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Exploring Factors Influencing Digital Transparency in Local Governments: Practices in Indonesia

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ABSTRACT

This study aims to analyze the factors that influence digital transparency in Indonesian local governments. The tested determinants are e-government maturity, financial report quality, and local government accountability systems. Data were collected from official websites, accountability reports, and financial reports of 541 Indonesian provincial and district/ city government. Using multiple regression analysis, this study found that e-government maturity, financial report quality, and local government accountability systems significantly positively affect digital transparency. The findings indicate that good governance practices can encourage transparency in presenting financial and non-financial information. However, this study also found that some local government websites are not fully accessible, which may hinder access to necessary data. The implications of this study emphasize the importance of developing mature e-government, improving the quality of financial reports, and strengthening accountability systems in local governments to strengthen transparency, reduce corruption, and increase government legitimacy.

Mengeksplorasi Faktor-Faktor yang Mempengaruhi Transparansi Digital di Pemerintah Daerah: Praktik di Indonesia

ABSTRAK

Penelitian ini bertujuan untuk menganalisis faktor-faktor yang memengaruhi transparansi digital di pemerintah daerah Indonesia. Determinan yang diuji adalah kematangan e-government, kualitas laporan keuangan, dan sistem akuntabilitas pemerintah daerah. Data dikumpulkan dari situs web resmi, laporan akuntabilitas, dan laporan keuangan dari 541 pemerintah provinsi serta kabupaten/kota di Indonesia. Menggunakan analisis regresi berganda, penelitian ini menemukan bahwa kematangan e-government, kualitas laporan keuangan, dan sistem akuntabilitas pemerintah daerah secara signifikan berpengaruh positif terhadap transparansi digital. Temuan ini menunjukkan bahwa praktik tata kelola yang baik dapat mendorong transparansi dalam penyajian informasi keuangan dan non-keuangan. Namun, penelitian ini juga menemukan bahwa beberapa situs web pemerintah daerah tidak sepenuhnya dapat diakses, yang mungkin menghambat akses terhadap data yang diperlukan. Implikasi dari penelitian ini menekankan pentingnya mengembangkan e-government yang matang, meningkatkan kualitas laporan keuangan, dan memperkuat sistem akuntabilitas di pemerintah daerah untuk memperkuat transparansi, mengurangi korupsi, dan meningkatkan legitimasi pemerintah.

1. Introduction

The public expects governments to exercise efficient governance to serve their interests. Efficient governance implementation enhances democratization, accountability, and transparency in managing financial and non-financial information and government operations. Effective governance principles include preventing corruption, managing budgets with discipline, and establishing a strong legal framework. These principles form the foundation for responsible development administration (Adiputra et al., 2018; Mardiasmo, 2018). The National Committee on Governance Policy (NCGP) emphasizes the urgency of openness, democracy, accountability, regulatory compliance, fairness, and equality to achieve good governance in Indonesia (Wilopo, 2017). Transparency and information disclosure build trust among stakeholders and reduce governance irregularities (Adiputra et al., 2018). The public continues to increase expectations of the government, especially regarding transparency and accountability in state financial management. Corruption's negative impact on government finances, development, and public welfare reinforces the demand for transparency. The Supreme Audit Agency (SAA) reflects this increased public demand for transparency in its assessment of central and local government financial reports. Indonesia's Minister of Finance reaffirmed the government's commitment to uphold transparency in state budget use, which is critical to ensuring efficient fund administration (Antaranews, 2021). Applying strong openness and accountability principles in state financial administration maintains effective budget management and ensures efficient and purposeful budget use (Gunawan, 2016).

The need for transparency increases when public officials engage in corruption cases. For example, the misuse of COVID-19 social assistance funds in the Greater Jakarta area involving the former minister of social affairs, and a scandal involving the Regent of Musi Banyuasin (CNN Indonesia, 2021; Kompas, 2021). These cases demonstrate the importance of upholding integrity in governance at national and local levels to prevent corruption that harms the state and society. Strong implementation of transparency and accountability principles allows for more effective management of government funds, ensuring targeted budget allocations and preventing harmful misuse. Cases of irregularities in state administration highlight the urgency of transparency in state financial management (CNN Indonesia, 2021; Kompas, 2021). These incidents demonstrate the importance of upholding integrity in governance at national and local levels to prevent corruption offenses that harm the state and society (Ceschel et al., 2022). Strong transparency standards enable more effective regulation of government fund use, ensuring targeted budget allocations and preventing harmful misuse. The government has regulated efforts to increase transparency in state financial management through the Public Information Disclosure Law. This regulation governs transparency at the local level in state administration. Minister of Home Affairs instruction No. 188-52/1797/SJ/2012 also promotes budget transparency by requiring local governments to publish relevant information on their websites (Muhtar et al., 2017). Although not all local governments provide online reports, websites facilitate easy access to public information and agency performance reports (Dwi Astuti, 2020). Governments can optimize website technology to increase transparency and public participation in monitoring local government policies and budget allocations.

Scholars increasingly explore factors that significantly influence government transparency. Adiputra et al. (2018) analyzed local government transparency by examining various factors, including local government size, quality of local financial reports, local government compliance with regulations, and the local political environment. Meanwhile, Latif et al. (2019) emphasized the importance of e-government in improving local government accountability and transparency, where e-budgeting is crucial to realizing a transparent and accountable local government (Gunawan, 2016). To identify determinants that influence local government openness levels, previous studies have adopted several theories, such as agency theory and legitimacy theory (Adiputra et al., 2018; Lněnička et al., 2021; Saraswati et al., 2019; Sofyani et al., 2022). Legitimacy theory emphasizes the urgency for the government to gain legitimacy from its stakeholders. Therefore, the government should engage in activities that align with stakeholders' expectations and requirements, which it can achieve by adopting transparency and accountability principles (Adiputra et al., 2018). Meanwhile, agency theory underlines local governments' responsibility as community representatives to fulfill community expectations (Adiputra et al., 2018). This theory relates to the concept that the public, acting as principal, delegates authority to the government, acting as agent, to improve public welfare (Saraswati et al., 2019).

This study aims to identify factors that can improve local government transparency. The studied variables include e-government system maturity, financial report quality, and accountability mechanism effectiveness. The research novelty lies in its focus on identifying digital transparency factors, which reflect recent developments in information and communication technology and its role in improving government transparency. These digital transparency factors include digital platform use, data disclosure, and online interactions between government and citizens, which researchers have not explored in depth in the context of local government in Indonesia. Additionally, this study uses a new measurement for the accountability variable. We measured accountability using a score issued by the Ministry of Administrative Reform and Bureaucratic Reform (MARBR). Using official scores from the Ministry provides a more accurate and standardized indicator to measure local government accountability levels, which previous similar studies have not used. This score covers various accountability aspects, including performance planning, measurement, reporting, internal evaluation, and achievement, providing a more comprehensive picture of local government accountability.

This research used a quantitative approach, observing local governments in Indonesia at the provincial, city, and district levels throughout 2022. Researchers will conduct regression testing with Eviews software using a sample of 541 local governments. Practically, this research aims to help local governments improve their transparency and accountability, especially in the digital era. From a theoretical perspective, the results can provide a deeper understanding of the relationship between digital transparency factors, accountability measured by the new method, and local government openness levels in the context of legitimacy theory. By integrating digital transparency factors and using more comprehensive accountability measurements from the Ministry of ARBR, this research expects to provide new insights into local government transparency and accountability dynamics in the digital era. The study results can serve as a basis for policymakers to design more effective strategies in improving local government transparency and accountability, as well as encouraging digital technology use in better governance.

2. Theoretical framework and hypotheses development

Following law number 23 of 2014 concerning regional government, the Indonesian government system currently adopts a decentralization approach, in which the central government gives authority to local governments to regulate and manage regional resources to improve local communities' welfare (Mardiasmo, 2018). Good governance is a fundamental aspect of governance. Good governance involves effective and responsible development management, emphasizing accountability, democracy, and efficiency, and budget discipline is essential in eradicating corruption (UNDP, 2008). Transparency is critical in good governance because it can build public trust in the government, increasing the effectiveness of implementing government programs and policies (Mardiasmo, 2018; Sofyani et al., 2022). Thus, efforts to increase transparency in the local government environment are significant to realize good governance as mandated by laws and regulations, which can be improved through the maturity of the e-government system, the quality of financial reports, and the effectiveness of accountability mechanisms, where a mature e-government system allows information disclosure and easy access for the public, the quality of good financial reports reflects financial performance accountability and effective accountability mechanisms can encourage openness and honesty of local governments.

Transparency is a crucial element in efficient governance as it guarantees the public's right to access and obtain information related to governance, particularly public financial management, in order to encourage the dissemination of financial information in the public sector. In Indonesia, the public information disclosure law, no. 14 of 2008 (UU KIP), provides the legislative framework governing public information management in public institutions, requiring local governments and administrators to be accountable for local governance and comply with public information disclosure standards. Information disclosure is also instructed in the minister of home affairs instruction number 188-52/1797/SJ/2012 on improving the openness and clarity of local budget management, including through the provision of related information on the respective local websites so that it can be accessed and understood by the general public (Muhtar, 2017), as well as Government Regulation of the Republic of Indonesia Number 56 of 2005 which mandates efficiency in the dissemination of information related to activities and projects organized, and Law Number 14 of 2008 on Public Information Disclosure which establishes a legal structure for local governments to disclose public information, strengthens the principle of transparency, and encourages public participation in supervision, so that collectively it can help efforts to prevent corruption (Adiputra et al., 2018).

Efforts to increase transparency in local government have attracted the attention of many researchers. Several studies have been conducted to identify factors that can encourage information disclosure at the local government level. One of the findings shows a relationship between the quality of financial reports and the level of transparency of local governments (Adiputra et al., 2018). With quality financial reports, local governments can provide more accurate and reliable information to the public. The local original income ratio is another factor that influences transparency (Wilopo, 2017). The more significant the proportion of income from the region itself, the greater the demand for transparent accountability for using these funds. Implementing e-budgeting is essential to increase accountability and transparency in regional financial management (Gunawan, 2016). An electronic budgeting system makes the budget planning, implementation and reporting process more open and accessible to the public. In addition, there is a particular study regarding the dissemination of local government financial reports via the Internet or official websites, which analyzes the extent to which local governments utilize information technology to publish financial information, thereby increasing openness and public access to this data (Guerrero-Gómez et al., 2021; Krah and Mertens, 2020; Puron-Cid et al., 2019; Trisnawati and Achmad, 2017). No less critical, the implementation of e-government has also become the focus of research concerning regional government accountability and transparency (Latif et al., 2019). By optimizing government services digitally, it is hoped that the principles of good governance, such as openness and accountability, can be better enforced.

Legitimacy theory

Legitimacy theory in accounting literature refers to the conformity of organizational activities with societal expectations, where managers must achieve optimal performance to uphold societal competence and trust (Deegan, 2019). Legitimacy is essential for organizations to meet society's expectations because organizations may face social consequences if they fail to achieve these expectations (Mathews, 1997). In order to gain support, organizational activities must be aligned with the social values of the environment. In the context of public sector organizations, including local governments, public demands are for them to improve quality, professionalism and accountability (Dowling and Pfeffer, 1975).

Legitimacy involves believing that an entity's actions conform to established social standards and norms (Suchman, 1995). Legitimacy theory can be applied to local government transparency because local governments must uphold and enhance their legitimacy by disclosing information and being accountable to the public (Deegan, 2018).

Increasing local government openness can foster a stronger relationship between government and society. This is achieved by facilitating open scrutiny and assessment of local government actions and choices, ensuring adherence to societal norms and anticipated principles (Mathews, 1997). Transparency allows the public to access the information needed to evaluate local government performance and ensure that its policies are aligned with the interests of the wider community.

Information disclosure becomes a means for local governments to gain legitimacy from the community because transparency allows the public to monitor and assess the performance of local governments, as well as ensure that local governments act following the norms and values prevailing in society so that when local governments are considered transparent and accountable, public trust and support for local governments will increase, which in turn increases the legitimacy of local governments in fulfilling their responsibilities (Dowling & Pfeffer, 1975).

Good governance

In the context of local government transparency, applying the principles of good governance is very important. This is regulated in Law Number 23 of 2014 concerning the Regional Government, which adheres to the concept of decentralization, where the central government gives authority to local governments to regulate and manage regional resources to improve local communities' welfare

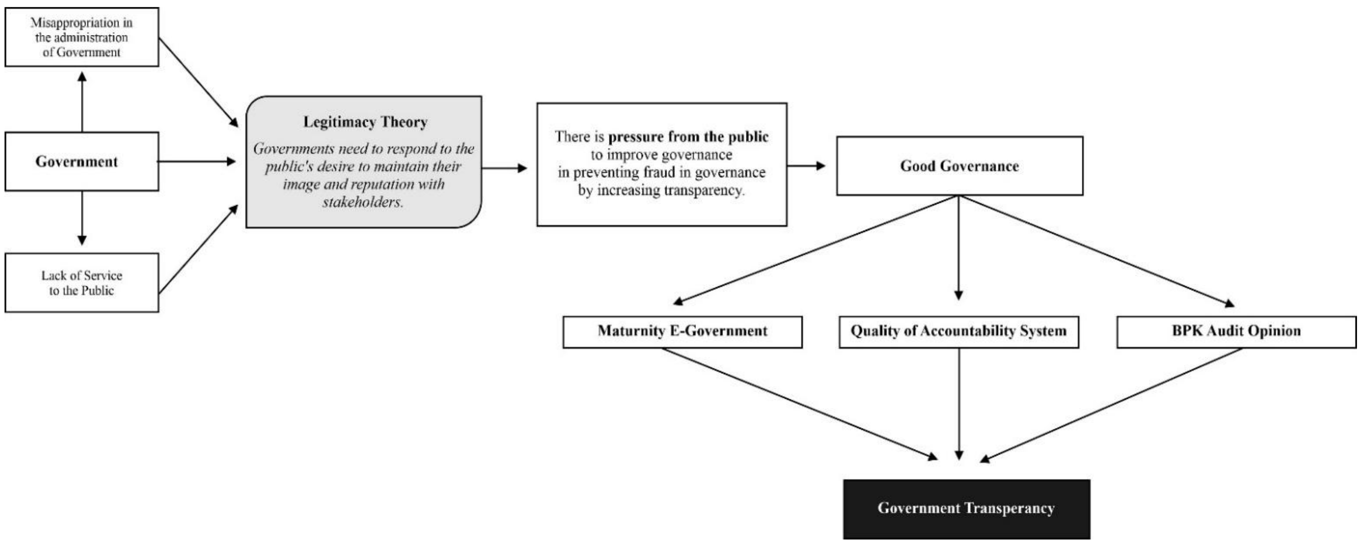

Figure 1. Conceptual framework

According to the United Nations Development Programme (UNDP), one of the main characteristics of good governance is transparency (Mardiasmo, 2018). Transparency is a crucial aspect of good governance because information disclosure allows the public to access and monitor government administration, including the management of public resources (Abdussamad et al., 2024; Febriananingsih, 2012). By applying the principle of transparency, local governments can increase accountability and credibility in the eyes of the public. This can be realized through various efforts, such as providing information related to regional financial management, implementing government programs and activities, and reporting performance regularly and openly. One of the efforts that can be made is through the publication of information on the official website of the local government so that the public can easily access the data and reports needed. When local government transparency can be improved, this will encourage the realization of good governance in the regions. The public will have greater trust in the performance of local governments and support the policies and programs implemented because they can understand and oversee the decision-making process and the use of local resources more openly (Council of Europe, 2008).

Government transparency has become a central issue in contemporary public governance discourse. Figure 1 in this study presents a comprehensive framework for understanding the factors influencing government transparency and its implications for achieving good governance. One of the main drivers of government transparency is pressure from the public to increase accountability and prevent fraud in the management of public resources (Cucciniello et al., 2017). Legitimacy theory offers a relevant theoretical lens for understanding government motivations to increase transparency. It states that organizations, including governments, have a social contract with society to act following prevailing social values, such as transparency and accountability.

However, efforts to improve government transparency are not free from challenges such as abuses in government administration and lack of quality public services. Therefore, solid factors are needed to realize adequate transparency. One of the critical enabling factors is e-government maturity, which refers to the adoption and utilization of information and communication technologies in government processes (Alshehri and Drew, 2012).

E-government can facilitate public access to information, improve service efficiency, and encourage public participation in decision-making. Furthermore, the quality of accountability systems also plays an essential role in government transparency. Effective accountability systems, such as internal and external audit mechanisms, reliable financial reporting, and legislative and civil society oversight, can ensure that governments are held accountable for their actions and decisions (Bauhr and Grimes, 2014).

Hypothesis development

Quality of local government financial accountability system

Government accountability is essential for fostering a positive relationship between government and society (Yuesti et al., 2022). Transparent disclosure of financial and non-financial information is a condition of accountability and essential for building trust and legitimacy among the parties involved. In this context, the concept of legitimacy theory is essential as it emphasizes that government public accountability is not only a legal obligation but also a means to uphold legitimacy and public trust (Dowling & Pfeffer, 1975).

An effective accountability system requires the government to disclose all its actions transparently while promoting efficiency, effectiveness and managerial responsibility in achieving organizational goals (Siriwardhane and Taylor, 2017). The government can ensure its credibility and increase public trust by implementing a solid accountability system. These measures aim to improve local government transparency by providing appropriate and easily accessible information. This is crucial in strengthening public accountability (Mardiasmo, 2018; Pratama and Imawan, 2019). Therefore, building a robust accountability framework will be the basis for government transparency, encourage clear responsibilities, and increase government and public trust. Therefore, this study proposes the following hypothesis:

H1: The quality of the accountability system has a positive effect on the level of transparency of local government.

Quality of local government financial statements

The concept of legitimacy theory is fundamental in motivating local governments to comply with the rules outlined in standardized financial reports (Dowling & Pfeffer, 1975). High-quality financial reports demonstrate the best government performance, increasing public trust in local governments. Previous research has investigated how the quality of financial statements affects local government accountability and transparency. However, the results are mixed; Wilopo (2017) found no relationship between the quality of financial reports and local government transparency. The opposite result was found by Adiputra et al. (2018), who found additional evidence indicating a relationship between the quality of financial statements and the transparency of local governments in Indonesia. This claim is supported by research conducted by Sutopo et al. (2017), which states that the quality of financial statements or audit opinions directly impacts the improvement of local government governance, which will directly increase the level of transparency of local governments in Indonesia. This study aims to investigate the correlation between financial reporting standards and the level of transparency in local governments to understand the determinants that affect the level of transparency in the public sector. Thus, this study proposes the following hypothesis:

H2: The quality of financial statements has a positive effect on the level of transparency of local governments.

E-Government maturity of local government

Legitimacy theory emphasizes the importance of government meeting the expectations of those who have given it authority, thus encouraging optimal performance. Governments have been motivated to improve the quality of e-government due to the public's need for transparency and accountability (Lakka et al., 2015). Today, local governments are engaged in a competition to improve government information systems to enable public engagement. A sophisticated e-government system can increase transparency using reliable technology (Fietkiewicz et al., 2017). Moreover, (Latif et al., 2019) conducted research that showed a direct correlation between the level of e-government maturity and transparency in local governments. In the era of globalization and digitalization, e-government can accelerate the availability of public information, improve bureaucratic efficiency, and strengthen the relationship between government and society. An efficiently integrated government information system is expected to establish a fast, accountable government that can better fulfil the needs and aspirations of the people. Effective e-government adoption can help local governments streamline public services and create a more transparent and efficient environment for all stakeholders. This research proposes hypotheses based on the data and arguments that have been outlined above:

H3: E-Government maturity has a positive effect on the level of transparency of local governments.

3. Research method

The methodology used in this study is a quantitative approach that utilises secondary data. The primary data source comes from financial reports and official websites of local governments in Indonesia. This research focuses on assessing accountability and transparency in local governments at the provincial and district/city levels implementing e-government by having official websites. Data were collected from 541 local governments, including provincial and district/city governments, fulfilling these criteria.

Table 1. Distribution data of local government levels

No	Level of government	Total	Percentage (%)
1	Province	34	6.28
2	City	93	17.2
3	District	414	76.52
	Total	541	100

Information about the local governments used in this study is presented in Table 1. One crucial requirement is that the provincial government publish a Local Government Financial Report (LKPD) for the 2022 fiscal year that has been audited by the Supreme Audit Agency (SAA) and received an opinion from the SAA. Once the data is collected, this study adopted regression analysis as the primary method to test the relationship between the variables under study. The regression analysis was be carried out using Eviews statistical software. The research model that will be used is as follows:

$$\text{TRAS} = \beta 0 + \beta 1\text{SAKT} + \beta 2\text{KLKP} + \beta 3\text{MTEG} + \beta 4\text{KYPD} + \beta 5\text{UKPD} + \varepsilon$$

Where:

TRANS : Transparency
SAKT : Accountability system quality
KLKP : Financial report quality
MTEG : E-Government maturity
KYPD : Local government wealth
UKPD : Local government size

Dependent variable

The dependent variable examined in this study is digital local government transparency, which is an important indicator to measure the extent to which information about local government activities is available to the public. Transparency is very important because it reflects the level of openness of local governments in providing access to information to the public.

The indicator assessed relates to the extent to which information regarding the administration of public resources, such as budgets, procurement of goods and services, and asset and financial management, is openly disclosed by local governments to the public. The specific indicators used in this study can be seen in Table 2.

Table 2. Digital transparency indicator

No	**Indicator**	**Point**	**Reference**
1	If the local government website can be found on the first page of a google search by typing in the name of the local government.	+1	Adiputra *et al* (2018)
2	Only three clicks or less are required to view financial and non-financial information on local government websites.	+1	
3	if financial and non-financial data can be downloaded in various formats.	+1	
4	If there is previous financial and non-financial information on government websites.	+1	
Minimum score 1 and maximum score 4			

Transparency is a crucial aspect of good governance. With transparency, the public can access information about governance and monitor the performance of local governments in managing public resources. This allows the public to participate in the decision-making process, provide input, and hold local governments accountable for their actions. In addition, transparency also plays an important role in preventing abuse of authority, corruption, and misappropriation of public resources by local government officials or employees. Therefore, transparency is an important criterion for assessing the integrity and effectiveness of local governments in carrying out their duties and functions. The higher the level of transparency, the greater the public trust in local government, and the greater the opportunity to increase accountability and public participation in local governance. Thus, this research is very relevant and important to conduct in order to evaluate and improve the quality of local governance in Indonesia.

Independent variable

This study used three independent variables, namely E-Government maturity, quality of financial reports, and quality of accountability systems, which are anticipated to influence the level of transparency in local government. The accountability system is evaluated through a ranking system managed by the Ministry of Administrative Reform and Bureaucratic Reform (MARBR), which uses the indicators detailed in Table 3. The audit opinion issued by SAA evaluates the integrity of the financial statements; it assigns a value of 1 for WTP and 0 for others. The final variable, e-government maturity, assesses the number of functions the municipality's website offers that fulfil the e-government maturity, as displayed in Table 4.

Table 3. Indicators for system accountability quality

No	Indicator	Point
1	Accountability Assessment by the Ministry of Administrative Reform and Bureaucratic Reform (MARBR) by getting a **AA rating**.	4
2	Accountability Assessment by the Ministry of Administrative Reform and Bureaucratic Reform (MARBR) by getting a **BB - A rating**	3
3	Accountability Assessment by the Ministry of Administrative Reform and Bureaucratic Reform (MARBR) by getting a **CC – B rating.**	2
4	Accountability Assessment by the Ministry of Administrative Reform and Bureaucratic Reform (MARBR) by getting a **D – C rating.**	1
Minimum score 1 and maximum score 4		

Control variable

This study incorporates control variables such as government wealth, measured using own-source revenue (OSR), and local government size, defined by total assets held. Local own-source revenue (OSR) represents the fiscal capacity of local governments to fund public programs and services. Total assets, in contrast, encompass all resources owned by the local government, including infrastructure and other assets. By including variables such as own-source revenue and total assets as control factors, researchers can gain a deeper understanding of how local government wealth and size affect transparency. This approach leads to a more comprehensive assessment of the factors influencing local government performance in Indonesia.

Table 4. Indicators of e-government maturity

No	Indicator	Point	Reference
1	Usability of catalogue on website	+1	Fietkiewicz, *et al* (2017)
2	Communication usability of the website	+1	
3	Usability of transactions on the website	+1	
4	Usefulness of interoperability (integration) on the website	+1	
5	Usability of participation on the website	+1	
	Minimum score 1 and maximum score 5		

4. Results and discussion

Descriptive analysis and correlation test

According to the statistical analysis presented in Table 5, the level of government transparency, with a mean of 1.97 and a standard deviation of 0.54, shows that most entities exhibit a satisfactory level of transparency. However, this value is still relatively low. Therefore, local governments in Indonesia should improve their level of transparency. The accountability system is considered highly accountable, evidenced by the mean score of 2.04 and standard deviation of 0.51. Financial reports show a high level of quality, as indicated by the mean score of 0.93. This indicates that most audit opinions from local governments need to be qualified (WTP). E-government maturity, with an average score of 2.19, shows a commendable level of proficiency in utilising technology to improve public services. In Indonesia, the average local government own-source revenue (PAD) is

25.74, with a relatively low standard deviation of 1.39. This suggests no significant difference in own-source revenue among local governments. On average, local governments have an asset size of 28.79 and a standard deviation of 0.76. This indicates that the distribution of local government assets is reasonably even.

Table 5. Summary statistics of main variables

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
TRAS	1.973231	2	3	1	0.535386
SAKT	2.036329	2	4	1	0.511009
KLKP	0.927342	1	1	0	0.259822
MTEG	2.193117	2	4	1	0.556217
KYPD	25.74469	25.6216	31.35927	22.30348	1.394085
UKPD	28.78706	28.6099	33.9309	27.39949	0.757422

TRANS= Transparency; SAKT= Accountability system quality; KLKP= Financial report quality; MTEG= E-Government maturity; KYPD= Local government wealth; UKPD= Local government size

Based on the results of the correlation test conducted in this study, each correlation coefficient between the variables presented in Table 6 is less than 0.8. This indicates no significant indication of multicollinearity issues to be concerned about, consistent with previous research (Gujarati, 2004; Sekaran and Bougie, 2016). In addition, it is essential to note that the Variance Inflation Factor (VIF) values consistently remained below the critical value of 10. These findings provide strong evidence against the hypothesis that multicollinearity issues are insignificant in the data set under study. As a result, these results further ensure that the fundamental hypotheses of this study regarding variable measurement and data analysis have been sufficiently fulfilled and can be reliably used to support the research results.

Table 6. Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)
(1) TRANS	1					
(2) SAKT	0.263***	1				
(3) KLKP	0.193***	0.294***	1			
(4) MTEG	0.468***	0.366***	0.097**	1		
(5) KYPD	0.344***	0.422***	0.197***	0.464***	1	
(6) UKPD	0.281***	0.363***	0.065	0.392***	0.422***	1
VIF		1.507	1.123	1.313	3.973	3.220

Notes: *** p<0.01, ** p<0.05, * p<0.1

TRANS= Transparency; SAKT= Accountability system quality; KLKP= Financial report quality; MTEG= E-Government Maturity; KYPD= Local government wealth; UKPD= Local government size

Discussion

In this study, Table 7 Panel A presents the regression analysis results. The findings show that E-Government Maturity (MTEG) has a statistically significant positive effect on Model 1, as indicated by a coefficient of 0.379 and a T-value of 9.112. Therefore, hypothesis one (H1) is accepted. Model 2 demonstrates that the quality of financial statements (KLKP) has a statistically significant positive effect, with a coefficient of 0.255 and a T-value of 2.953. Consequently, hypothesis two (H2) is accepted. The Quality of Local Government Accountability System (SAKT) shows a statistically significant positive effect on Model 3, with a coefficient of 0.121 and a T-value of 2.398. As a result, the third hypothesis (H3) is proven correct. In Model 4, all independent variables have a positive effect on the level of local government transparency. The consistent positive effect of the government wealth control variable (KYPD) across all research models indicates that the results can be considered reliable. In contrast, local government size (UKPD) did not consistently show a statistically significant effect across all models.

Table 7. Multivariate analysis

Panel A. Main regression				
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
	Coeff. (T-Value)	***Coeff. (T-Value)***	***Coeff. (T-Value)***	***Coeff. (T-Value)***
SAKT			0.121**	0.192*
			(2.398)	(1.787)
KLKP		0.255***		0.260***
		(2.953)		(3.147)
MTEG	0.379***			0.374***
	(9.112)			(8.939)
KYPD	0.071**	0.117***	0.102***	0.241***
	(2.668)	(4.104)	(3.367)	(2.716)
UKPD	0.029	0.005	0.013	0.017
	(0.618)	(0.113)	(0.263)	(0.366)
Obs.	541	541	541	541
Adjusted R^2	0.229	0.127	0.1277	0.255
F-Stat	24.432	25.519	25.342	35.422
Prob (F-Stat)	0.000	0.000	0.000	0.000
Panel B. Additional test				
Variable		**DISTRICT**	**CITY**	**PROVINCE**
		Coeff. (T-Value)	***Coeff. (T-Value)***	***Coeff. (T-Value)***
SAKT		0.167***	0.020	0.442*
		(3.207)	(0.173)	(1.800)
KLKP		0.370***	0.008	0.456
		(4.376)	(0.739)	(0.815)
MTEG		0.364***	0.355***	0.686***
		(7.692)	(3.671)	(3.890)
KYPD		1.512*	4.380	0.325*
		(1.655)	(0.338)	(1.733)
UKPD		0.181***	0.202**	0.334
		(2.988)	(1.979)	(1.515)
Obs.		414	93	34
Adjusted R^2		0.196	0.184	0.137
F-Stat		32.278	7.785	6.427
Prob (F-Stat)		0.000	0.000	0.000

Notes: *** p<0.01, ** p<0.05, * p<0.1

TRANS= Transparency; SAKT= Accountability system quality; KLKP= Financial report quality; MTEG= E-Government Maturity; KYPD= Local government wealth; UKPD= Local government size

The results indicate that the level of information disclosure by local governments is dependent on the quality of their accountability systems. Local governments can achieve greater openness through online access to public information, provided they have a robust accountability framework (Auditya et al., 2013). This increased transparency can strengthen public trust in government while reducing corruption and abuse of power. Effective governance and public participation in decision-making processes necessitate a high level of transparency. Legitimacy theory emphasizes the importance of governments demonstrating clear and measurable accountability to maintain public trust (Dowling & Pfeffer, 1975). By taking responsibility for their decisions and actions, governments can enhance their legitimacy and garner wider public support. The provision of public information in an accountable manner reflects the democratic principles that underpin governmental authority. Local governments can improve public service engagement, trust, and efficiency by providing access to transparent and accountable information (Siriwardhane & Taylor, 2017). Consequently, implementing systematic measures to enhance accountability systems can support transparency, strengthen the relationship between government and society, establish a foundation for good governance, and increase participation in decision-making processes that impact the sustainability of democracy.

This study also found that the quality of reports has a positive effect on the level of transparency in local governments. Good report quality is reflected in the audit opinion issued by the supreme audit agency (SAA). An unqualified opinion from the SAA indicates conformity with standards and the absence of material errors in local government financial reports. This level of compliance can increase public trust, aligning with legitimacy theory (Nor et al., 2019) The central government regulates information disclosure through laws and regulations, which reflects optimal performance and legal compliance. Research shows that the quality of financial reports influences the transparency of local governments in Indonesia, consistent with previous findings (Adiputra et al., 2018). High-quality financial reports signal compliance with standards, thereby strengthening public trust and fostering positive relationships between local governments and the community. Information disclosure in accordance with the public information disclosure act (UU KIP) is crucial for enhancing public trust and improving information accessibility.

The maturity of e-government was found to have a positive effect on the level of transparency in local governments. The development of local government e-government systems is crucial in supporting and facilitating various administrative needs. Beyond administrative facilitation, mature and established e-government systems can serve as effective tools for increasing public information transparency (DeLone and McLean, 1992). With websites equipped with advanced features, local governments can openly publish their financial and non-financial activities. This allows the public to access information quickly and transparently from any location and at any time, provided they have an internet connection (Chan et al., 2021). This finding aligns with research by Latif et al. (2019), which revealed that the level of e-government maturity can positively impact the transparency of local governments. Mature e-government implementation is known to support increased transparency in presenting information about local government activities (Gunawan, 2016). These findings have important implications for the development of government e-government systems. The more mature the local government's e-government system, the higher the level of transparency that can be achieved (Waheduzzaman and Khandaker, 2022). With the ease of accessing information from various locations and at any time through internet-connected devices, local governments need to take decisive steps in designing policies that support the enhancement of e-government. This will enable the wider community to experience improved services.

This research contributes to understanding the factors that influence local government transparency in Indonesia. A comprehensive approach that combines analyses of e-government maturity, financial report quality, and accountability systems has provided a more thorough perspective. The novelty of this study lies in the measurement of the accountability system using scores issued by the Ministry of PAN-RB. The results show that the better the local government accountability system, as evidenced by high ratings from the Ministry of PAN-RB, the higher the level of local government transparency. The practical implications of these findings include several recommendations. First, local governments need to develop a comprehensive strategy to improve transparency, which should include strengthening accountability systems, improving the quality of financial reports, and developing e-government. Second, local governments need to invest in financial management systems and staff training to improve SAA audit results. Third, local governments should prioritize the development of more advanced e-government systems, including integrated online platforms, interactive features, and mobile applications to enhance citizen engagement. Fourth, local governments need to implement digital literacy programs to maximize the utilization of e-government services by the public. This research also strengthens the understanding of transparency initiatives as a strategic effort to increase public trust and government credibility, in line with legitimacy theory. For future research, it is recommended to examine the long-term impact of these transparency initiatives on citizen engagement, government performance, and democratic participation. In addition, comparative studies across regions or countries can help identify universal principles and contextual factors in achieving optimal government transparency.

Additional test

Extensive regression tests were conducted at each local government level to ascertain the impact of these factors on district, city, and provincial transparency levels, as shown in Table 7 panel B. District Accountability System (SAKT) has a significant effect on transparency, indicating that a robust accountability system can improve local government transparency. Quality district government financial reports (LKPK) are essential to ensure proper and reliable financial reporting, which in turn will improve transparency. The maturation of e-government (MTEG) in the regions improves government-community interaction through good information technology in government administration. This includes effectively disseminating public information, speeding up services, and strengthening transparency in local government decision-making. The importance of government financial reports (LKPP) and the maturity level of information and communication technology (ICT) are critical, especially in urban areas. An effective LKPP (Local Government Financial Management and Reporting System) ensures the generation of appropriate financial reports, thus promoting transparency.

Nevertheless, the level of e-government maturity in the city shows that effective utilisation of information technology in government administration can improve transparency, facilitate access to public information, and optimise service efficiency. Improving e-government maturity (MTEG) at the provincial level can increase government transparency by increasing the availability of public information and fostering a culture of openness in decision-making processes. While the emphasis on transparency at the provincial level may not directly prioritise the quality of accountability systems (SAKT) and financial reports (LKPK), policymakers can improve local government transparency and accountability by considering these variables according to the needs and context of each region.

5. Conclusions

This paper provides a comprehensive analysis of the relationship between e-government maturity, financial report quality, and local government accountability systems concerning the level of information disclosure in the Indonesian government. As information technology becomes essential in many areas of life, including government, it is imperative to prioritise the accessibility, accuracy and transparency of information provided by the government to the public. This study examines the relationship between financial reports and official websites of local governments to understand how they affect the openness of these administrations. The results show that local governments that can improve their e-government maturity, produce high-quality financial reports, and build robust accountability systems tend to be more transparent in sharing information with the public.

A more comprehensive study shows that at the district level, the effectiveness of the accountability system, the accuracy of financial reports, and the level of e-government development have a considerable influence on local government disclosure. Strong accountability systems and comprehensive financial reports at the district level are essential to ensure the provision of appropriate information. In contrast, the level of e-government maturity helps expand the availability of public information. At the city level, improved transparency is strongly influenced by the quality of financial reports and the level of e-government maturity. On the other hand, at the provincial level, government transparency is mainly strengthened by e-government maturity, although the quality of accountability systems and financial reports could be more prominent. A thorough understanding of these characteristics provides essential insights for effective policies that improve openness and accountability in local governments, taking into account the specific conditions in each location.

The practical implications of this research are highly relevant for local governments in Indonesia. In addition to emphasising the importance of developing information technology through mature e-government, local governments also need to give equal focus to improving the quality of financial reports and strengthening accountability systems. These strategic measures to improve transparency and accountability will strengthen the relationship between government and society, reduce corruption, and strengthen the foundation of the government's overall legitimacy. In addition to practical implications, this research also has theoretical implications, namely expanding the understanding of how accountability, transparency and community participation are intertwined and reinforce each other in good governance. As such, this research provides practical insights for local government stakeholders and substantially contributes to theory development related to accountability, transparency and governance at the local level.

In addition, this study has limitations experienced by the author and can influence the study's results, namely related to data availability. Some local government websites cannot be accessed, making it difficult to obtain some financial and non-financial data needed. This limited access condition can affect the completeness and accuracy of the data used in the study and potentially impact the results of the analysis and conclusions obtained. As for the suggestions from this study, for future research, it is suggested that adding several variables that can affect transparency and accountability. In addition, the scope of research is expected to be limited to provincial and district/city governments and the Regional Work Unit level.

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