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The Effect of Collaborative Governance on Si Ajaib Application Effectiveness: The Mediating Role of Trust Building

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Abstract: Background: Digital transformation in government services through e-government implementation has become a strategic approach to improving public service quality. The Investment and One-Stop Integrated Service Office (DPMPTSP) of Buleleng Regency developed the SI AJAIB Application as a digital-based licensing service system. Despite increasing adoption, the application's effectiveness still faces challenges, including limited feature utilization, service speed, and accessibility. This indicates that the success of digital innovation implementation is not determined solely by technological factors but also by the quality of collaborative governance and the level of trust among stakeholders. Therefore, this study aims to analyze the effect of collaborative governance on the effectiveness of the SI AJAIB Application, with trust building as a mediating variable. Research Object and Objectives: The research object consists of 171 service users of the SI AJAIB Application. The study's objective is to examine how collaborative governance influences the application's effectiveness and to determine the mediating role of trust building in enhancing this relationship. Methods: This study employs a quantitative approach with a causal-associative research design. Data were collected using a Likert-scale questionnaire distributed to the 171 service users. The analysis was conducted using SEM-PLS (Structural Equation Modeling – Partial Least Squares) to test the relationships between collaborative governance, trust, and application effectiveness. The process included validity and reliability testing, structural model evaluation, and hypothesis testing using the bootstrapping technique. Results: The findings indicate that collaborative governance has a positive and significant effect on the effectiveness of the SI AJAIB Application. Additionally, trust building plays a mediating role, strengthening the relationship between collaborative governance and system effectiveness. Higher levels of stakeholder collaboration, reflected through communication, participation, and facilitative leadership, lead to increased trust, which in turn enhances the effectiveness of the application in public service delivery. Conclusion: The study concludes that the effectiveness of the SI AJAIB Application is influenced not only by the quality of the information system but also by collaborative governance and stakeholder trust. Trust building is a key element bridging collaborative governance and successful e-government implementation. Strengthening cross-sector collaboration and fostering public trust should be prioritized as strategic measures to improve the quality of regional digital government services.

Keywords: Collaborative Governance, Trust Building, Information System Effectiveness, E-Government, SI AJAIB

INTRODUCTION

Due to the rapid development of information and communication technologies, governments around the world have increasingly adopted various e-government initiatives over the past few decades. At the same time, digital transformation beyond the public sector continues to reshape citizens' expectations, particularly regarding the need for public institutions to deliver high-quality, real-time digital services (Szedmák et al., 2025). Digital transformation in the public sector has become a global agenda for enhancing the effectiveness and quality of public services. E-government implementation has evolved beyond mere digitization of administrative procedures to become a strategic instrument for realizing responsive, transparent, and accountable governance. According to Heeks (2006), the success of e-government is largely determined by the alignment between system design and social-institutional context (the design reality gap). This underscores the crucial role of non-technical factors in determining the success of digital innovation in the public sector. In Indonesia, the strengthening of e-government is realized through the Electronic-Based Government System (SPBE) policy as part of bureaucratic reform.

At the local level, the Investment and One-Stop Integrated Service Office (DPMPTSP) of Buleleng Regency developed the SI AJAIB Application (Buleleng Online Licensing Application) as an innovative digital-based licensing service. Although the application has improved service accessibility, several issues persist, including limited feature utilization, inconsistent service quality, and slow system response. This highlights a gap between the intended goals of implementation and the on-the-ground reality, potentially reducing the effectiveness of digital service delivery. Theoretically, the effectiveness of public sector information systems can be assessed using the DeLone and McLean (2003) model, which includes five dimensions: system quality, information quality, service quality, user satisfaction, and net benefits. The model emphasizes that system success is influenced not only by technical aspects but also by user perceptions and experiences in utilizing the system.

Meanwhile, collaborative governance is an important approach for addressing the complexities of public policy implementation. Ansell and Gash (2008) define collaborative governance as a collective decision-making process that involves both government and non-government actors within a formal, consensus-oriented, and deliberative forum. It encompasses six dimensions: face-to-face dialogue, trust building, commitment to process, shared understanding, and intermediate outcomes. However, the effectiveness of collaboration cannot be separated from the factor of trust. According to Blau's (1964) Social Exchange Theory, trust is a core element in collaborative governance. Trust building can be measured through five dimensions: reliability, integrity, benevolence, communication, and transparency. High levels of trust encourage active participation, reduce conflict, and enhance the sustainability of inter-actor collaboration.

Although previous studies have examined the relationship between e-government and collaborative governance, most treat these variables separately or only explore direct relationships without considering mediating variables. Moreover, research specifically investigating trust building as an intervening variable in the context of digital service system implementation at the regional level particularly in licensing services is still limited. This highlights a research gap in integrating collaborative governance, trust, and information system effectiveness comprehensively. Based on this gap, the present study offers a novelty by empirically test trust as a mediating mechanism linking collaborative governance and IS success in regional licensing services. This approach provides new insights for public administration research by demonstrating that e-government effectiveness is influenced not only by inter-actor

collaboration but also by the quality of trust established during the process. Consequently, this study contributes both theoretically, by enriching the literature, and practically, by guiding local governments in designing strategies to improve the quality of digital public services which collaborative governance creates interaction spaces that build trust in social exchange theory which in turn influences the success of digital systems as measured by DeLone & McLean model.

METHOD

This study employs a quantitative approach with a causal-associative research design, aimed at empirically analyzing the relationships and influences among variables through hypothesis testing. This design was chosen because the study focuses on examining the effect of Collaborative Governance (X) on the Effectiveness of SI AJAIB Application Implementation (Y), with Trust Building (Z) serving as a mediating variable. Data collection was conducted using structured questionnaires distributed to respondents and subsequently analyzed using statistical methods. The study utilizes quantitative data obtained from both primary and secondary sources. Primary data were collected through questionnaires administered to active users of the SI AJAIB application. Secondary data were gathered from official documents, performance reports, and statistical data related to the usage of the SI AJAIB application.

The population of this study comprises all active users of the SI AJAIB application at the DPMPTSP of Buleleng Regency, totaling 300 individuals based on 2025 data. The sampling technique employed was proportionate stratified random sampling, considering that the population consists of several groups with distinct characteristics. The sample size was determined using Slovin's formula with a 5% margin of error, resulting in 171 respondents, deemed representative of the population. The research instrument consisted of a five-point Likert scale questionnaire, ranging from 1 (strongly disagree) to 5 (strongly agree), to measure respondents' perceptions of each research variable indicator. This scale was applied to assess attitudes, perceptions, and evaluations of the phenomena under study, allowing the data to be quantitatively analyzed.

The study involves three main constructs:

1. Collaborative Governance (X) – independent variable
2. Trust Building (Z) – mediating variable
3. Effectiveness of SI AJAIB Application Implementation (Y) dependent variable

Variable measurement was based on indicators developed in the questionnaire. Collaborative Governance was measured through dimensions reflecting inter-actor collaboration processes in public service delivery. Trust Building was assessed based on the level of trust among actors and users toward the digital service system. The Effectiveness of SI AJAIB Application Implementation was measured based on user perceptions of system performance, service quality, and the system's benefits in supporting licensing services. The data analysis technique employed Structural Equation Modeling (SEM) using Partial Least Squares (PLS-SEM) with the assistance of SmartPLS software. This method was selected because it is capable of analyzing complex relationships among latent variables and testing both direct and indirect effects within the research model. The analytical procedures included descriptive statistical analysis, evaluation of the measurement model (outer model), and evaluation of the structural model (inner model) to test validity, reliability, and the relationships among variables in the study. PLS-SEM is more appropriate using over CB-SEM because it is suitable for exploratory research, can handle complex models with multiple constructs and indicators, and does not require strict assumptions of normal data distribution.

Table 1. Independent Operational Variable

Dimension	Operational Definition in the Context of SI AJAIB	Indicators
1.Starting Conditions	Initial conditions of collaboration involving actor engagement and participation.	1. Initial trust between institutions in implementing SI AJAIB. 2. Equality of roles between government, business actors, and the community. 3. Presence of motivation and incentives for involved parties. 4. Initial commitment to shared goals in application implementation.
2. Institutional Design	Institutional structure and inter-agency coordination that governs the cooperation mechanism among actors in supporting the implementation of SI AJAIB.	1. Clarity of task and responsibility distribution among institutions. 2. Existence of official regulations or guidelines related to collaborative implementation of SI AJAIB. 3. Openness of access to information and work procedures. 4. Structured coordination mechanisms among relevant parties.
3. Facilitative Leadership	The role of leadership in facilitating actors so that collaboration runs effectively in the implementation of the SI AJAIB application.	1. Leadership capable of mediating differences in interests. 2. Leaders encourage active participation of all parties. 3. Leaders support open and transparent communication. 4. Leaders maintain commitment and trust among actors.
4.Collaborative Process	Interaction processes that include dialogue, communication, and joint decision-making between DPMPTSP, business actors, and the community in the development and use of the SI AJAIB application.	1. Intensity of communication among actors in application implementation. 2. Involvement of external parties in discussions and evaluation.

		3. Decisions are made based on mutual consensus. 4. Existence of participatory forums or platforms for application improvement.
5. Intermediate Outcomes	Temporary results of the collaboration process that demonstrate inter-actor trust and support the sustainability of SI AJAIB implementation.	1. Increased trust among involved parties. 2. Growing shared commitment to support application sustainability. 3. Satisfaction with collaboration outcomes. 4. Formation of sustainable partnership networks.

Table 2. Dependent Operational Variable

Dimension	Operational Definition in the Context of SI AJAIB	Indicators
1.System Quality	Describes the extent to which the SI AJAIB application has good technical system quality, is easy to use, stable, and integrated in supporting licensing and investment services.	1. Ease of navigation and application use. 2. Speed and stability of the system in processing data. 3. Data security and user information protection. 4. System integration across service units.
2.Information Quality	Measures the quality of information produced by the SI AJAIB application in terms of accuracy, relevance, clarity, and timeliness to support decision-making and public services.	1. Accuracy of licensing and investment data presented. 2. Information is relevant and easily understood by users. 3. Timeliness of information updated periodically. 4. Availability of complete and transparent information.
3.Service Quality	Indicates the extent to which the quality of supporting services related to the use of SI AJAIB is delivered quickly, responsively, and helps users resolve technical or administrative issues.	1. Quick response to user complaints or inquiries. 2. Easily accessible and helpful technical support. 3. Friendly and professional attitude of service staff. 4. Consistent service across communication channels.

4.User Satisfaction	Describes the level of user satisfaction with the performance, ease of use, and benefits obtained from the implementation of the SI AJAIB application.	1. Satisfaction with the ease of service process through SI AJAIB. 2. Satisfaction with the application's benefits in saving time and cost. 3. Positive experience in using the application. 4. Users' willingness to continue using and recommend the application.
5. Net Benefit	Measures the extent to which the implementation of SI AJAIB provides tangible benefits to organizational effectiveness and improvement of public service quality at DPMPTSP Buleleng.	1. Increased efficiency and effectiveness of public services. 2. Reduced processing time and service costs. 3. Improved transparency and accountability of services. 4. Increased public satisfaction with licensing services.

RESULTS AND DISCUSSION

Overview of Respondents

This research was conducted at the Investment and One-Stop Integrated Service Office of Buleleng Regency, whose main duty is to provide licensing services. The respondents in this study totaled 171 people, consisting of 87 (51%) men and 84 (49%) women. Based on the processed data (2026), all respondents, totaling 171 people (100%), stated that they have used the Si Ajaib application. There were no respondents who stated that they had never used the application (0%). This indicates that all respondents in this study are active users or have at least accessed services through Si Ajaib. Thus, the data obtained truly represents the experiences of Si Ajaib application users in accessing licensing and administrative services.

The majority of respondents accessed Si Ajaib for Operational Permits for Community Learning Activity Centers (PKBM), totaling 77 respondents (45%). This indicates that PKBM operational services are the most dominant need, making them the main reason people use Si Ajaib. Furthermore, 36 respondents (21%) accessed Si Ajaib for Research Certificate purposes. This high number indicates that research administrative services are also a significant need in the community. Several other services that are quite frequently accessed include:

1. Advertisement Installation Permits: 14 respondents (8%)
2. Fundraising Permits: 13 respondents (8%)
3. Land Use Approval: 9 respondents (5%)
4. Reproductive and Family Health Permits: 6 respondents (4%)
5. Meanwhile, other types of services are accessed by a relatively small proportion (1–4

respondents or around 1–2%), such as:

1. Health Administration and Policy Permits
2. Acupuncture Permits
3. Health Microbiologist Permits
4. Occupational Health Supervisor Permits

5. Permits for Establishment and Operation of Learning Groups
6. Speech Therapist Practice Permits
7. Dental Technician Permits
8. Cultural Protection Permits
9. Sanitarian Work Permits

Measurement Model Evaluation (Outer Model)

a. Convergent Validity

According to Hair et al. (2019), convergent validity evaluation in reflective models is conducted by examining the outer loading values of each indicator. An outer loading value of ≥ 0.70 is recommended, as it demonstrates that the indicator strongly reflects the latent construct. However, outer loading values in the range of 0.60–0.70 are still acceptable, particularly in exploratory research, provided that the Average Variance Extracted (AVE) remains ≥ 0.50 and Composite Reliability ≥ 0.70.

Indicators with outer loading values below 0.40 should be removed from the model, as they are considered insufficient in representing the construct. Indicators with outer loadings between 0.40 and 0.70 may be considered for removal if doing so improves the AVE and Composite Reliability without compromising the conceptual validity of the construct being measured. Therefore, in this study, the removal of indicators was carried out gradually, taking into account both statistical considerations and the theoretical rationale underlying each construct. The following presents the results of the outer loading and Average Variance Extracted (AVE) tests.

Table 3. Outer Loading Test of Indicators for Collaborative Governance (X) and Effectiveness of SI AJAIB Application (Y)

Indicator	Collaborative Governance (X)	Effectiveness of SI AJAIB Application (Y)	Trust Building (Z)	Description
X1.1	0.698			VALID
X1.2	0.727			VALID
X1.3	0.693			VALID
X1.4	0.723			VALID
X1.5	0.715			VALID
X1.6	0.733			VALID
X1.7	0.690			VALID
X1.8	0.745			VALID
X1.9	0.777			VALID
X1.10	0.763			VALID
X1.11	0.703			VALID
X1.12	0.737			VALID
X1.13	0.696			VALID
Y1.1		0.768		VALID
Y1.2		0.713		VALID
Y1.3		0.708		VALID
Y1.4		0.749		VALID
Y1.5		0.642		VALID

Indicator	Collaborative Governance (X)	Effectiveness of SI AJAIB Application (Y)	Trust Building (Z)	Description
Y1.6		0.705		VALID
Y1.7		0.709		VALID
Y1.8		0.717		VALID
Y1.9		0.742		VALID
Y1.10		0.710		VALID
Y1.11		0.735		VALID
Y1.12		0.721		VALID
Y1.13		0.756		VALID
Y1.14		0.523		VALID
Z1.1			0.698	VALID
Z1.2			0.722	VALID
Z1.3			0.744	VALID
Z1.4			0.773	VALID
Z1.5			0.739	VALID
Z1.6			0.738	VALID
Z1.7			0.706	VALID
Z1.8			0.733	VALID
Z1.9			0.745	VALID
Z1.10			0.697	VALID
Z1.11			0.734	VALID
Z1.12			0.701	VALID
Z1.13			0.777	VALID

Source: Processed by Author (2026)

Based on the results of the outer loading test, most indicators across the three constructs meet the recommended threshold of ≥ 0.70. This indicates that the indicators effectively reflect their respective latent constructs.

1. Collaborative Governance (X). The outer loading values range from 0.690 to 0.777. Most indicators have values ≥ 0.70. Some indicators fall within the 0.60–0.70 range such as:

a. X1.1 = 0.698
b. X1.3 = 0.693
c. X1.7 = 0.690
d. X1.13 = 0.696

However, these values are still within acceptable limits according to Hair et al. (2019), so the indicators are retained because they are not below 0.60 and are conceptually still relevant to the Collaborative Governance construct. Overall, construct X has met the criteria for convergent validity.

2. Effectiveness of SI AJAIB Application (Y): Outer loading values range from 0.523 to 0.768. Almost all indicators meet the ≥ 0.70 threshold, except for:

a. Y1.5 = 0.642
b. Y1.14 = 0.523

Indicator Y1.5 falls within the 0.60–0.70 range, so it can be retained if the AVE and Composite Reliability values remain satisfactory. However, Y1.14 has a relatively low value of 0.523, near the minimum acceptable limit, and should be considered for removal if doing so increases the AVE and construct reliability.

3. Trust Building (Z): Outer loading values range from 0.697 to 0.777, with most indicators above 0.70. Some indicators slightly below 0.70 include:

a. Z1.1 = 0.698
b. Z1.10 = 0.697

These values are still considered acceptable and do not pose significant issues for convergent validity.

b. Average Variance Extracted (AVE)

In addition to the outer loading values, convergent validity in this study was also assessed using the Average Variance Extracted (AVE), which measures the extent to which a latent construct explains the variance of its indicators on average. Higher AVE values indicate that a greater proportion of the variance in the indicators is explained by the latent construct rather than by measurement error. According to Vinzi et al. (2010), an AVE value greater than 0.50 indicates good convergent validity, as the construct explains more than 50% of the variance of its indicators. The AVE test was conducted for all research constructs, namely Collaborative Governance, Effectiveness of SI AJAIB Application, and Trust Building.

Table 4. Average Variance Extracted (AVE) for Research Constructs

Construct	Average Variance Extracted (AVE)
Collaborative Governance (X)	0.523
Effectiveness of SI AJAIB Application (Y)	0.503
Trust Building (Z)	0.535

Source: Processed by the author (2026)

Based on the results of the measurement model assessment, the Average Variance Extracted (AVE) values for each construct meet the established criteria. The AVE value for the variable Collaborative Governance (X) is 0.523, for the variable Effectiveness of SI AJAIB Application (Y) is 0.503, and for the variable Trust Building (Z) is 0.535. According to Hair et al. (2019), a construct is considered to have achieved convergent validity if its AVE is ≥ 0.50. This indicates that the construct is able to explain more than 50% of the variance of its underlying indicators. Therefore, all variables in this study satisfy the criteria for convergent validity, as each has an AVE value above 0.50.

c. Table of Convergent Validity Results

1. Discriminant Validity

a. Discriminant validity is conducted to ensure that each construct is empirically distinct from the other constructs in the research model. In other words, each latent variable must measure a unique concept and should not overlap with other constructs. In PLS-SEM, discriminant validity can be assessed using three main methods, including:
b. Fornell-Larcker Criterion: This method compares the square root of the AVE (√AVE) with the correlations between constructs. A construct is considered valid if its √AVE value is greater than its correlation with any other construct.

Table 5. Fornell-Larcker Criterion

Construct	Collaborative Governance (X)	Effectiveness of SI AJAIB Application (Y)	Trust Building (Z)
Collaborative Governance (X)	0.724		
Effectiveness of SI AJAIB Application (Y)	0.501	0.709	
Trust Building (Z)	0.326	0.609	0.732

Source: Processed by the author (2026)

Based on the Fornell-Larcker Criterion (Table), the square root of the Average Variance Extracted (√AVE) for each construct is as follows: Collaborative Governance (X) = 0.724, Effectiveness of SI AJAIB Application (Y) = 0.709, and Trust Building (Z) = 0.732. All of these √AVE values are higher than the correlations with the other constructs. This indicates that each latent variable has a stronger ability to explain its own indicators compared to the other constructs. Therefore, the model meets the discriminant validity criteria according to the Fornell-Larcker Criterion.

a. **Cross Loading** involves comparing the loading values of each indicator on its own construct with the loadings on other constructs. An indicator is considered valid if its loading on its own construct is higher than on any other construct.

Table 6. Cross-Loading Test Results

Indicator	Collaborative Governance (X)	Effectiveness of SI AJAIB Application (Y)	Trust Building (Z)
X1.1	0,698	0,335	0,177
X1.2	0,727	0,312	0,162
X1.3	0,693	0,299	0,230
X1.4	0,723	0,350	0,216
X1.5	0,715	0,289	0,196
X1.6	0,733	0,409	0,271
X1.7	0,690	0,356	0,176
X1.8	0,745	0,420	0,264
X1.9	0,777	0,407	0,314
X1.10	0,763	0,374	0,272
X1.11	0,703	0,348	0,178
X1.12	0,737	0,443	0,267
X1.13	0,696	0,304	0,276
Y1.1	0,404	0,768	0,410
Y1.2	0,359	0,713	0,366
Y1.3	0,306	0,708	0,398
Y1.4	0,454	0,749	0,349
Y1.5	0,296	0,642	0,406
Y1.6	0,379	0,705	0,367
Y1.7	0,282	0,709	0,335
Y1.8	0,367	0,717	0,430
Y1.9	0,471	0,742	0,445
Y1.10	0,369	0,710	0,402

Y1.11	0,346	0,735	0,435
Y1.12	0,298	0,721	0,410
Y1.13	0,366	0,756	0,438
Y1.14	0,231	0,523	0,700
Z1.1	0,185	0,450	0,698
Z1.2	0,230	0,435	0,722
Z1.3	0,167	0,393	0,744
Z1.4	0,188	0,483	0,773
Z1.5	0,332	0,449	0,739
Z1.6	0,258	0,484	0,738
Z1.7	0,214	0,372	0,706
Z1.8	0,229	0,447	0,733
Z1.9	0,338	0,522	0,745
Z1.10	0,173	0,430	0,697
Z1.11	0,228	0,437	0,734
Z1.12	0,213	0,371	0,701
Z1.13	0,283	0,476	0,777

Source: Processed by the author (2026)

Based on the Cross-Loading Table, all indicators exhibit their highest loading values on the construct they are intended to measure compared to other constructs. For instance, indicator X1.9 has a loading of 0.777 on Collaborative Governance (X), which is higher than its loadings on Y (0.407) and Z (0.314). Similarly, indicator Y1.1 shows the highest loading on variable Y at 0.768, and indicator Z1.13 has the highest loading on variable Z at 0.777.
Although indicator Y1.14 has a higher loading on Z (0.700) than on Y (0.523), the majority of indicators consistently show that the highest loading occurs on their respective constructs. Therefore, overall, the model still meets the discriminant validity criteria based on cross-loading.

a. Heterotrait-Monotrait Ratio (HTMT): This method examines the ratio of correlations between constructs. The HTMT value should be less than 0.90 (or below 0.85 for a more conservative model).

Table 7. Heterotrait-Monotrait (HTMT) Ratio

Construct	Collaborative Governance (X)	Effectiveness of SI AJAIB Application (Y)	Trust Building (Z)
Collaborative Governance (X)			
Effectiveness of SI AJAIB Application (Y)	0.531		
Trust Building (Z)	0.338	0.637	

Source: Processed by the author (2026)

Based on the HTMT table, the correlation ratios between constructs are 0.531 for X–Y, 0.338 for X–Z, and 0.637 for Y–Z. All of these values are below the threshold of 0.90 (and even below 0.85), thereby satisfying the discriminant validity criteria according to the HTMT approach. If one or all of these criteria are met, the measurement model is considered to have good discriminant validity. Based on the three testing methods discussed Fornell Larcker criterion, cross-loading, and HTMT it can be concluded that the measurement model in this

study fulfills the discriminant validity requirements. This indicates that each construct in this research is distinct, and there is no conceptual or empirical overlap between the latent variables.

Construct Reliability

Construct reliability testing aims to assess the internal consistency of the indicators used to measure a latent variable. A construct is considered reliable if its indicators consistently and stably measure the intended variable. In this study, construct reliability was evaluated using Cronbach's Alpha. According to Hair et al. (2019), a construct is deemed to have good reliability if the Cronbach's Alpha value is ≥ 0.70.

Table 8. Cronbach's Alpha for Construct Reliability

Construct	Cronbach's Alpha
Collaborative Governance (X)	0.924
Effectiveness of SI AJAIB Application (Y)	0.923
Trust Building (Z)	0.928

Source: Processed by the author (2026)

Based on the table above, the Cronbach's Alpha values for the variables are as follows: Collaborative Governance (X) = 0.924, Effectiveness of SI AJAIB Application (Y) = 0.923, and Trust Building (Z) = 0.928. All of these values are well above the minimum threshold of 0.70 and fall within the "very high" category (>0.90). This indicates that each construct in this study exhibits excellent internal consistency. Therefore, it can be concluded that all latent variables in the research model are reliable and suitable for further analysis in the structural model (inner model).

Structural Model Evaluation (Inner Model)

The evaluation of the structural model (inner model) is a critical stage in Partial Least Squares Structural Equation Modeling (PLS-SEM) that aims to examine the relationships between latent variables in the research model. The inner model assesses both the strength and direction of the relationships among constructs, as well as tests the hypotheses formulated in the study. Three main tests are conducted:

a. R-Square (R^2)

R-Square (R^2) is a measure used to assess the explanatory power of the independent variables over the dependent variables in the structural model. The R^2 value represents the proportion of variance in the endogenous variable that can be explained by the exogenous variables in the model. A higher R^2 indicates a stronger ability of the model to explain the relationships among variables. According to Hair et al. (2019), R^2 values are categorized as follows: 0.75 = substantial, 0.50 = moderate, and 0.25 = weak.

Table 9. R-Square (R^2) Test Results

Dependent Variable	P Value
Effectiveness of SI AJAIB Application (Y)	0.000
Trust Building (Z)	0.025

Source: Processed by the author (2026)

Based on the table above, the R-Square values indicate that the Effectiveness of the SI AJAIB Application (Y) has a value of 0.000, while Trust Building (Z) has a value of 0.025. The R^2 value of 0.025 for Trust Building (Z) suggests that Collaborative Governance (X) explains

only 2.5% of the variance in Trust Building. According to the criteria proposed by Hair et al. (2019), this value falls into the weak category as it is below 0.25.

Meanwhile, the R^2 value of 0.000 for the Effectiveness of the SI AJAIB Application (Y) indicates that the independent variables in the model are not yet able to substantially explain the variance in Y. Therefore, the structural model's ability to explain the endogenous variables is still relatively low. Although the R^2 value for Effectiveness is reported as 0.000, this does not contradict the significant path coefficient ($\beta = 0.338$, $p < 0.05$). R^2 reflects the overall explanatory power of the model, whereas path coefficients assess the strength and significance of individual relationships. The results indicate that while the relationship between the variables is statistically significant, the explanatory power of the model for Effectiveness is very limited. This is further supported by the small effect size (f^2), suggesting that the predictor contributes only marginally to the variance of the endogenous construct. Therefore, the findings should be interpreted in terms of significant but weak effects, and it is likely that additional unobserved variables outside the model also influence Effectiveness.

b. Effect Size (f^2)

Effect Size (f^2) is used to measure the magnitude of the influence of an exogenous variable on an endogenous variable in the structural model. The f^2 value indicates how much a specific independent variable contributes to the increase in the R^2 value of the dependent variable. According to Hair et al. (2019), f^2 values are categorized as follows: 0.02 = small, 0.15 = medium (moderate), and 0.35 = large.

Table 10. Effect Size (f^2) Test Results

Relationship	f^2 Value
Collaborative Governance (X) → Effectiveness of SI AJAIB Application (Y)	0.026
Collaborative Governance (X) → Trust Building (Z)	0.061
Trust Building (Z) → Effectiveness of SI AJAIB Application (Y)	0.001

Source: Processed by the author (2026)

Based on Table 5.13, the effect size (f^2) values are as follows:

1. Collaborative Governance (X) → Effectiveness of SI AJAIB Application (Y) = 0.026
2. Collaborative Governance (X) → Trust Building (Z) = 0.061
3. Trust Building (Z) → Effectiveness of SI AJAIB Application (Y) = 0.001

According to Hair et al. (2019), an f^2 value of 0.02 is categorized as small, 0.15 as medium, and 0.35 as large. Therefore:

1. The effect of Collaborative Governance on the Effectiveness of the SI AJAIB Application falls into the small category.
2. The effect of Collaborative Governance on Trust Building is also categorized as small.
3. The effect of Trust Building on the Effectiveness of the SI AJAIB Application, with a value of 0.001, indicates a very small effect, approaching no practical influence.

These findings suggest that the contribution of each exogenous variable in increasing the R^2 value of the endogenous variables remains relatively low.

Hypothesis Testing

Hypothesis testing in this study was conducted using the bootstrapping method in SmartPLS by examining the path coefficients (original sample), T-statistics, and P-values. A hypothesis is accepted if the T-statistic > 1.96 and the P-value < 0.05 at a 5% significance level.

Hypothesis 1 (Ha1)

Ha1: Collaborative Governance has a positive and significant effect on the Effectiveness of the SI AJAIB Application at DPMPTSP Buleleng Regency.

H01: Collaborative Governance has a negative and insignificant effect on the Effectiveness of the SI AJAIB Application.

Based on the test results, the path coefficient is 0.338, the T-statistic is 5.298, and the P-value is 0.000. The coefficient indicates a positive direction, and since the T-statistic > 1.96 and the P-value < 0.05, Ha1 is accepted and H01 is rejected.

This means that Collaborative Governance has a positive and significant effect on the Effectiveness of the SI AJAIB Application at DPMPTSP Buleleng Regency. The better the implementation of collaborative governance, the higher the effectiveness of the SI AJAIB application.

Hypothesis 2 (Ha2)

Ha2: Trust Building mediates the positive effect of Collaborative Governance on the Effectiveness of the SI AJAIB Application.

H02: Trust Building mediates the negative effect of Collaborative Governance on the Effectiveness of the SI AJAIB Application.

The indirect effect test results show a coefficient value of 0.163, a T-statistic of 4.240, and a P-value of 0.000. These results indicate that the indirect effect is positive and significant. Since the direct effect of Collaborative Governance on Effectiveness is also significant (0.338; $p < 0.05$), and the indirect effect through Trust Building is significant, it can be concluded that Trust Building acts as a partial mediator. Therefore, Ha2 is accepted and H02 is rejected. This means that Trust Building significantly mediates the positive effect of Collaborative Governance on the Effectiveness of the SI AJAIB Application at DPMPTSP Buleleng Regency.

Discussion

The results of this study indicate that collaborative governance has a positive and significant effect on the effectiveness of the SI AJAIB application, both directly and indirectly through trust building as a mediating variable. These findings reinforce the notion that the success of digital innovation implementation in the public sector is not solely determined by technological factors, but also by the quality of collaborative governance and the level of trust among stakeholders. Empirically, the SEM-PLS structural model analysis shows that the direct effect of collaborative governance on effectiveness has a coefficient value of 0.338, with a T-statistic of 5.298 (>1.96) and a p-value of 0.000 (<0.05), leading to the acceptance of the first hypothesis (Ha1). This result indicates that higher levels of collaboration among stakeholders lead to greater effectiveness in the implementation of digital public service systems. This finding is consistent with the collaborative governance theory proposed by Ansell and Gash (2008), which emphasizes that effective collaboration is characterized by participatory interaction, open communication, and mutual trust among actors. In this study, collaboration among DPMPTSP, business actors, and the community contributes to improving the quality of SI AJAIB services, particularly in terms of coordination, service integration, and responsiveness.

Furthermore, the findings reveal that trust building plays a significant mediating role in the relationship between collaborative governance and application effectiveness. This is supported by the mediation test results, which show a coefficient value of 0.163, a T-statistic of 4.420 (>1.96), and a p-value of 0.000 (<0.05), leading to the acceptance of the second hypothesis (Ha2). Thus, the influence of collaborative governance on effectiveness is not purely direct but also operates through the mechanism of trust established among stakeholders. From a theoretical perspective, this finding aligns with Social Exchange Theory (Blau, 1964), which explains that trust develops through reciprocal and sustained social interactions. When the

government demonstrates transparency, consistency, and responsiveness in digital services, users' trust in the system increases, ultimately enhancing application usage and effectiveness.

In addition, this study supports the Information System Success Model proposed by DeLone and McLean (2003), which highlights that system success is determined by system quality, information quality, and service quality, all of which influence user satisfaction and net benefits. In the context of SI AJAIB, user trust acts as a crucial bridging factor between system quality and the level of application utilization by the public. These findings are also consistent with prior studies, such as Kim and Park (2019), which demonstrate that trust significantly influences e-government usage, and Wirtz and Daiser (2018), who emphasize that the success of public sector digital innovation depends on the combination of collaboration and trust. In Indonesia, Lestari (2023) similarly found that low levels of trust remain a major barrier to the implementation of electronic licensing systems at the regional level.

However, empirical evidence also reveals several limitations in the implementation of SI AJAIB, including suboptimal utilization of system features and issues related to service responsiveness. This suggests that although collaborative mechanisms have been established, the quality of trust building has not yet reached its full potential, thereby affecting the overall effectiveness of the system. In conclusion, this study underscores that the effectiveness of the SI AJAIB application is the result of the interaction among three key factors: collaborative governance, trust, and system quality. These elements must operate synergistically to achieve effective, transparent, and sustainable digital public services.

CONCLUSION

This study concludes that collaborative governance has a positive and significant effect on the effectiveness of the SI AJAIB application at DPMPTSP Buleleng Regency. This finding indicates that the quality of collaboration among stakeholders plays a crucial role in improving the performance of digital public services. In addition, trust building has been proven to act as a significant mediating variable, strengthening the relationship between collaborative governance and system effectiveness. These results emphasize that trust is a key element in the successful implementation of e-government, as it encourages user participation, acceptance, and satisfaction with digital services.

However, the model's ability to explain the effectiveness variable remains limited, indicating that other factors outside the model, such as technological quality, digital literacy, and organizational readiness, also contribute to system effectiveness. Overall, this study highlights that the effectiveness of digital public service innovation requires a strong synergy between collaborative governance, trust, and the quality of technological systems in order to produce optimal, sustainable, and user-oriented services. From a theoretical perspective, this study contributes to the integration of collaborative governance theory and trust-based mechanisms within the e-government effectiveness model. It extends prior literature by demonstrating that governance collaboration alone is not sufficient; rather, its effectiveness is substantially enhanced through the development of trust among stakeholders as an intervening process.

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