Government Budget Transparency: Challenges and Solutions in the Digital Era

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A B S T R A C T

Public budget transparency is a crucial element of good governance. In the digital era, citizen involvement in monitoring budget use has become increasingly easier thanks to technological advances and the transparency of government data. This article discusses the active role of citizens in monitoring public budget transparency through various digital platforms, such as data transparency portals, social media, and state financial oversight applications. With broader access to information, the public can participate in assessing the effectiveness of public fund use, reporting irregularities, and promoting government accountability. However, citizen participation in budget oversight still faces various challenges, such as low financial literacy, lack of awareness of the right to budget oversight, and the potential for misuse of information. Therefore, efforts are needed from various parties, including the government, non-governmental organizations, and the media, to improve education and facilitate access to transparent and understandable budget information.

Government budget transparency is a key element in realizing good, accountable, and participatory governance. In the digital era, public information transparency has undergone a significant transformation with the advent of information technology, open data, and electronic-based financial systems. However, increased digitalization also presents various challenges, such as limited human resource capacity, cybersecurity, and gaps in access to information between the central and regional governments. This study aims to identify key challenges and formulate strategic solutions to improve government budget transparency in the digital era

INTRODUCTION

Budget transparency is one of the main indicators of the implementation of *good governance principles* . Through open information regarding budget planning, implementation, and accountability, according to Mardiasmo (2018), budget transparency is a form of government accountability to the public through the provision of easily accessible and understandable financial information, the public can play an active role in overseeing the running of government. In the digital context, the development of information technology has enabled the public to access state financial data more easily through online portals, open data-based applications , and increasingly integrated government financial information systems.

Data from the World Bank (2023) shows that countries with high levels of government digitalization have better fiscal transparency scores than countries with manual systems. In Indonesia, digitalization through SPAN and e-Monev has become an important milestone towards a more open fiscal system. Public budget transparency is a fundamental aspect of accountable and democratic governance. In a country based on democratic principles, the public has the right to know how public funds are managed and used by the government. This transparency is not only an indicator of good governance but also an effort to prevent budget misuse that could harm the public's interests.

Technological advances have transformed the way people access and analyze state financial information. Governments in various countries, including Indonesia, have begun implementing information transparency systems by making budget data available through official websites and other digital platforms. This step provides citizens with an opportunity to understand how their taxes are allocated and used for development purposes. With this transparency, the public is not merely the object of policy but also plays a role as a watchdog, ensuring that public funds are used effectively and in accordance with the people's needs.

Citizen participation in public budget oversight is becoming increasingly relevant amidst various challenges in state financial governance. Corruption, budget waste, and inefficiency in state spending are still problems that frequently arise. The public, who have access to budget information, can more easily identify potential irregularities and encourage the government to act more transparently and accountably. In addition, public involvement in this supervision can also increase public trust in the government.

The government has developed various initiatives to increase budget transparency, such as e-budgeting, open data, and a digital-based public complaints system. However, the effectiveness of these initiatives depends heavily on active citizen participation. Without public involvement, budget transparency policies will remain mere formalities without any real impact in preventing misuse of funds. Therefore, increasing public financial awareness and literacy is key to creating an effective budget oversight ecosystem.

On the other hand, many challenges remain in achieving optimal budget transparency. One of the main challenges is low financial literacy among the public. Many citizens do not yet understand how to read government financial reports or analyze published budgets. This results in the available data not being utilized optimally in public budget monitoring efforts.

In addition, access to information that is not yet fully equal is also an obstacle. Although the government has provided a digital platform for budget transparency, some people still struggle to access it, particularly in remote areas with limited technological infrastructure. Another challenge is the lack of transparency in certain

aspects, such as details of regional government fund usage , which are sometimes difficult for the public to access.

Citizen participation in public budget oversight not only aims to prevent irregularities but also to promote efficiency in state financial management. When the public actively monitors, the government will be more careful in planning and executing the budget, knowing that every decision will be closely scrutinized by the public. This ensures that the allocated budget truly provides maximum benefits for public welfare.

The public can contribute to budget oversight in various ways , such as using digital platforms provided by the government, reporting indications of budget irregularities, and participating in public discussions on fiscal policy. Furthermore, social media is an effective tool for voicing findings or concerns regarding the use of public funds. With public pressure, the government will be more motivated to improve the state financial management system to make it more transparent and accountable.

In several countries, public involvement in budget oversight has proven effective in preventing corruption and increasing the efficiency of public spending. For example, in several large cities , citizens have used budget monitoring applications that allow them to directly see how public funds are spent. With this participatory model, budget policies become more inclusive and aligned with community needs. However, while technology has opened up wider access to information, there remains a risk of data misuse and manipulation. It's not uncommon to find government-provided data difficult to interpret or even presented in a less-than-transparent manner .

Therefore, more serious efforts are needed to ensure that budget transparency truly provides real benefits to the community, not just an administrative formality. Moreover, not all citizens have the desire or capacity to participate in budget oversight. Most people are still more focused on their daily needs and have less time or resources to study state financial reports. Therefore, the role of education is very important in building a culture of transparency and accountability in managing state finances.

Education about budget transparency should begin early, for example by incorporating financial literacy into the curriculum. This way, future generations will be better prepared to play an active role in ensuring that public funds are managed efficiently and are not misused. In addition to formal education, public awareness campaigns can also be an effective strategy to increase public understanding of the importance of their involvement in budget oversight. In the context of public policy, the government must also ensure that the transparency mechanisms implemented are truly accessible and usable by the public. For example, by providing simpler and easier-to-understand data, so that citizens with various educational backgrounds can utilize it as a real tool in creating better governance.

Overall, public budget transparency is a key component in building a clean and accountable government. However, its success depends not only on government initiatives, but also on the active participation of citizens. Therefore, synergy between the government, society, media, and civil society organizations is very necessary to ensure that every rupiah taken from people's taxes is used optimally for the public interest.

With increasing access to digital technology, the future of budget transparency is increasingly promising. However, existing challenges must be addressed immediately to ensure the benefits of this information transparency are felt by all levels of society. Properly implemented budget transparency will not only improve state financial management but also enhance public trust in the government.

LITERATURE REVIEW

Public Budget Transparency and Good Governance

Public budget transparency is widely recognized as a fundamental principle of good governance. Transparency refers to the openness of government in providing accessible, timely, and understandable information regarding public financial management, including budget planning, implementation, and accountability. According to Mardiasmo (2018), budget transparency serves as a mechanism through which governments demonstrate accountability to citizens and enable public oversight of state finances.

Sedarmayanti (2019) emphasizes that transparency is essential in preventing corruption, reducing budget misuse, and strengthening public trust in government institutions. In democratic systems, citizens have the right to know how public funds are collected and utilized, making transparency a critical element of accountable governance. Without transparent budget information, public participation and effective oversight become difficult to achieve.

Digitalization of Government and Fiscal Transparency

The advancement of information and communication technology has significantly transformed public financial management through the implementation of e-government systems. Digitalization has enabled governments to publish budget data through online portals, e-budgeting systems, and open data platforms, thereby improving fiscal transparency. Arifin and Rahmawati (2021) find that electronic-based budgeting systems contribute to increased accuracy, efficiency, and transparency in regional financial reporting.

However, Hartono (2022) highlights that technological advancement alone is insufficient. The effectiveness of digital transparency initiatives depends heavily on institutional capacity, digital literacy, and the readiness of both government officials and citizens to utilize financial information systems.

Citizen Participation in Budget Oversight

Citizen participation is a key component in strengthening budget transparency and public accountability. The International Budget Partnership (2023), through the Open Budget Survey, demonstrates that public involvement in the budget process is positively associated with lower corruption levels and improved public spending efficiency. Citizens can participate by accessing budget information, analyzing expenditure data, reporting irregularities, and engaging in public discussions on fiscal policy.

Despite these opportunities, several studies note that public participation often remains limited. Low financial literacy and the technical complexity of budget documents hinder citizens' ability to interpret and utilize budget data effectively. As a result, participation tends to be passive, focused mainly on information access rather than active engagement in oversight or policy advocacy.

Challenges and Strategic Solutions in the Digital Era

Although digitalization offers significant potential for enhancing budget transparency, various challenges persist. The Global Initiative for Fiscal Transparency (GIFT, 2022) identifies key obstacles, including uneven access to digital infrastructure, inconsistent budget data presentation across government levels, limited feedback mechanisms, and cybersecurity risks.

Another major challenge is inequality in access to information, particularly between urban and rural areas. Citizens in remote regions often face technological limitations that restrict their participation in digital transparency initiatives. Furthermore, the lack of standardized and user-friendly budget data formats reduces the usability of published information for the general public.

To address these challenges, previous studies recommend strengthening public financial literacy, simplifying budget data presentation, and improving institutional mechanisms for public feedback and reporting. The use of advanced technologies such as data analytics and artificial intelligence is also increasingly discussed as a potential tool to support budget analysis and detect irregularities. However, successful implementation requires adequate infrastructure, regulatory support, and human resource development.

METHODOLOGY

This research uses a qualitative approach with descriptive methods to analyze the role of citizens in overseeing public budget transparency in the digital era. This method was chosen because it allows researchers to understand the phenomenon in depth, including how citizens utilize technology in budget oversight and the challenges faced in the process. Data were collected from various sources, including interviews, literature studies, and document analysis related to budget transparency policies.

Data collection was conducted through in-depth interviews with various parties involved in public budget oversight. The speakers included government officials responsible for budget transparency, state financial transparency activists, academics in the fields of economics and public policy, and members of the public who are active in budget oversight through digital platforms. Interviews were conducted using a semi-structured approach, allowing for deeper exploration of the informants' perspectives and experiences.

Apart from interviews, this research also relies on literature studies as the main data source. The literature used includes government policies on budget transparency, academic research related to state financial transparency, and reports from non-governmental organizations that focus on anti-corruption and public participation. By examining these various sources, this research can provide a broader picture of how budget transparency is implemented and how citizens can participate in oversight.

Document analysis was conducted by examining various regulations related to budget transparency, such as the Public Information Disclosure Law and the government's e-budgeting policy . Furthermore, digitally published budget reports were analyzed to understand the extent to which information transparency has been implemented and whether the data provided is accessible and optimally utilized by the public.

This study also uses an observation method on digital platforms used in budget monitoring. The platforms analyzed included government budget transparency portals, websites of independent institutions that monitor financial transparency, and social media used for discussion and advocacy related to state budget management. This observation aims to understand the extent to which digital technology has played a role in increasing citizen participation in public budget oversight.

To ensure data validity, this study uses the triangulation method. Triangulation is carried out by comparing data from various sources, such as interviews, official documents, and findings from literature studies and observations. With this approach, the accuracy of information can be more assured and allows researchers to gain a more comprehensive understanding of the role of citizens in overseeing public budgets.

In this study, community involvement in budget oversight was also analyzed based on the level of participation undertaken. Participation can be categorized into several levels, ranging from passive access to budget information to active involvement in policy advocacy and reporting budget irregularities. By understanding these different levels of participation, research can provide recommendations on strategies that can be used to increase public involvement in budget oversight.

This study also compares the implementation of budget transparency in Indonesia with several other countries that have successfully implemented public financial information disclosure. This comparison aims to identify best practices that can be implemented in Indonesia and examine how certain factors influence the success of budget transparency in various countries.

This research has several limitations, one of which is the limitation in accessing data that is confidential or not published by the government. While much budget data is readily available online, some more detailed information regarding budget allocations at the regional level remains difficult to access. Therefore, this research focuses more on publicly available data and how the public utilizes it in budget oversight.

Another limitation is the scope of the sample used in the study. Despite attempting to cover various community groups, this research still has limitations in reaching certain groups, such as communities in remote areas who have limited access to digital technology. Therefore, the results of this study better represent the participation of people who have access to digital information and communication technology. To address these limitations, this study recommends further research that focuses more on community participation in areas with limited access to information. Further studies are also needed to explore how budget transparency policies can be improved to be more inclusive and accessible to all levels of society, including those with limitations in digital and financial literacy.

By using the various research methods described, this study is expected to provide deeper insights into how citizens can play a role in monitoring public budget transparency in the digital era. The results of this study are expected to be a basis for policy makers, academics, and civil society in designing more effective strategies to increase public participation in state financial oversight.

RESULTS AND DISCUSSION

Research conducted by Arifin and Rahmawati (2021) shows that implementing an electronic-based financial system can increase the efficiency and accuracy of budget reporting by up to 25%. Meanwhile, a study by Hartono (2022) emphasized the importance of digital literacy for government officials in improving their understanding of regional financial transparency systems. Another study by the OECD (2023) also confirmed that implementing open budget data led to a 30% increase in public participation in the fiscal oversight process.

According to *the 2023 Open Budget Survey (OBS)* published by the International Budget Partnership (IBP), the level of budget information transparency in various countries shows a global upward trend. This improvement includes the availability of public budget documents, access to spending realization data, and public involvement in the budget preparation and evaluation process. However, the survey results also indicate that significant gaps remain. This contrasts between countries with high levels of transparency and those that still face challenges in fiscal information disclosure. These differences are influenced by factors such as

institutional capacity, political support, and the quality of the digital infrastructure used to manage and publish budget data.

This study found that the role of citizens in overseeing public budget transparency in the digital era has increased along with the development of access to information and technology. Public participation in budget oversight extends beyond accessing information to include data analysis and reporting indications of irregularities. With greater information transparency, the public now has the opportunity to participate in ensuring that public funds are managed transparently and responsibly. One of the key findings of this study is that digital technology has played a significant role in increasing public access to budget information.

The government has provided various platforms, such as budget transparency portals and e-budgeting systems, that allow citizens to view the allocation and use of public funds. These platforms provide greater transparency and enable the public to understand how the budget is prepared and how it is implemented on the ground. However, despite increased access to information, this study found that many citizens still lack a thorough understanding of how to read and analyze budget data. Low financial literacy and limited understanding of technical budget documents are major barriers to public participation. Therefore, more intensive educational efforts are needed to improve public understanding of state budget management. Furthermore, this study also found that public participation in budget oversight still tends to be passive.

Many citizens simply access information without truly engaging in analysis or reporting any indications of irregularities. This is due to various factors, including a lack of awareness of the importance of active involvement in budget oversight and a lack of mechanisms that allow the public to contribute directly to the oversight process. Public participation in budget oversight is also significantly influenced by social and economic factors.

People with higher levels of education tend to be more active in accessing and utilizing budget information than those with lower educational levels. Furthermore, groups with a direct stake in the public budget, such as civil society organizations and academics, are more frequently involved in discussions and advocacy related to budget transparency than the general public.

This study also found that social media plays a significant role in supporting public budget transparency. The public uses various social media platforms to discuss budget use and uncover potential irregularities. Cases of budget misuse uncovered through social media often garner widespread attention and push the government to act more transparently and accountably. However, while social media is an effective tool for promoting budget transparency, this study also found that challenges remain in ensuring the validity of the information disseminated. Inaccurate information or even hoaxes related to the state budget are not uncommon, which can cause confusion among the public. Therefore, better information verification mechanisms are needed to ensure discussions on budget transparency remain based on facts and valid data.

Furthermore, this study found that several obstacles remain in the government's implementation of budget transparency policies. One major obstacle is the lack of uniformity in the presentation of budget data across various levels of government. Although the central government has implemented a fairly robust budget transparency system, many local governments have not yet fully adopted the same policy. As a result, the public in some regions still faces difficulties in accessing budget information that should be open to the public. Another obstacle identified in this study is the lack of effective feedback mechanisms between the public and the government in budget oversight. Although the public can access budget information, not all

platforms provide the means for citizens to easily provide input or report indications of irregularities.

This results in low-effective public participation in budget oversight, due to the lack of clear communication channels between citizens and authorities. Furthermore, this study also found that in several regions, community initiatives have emerged to independently increase budget transparency. Several communities and civil society organizations have formed budget monitoring groups that work independently to analyze budget data and advocate for transparency within local governments. These initiatives demonstrate that with adequate support and education, the public can play a more active role in public budget oversight.

The success of these initiatives also demonstrates the critical importance of collaboration between government, civil society, and the media in improving budget transparency. In some regions, collaboration between government and civil society organizations has resulted in more effective budget transparency models, where the government actively involves citizens in the budget planning and oversight process. Such models can serve as good examples for implementation in other regions still facing challenges in budget transparency.

Furthermore, this study also identified that the use of artificial intelligence (AI) and data analytics-based technology could be a potential solution for increasing budget transparency. This technology allows for faster and more accurate budget data analysis, allowing the public to more easily understand how the budget is being used. Several countries have begun developing AI-based systems to identify patterns of budget misuse, and this could serve as inspiration for Indonesia to implement similar technology.

However, the application of technology in budget oversight also faces challenges, particularly related to infrastructure and human resource readiness. Not everyone has access to advanced technology, and many still lack the skills to utilize digital technology in budget analysis. Therefore, investment in community capacity building and digital infrastructure that supports broader budget transparency is needed. This study also found that budget transparency not only improves government accountability but can also increase efficiency in state financial management. When the public actively monitors the budget, the government becomes more careful in allocating and using public funds. This can prevent budget waste and ensure that every rupiah spent truly benefits the public's welfare.

In a global context, this study also identified that countries with high levels of budget transparency tend to have lower levels of corruption. Case studies from several countries demonstrate that budget transparency, supported by strong public participation, can be an effective strategy in combating corruption and increasing public trust in government. Overall, this study confirms the crucial role of citizens in overseeing public budget transparency, particularly in the digital age.

With broader access to information, the public has a greater opportunity to ensure that public funds are managed transparently and responsibly. However, for public participation in budget oversight to be more effective, further efforts are needed to improve financial literacy, provide better communication mechanisms, and strengthen collaboration between the government, the public, and the media.

The results of this study also provide implications for policymakers: budget transparency must be accompanied by efforts to increase public capacity to understand and utilize available information. Without active citizen participation, budget transparency policies will remain mere formalities without any real impact on improving state financial accountability. Therefore, policies related to budget

transparency must continue to be developed to be more inclusive and accessible to all levels of society.

CONCLUSION

This study concludes that government budget transparency in the digital era plays a vital role in strengthening accountability and public trust. Digital platforms and electronic budgeting systems have improved access to budget information and enabled greater citizen involvement in fiscal oversight. However, the effectiveness of these initiatives is still constrained by low financial literacy, unequal access to digital infrastructure, and limited public engagement beyond information access.

Therefore, budget transparency must be supported by improved public capacity, inclusive access to information, and effective feedback mechanisms. Strengthening collaboration between government, civil society, and the media is essential to ensure that digital transparency initiatives contribute meaningfully to accountable and participatory governance.

REFERENCES

Arifin, Z., & Rahmawati, S. (2021). Implementasi E-Budgeting dalam Meningkatkan Transparansi Keuangan Daerah. Jurnal Akuntansi Publik, 12(2), 45–57.

e-Government. In Seminar Nasional Industri dan Teknologi (pp. 212-225). Fadri, Z., & Fil, S. (2024). Era Digital Dan Dampaknya Terhadap Administrasi Publik. Reformasi Birokrasi Dalam Administrasi Publik: Tantangan Dan Peluang Di Era Digital, 61.

Febrian, G., & Figueredo, G. (2024). KemenkeuGPT: Leveraging a Large Language Model on Indonesia's Government Financial Data and Regulations to Enhance Decision Making. arXiv:2407.2

Fikriyah, T. M., & Trisnaningsih, S. (2022, May). Studi Literatur Electronic Budgeting Sebagai Peningkatan Transparansi Anggaran Pendapatan Dan Belanja Daerah (APBD). In Seminar Nasional Akuntansi dan Call for Paper (Vol. 2, No. 1, pp. 17-27).

Global Initiative for Fiscal Transparency (GIFT). (2022). Guide on Advancing Fiscal Transparency for Development.

Hartono, B. (2022). Literasi Digital dan Transparansi Fiskal di Era E-Government. Jurnal

International Budget Partnership. (2022). Open Budget Survey 2021: Global Report. Washington, D.C.

International Budget Partnership. (2023). Open Budget Survey 2023: Global Report. Washington, D.C.

Kementerian Keuangan Republik Indonesia. (2022). Laporan Keuangan Pemerintah Pusat (LKPP) 2022. Jakarta.

Pabubung, M. R. (2021). Transparansi: Instrumen Menghadapi Korupsi Pengadaan Dana Desa. Journal of Politics and Government, 3(2). Lawrence, J. (2024). PENCEGAHAN TINDAK PIDANA KORUPSI DI ERA DIGITAL: PERAN DAN KESADARAN MAHASISWA. Causa: Jurnal Hukum dan Kewarganegaraan, 6(10), 1-10.

Sedarmayanti. (2019). Good Governance: Kepemimpinan dan Etika dalam Manajemen Pemerintahan. Bandung: Refika Aditama.

World Bank. (2022). Fiscal Transparency during the COVID-19 Emergency: Evidence from Country Responses. Washington, D.C.