

THE DETERMINANTS OF E-BUDGETING IMPLEMENTATION IN INDONESIA: A SYSTEMATIC LITERATURE REVIEW

Bambang Subiyanto¹, Syamsudin², Khairul Saleh L. Tobing³, Kumba Digdowiseiso⁴,
Norakma Abd Majid⁵

^{1,2,3,4} Faculty of Economics and Business, Universitas Nasional Jakarta

⁵ Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu

Corresponding Author: bambang.subiyanto@civitas.unas.ac.id, syamsudin@civitas.unas.ac.id,
khairul.saleh@civitas.unas.ac.id, kumba.digdo@civitas.unas.ac.id, norakma@umt.edu.my

Abstract

This study conducts a comprehensive analysis of the factors that influence the implementation of E-Budgeting in Indonesia. Furthermore, the research highlights the significance of modernization in the management of public budgets and the government's endeavors to enhance efficiency and transparency by adopting E-Budgeting. The primary goal is to ascertain the pivotal factors that impact the effective execution of this system. The employed approach is Systematic Literature Review, which consolidates findings from diverse reputable sources. The research findings and analysis indicate that the factors influencing the implementation of E-Budgeting encompass a range of technical, political, social, and cultural determinants. The primary factors that influence implementation are resources, political backing, inter-agency coordination, and adherence to regulations. Furthermore, organizational culture, institutional capacity, stakeholder participation, and ongoing evaluation also exert significant influence. Implementing E-Budgeting has the effect of enhancing efficiency, transparency, and accountability in the management of public budgets. The research concludes that the adoption of E-Budgeting in Indonesia represents a favorable stride towards enhanced efficiency and transparency in budget administration. However, in order to attain complete success, it is imperative to give significant consideration to the determinant factors that have been mentioned. Implementing E-Budgeting in Indonesia can yield significant advantages in promoting sustainable economic growth and enhancing governance by effectively addressing these challenges.

Keywords: Determinants, E-Budgeting, Indonesia

INTRODUCTION

The technological advancement in Indonesia has undergone significant acceleration in recent decades. The nation has experienced a substantial surge in the implementation of information and communications technology (ICT), accompanied by a growing prevalence of internet access and the enhancement of telecommunications infrastructure. This has generated significant prospects for the expansion of the digital economy, startups, e-commerce, and technological advancement. The Indonesian government has actively promoted the advancement of the technology sector through a range of initiatives, including "Making Indonesia 4.0," which facilitates the transition of industries into the digital era. In addition to that, the advancement of fintech and digital payments has revolutionized the manner in which Indonesian individuals engage in transactions and avail financial services. Nevertheless, the obstacles of restricted availability in distant regions and safeguarding personal data are matters that must be resolved to ensure the uninterrupted advancement of technology in Indonesia (Andriyanto et al., 2019).

E-budgeting, also known as electronic-based budgeting, is a technological approach employed in the planning, management, and monitoring of government budgets. It involves the utilization of information and communication systems. By implementing e-budgeting, the government can enhance the efficiency and transparency of budget management. This technology facilitates a more organized and quantifiable approach to budget planning and allocation by utilizing a specialized software system that can consolidate budget data from multiple government agencies. In addition, e-budgeting enables the government to conduct real-time monitoring and evaluation of budget utilization, thereby facilitating the process of making well-informed decisions (Andriyanto et al., 2019). E-budgeting enhances the accessibility of budget information to stakeholders and the

public, thereby promoting transparency, accountability, and participation in the government budgeting process. This technology has emerged as a crucial tool in endeavors to modernize and revamp the public financial sector in diverse nations, such as Indonesia.

E-budgeting plays a crucial role in Indonesia as it offers numerous significant advantages in managing public budgets and improving government administration efficiency. Amidst the intricate nature and substantial financial resources that the Indonesian government must handle, e-budgeting enables a more organized, precise, and transparent approach to budget planning, allocation, monitoring, and reporting. E-budgeting enables the government to actively track the utilization of funds in real-time, diminish the likelihood of financial leakage or misappropriation of public funds, and enhance transparency and responsibility. In addition, e-budgeting facilitates the active engagement of the public and stakeholders in the process of budget planning and management, thereby enhancing transparency and fostering public confidence (Zahri & Kusumastuti, 2020). Indonesia, being a nation with a substantial and varied population, can utilize e-budgeting to guarantee more equitable and effective distribution of funds across its entire territory. Therefore, e-budgeting facilitates the progress of improved governance and promotes sustainable economic growth and inclusive development in Indonesia.

The implementation of e-budgeting can be extended to multiple sectors within the government. The primary benefit of e-budgeting is its versatility to function across various industries, thereby enhancing effectiveness and openness in the administration of public budgets. E-budgeting is a potent instrument for enhancing the management of public finances (Zahri & Kusumastuti, 2020). An e-budgeting system enables the government to consolidate financial data from multiple agencies and enhance the efficiency of budget management, encompassing planning, allocation, supervision, and financial reporting. Educational institutions employ e-budgeting to effectively administer budget allocations, track expenditures, and evaluate the performance of the education sector. This fosters enhanced transparency and accountability in the allocation of education funds. E-budgeting can be utilized for the purpose of strategizing and overseeing health budgets, encompassing the acquisition of medications, medical infrastructure, and remuneration for healthcare staff. This facilitates improved accessibility to healthcare services and enhances the efficacy of resource allocation (Zhu et al., 2018).

E-budgeting plays a crucial role in the allocation of funds for various infrastructure projects, including construction, road maintenance, public transportation, and other related endeavors. This can expedite the development process and ensure optimal allocation of the budget. E-budgeting is crucial in the social services sector, encompassing areas like social assistance, housing, and community welfare services. This technology enables the government to oversee and assess the effects of social programs (Ketut & Gusti, 2022). E-budgeting can enhance the management of budgets allocated to environmental concerns, including nature conservation, waste management, and environmental protection. In addition, e-budgeting can be customized to suit the requirements of various sectors. Implementing this technology across different industries enhances budget management efficiency, promotes transparency, mitigates the risk of public fund misappropriation, and fosters stakeholder engagement and participation in the budgeting process (Ketut & Gusti, 2022).

Studying the factors that influence the implementation of e-budgeting in Indonesia is highly pertinent due to the intricate and significant nature of public budget management in this nation. This is contingent upon various factors, specifically the Indonesian government's implementation of e-budgeting as a means to modernize the public financial sector and enact government reform. Nevertheless, there may still be impediments to the implementation of e-budgeting, including restricted accessibility in remote regions, insufficient technical proficiency in certain agencies, and difficulties in harmonizing diverse data and systems. Furthermore, this research elucidates the impact of various factors, such as resources, political support, inter-agency coordination, and organizational culture, on the efficacy of e-budgeting implementation at the national, regional, and local levels. This research aims to comprehensively examine the degree to which e-budgeting enhances efficiency, transparency, and accountability in the management of public budgets in Indonesia. These factors are crucial for sustainable economic development and growth.

RESEARCH METHODS

The systematic literature review method is a rigorous scientific approach used to summarize, analyze, and synthesize existing research in a specific field of knowledge. This approach employs a methodical and organized process to identify, evaluate, and condense information from pertinent literature sources (Han & Lin, 2023). Usually, this research entails conducting a thorough search of scientific documents, journals, articles, and publications that are relevant to a specific research topic, using well-defined criteria for inclusion. Upon gathering

pertinent literature, this study will undertake a thorough examination of available data, discerning patterns, disparities, resemblances, or hindrances within the existing literature. The primary objective of the systematic literature review method is to generate a more profound comprehension of advancements and discoveries in a specific field of knowledge, while also identifying research deficiencies that may require additional investigation. This approach can additionally be employed to facilitate decision-making, construct a theoretical framework, or provide a comprehensive perspective on a specific subject within the scientific literature.

DISCUSSION OF RESEARCH RESULTS

Based on the SLR results of 8 journals that match the searched keywords including information systems, accounting and inventory, the following results were obtained in Table 1 :

Table 1. Research Results

No.	Article Title	Writer	Research Findings/Results
1	Determinants of User Perception, User Satisfaction and Successful Implementation of E-Budgeting in the Surakarta City Government	(Zahri & Kusumastuti, 2020)	Even though the e-budgeting system in the Surakarta Government has experienced positive developments in terms of information quality and performance, serious efforts are still needed to improve the quality of the system. There are still various problems related to budget absorption, and budget implementation by related parties, especially the community, is not yet fully under control.
2	Effectiveness of e-Budgeting Implementation in Realizing Good Governance with the CIPP Model (Case Study in Surabaya City)	(Ketut & Gusti, 2022; Permatasari & Biduri, 2021)	Process evaluation shows that the implementation of e-Budgeting in the Surabaya City Government has been running since 2013 with progress and innovation in accordance with emerging policies and challenges. Therefore, this implementation continues to develop and provide benefits to this day.
3	The Influence of E-Budgeting Implementation on Regional Financial Transparency in Indonesia	(Nasution & Rizqy Ramadhan, 2019)	The implementation of e-budgeting has a positive impact on the level of regional financial transparency. The implementation of e-budgeting makes local government financial management in Binjai City more informative and transparent.
4	Analysis of the Implementation of E Budgeting in Supporting Transparency in the Surakarta City Government	(Julianty, 2021)	The use of E-budgeting by the Surakarta City Government reflects the level of transparency and accountability of the local government towards the residents of Surakarta City.
5	Analysis of E-Budgeting Implementation Using the CiPP (Context, Input, Process, and Product) Model and Its Impact on Public Financial Transparency and Accountability in	(Ketut & Gusti, 2022)	The implementation of an e-budgeting system facilitates and provides great benefits in public financial management, even if it has not yet reached its full potential. The implementation of e-budgeting also has an impact on increasing the level of transparency and accountability.

	Karangasem Regency SKPD		
6	Evaluation of E-Budgeting Implementation in Budget Planning in Maros Regency	(A'yun & Hartaman, 2021)	Implementation of the E-Budgeting System in Budgeting in Maros Regency can be revealed that currently the electronic-based budgeting system has been implemented well but has not achieved optimal results and benefits. This can be seen from the evaluation results against 6 (six) criteria, including effectiveness, efficiency, adequacy, equality and responsiveness.
7	Implementation of EBudgeting Management Policies and Control Systems in realizing Good Governance (Case Study of the Bandung City Government)	(Program et al., 2020)	By implementing E-Budgeting, the principles of Good Governance are also realized, so that it is hoped that the public can monitor the performance of government administration.
8	Implementation of the E-Budgeting System on Public Financial Transparency and Accountability (Study on the Surabaya City Government)	(Gunawan, 2019)	An important role in budget making is given by E-Budgeting. This system is able to reduce the time required for the budget creation process because it is done online and can be accessed from various locations.

The integration of E-Budgeting in Indonesia has emerged as a crucial component in the endeavor to modernize and revamp the management of public budget. The Indonesian government has endeavored to employ information technology in the processes of budget planning, allocation, monitoring, and reporting. The implementation of E-Budgeting entails several steps, including the creation of a comprehensive budget information system, the training of government personnel in its utilization, and the undertaking of measures to guarantee the precision and timeliness of budgetary information. E-Budgeting has been effectively implemented in diverse government entities, such as ministries, institutions, and local governments (Adila & Dahtiah, 2020). E-Budgeting has yielded several significant advantages, including enhanced efficiency in the budgeting process through the utilization of online systems that expedite workflow, diminish bureaucracy, and prevent data duplication. In addition, E-Budgeting enhances transparency and accountability in budget administration by facilitating stakeholders, including the general public, to readily access budgetary information. This measure effectively mitigates the risk of misappropriation of public funds and enhances public confidence in the government (Adila & Dahtiah, 2020).

Despite the notable advantages of implementing E-Budgeting, there remain various obstacles that must be addressed. An issue that arises is the disparity in access to information technology across the nation, particularly in remote regions. Furthermore, it is crucial to provide training and enhance the technical proficiency of government employees to guarantee the effective execution of E-Budgeting (Khoirunnisak et al., 2017). In general, the introduction of E-Budgeting in Indonesia is a favorable measure towards enhancing the effectiveness and transparency of budget administration, which is crucial in promoting sustainable economic expansion and inclusive progress. The introduction of E-Budgeting in Indonesia has had a substantial influence on the management of public budgets and the governance of the government. An important consequence is the enhancement of efficiency and productivity in the processes of budget planning, allocation, monitoring, and reporting. This system facilitates the utilization of information technology to streamline workflows, decrease bureaucratic processes, and minimize data replication, thus expediting the budgeting process. In addition, the implementation of E-Budgeting also enhances transparency and accountability in the management of budgets. Online platforms provide convenient

access to budget information for the public and other stakeholders, facilitating the monitoring of public fund utilization and fostering government responsiveness (Khoirunnisak et al., 2017).

Furthermore, E-Budgeting has the additional benefit of mitigating the risk of misappropriation of public funds, as it enables more precise and thorough tracking and monitoring of financial resources. This aids in reducing the occurrence of leakage and corruption in the management of budgets. In addition, E-Budgeting facilitates convenient accessibility for stakeholders to track budget progress, thereby fostering increased engagement in the budgeting process. Nevertheless, despite the observed positive effects, there remain numerous obstacles that must be surmounted, including the issue of technology accessibility in remote regions and the enhancement of technical proficiency among government personnel. Nevertheless, the introduction of E-Budgeting in Indonesia has significantly contributed to enhancing efficiency, transparency, and accountability in the management of public budgets. These factors are crucial in promoting sustainable economic growth and improving governance (Ketut & Gusti, 2022).

The factors that influence the success and effectiveness of implementing E-Budgeting in Indonesia are known as determinants. Firstly, resources play a crucial role, encompassing sufficient allocation of funds, appropriate information technology infrastructure, and the presence of proficient personnel. The scarcity of this resource can impede the successful execution. Secondly, the presence of political support and unwavering government commitment holds significant importance. Lack of complete support from central and regional governments may impede the progress of E-Budgeting implementation. Thirdly, the coordination between different agencies and adherence to current regulations are also crucial factors that influence the outcome. Efficient collaboration and synchronization are imperative among the diverse government entities engaged in budget administration (A'yun & Hartaman, 2021). Fourthly, it is crucial to take into account organizational culture and institutional capacity to guarantee that government employees possess the necessary skills and comprehension to effectively oversee the E-Budgeting system. Finally, the involvement of stakeholders, including the community, as well as ongoing evaluation and monitoring, are crucial in guaranteeing the effective implementation of E-Budgeting in Indonesia. Thus, the determinants of E-Budgeting implementation encompass technical, political, social, and cultural factors that are interconnected and exert influence on the implementation of this system (Khoirunnisak et al., 2017).

CLOSING

Conclusion

Based on prior information, it can be inferred that the implementation of E-Budgeting in Indonesia encompasses several interconnected pivotal factors. Key determinants of successful implementation include the allocation of financial resources, the establishment of a robust information technology infrastructure, and the presence of highly skilled personnel. In addition to that, political backing and government dedication are highly essential, as well as the synchronization between organizations and conformity with current regulations. The success of implementing E-Budgeting is significantly influenced by the organizational culture and capacity of government institutions. Stakeholder involvement and continuous assessment are crucial factors in the implementation process. Implementing E-Budgeting in Indonesia is a vital measure towards modernizing and revamping the management of public budgets.

The primary determinants impacting the effective execution of E-Budgeting encompass resource allocation, including budgetary provisions and information technology infrastructure, political backing, government dedication, interagency coordination, and adherence to prevailing regulations. Furthermore, the successful implementation of this system relies heavily on factors such as organizational culture, institutional capacity, stakeholder participation, and evaluation. The factors that influence the successful implementation of E-Budgeting encompass technical, political, social, and cultural aspects. These factors must be carefully considered and coordinated in order to effectively manage public budgets using the E-Budgeting system. Indonesia's implementation of E-Budgeting has significant potential to enhance efficiency, transparency, and accountability in public budget management. This is crucial for fostering sustainable economic growth and improving governance.

Acknowledgement

This article is a part of joint research and publication between Faculty of Economics and Business, Universitas Nasional, Jakarta and Faculty of Business, Economics, and Social Development, Universiti Malaysia Terengganu.

REFERENCE

- Adila, RN, & Dahtiah, N. (2020). Evaluation of the Implementation of the E-Budgeting System with the Human Organization Technology Fit Model Approach in the West Java Provincial Government. Proceedings of the 11th Industrial Research Workshop and National Seminar Bandung, 26–27.
- Andriyanto, D., Baridwan, Z., & Subekti, I. (2019). Antecedents of E-Budgeting Behavior: The Case of Village Financial Information Systems in Banyuwangi, Indonesia. *Journal of Accounting and Business Dynamics*, 6(2), 151–170. <https://doi.org/10.24815/jdab.v6i2.13938>
- A'yun, LQ, & Hartaman, N. (2021). Evaluation of E-Budgeting Implementation in Budget Planning in Maros Regency. *Journal of Government and Political Issues*, 1(2), 65–72. <https://doi.org/10.53341/jgpi.v1i2.22>.
- Adila, RN, & Dahtiah, N. (2020). Evaluation of the Implementation of the E-Budgeting System with the Human Organization Technology Fit Model Approach in the West Java Provincial Government. Proceedings of the 11th Industrial Research Workshop and National Seminar Bandung, 26–27.
- Andriyanto, D., Baridwan, Z., & Subekti, I. (2019). Antecedents of E-Budgeting Behavior: The Case of Village Financial Information Systems in Banyuwangi, Indonesia. *Journal of Accounting and Business Dynamics*, 6(2), 151–170. <https://doi.org/10.24815/jdab.v6i2.13938>
- A'yun, LQ, & Hartaman, N. (2021). Evaluation of E-Budgeting Implementation in Budget Planning in Maros Regency. *Journal of Government and Political Issues*, 1(2), 65–72. <https://doi.org/10.53341/jgpi.v1i2.22>
- Gunawan, DR (2019). Implementation of the E-Budgeting System on Public Financial Transparency and Accountability (Study on the Surabaya City Government). *Accounting journal*. <http://journal.unesa.ac.id/index.php/aj>
- Han, K. T., & Lin, J. K. (2023). Empirical and quantitative studies of Feng Shui: A systematic review (PRISMA 2009 item 1). In *Heliyon* (Vol. 9, Issue 9). Elsevier Ltd. <https://doi.org/10.1016/j.heliyon.2023.e19532>
- Julianty, AF (2021). Analysis of the Implementation of E Budgeting in Supporting Transparency in the Surakarta City Government. *Accounting journal*.
- Ketut, NLEK, & Gusti, IPA (2022). Analysis of the Implementation of E-Budgeting Using the Cipp Model (Context, Input, Process, and Product) and its Impact on Public Financial Transparency and Accountability in SKPD Karangasem Regency. *Accounting Student Scientific Journal*) Ganesha Education University, 13(03).
- Khoirunnisak, R., Arishanti, D., & Vebrianti, DD (2017). Implementation of E-Budgeting by the Surabaya City Government in Achieving Good Governance. Proceedings of the National Seminar and Call for Papers on Economics and Business, 249–256.
- Nasution, DAD, & Rizqy Ramadhan, P. (2019). The Influence of E-Budgeting Implementation on Regional Financial Transparency in Indonesia. *E-Journal of Accounting*, 669. <https://doi.org/10.24843/eja.2019.v28.i01.p26>
- Permatasari, O., & Biduri, S. (2021). Implementation of E-Budgeting in the Era of the COVID-19 Pandemic at the Regional Secretariat of Sidoarjo Regency. *Academia Open*, 4. <https://doi.org/10.21070/acopen.4.2021.2069>
- Program, RJ, D4, S., Government, AM, Bandung, PN, & Akuntansi, J. (2020). Implementation of Policies and Management Control Systems of E-Budgeting in Realizing Good Governance (Case Study in Bandung City Government) Implementation of Policies and Management Control Systems of E-Budgeting in Realizing Good Governance (Case Study in Bandung City Government) Neneng Dahtiah. *Indonesian Accounting Research Journal*, 1(1), 162–172.

- Zahri, RM, & Kusumastuti, DA (2020). Determinants of User Perception, User Satisfaction and Successful Implementation of E-Budgeting in the Surakarta City Government. *Owner*, 4(1), 240. <https://doi.org/10.33395/owner.v4i1.221>
- Zhu, M., Sari, A., & Lee, MM (2018). A systematic review of research methods and topics of the empirical MOOC literature (2014–2016). *Internet and Higher Education*, 37, 31–39. <https://doi.org/10.1016/j.iheduc.2018.01.002>