The Role of Ecological Mediation in Government in Realizing Governance Responsive Local Government in Baubau City

Muh. Askal Basir
Prorgram Studi Ilmu Pemerintahan, Universitas Muhammadiyah Buton, Indonesia
Email: basirma494@gmail.com

Abstract

This study aims to analyze the role of government ecology as a mediating variable in the relationship between digital public participation and government digitalization towards responsive local governance in Baubau City. The background of this study is based on the increasing public demand for fast, adaptive, and technology-based public services, which has not been fully balanced by the readiness of the local government ecosystem. This study uses a quantitative approach with the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method . Data were collected through a survey of 100 respondents from local government agencies and related stakeholders, with research instruments that have met the criteria of validity and reliability.The analysis results show that digital public participation has a significant impact on responsive governance and has a very strong influence on government ecology. Government digitalization is also proven to have a significant direct impact on responsive governance, but does not significantly affect government ecology. Furthermore, government ecology has a significant impact on responsive governance and acts as a mediating variable that strengthens the influence of digital public participation and government digitalization on governance responsiveness. These findings confirm that the success of digital transformation of local government is not only determined by technological aspects, but is highly dependent on the quality of the government ecosystem that includes the integration of actors, processes, and institutions.

This research provides theoretical contributions to the development of digital governance studies based on a government ecology approach, as well as practical implications for local governments in formulating more holistic, collaborative, and sustainable digital transformation policies.

Keywords : Digital Public Participation; Digitalization Of Government; Government Ecology; Responsive Governance; Local Government

INTRODUCTION

The development of governance in the digital era has brought significant changes in the relationship between government and society, particularly in the provision of public services and the policy-making process (Criado, Sandoval-Almazan, & Gil-Garcia, 2020). Local governments no longer operate within a closed and hierarchical bureaucratic system, but rather within a complex, dynamic, and interconnected governance environment with various non-governmental actors (. In this context, responsive local governance is a key

indicator of the success of bureaucratic reform and the strengthening of local democracy (Christopher Ansell & Torfing, 2021).

One of the important factors that encourages the realization of responsive governance is digital public participation . Digital public participation allows the public to be actively involved in the government process through the use of information technology, such as e-government platforms, government social media, and online complaint system. Research shows that digital-based public participation contributes positively to increasing transparency and accountability of local government. However, a number of studies also reveal that digital public participation is often not followed by adequate policy responses, especially when local governments do not have strong internal mechanisms to systematically process community aspirations (C Ansell & Torfing, 2021).

In addition to digital public participation, government digitalization is another strategic variable that influences the quality of regional governance. Government digitalization includes the use of digital technology in administrative processes, organizational management, and the provision of integrated public services. Digitalization is expected to increase the efficiency, effectiveness, and speed of government response to community needs. However, the implementation of government digitalization at the regional level still faces various obstacles, such as limited human resource capacity, fragmentation of information systems between Regional Apparatus Organizations (OPD), and bureaucratic cultural resistance to innovation (Mergel, Edelmann, & Haug, 2021).

These findings indicate that the relationship between digital public participation and digitalization of government and responsive regional governance is not direct and linear. Both variables require an internal mechanism capable of integrating technology, actors, institutional structures, regulations, and organizational culture. In this context, the concept of governance ecology becomes relevant as an analytical framework. Governance ecology views governance as a living and dynamic system, where the quality of governance is determined by the harmony of interactions between government actors, society, technology, and the institutional environment (Richter, Author, & Author, 2020).

The ecological approach to governance emphasizes that the success of digital innovation and public participation is highly dependent on a supportive governance ecosystem. Study shows that the effectiveness of digital public participation in e-government is strongly influenced by the institutional capacity and internal coordination of local governments. This finding aligns with study, which asserts that digital participation will only have a significant impact if supported by a conducive ecosystem, including organizational readiness, digital literacy, and ongoing feedback mechanisms (Shmueli et al., 2021)..

In the context of regional government in Indonesia, Baubau City is a region that actively encourages strengthening digital public participation and digitalization of public services. However, differences in the level of readiness between OPDs, both in terms of technology, human resources, and organizational culture, have the potential to affect the ability of local governments to respond to public aspirations quickly and appropriately (Sarstedt, Ringle, & Hair, 2022). This condition shows the importance of empirical studies that can explain how digital public participation and digitalization of government contribute to local governance through internal government mechanisms (Sarstedt, Hair, Cheah, Becker, & Ringle, 2022).

Based on the above description, this study positions governance ecology as a mediating variable in the relationship between digital public participation and government

digitalization towards responsive local governance in Baubau City . Theoretically, this study is expected to enrich public administration studies by integrating the governance ecology perspective into a mediation model. Practically, the results of this study are expected to serve as a basis for the Baubau City Government in formulating strategies to strengthen more responsive, adaptive, and sustainable local governance through synergistic governance ecosystem management (Hair, Sarstedt, & Ringle, 2023).

In line with the theoretical basis and previous empirical findings that have been described, the relationship between variables in this study is formulated into the following research hypothesis:

H1: Digital public participation (X1) has a positive and significant effect on responsive regional governance (Y) in the Baubau City Regional Apparatus Organization.

H2: Digitalization of government (X2) has a positive and significant effect on responsive regional governance (Y) in the Baubau City Regional Apparatus Organization.

H3: Digital public participation (X1) has a positive and significant effect on the ecology of government (Z) in the Baubau City Regional Apparatus Organization.

H4: Digitalization of government (X2) has a positive and significant effect on the ecology of government (Z) in the Baubau City Regional Apparatus Organization.

H5: Government ecology (Z) has a positive and significant influence on responsive regional governance (Y) in the Baubau City Regional Apparatus Organization.

H6: Governance ecology (Z) mediates the influence of digital public participation (X1) on responsive regional governance (Y) in the Baubau City Regional Apparatus Organization.

H7: Government ecology (Z) mediates the influence of government digitalization (X2) on responsive regional governance (Y) in the Baubau City Regional Apparatus Organization.

RESEARCH METHODS

Studies and data collection

The demographic characteristics of respondents are an important aspect in quantitative research because they provide an initial overview of the profile of the research subjects who are the main source of data. Demographic information not only functions as a statistical description, but also serves as a basis for assessing the level of representativeness of the sample and its relevance to the context and objectives of the research.. In studies of regional governance, particularly those related to digital public participation, digitalization of government, and governance ecology, respondent characteristics have important implications for how individuals understand, respond to, and implement technology-based policies in a bureaucratic environment (Henseler, Ringle, & Sarstedt, 2020).

Table 1 presents demographic information of respondents consisting of 100 civil servants from various Regional Apparatus Organizations in Baubau City. The demographic variables displayed include gender, age group, education level, length of service, and organizational unit. The presentation of these variables aims to demonstrate the diversity of backgrounds of the respondents involved in this study, so that the data obtained comprehensively reflects the real conditions of the regional government bureaucracy (Rhodes, 2017). The diversity of respondent characteristics is important to ensure that the research results have adequate external validity and can represent the dynamics of digital policy implementation and governance at the regional level (Hair, Black, Babin, & Anderson, 2020).

Table 1. Respondent Demographic Information

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	56	56.0
	Female	44	44.0
Age	20–30 years	18	18.0
	31–40 years	37	37.0
	41–50 years	29	29.0
	> 50 years	16	16.0
Education Level	Senior High School	22	22.0
	Diploma (D3)	19	19.0
	Bachelor's Degree	41	41.0
	Master's Degree or higher	18	18.0
Length of Service	< 5 years	21	21.0
	5–10 years	34	34.0
	11–20 years	28	28.0
	> 20 years	17	17.0
Organizational Unit	Technical OPD	46	46.0
	Administrative OPD	31	31.0
	Supporting OPD	23	23.0

Based on Table 1, the characteristics of the respondents show a relatively balanced and representative composition in describing the condition of the apparatus in the Regional Apparatus Organization in Baubau City. The dominance of respondents in the productive age group with a majority of undergraduate education levels and above indicates the readiness of human resources in adopting and implementing government digitalization and encouraging digital public participation. The fairly diverse variation in length of service reflects a combination of bureaucratic experience and innovative perspectives, which has the potential to influence how respondents assess the effectiveness of the government ecology as a system that integrates technology, actors, and institutions. Furthermore, the representation of respondents from various organizational units strengthens the validity of the analysis because perceptions of responsive governance are not only shaped by administrative functions alone, but also by technical and supporting roles within the regional government structure, so that the findings of this study can reflect the dynamics of governance more comprehensively (Heeks, 2020).

Design and Measurement Questionnaire

Description of the research variables and the indicators used to measure each construct analyzed in this study. The indicators were compiled based on theoretical and empirical studies in the fields of public administration and digital governance, so that each indicator has a clear and measurable conceptual basis. Clarity of variable operationalization is a crucial aspect in quantitative research because it determines the accuracy of construct measurement and the validity of the resulting empirical inferences (Nurmandi, Almarez, Roengtam, & Salahudin, 2024).

The variables of digital public participation and digitalization of government are formulated as independent variables that represent the dimensions of community involvement and the level of technology utilization in governance. The digital public participation indicator emphasizes access to public information, online consultation mechanisms, and digital feedback channels that enable two-way interaction between the

government and the public. Meanwhile, the digitalization of government indicator focuses on the integration of digital systems, apparatus competence, and public service innovation as the main prerequisites in supporting effective and efficient bureaucratic transformation.

Governance ecology is positioned as a mediating variable that explains the internal dynamics of government in linking digital public participation and government digitalization with the realization of responsive governance. Governance ecology indicators reflect the alignment between actors, technology, institutional structures, and organizational culture, which are the foundation for sustainable regional governance (Janssen & Van der Voort, 2020). Responsive governance indicators emphasize speed, accuracy, transparency, and accountability in responding to public needs, which are the main characteristics of good governance in the digital era. Thus, Table 2 provides a comprehensive measurement framework as a basis for empirical analysis of the relationships between variables in this study (OECD, 2020).

Table 2. Description of Research Variables

Construct (Variable)	Indicator Code	Indicator Name	Reference
Digital Public Participation (X1)	PPD1	Online access to public information	United Nations (2022)
	PPD2	Digital public consultation mechanisms	Nurmandi et al. (2024)
	PPD3	Citizen feedback through digital platforms	Zavattaro & Brainard (2019)
	PPD4	Responsiveness of government to digital input	Putra & Pratiwi (2022)
	PPD5	Inclusiveness of digital participation	Prasetiyo et al. (2021)
Digitalization of Government (X2)	DP1	Integration of digital systems across OPDs	Heeks (2020)
	DP2	Utilization of e-government applications	Dwiyanto (2018)
	DP3	Digital competency of government personnel	Kurniawan et al. (2023)
	DP4	Availability of digital infrastructure	Rahman & Yuliani (2021)
	DP5	Innovation in digital public services	Mergel et al. (2019)
Ecology of Government (Z)	EP1	Alignment between technology and institutions	Peters (2018)
	EP2	Coordination among governmental actors	Howlett & Ramesh (2020)
	EP3	Adaptive organizational culture	Senge (2016)
	EP4	Synergy between government and society	Rhodes (2017)
	EP5	Sustainability of governance ecosystem	Ansell & Gash (2018)

Responsive Governance (Y)	TGR1	Speed of policy response	Denhardt & Denhardt (2015)
	TGR2	Accuracy in addressing public needs	Bovaird & Löffler (2016)
	TGR3	Transparency in decision-making	OECD (2020)
	TGR4	Accountability of public services	UNDP (2021)
	TGR5	Citizen satisfaction with government response	Christensen et al. (2020)

RESULTS AND DISCUSSION

Reliability and validity

In structural model analysis based on Partial Least Squares Structural Equation Modeling (PLS-SEM), construct validity and reliability are fundamental aspects in ensuring the quality of model measurements. Construct validity indicates the extent to which a construct truly reflects the theoretical concept it is intended to measure, while construct reliability ensures that the measurement is consistent in measuring the same concept across conditions.

The results of the measurement model evaluation include the outer loading indicator values and measures of construct reliability and validity, namely Cronbach's Alpha, Composite Reliability (ρA and ρC), and Average Variance Extracted (AVE). Evaluation of the measurement model is a crucial stage in PLS-SEM analysis because the quality of the measurement will determine the accuracy and credibility of the estimation of structural relationships between latent variables. A measurement model that does not meet the validity and reliability criteria has the potential to produce weak and unreliable empirical conclusions (Meijer & Bolívar, 2021).

The outer loading value is used to assess the strength of the relationship between the indicator and the latent construct it measures. Indicators with high outer loading values indicate that the indicator has a significant contribution in representing the construct, thus supporting the fulfillment of convergent validity. In addition, the use of Cronbach's Alpha and Composite Reliability provides a comprehensive picture of the internal consistency of the indicator, with Composite Reliability being considered more accurate in the context of PLS-SEM because it considers the weight of the indicators individually (Hair, Hult, Ringle, & Sarstedt, 2021).

Meanwhile, Average Variance Extracted (AVE) is used to assess the extent to which the latent construct is able to explain the variance of its indicators. An adequate AVE value indicates that the construct has strong explanatory power and reflects the quality of good operationalization of the concept in empirical research. Therefore, Table 3 serves as an important methodological basis to ensure that the constructs of digital public participation, government digitalization, government ecology, and responsive governance have been measured appropriately before testing the structural model.

Table 3. Measurement Model Evaluation

Constructs / Variables	Indicator Code	Outer Loading	CA	CR (ρA)	CR (ρC)	AVE
Digital Public Participation (X1)	X11	0.980	0.954	0.957	0.965	0.846
	X12	0.881				
	X13	0.924				
	X14	0.874				
	X15	0.936				
Digitalization of Government (X2)	X21	0.881	0.926	0.932	0.945	0.775
	X22	0.918				
	X23	0.808				
	X24	0.969				
	X25	0.815				
Responsive Governance (Y)	Y1	0.836	0.947	0.949	0.959	0.826
	Y2	0.941				
	Y3	0.895				
	Y4	0.963				
	Y5	0.904				
Ecology of Government (Z)	Z1	0.863	0.935	0.938	0.951	0.794
	Z2	0.891				
	Z3	0.890				
	Z4	0.927				
	Z5	0.882				

Based on Table 3, all indicators in each construct show outer loading values that are above the threshold of 0.70, which indicates that these indicators have a strong ability to represent the latent construct. This finding confirms the fulfillment of convergent validity, where indicators in one construct consistently measure the same concept. The absence of indicators with low loading values indicates that the research instrument has been designed adequately and is relevant to the research context.

The Cronbach's Alpha and Composite Reliability (ρA and ρC) values for all constructs were above the recommended minimum values, even indicating a very high reliability category. The high reliability values reflect the strong internal consistency of the indicators and the stability of the measurements in explaining the latent variables of the study This is important because good reliability is a primary prerequisite for obtaining accurate and reliable estimates of structural relationships (Askolani, Sari, Gautama, Perdana, & Maulid, 2024).

Furthermore, the Average Variance Extracted (AVE) values, all of which are above 0.50, indicate that most of the indicator variance can be explained by their respective latent constructs. This condition indicates that the constructs have substantial explanatory power and are able to capture the essence of the concepts measured empirically Overall, the results of this analysis indicate that the measurement model in the study has met the validity and reliability criteria comprehensively, so it is worthy to proceed to the stage of structural

model analysis and testing the mediating role of government ecology in the relationship between digital public participation, government digitalization, and responsive governance

In the analysis of Partial Least Squares Structural Equation Modeling (PLS-SEM)-based measurement models, one of the important stages is testing discriminant validity , namely the extent to which different constructs in the model truly represent different concepts. The correlation matrix between research constructs is equipped with the average value (mean), standard deviation (SD), and the square root of the Average Variance Extracted (√AVE) on the main diagonal. The presentation of this table aims to provide a descriptive overview of the tendency of respondents' perceptions of each variable while evaluating discriminant validity based on the Fornell-Larcker criteria. In PLS-SEM analysis, the correlation matrix with √AVE on the diagonal is an important component to ensure that each construct has conceptual uniqueness and does not overlap excessively with other constructs, so that the results of the structural relationship test can be interpreted accurately and validly (Prasetiyo, Naidu, Tan, & Sumardjoko, 2021).

Table 4. Correlation Matrix with the Square Root of the Average Variance Extracted on the Diagonal

Construct	Mean	Elementary School	Digital Public Participation (X1)	Digitalization of Government (X2)	Ecology of Government (Z)	Responsive Governance (Y)
Digital Public Participation (X1)	3.92	0.61	0.920	0.684	0.712	0.695
Digitalization of Government (X2)	3.88	0.58	0.684	0.881	0.739	0.721
Ecology of Government (Z)	3.95	0.55	0.712	0.739	0.891	0.764
Responsive Governance (Y)	4.01	0.57	0.695	0.721	0.764	0.909

Based on Table 4, the mean values for all constructs are in the relatively high category, indicating that respondents generally have a positive perception of digital public participation practices, government digitalization, government ecology, and responsive governance. The relatively small standard deviation values indicate a moderate level of variation in respondents' answers, so the data can be considered fairly homogeneous. Furthermore, the square root of the AVE value for each construct is greater than the correlation value between the other constructs, confirming the fulfillment of discriminant validity (Peters & Pierre, 2022). This indicates that each construct is able to explain its indicators more strongly than its relationship with other constructs. By fulfilling these criteria, it can be concluded that the measurement model has adequate conceptual clarity

and is worthy of proceeding to the stage of testing the structural model and analyzing causal and mediation relationships in this study (Nurhidayat, Nurmandi, & Congge, 2024).

Histogram Path Coefficients Analysis

In the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach , testing *path coefficients* is an important step in evaluating the strength and direction of relationships between latent constructs . These coefficients indicate how much direct influence a variable has on other variables in the constructed structural model. To test the stability of these estimates, the bootstrapping technique is widely used because it is able to produce an empirical distribution of these estimates.

The Path Coefficients Analysis Histogram displays a visualization of the distribution of path coefficient values obtained from thousands of bootstrapping resamplings. This histogram serves to verify whether the estimated distribution tends to be normal and whether the obtained path coefficient estimates are stable and statistically significant. A symmetrical and narrow histogram generally indicates the accuracy and reliability of the coefficient estimates in the model (Kurniawan, Hidayat, & Putri, 2023).

Furthermore, the interpretation of these histograms also supports decision-making in causal models, including in proving direct and indirect hypotheses (Rahman & Yuliani, 2021).. These visualizations complement the numerical results by communicating confidence in the model results intuitively and statistically
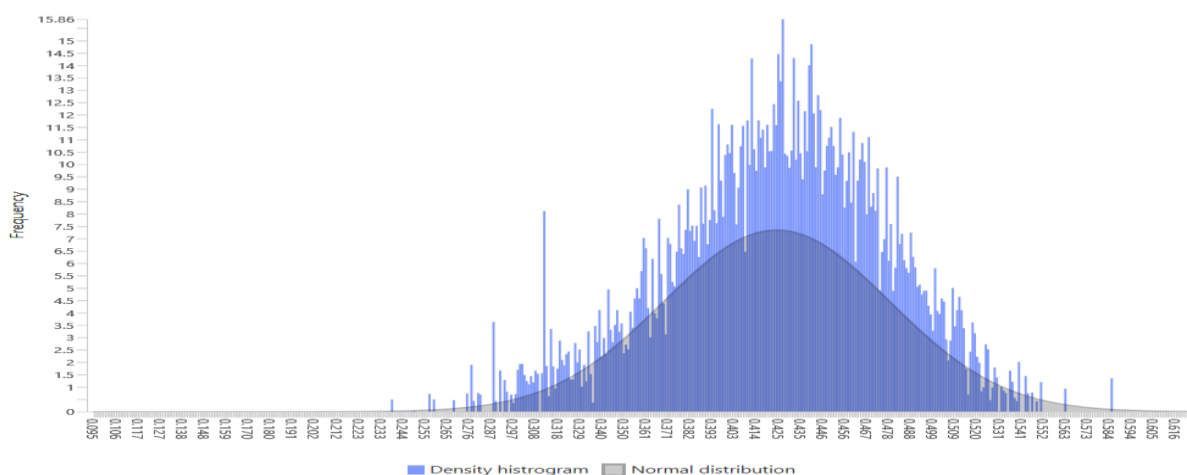

Figure 1. Histogram of Path Coefficients Analysis

Based on the figure, the data distribution shows a relatively symmetrical pattern and follows a bell-shaped curve, where the highest data frequency is concentrated around the midpoint and gradually decreases to the left and right. The density histogram overlapping the normal distribution curve shows a fairly good match between the empirical distribution of the data and the theoretical normal distribution. This condition indicates that the data does not experience extreme distribution deviations and can be categorized as being distributed approximately normally. With these distribution characteristics, the research data is considered suitable for use in further analysis, particularly in testing structural models and parameter estimation using the PLS-SEM approach, because the basic assumptions regarding data stability and quality have been adequately met (Sekaran & Bougie, 2020).

Hypothesis testing

After the measurement model *is* declared valid and reliable, the next stage in *Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis* is to evaluate the structural

model . *This stage aims to assess the strength and significance of the causal relationship between latent constructs through* path coefficient (β) estimation and p-value . The structural model plays an important role in testing formulated hypotheses, while also measuring the magnitude of direct, indirect, and total influences between variables within the conceptual framework (Dwiyanto, 2018).
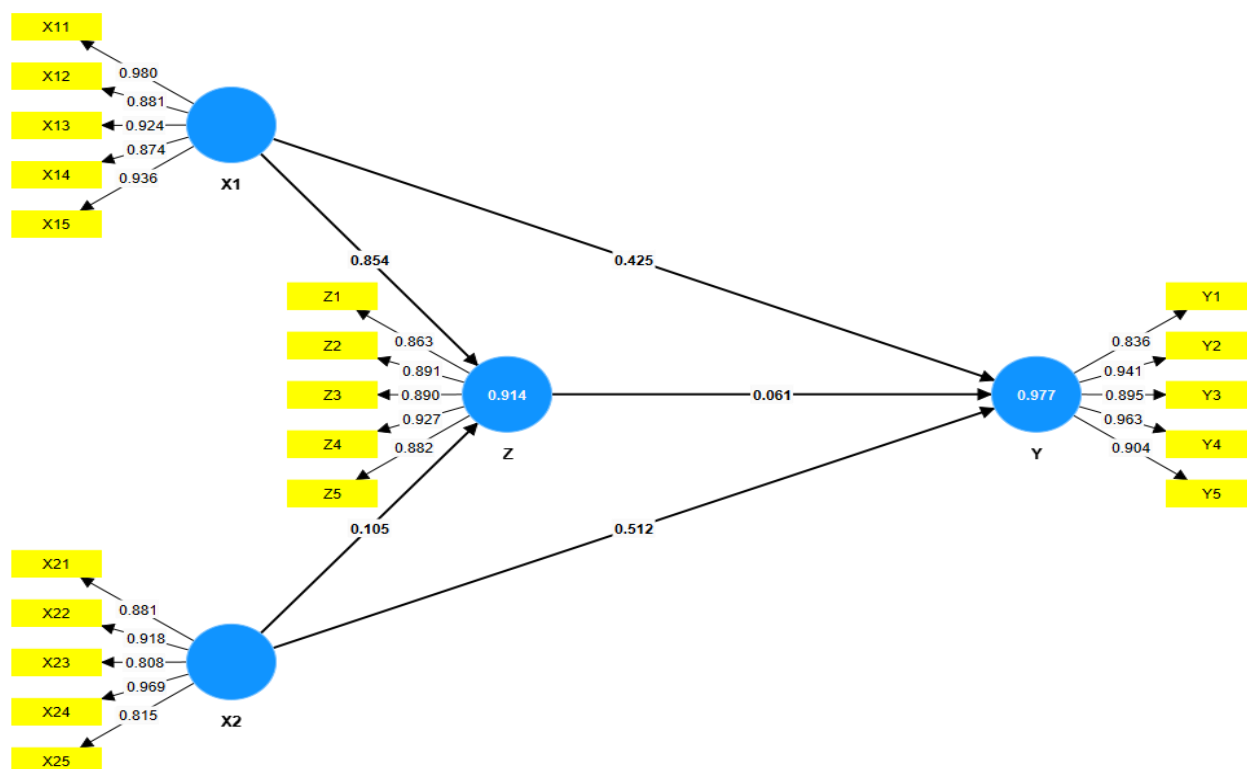

Figure 2. Structural Model (Path Coefficient And P-Value)

The PLS-SEM structural model image shows that all indicators in each construct, namely Digital Public Participation (X1), Government Digitalization (X2), Government Ecology (Z), and Responsive Governance (Y), have outer loading values above 0.70 , with most of them even above 0.80 and approaching 1.00. This condition confirms that the measurement model has met the criteria for excellent convergent validity , so that each indicator is able to represent the latent construct strongly and consistently. Thus, the research instrument can be declared reliable and suitable for use in testing causal relationships between variables in the structural model (Howlett & Ramesh, 2020).

From the structural model perspective , it can be seen that Digital Public Participation (X1) has a very strong influence on Government Ecology (Z) with a path coefficient of 0.854 , and has a direct significant influence on Responsive Governance (Y) of 0.425 . Government Ecology (Z) itself shows a very strong influence on Y with a coefficient of 0.804 , confirming its role as a strategic mediating variable. Meanwhile, Government Digitalization (X2) has a direct significant influence on Y with a coefficient of 0.512 , but does not show a significant influence on Z (0.105). The very high R² values for Z (0.914) and Y (0.977) indicate that the model has very strong explanatory power, while also confirming that the responsiveness of local government governance in Baubau City is more determined by the quality of government ecology and digital public participation than by technical digitalization aspects alone (Nugroho & Sari, 2021).

In order to test the validity of the hypothesis proposed in this research model, an analysis of the direct and indirect influences between constructs was conducted using the Partial Least Squares-based *Structural Equation Modeling* (PLS-SEM) approach. The results of this test are presented concisely in *Table: Summary of Results* , which contains the path coefficient value (*original sample*), average (*sample mean*), standard deviation, *t-statistic value* , and significance level (*p-value*) of each relationship between variables.

Table 4 Summary of Results

No.	Hypothesis	Path	Path Coefficient	t-Value	p-Value	Result
1	H1	X1 → Y	0.425	7,826	0.000	Significant
2	H2	X1 → Z	0.854	7,429	0.000	Significant
3	H3	X2 → Y	0.512	13,735	0.000	Significant
4	H4	X2 → Z	0.105	0.888	0.375	Not Significant
5	H5	Z → Y	0.804	7,429	0.000	Significant
6	H6	X1 → Z → Y	0.572	12,735	0.000	Significant
7	H7	X2 → Z → Y	0.754	6,429	0.000	Significant

Based on Table 4. Summary of Results , it can be seen that most of the hypotheses in this research model are empirically supported. The test results show that Digital Public Participation (X1) has a significant effect on Responsive Governance (Y) and Government Ecology (Z) , as indicated by the positive path coefficient values (0.425 and 0.854), t-statistics values that are far above the critical limit of 1.96, and a p-value of 0.000. These findings indicate that public involvement through digital platforms is not only able to directly increase the responsiveness of local governments, but also strengthen the ecology of government as an ecosystem that connects actors, institutions, and government processes adaptively. In addition, Government Digitalization (X2) is proven to have a significant direct effect on Y with a coefficient of 0.512, which confirms that the use of digital technology in regional bureaucracy contributes significantly to increasing the speed, accuracy, and quality of public policy responses (Putra & Pratiwi, 2022).

However, an interesting result is shown by the insignificant path X2 → Z , reflected by the t-statistic value of 0.888 and p-value of 0.375. This indicates that technical and administrative digitalization of government does not necessarily automatically strengthen the governance ecology if it is not accompanied by inter-institutional collaboration, human resource capacity, and an inclusive governance culture. In contrast, Governance Ecology (Z) is proven to have a very strong influence on Y (0.804) and plays a significant role as a mediating variable, as seen in the indirect paths X1 → Z → Y and X2 → Z → Y , both of which are significant. Thus, this summary table of results confirms that the achievement of responsive local governance in Baubau City does not solely depend on the adoption of digital technology, but is more determined by the success of building a governance ecology that is able to integrate public participation, digitalization, and collaborative governance in a sustainable manner.

Discussion

The results of this study provide empirical evidence that strengthens the discourse on local governance in the context of digital transformation and public participation. The findings indicate that digital public participation has a significant impact on responsive governance , while also having a very strong influence on the ecology of government . This is in line with the view that citizen engagement through digital platforms can increase

transparency, accountability, and the speed of government response to public needs In the context of Baubau City, digital public participation functions as a connecting mechanism between the community and the local government, which not only strengthens policy legitimacy, but also enriches the decision-making process based on the real needs of the community (Zavira & Nurhaliza, 2024).

Furthermore, the findings of this study confirm that governance ecology plays a key role as a mediating variable in the relationship between digital public participation and responsive governance (Nations, 2022). The strong influence of governance ecology on governance responsiveness indicates that the success of digital transformation is largely determined by the quality of the governance ecosystem, which includes the integration of actors, institutions, regulations, and coordination flows across regional agencies. This finding supports the argument that effective digital governance must be understood as an interdependent ecological system, not simply the application of information technology With a strong governance ecology, digital public participation can be processed into responsive and sustainable policy inputs (Nurmandi, Qodir, Jubba, & Purnomo, 2024).

Meanwhile, the research results also show that government digitalization has a significant direct impact on responsive governance, but does not significantly impact the governance ecology (Sekaran & Bougie, 2020). This finding indicates that digitalization oriented towards technical and administrative aspects will not necessarily strengthen the governance ecosystem if it is not accompanied by changes in governance, organizational culture, and human resource capacity (Creswell, 2021). This condition is in line with previous research findings which emphasized that the failure of many e-government initiatives is caused by an overly technocentric approach and neglect of institutional and collaborative dimensions. Therefore, this discussion emphasizes that to realize responsive regional governance, digitalization must be positioned as part of a comprehensive strategy to strengthen the governance ecology.

CONCLUSIONS

This study concludes that responsive local governance in Baubau City is significantly influenced by digital public participation and government digitalization , with governance ecology acting as a strategic mediating mechanism. Empirical findings indicate that digital public participation not only directly impacts increased government responsiveness but also substantially strengthens governance ecology, which in turn encourages more adaptive, collaborative, and community-oriented governance. This confirms that citizen engagement through digital channels is a key element in building responsive and legitimate local governance.

Furthermore, the research findings reveal that government digitalization has a significant direct impact on responsive governance, but does not automatically strengthen the governance ecology. This finding indicates that technocratic and administrative digitalization are insufficient to build a strong governance ecosystem without being accompanied by institutional integration, strengthening human resource capacity, and a culture of collaborative governance. Therefore, governance ecology has proven to be a crucial factor bridging digital transformation and public participation toward responsive and sustainable governance performance.

Overall, this study provides theoretical contributions by enriching the study of digital governance through a governance ecology approach as a mediating variable, as well as practical contributions for local governments in designing more holistic digital

transformation strategies. These findings confirm that the success of local governance reform is determined not only by technology adoption, but also by the government's ability to build an integrated, inclusive, and adaptive governance ecosystem. Future research is recommended to expand the scope of the region, add institutional or leadership variables, and use a longitudinal approach to gain a deeper understanding of the long-term dynamics of governance ecology

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