

RESEARCH ARTICLE

GOVERNANCE QUALITY AND SUSTAINABLE DEVELOPMENT: THE MEDIATING ROLE OF ACCOUNTABILITY IN LOCAL GOVERNMENT PERFORMANCE

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—Abstract—

Effective governance quality is widely acknowledged as a crucial factor influencing sustainable development and the efficiency of institutions within the public sector. This

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research investigates how transparency, e-government, and governmental capacity affect sustainable development performance, with accountability functioning as a mediating factor in local government contexts. Employing a quantitative methodology, data were obtained from local government officials via structured questionnaires and analysed using Structural Equation Modelling (SEM). The results indicate that transparency, e-government, and government capacity substantially reinforce accountability. Subsequently, accountability exerts a positive effect on sustainable development performance and mediates the link between governance quality and development outcomes. From an institutional standpoint, robust accountability mechanisms can mitigate information asymmetries and strengthen internal control procedures, thereby fostering more effective performance in the public sector. These findings imply that governance reforms incorporating digitalisation, transparency measures, and capacity enhancement can improve development outcomes through more reliable accountability frameworks. Consequently, policymakers should emphasise strategies for governance strengthening to advance sustainable development objectives at the local government level.

Keywords: E-Government; Accountability; Transparency; Government Capability; Government Performance.

INTRODUCTION

Institutional quality is extensively acknowledged in economic scholarship as a key determinant of development outcomes and long-term sustainability (Han, 2020). Within the public sector, governance structures determine how resources are distributed, monitored, and utilised to achieve developmental objectives. Deficiencies in governance may give rise to information asymmetries, agency problems, and inefficient resource allocation, ultimately limiting sustainable development results. Therefore, enhancing governance quality is central not only to administrative reform but also to improving institutional efficiency and the effectiveness of development initiatives. Under the Sustainable Development Goals (SDGs) framework, local governments assume a pivotal role in translating national development strategies into actionable programmes and budgetary decisions. The success of SDG implementation relies not only on sound policy design but also on the robustness of governance mechanisms that regulate transparency, digital administration, and institutional capacity. Transparency mitigates information asymmetry between public officials and stakeholders, thereby strengthening oversight and curbing opportunistic conduct (Zein & Septiani, 2025). E-government facilitates administrative efficiency and lowers transaction costs in the delivery of public services (Wirtz & Daiser, 2017). Government capacity reflects the institutional competence to manage resources, implement policies, and coordinate development initiatives effectively (Acharya, 2018; Avellaneda, 2017; Fukuyama, 2013).

From the perspective of agency theory, accountability operates as a mechanism to reduce agency costs arising from the principal–agent separation between citizens and public officials (Jensen & Meckling, 2019). Effective accountability systems improve monitoring processes, reinforce internal controls, and increase the probability that public resources are allocated in line with developmental priorities. In this regard, accountability serves as an institutional conduit through which governance quality is converted into enhanced development outcomes and greater efficiency in public sector management. Although existing empirical research has explored the association between governance quality and public service outcomes (Martínez-Córdoba et al., 2020), limited studies have examined accountability as a mediating factor linking governance dimensions—such as transparency, e-government, and government capacity—to sustainable development performance at the local government level. Investigating this mediating role is crucial as it elucidates how governance reforms may shape development outcomes through institutional mechanisms that strengthen oversight and internal control.

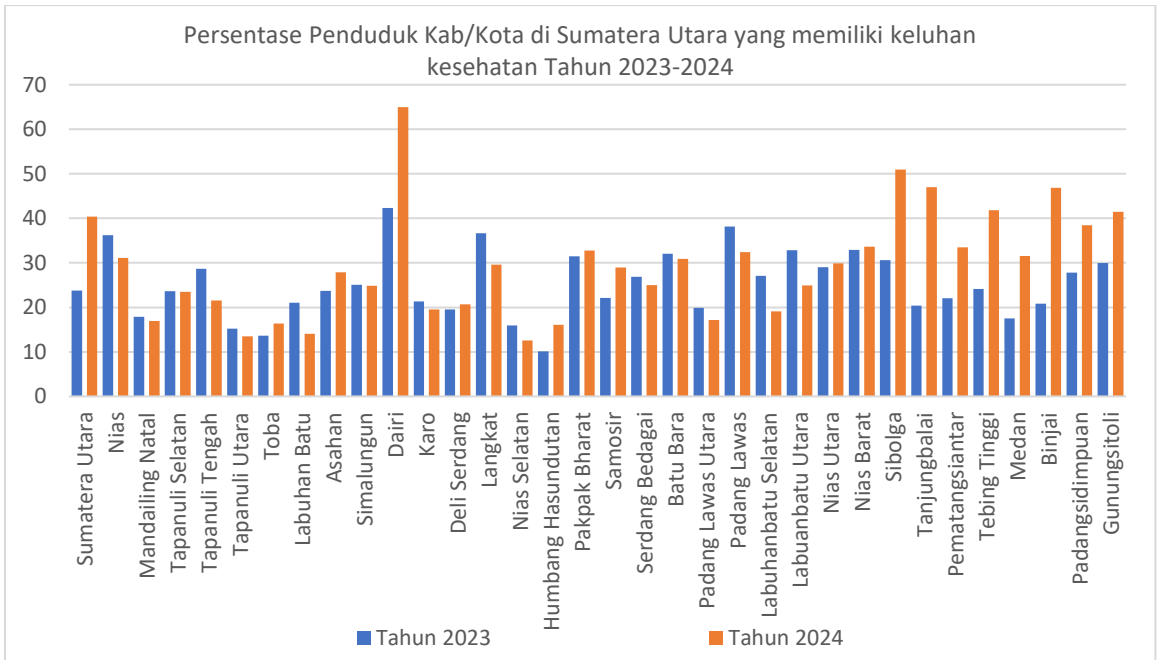


Figure 1: Percentage of Health Injuries in Regency/City Community in Sumatera Province

Source: Central Statistics Agency of North Sumatra

As depicted in Figure 1, this research conceptualises governance quality as encompassing transparency, e-government, and government capacity. It is hypothesised that these components affect sustainable development performance, with accountability acting as an intervening variable. The suggested structural relationships are illustrated in Figure 2.

Gini Ratio Sumatera Utara, Tahun 2020 - 2024

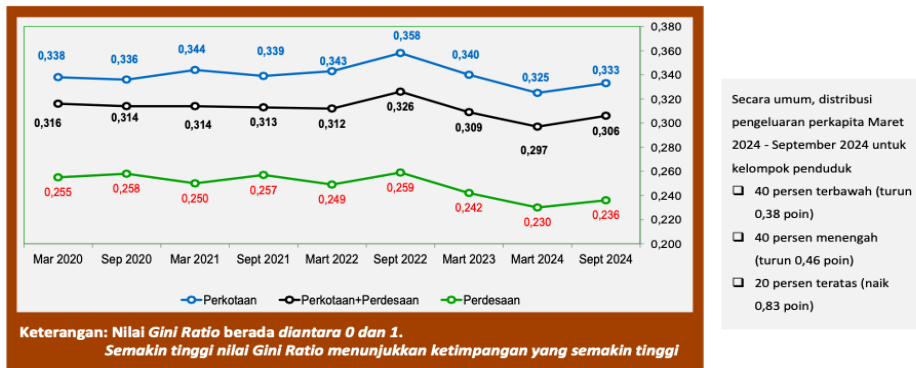


Figure 2: Gini Ratio of North Sumatra 2020-2024

Source: Central Statistics Agency of North Sumatra

This research makes two principal contributions to the literature. First, it advances the study of institutional and public governance by framing accountability as an economic governance mechanism that connects institutional quality with development performance. Second, it provides practical insights for policymakers, fiscal authorities, and local government administrators by emphasising the need to strengthen governance systems to facilitate effective resource management and achieve sustainable development goals. By integrating governance theory with an institutional economic perspective, the study offers a more nuanced understanding of how governance reforms can improve development outcomes at the local level. The structure of the paper is as follows. Section 2 reviews the relevant literature and formulates the research hypotheses. Section 3 outlines the research methodology and data analysis procedures. Section 4 presents the empirical findings and discussion. Section 5 concludes with policy implications and suggestions for future research.

The study investigated the mediating role of accountability in the relationship between governance quality—represented by transparency, e-government, and government capacity—and sustainable development performance in local government contexts. The results indicate that governance mechanisms significantly enhance accountability, which in turn positively influences sustainable development performance. The mediation analysis demonstrates that accountability operates as an institutional channel through which governance reforms translate into improved development outcomes. Theoretically, these findings corroborate arguments from institutional economics that institutional quality is critical in shaping development performance (Robinson & Acemoglu, 2012; North, 1990). Consistent with agency theory, accountability mechanisms mitigate information asymmetry and reduce agency problems between public officials and (Jensen & Meckling, 2019). By reinforcing monitoring systems and internal controls, accountability may improve institutional effectiveness and strengthen the management of public programmes.

The findings align with prior empirical research showing that transparency and digital governance contribute to enhanced public sector performance (Alt & Lassen, 2006; Lee et al., 2012). However, this study extends earlier work by empirically demonstrating that governance dimensions do not act in isolation; rather, their effect on sustainable development performance is amplified through accountability mechanisms. This underscores the importance of integrated governance reforms that combine transparency initiatives, digital transformation, and capacity-building efforts. From a policy perspective, local governments should prioritise reinforcing accountability alongside transparency and e-government measures. Such integration can improve oversight, enhance coordination, and enable more efficient utilisation of public resources in pursuit of sustainable development goals. While this study relies on perceptual indicators, the findings suggest a strong association between governance quality and institutional effectiveness in development implementation. Nevertheless, there are limitations. The use of self-reported perceptual measures may not fully reflect objective fiscal efficiency or macroeconomic performance. In addition, the cross-sectional research design limits causal inference regarding the relationships observed. Future research should employ longitudinal approaches and incorporate objective financial or economic indicators, such as budget efficiency metrics or regional economic performance data, to provide a more comprehensive evaluation of the governance–development relationship.

Overall, this study contributes to the understanding of governance and institutional processes by clarifying the mediating function of accountability in enhancing sustainable development performance at the local level. By combining governance theory with an institutional economic lens, it provides insights into how strengthened accountability systems can foster more effective and sustainable public sector performance. Despite its contributions, the study acknowledges several limitations, including the reliance on perceptual data, which may introduce response bias, and the cross-sectional nature of the dataset, which restricts causal interpretation. Future investigations employing longitudinal data and objective financial or economic indicators would offer a more robust understanding of the governance–development nexus. The study primarily utilises perceptual measures to assess governance quality, accountability, and development performance. While these measures capture internal institutional practices, they may not fully reflect fiscal efficiency or broader economic outcomes. Subsequent research should integrate financial and economic metrics, such as budget execution ratios, capital expenditure efficiency, or regional growth indicators, to validate and extend the current findings.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Institutional Quality and Sustainable Development

Institutional economics highlights the central importance of institutional quality in

determining economic performance and long-term development outcomes (Robinson & Acemonglu, 2012; North, 1990). Robust governance structures mitigate uncertainty, reduce transaction costs, and promote more efficient allocation of public resources. In the realm of sustainable development, the quality of governance shapes the formulation, implementation, and oversight of development programmes. Empirical cross-country studies employing panel regression techniques have shown that governance indicators are closely linked to development performance. Likewise, (Rajkumar & Swaroop, 2008) using cross-country regression analyses, reported that public expenditure yields more significant development gains in countries with stronger institutional frameworks. These results indicate that governance mechanisms enhance development effectiveness by reinforcing institutional arrangements. Nonetheless, much of the existing research has concentrated on macro-level perspectives and direct relationships. There remains limited investigation into governance mechanisms at the local government level, particularly regarding the mediating function of accountability in connecting governance quality with sustainable development performance. This study seeks to fill this gap by combining institutional theory with mediation analysis within a local government context.

Transparency and Accountability

Transparency denotes the extent to which information on government decisions and financial management is openly available and accessible. According to agency theory, transparency diminishes information asymmetry between public officials (agents) and citizens (principals), thereby alleviating potential agency conflicts (Jensen & Meckling, 2019). Empirical research underscores the role of transparency in enhancing institutional performance. Alt and Lassen (2006), analysing panel data from OECD countries, observed that greater fiscal transparency is linked to reduced public debt levels. Ríos et al. (2022), using regression techniques, found that higher budget transparency contributes to improved fiscal performance and strengthens public sector discipline. At the organisational level, SEM-based studies indicate that transparency positively affects accountability mechanisms and overall performance outcomes. Drawing on these theoretical and empirical insights, transparency is anticipated to reinforce accountability systems within local governments.

H1: *Transparency positively affects accountability.*

E-Government and Accountability

E-government encompasses the application of information and communication technologies to improve public administration processes and the delivery of services. Digital governance systems help reduce bureaucratic inefficiencies, strengthen monitoring, and lower transaction costs in administrative operations (Heeks, 2006). Empirical research employing survey-based regression models and SEM has explored the impact of e-government on governance outcomes. According to Lee et al., (2012),

using regression analysis, reported that implementing e-government enhances public trust and administrative effectiveness. Similarly, suggests that digital governance bolsters participatory mechanisms and oversight capabilities. From both a public finance and institutional perspective, digitalisation improves the efficiency of monitoring and increases institutional responsiveness. Nevertheless, there is limited research that directly examines accountability as a mediating mechanism linking e-government to development performance at the local government level. Consequently, this study proposes:

H2: *E-government positively affects accountability.*

Government Capacity and Accountability

Government capacity refers to the institutional and managerial competence required to design, implement, and enforce policies effectively (Fukuyama, 2013; Grindle, 1997). Robust administrative capacity improves coordination, financial oversight, and the execution of policy initiatives. Empirical evidence from cross-sectional and panel data studies indicates that higher institutional capacity is positively linked to enhanced public service delivery and improved development outcomes (Fukuyama, 2013). Additionally, (Rajkumar & Swaroop, 2008) demonstrate that stronger institutional quality increases the effectiveness of public expenditure. From the standpoint of economic governance, greater institutional capacity minimises inefficiencies in resource management and reinforces internal control systems. Such institutional enhancement is anticipated to strengthen accountability mechanisms.

H3: *Government capacity positively affects accountability.*

Accountability and Sustainable Development Performance

Accountability denotes the responsibility of public officials to report, explain, and justify their actions to relevant stakeholders. Within agency theory, accountability mechanisms serve to lower agency costs and improve organisational performance (Jensen & Meckling, 2019) Empirical research using SEM and regression techniques demonstrates that accountability is positively associated with public sector performance and the quality of service delivery. According Kaufmann et al. (2010) reported that governance indicators related to accountability correlate with better development outcomes at the national level. Likewise, studies in public administration indicate that robust accountability systems strengthen the effectiveness of policy implementation. From the perspective of institutional economics, accountability reinforces credible commitment and fortifies institutional stability, both of which are critical for sustainable development (North, 1990). Accordingly, the following hypothesis is proposed:

H4: *Accountability positively affects sustainable development performance.*

The Mediating Role of Accountability

While previous studies have established the direct links between governance dimensions and development performance, few have investigated accountability as a mediating mechanism within a comprehensive governance framework, particularly at the subnational level. Mediation analysis using SEM allows for the examination of indirect effects and clarifies the pathways through which governance mechanisms impact performance outcomes. From a theoretical standpoint, transparency, e-government, and government capacity strengthen monitoring processes and mitigate agency problems, thereby reinforcing accountability. Enhanced accountability subsequently converts improvements in governance quality into superior development performance. This mediation perspective provides insight into why governance reforms may yield inconsistent outcomes: in the absence of robust accountability systems, advancements in transparency or digitalisation may not translate into tangible development improvements. Consequently, this study proposes:

H5: *Accountability mediates the relationship between governance quality (transparency, e-government, and government capacity) and sustainable development performance.*

RESEARCH METHODOLOGY

Research Design

This research utilises a quantitative design to investigate the mediating function of accountability in the relationship between governance quality—which includes transparency, e-government, and government capacity—and sustainable development performance. Primary data were gathered from local government officials through a cross-sectional survey. Structural Equation Modelling (SEM) was employed to assess the hypothesised relationships and mediation effects, as SEM is well-suited for simultaneously analysing complex interactions among latent constructs (Hair et al., 2019; Kline, 2016).

Population and Sample

The study population comprised officials employed in local government institutions who are directly engaged in financial management, development planning, and administrative activities. These respondents were chosen due to their relevant expertise and familiarity with governance practices and accountability mechanisms within their organisations. A purposive sampling method was employed to ensure that only individuals occupying appropriate institutional roles were included in the study (Sekaran & Bougie, 2016). A total of [insert number] questionnaires were distributed, yielding [insert number] valid responses and a response rate of [insert %]. The final sample size meets the minimum requirements for SEM analysis, which recommends at

least 5–10 observations per estimated parameter or a minimum of 100–200 observations to achieve stable model estimation (Hair et al., 2019; Kline, 2016).

Instrument Development and Measurement

The research instrument was designed drawing on established theoretical frameworks and prior empirical studies within the governance and public administration literature. Measurement items were adapted from validated scales and tailored to the local government context to ensure content validity (DeVellis & Thorpe, 2021). The questionnaire comprised five principal constructs:

- Transparency ([X] items)
- E-government ([X] items)
- Government capacity ([X] items)
- Accountability ([X] items)
- Sustainable development performance ([X] items)

All constructs were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), a method commonly employed in governance and organisational research (Sekaran & Bougie, 2016). Transparency was evaluated through indicators addressing the accessibility and openness of information. E-government captured the degree to which digital systems are implemented in administrative procedures. Government capacity reflected both institutional competence and managerial effectiveness. Accountability measured mechanisms for reporting, monitoring, and responsibility. Sustainable development performance assessed respondents' perceptions of effectiveness in achieving development goals.

Data Collection Procedure

Data were collected during [insert month and year] using structured questionnaires administered both electronically and in printed format. Before conducting the main survey, a pilot study involving [insert number] respondents was carried out to evaluate the clarity, reliability, and relevance of the instrument (DeVellis & Thorpe, 2021). Feedback from this pilot was utilised to refine item phrasing and enhance measurement quality. Participation was voluntary, and respondents were assured of confidentiality and anonymity to mitigate social desirability bias and promote candid responses. These procedural measures were implemented to minimise potential common method bias (Podsakoff et al., 2012).

Validity and Reliability Assessment

The measurement model was assessed prior to testing the hypotheses. Convergent validity was examined through factor loadings and Average Variance Extracted (AVE), with factor loadings above 0.70 and AVE values exceeding 0.50 considered indicative

of satisfactory convergent validity (Hair et al., 2019). Internal consistency reliability was evaluated using Cronbach's Alpha and Composite Reliability, where values of 0.70 or higher denote acceptable reliability (Hair et al., 2019; Nunnally & Bernstein, 1994). Discriminant validity was assessed using the Fornell–Larcker criterion and cross-loading analysis to confirm that each construct was empirically distinct (Fornell & Larcker, 1981). To evaluate potential common method variance, Harman's single-factor test was conducted. The findings revealed that no single factor accounted for the majority of variance, indicating that common method bias is unlikely to compromise the validity of the results (Podsakoff et al., 2012).

Data Analysis Technique

Structural Equation Modelling (SEM) using [PLS-SEM / CB-SEM] was applied to examine both direct and indirect relationships among the study variables. SEM enables the simultaneous estimation of multiple interrelated paths and is especially suitable for mediation analyses involving latent constructs (Hair et al., 2019; Kline, 2016). The analysis was conducted in two stages:

1. Evaluation of the measurement model (validity and reliability testing).
2. Evaluation of the structural model (hypothesis testing and mediation analysis).

Bootstrapping with [insert number, e.g., 5,000] resamples was conducted to evaluate the statistical significance of path coefficients and indirect effects. The mediating role of accountability was examined through analysis of indirect effects and confidence interval estimation, in accordance with recommended SEM procedures for mediation testing (Hair et al., 2019). Model explanatory power was assessed using the coefficient of determination (R^2), while effect size (f^2) and predictive relevance (Q^2) were calculated to evaluate the robustness of the structural model. Although the study utilises perceptual indicators, these measures capture institutional practices and governance mechanisms that shape the implementation of development programmes. Future studies could complement perceptual data with objective fiscal or macroeconomic measures to further validate the relationship between governance and development. This research adopts a causal approach, aiming to identify the causal relationships among variables. Typically, causal research allows the researcher to specify independent, mediating, and dependent variables. In this study, accountability is examined as a mediating variable linking transparency, e-government, and government capacity to the performance of the North Sumatra Provincial Government. Primary data were used because the variables of interest cannot be directly observed or are difficult to measure. Therefore, operationalisation was necessary to convert the dimensions and indicators of these variables into observable measures. The study population consists of regional government agencies (OPD) in North Sumatra Province. The sample includes Bappeda (Regional Development Planning Agency), BPKAD (Regional Financial and Asset Management Agency), and Inspectorates across 33 Regencies/Cities in the province.

RESULT AND DISCUSSION

Descriptive Statistics and Measurement Model

Table 1 displays the descriptive statistics for the study variables. The mean scores suggest that respondents perceive governance quality, accountability, and sustainable development performance to be implemented at a relatively high level within local government institutions. These results indicate that governance reforms have been integrated into institutional practices to some extent.

Table 1: Descriptive Statistic

Variable	N	Mean	St. Deviation	Conclusion
Transparency	283	3,89	0,87	High
E-Government	283	4,08	0,78	High
Government Capacity	283	3,84	0,92	High
Accountability	283	4,22	0,72	Very High
Local Government Performance	283	4,01	0,83	High

Source: PLS Processed (2025)

The evaluation of the measurement model is summarised in Table 2. All factor loadings surpass the recommended threshold of 0.70, and the AVE values exceed 0.50, demonstrating satisfactory convergent validity (Hair et al., 2019). The AVE test results for this study are presented in Table 2.

Table 2: Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)	Critical Point	Conclusion
X1 T	0,708	0,5	Reliable
X2 EG	0,708	0,5	Reliable
X3 KP	0,691	0,5	Reliable
Y KIN	0,831	0,5	Reliable
Z AK	0,840	0,5	Reliable

Source: PLS Processed (2025)

The AVE test results indicate that all variables exhibit AVE values above the established threshold of 0.50. Meeting this criterion suggests that the variables are valid and reliable for inclusion in subsequent analyses. Cronbach's Alpha and Composite Reliability values exceed 0.60, confirming satisfactory internal consistency. Discriminant validity evaluated using the Fornell–Larcker criterion, shows that each construct is empirically distinct. The AVE test results for this study are presented in Table 3.

Table 3: Cronbach Alpha's Test Result

Variable	Cronbach's alpha	Critical Point	Conclusion
Transparency (X1)	0,949	0,6	Reliable
E-Government (X2)	0,954	0,6	Reliable

Government Capacity (X3)	0,975	0,6	Reliable
Accountability (Z)	0,993	0,6	Reliable
Local Government Performance (Y)	0,984	0,6	Reliable

Source: PLS Processed (2025)

The Cronbach’s Alpha results show that all variables surpass the 0.6 threshold, indicating an acceptable level of reliability. This confirms that the measures can be considered dependable for assessing the inner model.

Structural Model and Hypothesis Testing

Outer Model Test

The assessment of the outer model commenced with parameter estimation using the Partial Least Squares (PLS) method. As noted by, an indicator is considered valid if its factor loading exceeds 0.70. Loadings between 0.50 and 0.60 may still be acceptable under specific circumstances, particularly in exploratory research. Indicators with loadings below 0.50, however, should be removed from the model as they are deemed inadequate for measuring the intended construct. The loading values for each indicator across all variables, derived using the PLS Algorithm, are presented in Figure 4.

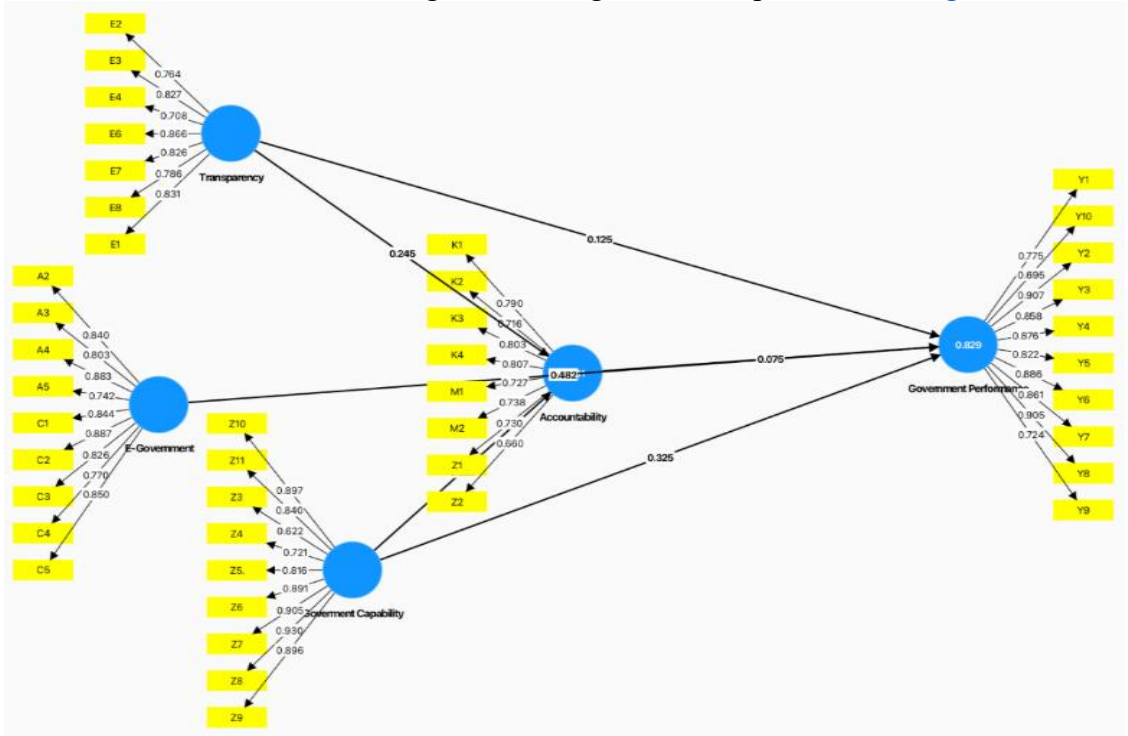


Figure 3: Validity Test Results Based on Outer Loading

As shown in Figure 4, all indicator items are deemed valid, as each exhibits a factor loading above 0.70, satisfying the criteria for convergent validity. Therefore, all

indicators are considered appropriate and can be employed in this study to measure the corresponding constructs.

Reliability Test

Construct reliability in PLS analysis can be assessed using two metrics: Cronbach's Alpha and Composite Reliability. A latent construct is considered to demonstrate satisfactory reliability if both Cronbach's Alpha and Composite Reliability values exceed 0.70. This indicates that the indicators within the construct are consistent and dependable for measuring the intended variables.

Table 4: Construct Reliability and Validity

	Transparency	E-Government	Government Capability	Accountability	Government Performance
Cronbach's Alpha	0,865	0,888	0,896	0,994	0,898
rho A	0,977	0,898	0,966	0,981	0,899
Composite Reliability	0,988	0,981	0,891	0,994	0,991

Source: PLS Processed (2025)

The results of the data analysis show that Cronbach's Alpha and Composite Reliability values for all latent variables exceed 0.70. This demonstrates that each latent variable in the study satisfies the reliability criteria and can be considered dependable.

Mediation Testing (Indirect Effect)

Mediation analysis (indirect effects) was conducted to examine whether transparency, e-government, and government capacity influence government performance. Specifically, this analysis evaluates whether the effects of transparency, e-government, and government capacity on government performance are transmitted through accountability. Based on [Table 5](#), the indirect effect of transparency on government performance via accountability is 1.931 with a p-value of 0.027.

Table 5: Indirect Effect Test Significance Test

Relationship	Indirect Effect	P Value	Conclusion
Transparency -> Accountability-> Government Performance	1.931	0.027	Accepted
E-Government-> Accountability-> Government Performance	2.584	0.005	Accepted
Government Capability -> Accountability-> Government Performance	0.750	0.227	Rejected

This indicates that accountability significantly mediates the relationship between transparency and government performance. The findings suggest that transparency not only exerts a direct effect but is more effective in enhancing government performance

when supported by robust accountability mechanisms. Therefore, accountability serves as a critical mechanism that reinforces the link between transparency and government performance.

Coefficient of determination (R^2)

The coefficient of determination (R^2) shows that the governance variables account for a significant portion of the variance in both accountability and sustainable development performance. The results of the structural model are summarised in [Table 6](#).

Table 6: Result of Coefficient of Determination Test (R^2)

Construct	Variable	Adj. R-Square	Criteria
Local Government Performance (Y)	Transparency (X1)	0,736	Moderate
	E-Government (X2)		
	Government Capacity (X3)		
	Accountability (Z)		
Accountability (Z)	Transparency (X1)	0,768	Moderate
	E-Government (X2)		
	Government Capacity (X3)		

Source: PLS Processed (2025)

The Coefficient of Determination (R^2) for Government Performance indicates that variations in Transparency (X1), E-Government (X2), Government Capacity (X3), and Accountability (Z) collectively explain 0.736, or 73.6%, of the variance in the Government Performance (Y) construct. This R^2 value represents a moderate level, suggesting that the model predicts the performance of the North Sumatra Government with reasonable accuracy. Similarly, the R^2 for Accountability (Z) shows that variations in Transparency (X1), E-Government (X2), and Government Capacity (X3) account for 0.768, or 76.8%, of the variance in the Accountability construct. This value also falls within the moderate range, indicating reliable predictive capacity for governance performance in the region. Both R^2 values are considered substantial, demonstrating that the independent variables effectively explain variations in the dependent variables. Consequently, the model employed in this study possesses strong predictive power and is appropriate for further analysis.

Hypothesis Testing

The results of the hypothesis testing conducted in this study are presented in [Table 7](#).

The results indicate that Transparency exerts a positive and significant influence on government performance. This suggests that higher levels of information disclosure and public reporting by government institutions are associated with enhanced performance. Transparency serves as a foundation for improving efficiency, effectiveness, and public trust in governmental agencies. E-government demonstrates a positive but statistically

insignificant effect on government performance. This implies that the mere implementation of electronic governance systems has not directly translated into performance improvements. The effect of e-government on performance is likely to be stronger when digital systems are effectively utilised to enhance bureaucratic transparency and accountability.

Table 7: Result of Hypothesis Testing

Hypothesis	Path Coefficient	P-Values	Conclusion
X1 → Y	0,101	0,001	Significant
X2 → Y	0,054	0,387	Not Significant
X3 → Y	0,069	0,042	Significant
Z → Y	0,775	0,000	Significant
X1 → Z	0,074	0,007	Significant
X2 → Z	0,870	0,000	Significant
X3 → Z	-0,004	0,876	Not Significant
X1 → Z → Y	0,058	0,007	Significant
X2 → Z → Y	0,674	0,000	Significant
X3 → Z → Y	-0,003	0,876	Not Significant

Source: PLS Processed (2025)

Government capacity has a positive and significant effect on government performance, indicating that higher competence and ability among civil servants in executing duties and managing resources correspond with improved organisational performance. Strengthening bureaucratic capacity is therefore essential for achieving optimal work outcomes. Accountability also has a positive and significant impact on government performance, confirming that clear responsibility structures and accountability mechanisms are critical determinants of institutional effectiveness. Well-established accountability promotes transparent, measurable, and results-oriented governance. Transparency has a positive and significant effect on accountability, suggesting that greater disclosure of public information strengthens the culture of accountability within government agencies. Openness forms a vital basis for building trust and an effective public oversight system.

E-government shows a positive and significant effect on accountability. These findings imply that the adoption of information technology and digital systems in governmental management substantially enhances accountability. Digital governance facilitates more transparent, accurate, and accessible reporting, monitoring, and auditing processes. Government capacity exhibits a negative and insignificant effect on accountability, indicating that increasing civil servant capacity alone does not directly reinforce accountability mechanisms. Without complementary reporting systems and an accountability-oriented culture, individual capabilities may not translate into improved institutional transparency. Transparency has a positive and significant indirect effect on performance through accountability. This suggests that transparency strengthens performance primarily when accompanied by robust accountability systems. In other

words, information disclosure encourages the establishment of mechanisms that ultimately enhance the effectiveness of government operations.

E-government demonstrates a positive and significant indirect effect on performance via accountability, representing the strongest pathway in the research model. This indicates that digital governance systems substantially contribute to performance improvements by reinforcing accountability. Government digitalisation, therefore, serves as a key instrument for promoting a transparent and results-oriented bureaucracy. Government capacity shows a negative and insignificant indirect effect on performance through accountability. This implies that increases in civil servant competence alone are insufficient to drive performance improvements unless supported by strong accountability mechanisms. Capacity without accountability does not produce significant enhancements in government performance.

Discussion

The findings provide empirical evidence that governance quality enhances sustainable development performance through institutional accountability mechanisms. Rather than acting solely through direct effects, transparency, e-government, and government capacity influence performance via accountability as a mediating governance channel. From an institutional economics perspective, accountability can reduce agency costs and improve coordination within public sector institutions (Jensen & Meckling, 2019). By reinforcing monitoring and reporting procedures, accountability strengthens internal control systems and may facilitate more efficient allocation of public resources. Although this study relies on perceptual indicators, the results suggest that governance reforms are associated with improved institutional effectiveness.

The significant link between transparency and accountability aligns with (Alt & Lassen, 2006), who reported that transparency fosters fiscal discipline. Similarly, the positive impact of e-government is consistent with previous studies indicating that digital governance enhances administrative efficiency and institutional performance. The pronounced effect of government capacity further supports institutional theory, which highlights the role of administrative competence in achieving development goals (Fukuyama, 2013). The observed mediation effect provides additional nuance to the literature. Whereas earlier studies often emphasised direct relationships between governance and performance, the present findings indicate that governance improvements require robust accountability mechanisms to effectively translate into enhanced development outcomes. This may help explain inconsistencies in prior empirical results, where governance reforms alone did not produce significant performance gains. Variations in institutional maturity, quality of implementation, and contextual factors may contribute to these differences.

Nonetheless, the findings should be interpreted with caution given the reliance on

perceptual measures. While perceptions reflect internal institutional practices and governance realities, future research incorporating objective fiscal and macroeconomic indicators would offer a more comprehensive understanding of the governance–development relationship. Overall, the results emphasise that integrated governance reforms—combining transparency initiatives, digital transformation, and institutional capacity enhancement—are more likely to improve sustainable development performance when supported by strong accountability systems. This underscores the importance of institutional coherence in achieving long-term development objectives.

REFERENCES

- Acharya, K. K. (2018). The capacity of local governments in Nepal: from government to governance and governability? *Asia Pacific Journal of Public Administration*, 40(3), 186-197. <https://doi.org/10.1080/23276665.2018.1525842>
- Alt, J. E., & Lassen, D. D. (2006). Transparency, political polarization, and political budget cycles in OECD countries. *American Journal of Political Science*, 50(3), 530-550. <https://doi.org/10.1111/j.1540-5907.2006.00200.x>
- Avellaneda, C. (2017). Local Government Effectiveness: Assessing the Role of Administrative Capacity. <https://d1wqtxts1xzle7.cloudfront.net/122292950/avellaneda-paper-libre.pdf?1744459890>
- DeVellis, R. F., & Thorpe, C. T. (2021). *Scale development: Theory and applications*. Sage publications. <https://uk.sagepub.com/en-gb/eur/scale-development/book269114>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1). <https://doi.org/10.2307/3151312>
- Fukuyama, F. (2013). What is governance? *Governance*, 26(3), 347-368. <https://doi.org/10.1111/gove.12035>
- Grindle, M. S. (1997). Divergent cultures? When public organizations perform well in developing countries. *World Development*, 25(4), 481-495. [https://doi.org/10.1016/S0305-750X\(96\)00123-4](https://doi.org/10.1016/S0305-750X(96)00123-4)
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. Scopus. <https://doi.org/10.1108/EBR-11-2018-0203>
- Han, Y. (2020). The impact of accountability deficit on agency performance: performance-accountability regime. *Public Management Review*, 22(6), 927-948. <https://doi.org/10.1080/14719037.2019.1679237>
- Jensen, M. C., & Meckling, W. H. (1919). Theory of the firm: Managerial behavior, agency costs and ownership structure. In *Corporate governance* (pp. 77-132). Gower. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315191157-9>
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). *The Worldwide Governance Indicators*.

- The World Bank. <https://hdl.handle.net/10986/42373>
- Kline, R. B. (2016). *Principles and Practice of Structural Equation Modeling* (Fourth Edition). The Guilford Press. <https://psycnet.apa.org/record/2015-56948-000>
- Lee, S., Kim, B. G., & Kim, H. (2012). An Integrated View of Knowledge Management for Performance. *Journal of Knowledge Management*, 16(2), 183–203. <http://dx.doi.org/10.1108/13673271211218807>
- Martínez-Córdoba, P.-J., Raimo, N., Vitolla, F., & Benito, B. (2020). Achieving sustainable development goals. Efficiency in the Spanish clean water and sanitation sector. *Sustainability*, 12(7), 3015. <https://doi.org/10.3390/su12073015>
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511808678>
- Nunnally, J., & Bernstein, I. (1994). *Psychometric Theory* (Third Edition). McGraw-Hill. <https://doi.org/10.1177/014662169501900308>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569. Scopus. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Rajkumar, A. S., & Swaroop, V. (2008). Public spending and outcomes: Does governance matter? *Journal of Development Economics*, 86(1), 96–111. <https://doi.org/10.1016/j.jdeveco.2007.08.003>
- Ríos, A. M., Guillamón, M. D., Cifuentes-Faura, J., & Benito, B. (2022). Efficiency and sustainability in municipal social policies. *Social Policy & Administration*, 56(7), 1103-1118. <https://doi.org/10.1111/spol.12843>
- Robinson, J. A., & Acemoglu, D. (2012). *Why nations fail: The origins of power, prosperity and poverty* (pp. 45-47). London: Profile. <https://www.wcfia.harvard.edu/publications/why-nations-fail-origins-power-prosperity-and-poverty>
- Sekaran, U., & Bougie, R. (2016). *Research Methods For Business* (Seventh Edition). John Wiley & Sons Ltd. https://digilib.politeknik-pratama.ac.id/assets/dokumen/ebook/feb_f006f52b62a646e28c8c7870aa1112fbc0c49ca_1650455622.pdf
- Wirtz, B. W., & Daiser, P. (2017). *E-Government: Strategy Process Instruments*. German University of Administrative Sciences Speyer, Chair for Information and Communication Management. <https://books.google.com.pk/books?id=n3TutwEACAAJ>
- Zein, M. H. M., & Septiani, S. (2025). Improving local government financial performance: The role of management, transparency, and accountability. *Journal of Posthumanism*, 5(6), 4858-4871. <https://www.cceol.com/search/article-detail?id=1361702>