Driving Transparency and Efficiency through E-Budgeting in Indonesia's Regional Finance Governance

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Abstract

The implementation of e-budgeting in regional financial management represents a strategic innovation to promote transparency, efficiency, and accountability in local governance. Manual budgeting systems have often been vulnerable to errors, inefficiencies, and misuse of public funds, underscoring the need for digital transformation. This study aims to analyze how e-budgeting contributes to improving transparency and efficiency in regional financial management, focusing on its role in strengthening public accountability and optimizing budget utilization. Employing a qualitative approach with a literature review method, the study synthesizes findings from academic works, government regulations, institutional reports, and credible publications. The analysis reveals that e-budgeting enhances transparency by expanding public access to budget information and accountability, as demonstrated in cities such as Surabaya and Surakarta. In terms of efficiency, it accelerates budget preparation, reduces administrative costs, and improves inter-agency coordination. However, challenges remain in digital infrastructure, human resource capacity, and public literacy. Strengthening leadership commitment, technical readiness, and outreach is crucial for maximizing e-budgeting's role in supporting good governance.

1. Introduction

Strengthening regional financial management is essential to achieve clean, transparent, and accountable governance. Robust financial governance not only promotes efficient use of public funds but also forms the cornerstone of good governance practices. Transparency provides the public with access to reliable information, while efficiency ensures that state budgets are directed appropriately and utilized to their fullest potential.

In reality, however, many local governments continue to depend on traditional budget management practices. Manual approaches to planning, budgeting, and financial reporting often generate problems such as delays, duplication of programs, and limited oversight. According to the Supreme Audit Agency (BPK, 2022), more than 35% of Indonesia's 542 local governments experienced discrepancies in budget formulation and implementation, leading to inefficiencies. Furthermore, manual processes heighten the likelihood of corruption and fund leakages, thereby diminishing public confidence in government institutions (Komala, 2020).

To address these issues, digitalization of public finance has been advanced, particularly through the introduction of e-budgeting. This electronic system digitizes the entire budget cycle from planning and inputting activities to allocation and reporting allowing real-time data monitoring, stronger oversight, and greater public accessibility. Within this framework, e-budgeting is positioned as a strategic instrument to reinforce both transparency and efficiency in regional financial governance (Gamayuni, 2020). Its adoption aligns with the broader agenda of

bureaucratic reform and digital transformation. In line with this, the Ministry of Home Affairs, through Regulation Number 70 of 2019, requires regional governments to integrate development planning and budgeting via the Regional Government Information System (SIPD), which incorporates the e-budgeting module. The objective is to establish a more transparent, integrated, and efficient financial system.

Although e-budgeting is normatively expected to strengthen governance, its implementation across regions continues to encounter notable challenges. Many local governments still limit public access to budget information (Setyawan & Gamayuni, 2020). Efficiency has also not been maximized, as some areas face difficulties integrating e-budgeting with other financial systems, which in turn creates additional administrative complexity. Common barriers include insufficient IT-competent personnel, unequal digital infrastructure, and resistance within bureaucracies to system reform (Nugroho & Ayem, 2021). According to the 2023 report by the Corruption Eradication Commission (KPK), while almost all local governments have adopted e-budgeting, around 18% fail to use it consistently throughout the fiscal year. This indicates that the mere adoption of digital systems does not guarantee improved outcomes without institutional commitment and adequate resources.

From an academic standpoint, empirical evaluations of e-budgeting's effectiveness remain limited. Much of the existing literature has emphasized technical readiness or organizational capacity rather than its actual impact on financial transparency and efficiency. The readiness of local agencies in applying e-

budgeting, without assessing its implications for budget openness and efficiency. Similarly, Subiyanto et al. (2023) reported that in East Java Province, the introduction of e-budgeting did not significantly increase transparency, as the dissemination of budget documents was still restricted.

This lack of empirical evidence directly connecting e-budgeting to transparency and efficiency in budget management highlights a substantial research gap. Moreover, studies that integrate qualitative and quantitative approaches to evaluate its function as a tool for public accountability are still rare. Against this backdrop, the present study aims to examine the extent to which e-budgeting enhances transparency and efficiency in regional financial management. Specifically, it seeks to measure how effectively the system is implemented, evaluate the degree of budget disclosure to the public, and analyze its influence on budget utilization efficiency. The findings are expected to contribute theoretically to the discourse on digital financial governance and offer practical guidance for local governments to optimize e-budgeting as part of bureaucratic reform and accountability enhancement.

2. Methods

This research applies a qualitative design using a literature review method as the main strategy for both data collection and analysis. The qualitative approach was selected to enable an in-depth exploration of conceptual frameworks and theoretical insights, with a specific focus on how e-budgeting implementation affects

transparency and efficiency in regional financial management within local government contexts.

The study relies on secondary data, obtained indirectly from documentation and publications produced by various institutions. Sources consist of academic references such as textbooks, national and international journal articles, research reports, legal regulations, and official publications from government bodies including Ministry of Home Affairs, as well as credible media articles addressing related issues. Data selection followed a purposive sampling technique, emphasizing relevance to the research variables and the credibility of the institutions or publishers.

The variables examined in this study consist of independent and dependent variables. The independent variable (X) is the implementation of e-budgeting, encompassing dimensions such as digitalization of the budgeting process, transparency of information systems, public involvement, and integration of financial management systems. The dependent variable (Y) includes transparency and efficiency in regional financial management, measured through indicators such as openness of budget information to the public, accuracy in fund utilization, streamlining of bureaucratic procedures, and reduction in the potential for budget irregularities.

The main focus of this study is to examine the impact of e-budgeting implementation on transparency and efficiency in regional financial management through a literature review. The analysis is conducted by identifying and comparing findings from previous studies, identifying thematic patterns, and drawing

conceptual conclusions about the relationships between variables. Thus, this study not only serves as a theoretical exploration but also provides practical contributions in the form of recommendations for improving regional financial governance through the optimization of the e-budgeting system.

3. Results

3.1. E-Budgeting as a Strategic Instrument for Transparency and Efficiency in Local Government Finance

The adoption of e-budgeting in regional financial management represents a major advancement toward realizing principles of good governance. By utilizing information technology, this system digitizes budgeting, administration, accounting, and financial reporting, thereby replacing manual methods that are vulnerable to errors and inefficiencies. The primary objectives of e-budgeting are not only to improve operational effectiveness but also to reinforce transparency and accountability in managing public finances. Within the Indonesian context, where fiscal decentralization through regional autonomy grants substantial authority to local governments, e-budgeting has emerged as a strategic instrument to ensure that public resources are managed efficiently and responsibly. This section elaborates on how e-budgeting contributes to transparency and efficiency in regional financial management, drawing on expert insights and empirical evidence. Transparency is a cornerstone of robust financial governance. Regional financial management involves the openness of budget information to the public, covering aspects such as allocation, utilization, and reporting. E-budgeting significantly

fosters transparency by offering a digital platform that provides real-time access to financial data (Oktaviani & Puspitaningtyas, 2019). Gamayuni (2020) highlights that the system enhances transparency by generating financial reports in accordance with accrual-based government accounting standards, thereby ensuring accuracy, consistency, and accountability. Furthermore, e-budgeting automatically documents every budget revision, minimizing opportunities for data manipulation commonly found in traditional manual systems.

Nugroho and Ayem (2021) emphasize that transparency within e-budgeting goes beyond simply disclosing information; it also requires standardized procedures that incorporate public participation. In practice, this system allows local governments to disseminate documents such as the Regional Revenue and Expenditure Budget (APBD), Work Plans and Budgets (RKA), and budget realization reports through official portals or dedicated applications. Such accessibility enables monitoring by the public, civil society groups, and the media, thereby reinforcing government accountability. Moreover, the transparency afforded by e-budgeting minimizes opportunities for misuse of public funds, such as corruption or budget manipulation since the digital record it produces is difficult to alter without detection by authorized parties. Empirical evidence supports these benefits.

Setyawan and Gamayuni (2020), using a simple regression analysis, found that e-budgeting significantly enhances regional financial transparency by expanding public access to budget information, reducing information asymmetry between governments and citizens, and building greater public trust in fiscal management. A

notable case is Surabaya, one of the earliest adopters of e-budgeting in Indonesia, which has implemented the Government Resource Management System (GRMS) since 2015. Through this integrated online platform, the public can access budget information directly via a transparency website (Setyawan et al., 2019). Features such as activity galleries, financial reporting, and public information request mechanisms further increase community involvement in budget oversight.

Surakarta offers another noteworthy example of successful e-budgeting adoption. Through the Regional Financial Management Information System (SIMDA Keuangan), the city has strengthened transparency by enabling public access to budget data online. This platform makes it possible for citizens to monitor real-time allocations for various programs, such as infrastructure projects and public services. In addition, the digital trail produced by e-budgeting supports more effective audits by the Supreme Audit Agency, thereby enhancing accountability. Surakarta's achievement of an Unqualified Opinion from BPK for 12 consecutive years further demonstrates that e-budgeting contributes not only to greater transparency but also to improvements in the overall quality of financial management (Subiyanto et al., 2023).

Nevertheless, the transparency gained from e-budgeting is not without limitations. One key challenge lies in the low levels of digital literacy in some communities, especially in rural and remote regions. Although budget information is made available online, many citizens either lack adequate access or struggle to interpret the data effectively. This highlights the need for local governments to carry out extensive outreach and education programs to ensure that the information

provided can be meaningfully utilized by the public. Another concern is data security. To maintain public trust, e-budgeting systems must be supported with strong safeguards against risks such as hacking or data breaches.

3.2. Improving Accuracy, Speed, and Cost-Effectiveness through E-Budgeting

Beyond promoting transparency, e-budgeting also plays a crucial role in improving the efficiency of regional financial management. Efficiency in this sense reflects the capacity of local governments to handle budgets more swiftly, accurately, and cost-effectively, thereby ensuring that resources are distributed in ways that maximize public benefit. As Gamayuni (2020) explains, e-budgeting functions as a technological instrument that strengthens efficiency and effectiveness in budget administration by automating processes through applications or web-based platforms. The shift away from paper-based and manual systems allows budget preparation, implementation, and reporting to be carried out faster and with greater precision.

Nkya (2019) further emphasizes that e-budgeting supports performance management in the public sector by streamlining activities related to budgeting, administration, accounting, and financial reporting. Under manual systems, budget preparation often requires several months, as it involves multiple actors and extensive physical documentation that can be prone to mistakes. In contrast, e-budgeting integrates these activities within a single digital platform, providing real-time data updates and minimizing the potential for human error during data entry. Moreover, built-in features such as automated budget forecasting and analytical tools

assist local governments in developing Work Plans and Budgets (RKA) that are more targeted and easier to evaluate (Setyawan & Gamayuni, 2020).

Empirical evidence from several regions in Indonesia highlights that e-budgeting has generated substantial efficiency improvements. In Surabaya, for instance, the use of the Government Resource Management System (GRMS) has streamlined inter-agency coordination during budget preparation. Previously, this process was frequently delayed due to inconsistencies in data across work units. By adopting an integrated platform, all units are able to access and update budget information simultaneously, which shortens the time needed to finalize the Regional Revenue and Expenditure Budget (Gamayuni & Hendrawaty, 2020). In addition, the system enhances the accuracy and timeliness of financial reporting, a critical factor behind Surabaya's achievement of consecutive Unqualified Opinions from the Supreme Audit Agency.

Similar results have been observed in Surakarta, where the Regional Financial Management Information System has been implemented since 2017. This platform automates budgeting, administration, and reporting, thereby reducing the workload for government staff. Consequently, the duration of budget-related activities has been significantly shortened, enabling the government to allocate more attention to program execution and public service delivery (Sakti et al., 2023). Supporting evidence from Komala (2020) shows that leadership commitment and the presence of skilled operators are decisive in improving e-budgeting efficiency. Interestingly, the study found that formal education and training play a comparatively minor role,

suggesting that the system's success depends more on infrastructure readiness and strong leadership support.

Another efficiency advantage of e-budgeting lies in its ability to reduce operational costs. By minimizing the reliance on paper, printing, and the distribution of hard-copy documents, local governments are able to redirect financial resources toward more urgent priorities, such as infrastructure projects or enhancing public services. Moreover, when e-budgeting is integrated with other financial information systems, such as electronic procurement platforms for goods and services, it allows local governments to improve budget allocation and reduce inefficiencies, thereby ensuring that public funds are utilized more effectively.

3.3. Implementation Challenges and Policy Alignment of E-Budgeting in Indonesia

Although e-budgeting offers significant advantages, its implementation still faces several obstacles. One major barrier is the uneven development of technological infrastructure, particularly in rural and remote areas where internet access remains limited. Without reliable connectivity, the application of e-budgeting becomes highly constrained. Another key issue lies in the competency of human resources. Many government employees are not fully familiar with digital systems, requiring intensive training to ensure smooth operation. Nugraha and Wibowo (2020) stated that strong leadership commitment is equally essential, as a lack of support can lead to internal resistance that hampers adoption.

Public participation also presents a challenge. While budget information is made available online, awareness and the ability to interpret such data among citizens

remain low. To overcome this, local governments need to intensify outreach efforts through campaigns or digital literacy programs. In addition, safeguarding data security is a pressing concern. E-budgeting platforms must be supported with robust encryption and protective measures to minimize risks of hacking or data breaches that could undermine public confidence (Yuliant et al., 2020).

At the national level, the use of e-budgeting is in line with government initiatives to improve the efficiency and effectiveness of public financial management. The need for prudent, targeted, and transparent budget practices. In this framework, e-budgeting serves as a strategic instrument for overseeing and optimizing budget use, though budgetary reductions may create obstacles if not supported by well-structured implementation strategies.

Empirical evidence shows that e-budgeting contributes positively to both transparency and efficiency in regional financial governance. By ensuring public access to budget information it enhances accountability and minimizes opportunities for misuse of public funds. At the same time, it streamlines processes through automation, reduces operational expenditures, and accelerates decision-making. The experiences of Surabaya and Surakarta highlight how e-budgeting can be effectively applied to strengthen financial governance. Nonetheless, its long-term success relies on adequate digital infrastructure, competent human resources, and extensive outreach initiatives. Addressing these prerequisites will enable e-budgeting to evolve into a pivotal instrument for creating regional financial management systems that are more transparent, efficient, and accountable.

4. Conclusion

The adoption of e-budgeting in regional financial management represents a strategic move toward building governance that is more transparent, efficient, and accountable. This digital system replaces traditional manual methods that were often vulnerable to errors, inefficiency, and budget irregularities. By transforming processes of budgeting, administration, reporting, and accounting into digital formats, e-budgeting enables real-time access to financial data, broadens public access to budget documents, and fosters greater community involvement in monitoring fiscal activities. In terms of transparency, it has proven effective in expanding public availability of financial information through online platforms. Cities such as Surabaya and Surakarta exemplify this progress, demonstrated by higher accountability and consistent achievement of Unqualified Opinions from the Supreme Audit Agency. Such openness not only minimizes opportunities for budget misuse but also reinforces citizens' trust in local governments.

From an efficiency standpoint, e-budgeting streamlines the preparation and execution of budgets through automation and integrated data systems. This allows local governments to prepare Work Plans and Budgets more quickly, cut administrative workloads, and lower operational expenses, particularly those tied to physical documentation. Oversight by auditing bodies is also facilitated, as every transaction and adjustment is digitally recorded. Nonetheless, the full effectiveness of e-budgeting remains constrained by issues such as uneven digital infrastructure, limited public digital literacy, inadequate staff capacity, and cybersecurity risks. Thus, successful implementation depends greatly on strong policy backing, committed

local leadership, sufficient technical training, and outreach programs designed to involve all levels of society.

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