

The Influence of the Quality of Digital Population Identity (IKD) Services on Public Satisfaction in Garut Regency

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ABSTRACT

This study examines the effect of Digital Population Identity (IKD) service quality on public satisfaction at the Population and Civil Registration Office of Garut Regency, Indonesia. A quantitative approach with an explanatory survey design was employed. Data were collected from 100 IKD users selected through an accidental sampling technique, which was considered appropriate because no comprehensive sampling frame of active IKD users was available. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The results indicate that IKD service quality has a positive and significant effect on public satisfaction (path coefficient = 0.749; $t = 17.398$; $p < 0.001$). The coefficient of determination ($R^2 = 0.560$) shows that service quality explains 56.0% of the variance in public satisfaction, while the remaining 44.0% is influenced by other factors outside the research model. The findings suggest that reliable digital services, clear information, responsive service officers, and user-friendly service processes are key determinants of citizens' satisfaction with IKD services. Considering the geographical characteristics of Garut Regency, improving citizens' satisfaction requires not only continuous enhancement of service quality but also context-sensitive strategies, including expanding digital access, strengthening digital literacy, and improving the accessibility of IKD services for communities in remote areas.

Introduction

Digital transformation in governance has become a strategic agenda in various countries, including Indonesia. Public services, as a key pillar of public trust in the government, are required to continuously adapt to developments in information and communication technology. In this context, e-government is seen as a digital innovation capable of improving service accessibility, bureaucratic efficiency, transparency, and the quality of public services in a more responsive and integrated manner (DeLone & McLean, 2003; Chan et al., 2021; Pham et al., 2023; Patergiannaki & Pollalis, 2024). Furthermore, various studies have shown that the quality of government digital services is closely related to public satisfaction, trust, and loyalty in the use of technology-based public services (Chan et al., 2021; Kala et al., 2024).

In Indonesia, the digital transformation of government is strengthened through Presidential Regulation No. 95 of 2018 concerning the Electronic-Based Government System (SPBE) and Presidential Regulation No. 82 of 2023 concerning the Acceleration of Digital Transformation and the Integration of National Digital Services. These policies emphasize the importance of integrating digital services across sectors to create more effective, efficient, and citizen-oriented public services (OECD, 2024). Within this framework, the Ministry of Home Affairs launched the Digital Population Identity (IKD) program as part of the digitization of population administration, which serves as the main foundation for digital identity-based public services.

IKD is electronic information that represents population documents and personal data in digital form through an application on a mobile device, as stipulated in Minister of Home Affairs Regulation Number 72 of 2022 (Ministry of Home Affairs of the Republic of Indonesia, 2022). This program aims to improve service efficiency, accelerate public administration processes, and strengthen population data security through a digital authentication system (Marwiyah, 2023). Furthermore, IKD implementation is also part of the development of an integrated national digital identity system to support more seamless and citizen-centric public services (Global Government Forum, 2023). By early 2024, millions of people had registered in the IKD system, although its implementation in various regions still shows varying degrees of success.

From a theoretical perspective, public service quality is understood as the ability of government organizations to consistently meet or exceed public expectations. Parasuraman, Zeithaml, and Berry (1988) explain that service quality can be measured through five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy. With the development of digital services, the concept of service quality has expanded to include aspects of system ease of use, application reliability, response speed, and data security as essential components of e-service quality (Parasuraman et al., 2005; Marwiyah, 2023). Meanwhile, public satisfaction is understood as an emotional and cognitive evaluation that arises from comparing expectations before receiving a service with the actual experience after using that service (Oliver, 1980; Chan et al., 2021).

Various empirical studies have shown a positive relationship between service quality and public satisfaction with population administration services. Kurniawan et al. (2023) found that service quality significantly influences public satisfaction with population administration services. Similar findings were also presented by Riauwati and Dwiyantri (2023); Wulandari (2023), who demonstrated that consistently improving service quality can increase public satisfaction with public services. More specifically, Lubis and Ginting (2024) demonstrated that digital service quality in the use of the IKD application influences user satisfaction.

However, the implementation of IKD in various regions still faces several challenges that impact the effectiveness of digital services. Several studies have shown that limited technological infrastructure, low public digital literacy, and the readiness of government organizations are obstacles to optimizing IKD services (Widiyarta & Zunaidi, 2024; Siagian & Hasibuan, 2025). These conditions have resulted in suboptimal adoption and utilization of IKD in various regions, necessitating a more adaptive implementation strategy oriented to community needs.

Garut Regency provides a distinctive context for examining the implementation of Digital Population Identity (IKD) services due to its diverse geographical and socio-demographic characteristics. The regency comprises both urban and rural areas, with many sub-districts located in mountainous regions where internet connectivity and digital infrastructure remain uneven. These geographical disparities, together with differences in digital literacy and smartphone ownership among citizens, may influence access to and utilization of digital public services. Since the IKD program relies on internet access, mobile devices, and users' digital competencies, variations in these contextual factors may affect the quality of service delivery and public satisfaction. Therefore, Garut Regency represents an important setting for understanding how local geographical and social conditions shape the implementation of digital public services.

Although much research has been conducted on service quality and public satisfaction, several research gaps remain. First, most previous studies have focused on general population administration services rather than Digital Population Identity (IKD) as a relatively new digital public service innovation. Second, quantitative studies examining the effect of IKD service quality on public satisfaction at the local government level remain limited. Third, despite the distinctive geographical and socio-demographic characteristics of Garut Regency – including mountainous areas, unequal digital infrastructure, and varying levels of digital literacy – no previous study has specifically examined the effect of IKD service quality on public satisfaction at the Garut Regency Population and Civil Registration Office.

Based on these research gaps, this study contributes not only by examining the relationship between Digital Population Identity (IKD) service quality and public satisfaction, but also by situating the analysis within the local context of Garut Regency, where geographical diversity and digital disparities shape citizens' experiences in accessing digital public services. Rather than treating citizens as

homogeneous users of digital government services, this study recognizes that local socio-geographical conditions influence how public services are delivered and experienced. In doing so, the study contributes to the growing discussion on digital public administration from a **Non-Western Perspective**, highlighting how contextual factors in developing regions affect the implementation of digital government initiatives. Theoretically, the findings extend the literature on digital public service quality by incorporating contextual characteristics that are often overlooked in conventional e-government studies. Practically, the results provide evidence-based recommendations for designing more inclusive and context-sensitive IKD services, particularly for regions facing geographical constraints and unequal digital access. Therefore, this study aims to analyze the effect of Digital Population Identity (IKD) service quality on public satisfaction at the Garut Regency Population and Civil Registration Office.

Literature Review

E-Government and Digitalization of Public Services

A systematic review of research on e-government and public trust in developing countries between 2008 and 2024 (as summarized in Razanakoto, 2026) reveals a significant thematic shift. Earlier studies primarily focused on mechanisms for building public trust through transparency and information security, whereas more recent studies emphasize how trust contributes to the effectiveness of digital government initiatives, with user satisfaction emerging as a key indicator of successful e-government implementation.

This is not a trivial shift: trust is now understood not only as a prerequisite for adoption but also as a prerequisite for adoption. e-government, but rather as a component of the quality of the service experience itself. The OECD (2024) confirms that among all factors influencing trust in public institutions, government responsiveness and a sense of voice are the strongest predictors—suggesting that the quality of interactions between citizens and government digital systems has implications that go beyond mere transactional satisfaction.

Patergiannaki and Pollalis (2024) made an important methodological contribution by demonstrating that the quality of e-government services at the local government level is significantly moderated by demographic variables, including age, educational level, and digital readiness. These findings challenge studies on e-government user satisfaction that treat citizens as a homogeneous population, a methodological limitation that is also common in many domestic studies. Similarly, Kala et al. (2024) confirmed a comparable pattern in India, showing that residential status (urban versus rural) significantly moderates the relationship between e-government service quality and citizen trust. In other words, user heterogeneity should not merely be treated as a control variable, but rather as an important moderating factor that determines whether the relationship between service quality and public satisfaction operates consistently across different population segments. This perspective is particularly relevant to the context of Garut Regency, where

substantial differences exist between urban and rural areas in terms of internet accessibility, digital infrastructure, and citizens' digital literacy. Such variations may influence how citizens access and experience Digital Population Identity (IKD) services, suggesting that the relationship between service quality and public satisfaction should be interpreted within its local socio-geographical context rather than assumed to be uniform across all users. Therefore, examining IKD services in Garut contributes to a broader understanding of how contextual factors shape the implementation and outcomes of digital public services in developing regions.

In the Indonesian context, Tui et al. (2022) demonstrated that e-government innovation in population administration agencies positively contributes to improving public service quality. However, the success of digitalization depends not only on technological quality, but also on the readiness of the institutional ecosystem, human resource capacity, infrastructure availability, and adaptive leadership. Furthermore, Widiyarta and Zunaidi (2024) emphasized that optimistic narratives surrounding the digitalization of public services often overlook the issue of the digital divide, which may exclude certain groups of citizens from services intended to be inclusive. In the case of Garut Regency, characterized by mountainous geographical conditions and substantial disparities in digital access between urban and rural communities, the fragmentation of digital service experiences is likely to be more pronounced than in studies conducted in predominantly urban areas.

Quality of Public Services

The debate surrounding public service quality in administrative literature over the past three decades has continued to evolve alongside changes in service delivery contexts. One of the most influential theoretical foundations is the SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (1988), which conceptualizes service quality as the gap between users' expectations and their actual perceptions of services received. The model measures service quality through five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. The primary strength of SERVQUAL lies in its ability to conceptualize quality as a relational construct shaped by users' subjective evaluations rather than as an objective characteristic of the service itself, making it widely applicable across various sectors. However, the model was originally developed based on observations of face-to-face commercial services, and its applicability becomes more complex when applied to digital government services.

One of the fundamental limitations of SERVQUAL in the digital context lies in its assumptions regarding service interaction structures. In conventional services, responsiveness and assurance are primarily reflected through the behavior and interaction of service personnel. In contrast, within digital services, these dimensions are represented by system responsiveness, application reliability, and technological infrastructure performance, which are conceptually distinct from interpersonal service interactions. Recognizing this limitation, Parasuraman, Zeithaml, and Malhotra (2005) introduced the E-S-QUAL model, consisting of four dimensions: efficiency, system availability, fulfillment, and privacy, specifically

designed to accommodate the characteristics of web-based services. Although E-S-QUAL represents an important conceptual advancement, it was primarily developed for voluntary and profit-oriented e-commerce transactions. Consequently, when applied to mandatory and government-controlled digital identity services that emphasize collective public interests, the model still faces substantial limitations. Yaakoubi et al. (2025), through a systematic review of 626 Scopus-indexed articles published between 2014 and 2024, argued that both SERVQUAL and E-S-QUAL remain insufficient for fully capturing the complexity of digital public services because both models were originally designed within commercial environments characterized by competition and user choice, conditions that differ fundamentally from the public sector context.

At the domestic level, Hardiyansyah (2018) adapted the SERVQUAL framework into the Indonesian public service context by integrating its five dimensions with bureaucratic performance indicators. Nevertheless, this adaptation remains largely grounded in conventional service characteristics and has not fully incorporated the increasingly important technological dimensions of digital public services. Furthermore, Riauwati and Dwiyantri (2023) found that the influence of each SERVQUAL dimension on public satisfaction varies significantly in the context of population administration services, indicating that the relative importance of service quality dimensions is highly dependent on service characteristics and contextual conditions. This issue becomes even more relevant in the context of Digital Population Identity (IKD) services, raising an important question regarding whether conventional service quality frameworks can adequately measure the quality of digital identity-based public services without substantial conceptual modification.

Community Satisfaction

Public satisfaction with public administration cannot be treated as a unidimensional construct solely reflecting the technical quality of services. The OECD (2024) in a public trust survey covering 30 countries found that citizen satisfaction with administrative services was consistently influenced by a combination of service delivery quality, perceptions of government responsiveness, and a sense of voice in public decisions—confirming the complexity of multiple determinants of satisfaction that cannot be reduced to a purely technical dimension. Specifically in the context of digital services, Alkrajji and Ameen (2021, 2022, as cited in Mohd Suki et al., 2025) demonstrated that satisfaction significantly influences user loyalty.e-government, and that trust (trust) is a variable that mediates the relationship — not a variable that is parallel to or separate from satisfaction.

Kala, Chaubey, Meet, and Al-Adwan (2024) in *Interdisciplinary Journal of Information, Knowledge, and Management* integrating the Technology Acceptance Model (TAM) and Information Systems Success Model (ISSM) to study user satisfactione-governmentin India — a context that shares structural similarities with Indonesia in terms of population scale, user heterogeneity, and digital infrastructure gaps. Their findings reveal that information quality (information quality) and system quality (system quality) is a more consistent predictor of

satisfaction than conventional service quality (service quality) in a digital context. The implication is that public satisfaction with the IKD is likely determined more by whether the application functions reliably and produces accurate information, rather than whether Disdukcapil officers are friendly and responsive—a proposition that requires its own empirical testing.

On the other hand, DeLone and McLean (2003) in an update Information Systems Success Model (ISSM) they emphasize that in digital-based information systems, user satisfaction is a function of three interacting qualities: system quality (system quality), information quality (information quality), and quality of service (service quality) This model is more comprehensive than SERVQUAL alone because it accommodates the technical dimension of the system as a stand-alone determinant of satisfaction, not as a complementary dimension. When applied to IKD, the implication is: public satisfaction with digital population services cannot be adequately explained solely through conventional service dimensions – system quality The IKD application itself is an independent and potentially dominant explanatory variable.

In domestic research, the variation in findings between studies reflects high context-dependence. Wulandari (2023) found the dominance of the dimensions responsiveness and assurance on satisfaction at the Population and Civil Registration Office (Disdukcapil) in Sidenreng Rappang Regency; Kurniawan, Sihombing, and Ridho (2023) confirmed a significant simultaneous effect but with a different partial profile in North Padang Lawas; Nurdiana, Iriany, and Ulumudin (2024) found a significant positive effect through SEM-PLS in Garut Regency. This variation is not an anomaly—it reflects that public satisfaction with population services is shaped by the interaction between service characteristics, user characteristics, and local infrastructure contexts that cannot be generalized across regions.

The Relationship between Service Quality and Public Satisfaction

Public satisfaction is widely regarded as an important indicator of the success of public service delivery. According to the Expectancy Disconfirmation Theory (Oliver, 1980), satisfaction arises when the performance of a service meets or exceeds users' expectations. In the context of digital public services, citizens evaluate their satisfaction not only based on the outcomes of the service but also on their overall experience in accessing and using the service, including its accessibility, responsiveness, reliability, and ease of use. Therefore, higher service quality is expected to lead to higher levels of public satisfaction.

Previous empirical studies consistently demonstrate a positive relationship between service quality and public satisfaction. Kurniawan et al. (2023) found that improvements in population administration service quality significantly increased citizens' satisfaction. Similar findings were reported by Riauwati and Dwiyantri (2023) and Wulandari (2023), who concluded that better service quality contributes positively to public satisfaction in public administration services. In the context of Digital Population Identity (IKD), Lubis and Ginting (2024) also showed that the quality of digital services significantly influences users' satisfaction, indicating that

successful digital transformation depends not only on technological innovation but also on the quality of services experienced by citizens.

Nevertheless, the relationship between service quality and public satisfaction may not operate uniformly across different regional contexts. As highlighted by Kala et al. (2024), contextual characteristics such as differences between urban and rural communities may influence citizens' experiences with digital public services. This perspective is particularly relevant to Garut Regency, where disparities in digital infrastructure, internet accessibility, and digital literacy exist across urban and rural areas. These conditions may shape how citizens perceive the quality of IKD services and, consequently, their level of satisfaction. Examining this relationship in Garut therefore contributes to understanding how local contextual factors influence the implementation of digital public services in developing regions.

Based on the theoretical arguments and previous empirical findings, this study proposes the following hypothesis:

H1: Service quality has a positive and significant effect on public satisfaction with Digital Population Identity (IKD) services at the Garut Regency Population and Civil Registration Office.

Research Methods

This study employed a quantitative approach using an explanatory survey design to examine the effect of Digital Population Identity (IKD) service quality on public satisfaction at the Population and Civil Registration Office of Garut Regency. A quantitative approach was selected because the study focused on testing causal relationships between variables through structured measurement and objective statistical analysis (Creswell & Creswell, 2018). The research was conducted at the Population and Civil Registration Office of Garut Regency because the institution has implemented IKD services as part of the digital transformation of public services and operates within a region characterized by heterogeneous geographical and social conditions, making it relevant for examining citizens' experiences in using digital-based population administration services.

The population of this study consisted of all users of IKD services in Garut Regency. Since the exact number of active IKD users was unknown and no complete sampling frame was available, the sample size was determined using the Lemeshow formula with a 95% confidence level, a population proportion of 0.5, and a margin of error of 10%, resulting in a minimum sample size of 96 respondents, which was subsequently rounded to 100 respondents (Lwanga & Lemeshow, 1991). The study employed an accidental sampling technique, whereby respondents were selected based on their availability and willingness to participate during the research period, provided that they had activated and used the IKD application. This non-probability sampling approach was considered appropriate because no comprehensive sampling frame of active IKD users was available. To minimize potential sampling bias, data collection was conducted on different days and at

different service hours to increase the likelihood of capturing respondents with diverse socio-demographic backgrounds. Only respondents who had direct experience using the IKD application were included in the study to ensure that the evaluation reflected actual service experiences rather than perceptions of non-users. Although accidental sampling limits statistical generalizability, these procedures were implemented to enhance the diversity, representativeness, and credibility of the sample within the practical constraints of the study.

Data were collected using a structured questionnaire with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The service quality variable was operationalized using 17 indicators adapted from the SERVQUAL dimensions proposed by Parasuraman et al. (1988) and contextualized for digital public services. These indicators represented five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. The public satisfaction variable was measured using 10 indicators developed based on the Expectancy Disconfirmation Theory (Oliver, 1980), reflecting the extent to which users' experiences with IKD services met or exceeded their expectations. Prior to the main survey, the questionnaire instrument was subjected to a pilot test to assess the clarity of the questionnaire items and respondents' understanding of the measurement indicators. The operational definitions and measurement indicators for each construct are presented in Table 1.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 software. PLS-SEM was selected because it is appropriate for predictive research models, accommodates relatively small to medium sample sizes, and does not require multivariate normal data distribution (Hair et al., 2019). The analysis consisted of two stages. First, the measurement model (outer model) was evaluated by assessing indicator reliability (outer loadings), internal consistency reliability (Cronbach's Alpha and Composite Reliability), convergent validity (Average Variance Extracted/AVE), and discriminant validity using the Heterotrait-Monotrait Ratio (HTMT). Second, the structural model (inner model) was assessed using the coefficient of determination (R^2), effect size (f^2), path coefficients, and bootstrapping procedures to test the significance of the hypothesized relationships at a 5% significance level. The conceptual framework of the study is presented in Figure 1.

Table 1. Operational Definition of Research Variables

Variable	Dimensions	Indicators	Code	Source
Service Quality	Reliability	Accuracy of service process; consistency of service performance; reliability of information provided; timeliness of service completion	KP1–KP4	Adapted from Parasuraman et al. (1988)
	Responsiveness	Prompt response to service requests; responsiveness to complaints; speed of problem resolution; willingness of officers to assist users	KP5–KP8	Adapted from Parasuraman et al. (1988)
	Assurance	Competence of service officers; security of personal data; users' confidence in the service	KP9–KP11	Adapted from Parasuraman et al. (1988)
	Empathy	Individual attention to users; understanding users' needs; ease of communication with officers	KP12–KP14	Adapted from Parasuraman et al. (1988)
	Tangibles	Ease of application access; application interface; availability of supporting service facilities	KP15–KP17	Adapted from Parasuraman et al. (1988)
Public Satisfaction	User Satisfaction	Overall satisfaction; fulfillment of expectations; satisfaction with service process; ease of use; efficiency; service usefulness; trust in service; intention to continue using IKD; willingness to recommend; overall evaluation	KM1–KM10	Adapted from Oliver (1980)

Source: Adapted from Parasuraman et al. (1988) and Oliver (1980), processed by the authors (2026).

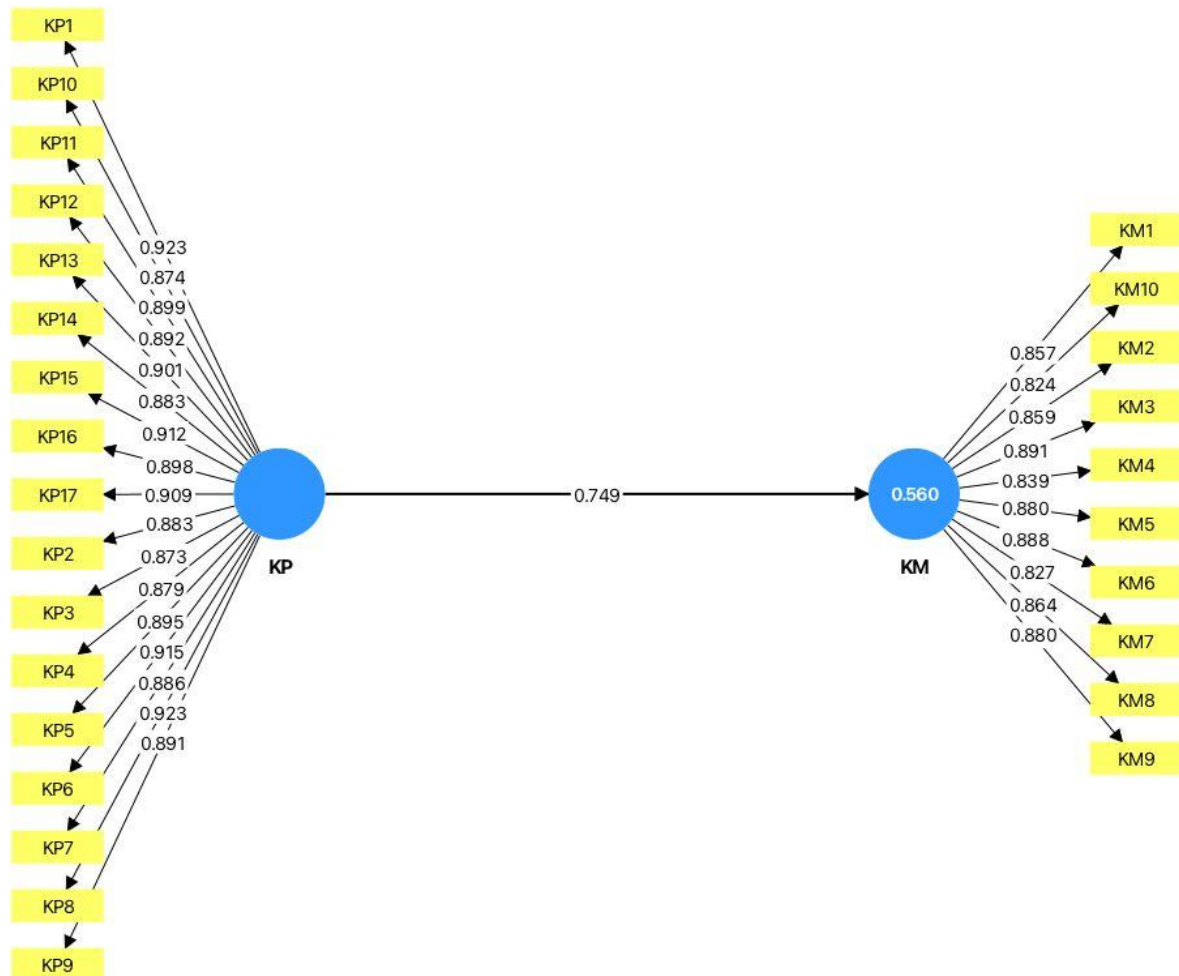


Figure 1. Conceptual Framework of the Research

Information:

KP = Quality of Service

KM = Community Satisfaction

KP1-KP17 = Service Quality Variable Indicators

KM1-KM10 = Community Satisfaction Variable Indicators

Figure 1 presents the estimated measurement model (outer model) and structural model (inner model) generated using SmartPLS 4.0. As shown in Table 1, the Service Quality construct was operationalized using 17 indicators adapted from the SERVQUAL dimensions proposed by Parasuraman et al. (1988), namely reliability, responsiveness, assurance, empathy, and tangibles, which were contextualized to reflect the characteristics of Digital Population Identity (IKD) services. The adaptation involved modifying conventional service quality indicators to capture the digital service environment, including application accessibility, clarity of information, system reliability, responsiveness of service officers, data security, and supporting service facilities. Meanwhile, the Public Satisfaction construct was measured using 10 indicators adapted from the

Expectancy Disconfirmation Theory (Oliver, 1980), reflecting users' evaluations of whether the IKD services met or exceeded their expectations. The operational definitions and measurement indicators of both constructs are presented in Table X. All indicators achieved outer loading values above 0.70, indicating satisfactory indicator reliability and confirming that each indicator adequately represented its respective construct.

Results and Discussion

Structural Model Testing (Inner Model)

Structural model testing is done by looking at the values R-square, f-square, And path coefficient to determine the model's ability to explain the relationship between research variables.

Table 2. Inner Model Test Results

Variables/ Testing	Mark
R-square (Citizen Satisfaction)	0.560
R-square Adjusted	0.556
f-square Service Quality → Customer Satisfaction	1.275
Path Coefficient of Service Quality → Community Satisfaction	0.749
T-statistics	17.398
P-values	0.000

Source: SmartPLS output, processed by researchers (2026)

Based on Table 1, the R-square value for the public satisfaction (CSI) variable was 0.560, and the adjusted R-square value was 0.556. These results indicate that the quality of Digital Population Identity (DIC) services can explain 56.0% of the variation in public satisfaction, while the remaining 44.0% is influenced by other variables outside the research model. These values are in the moderate category, so the research model is considered quite good in explaining public satisfaction with ICD services at the Garut Regency Civil Registration Office.

Furthermore, the f-square test results showed a value of 1.275 for the relationship between service quality and public satisfaction. This value is greater than 0.35, indicating that service quality has a significant effect size on public satisfaction. Thus, service quality is a crucial factor in increasing public satisfaction with IKD services.

The bootstrapping test results showed a path coefficient value of 0.749, indicating a positive relationship between service quality and public satisfaction. This means that the better the quality of IKD services provided by the Garut Regency Population and Civil Registration Office, the higher the level of public satisfaction. Furthermore, the t-statistic value of 17.398 is greater than 1.96, and the p-value of 0.000 is less than 0.05. These results indicate that the quality of Digital

Population Identity (IKD) services has a positive and significant effect on public satisfaction, thus the research hypothesis is accepted.

The findings of this study align with the theory of service quality, which states that fast, accurate, easy, and responsive public services will increase public satisfaction as service users. In the context of IKD services, good service quality can be seen from the ease of the activation process, clarity of service information, speed of service from officers, and the ability of officers to assist the public in understanding the use of Digital Population Identification. The better the quality of service, the greater the public's satisfaction with the services provided by the Garut Regency Population and Civil Registration Office.

The results of this study also support previous research that found that service quality significantly impacts public satisfaction with digital-based public services. The transformation of population administration services through the Digital Population Identity System (IKD) requires public service officials to provide adaptive, effective, and community-oriented services. Therefore, improving service quality is a key factor in supporting the successful implementation of Digital Population Identity.

Discriminant Validity Testing

Discriminant validity testing was conducted using the Heterotrait-Monotrait Ratio (HTMT) method to ensure that each construct in the study could be distinguished empirically.

Table 3. Results of the Discriminant Validity Test (HTMT)

Relationship between variables	HTMT Value	Criteria	Information
Service Quality → Public Satisfaction	0,766	<0,90	Valid

Source: SmartPLS output, processed by researchers (2026)

Based on Table 2, the HTMT value obtained for the service quality and public satisfaction variables is 0.766. This value is less than 0.90, indicating that discriminant validity has been met. Thus, the service quality and public satisfaction variables can be empirically distinguished and are suitable for use in the research model.

These results indicate that the research instrument used was able to accurately measure each construct. The service quality variable has different measurement characteristics than the public satisfaction variable, so the research model is declared valid and can be used to measure the effect of IKD service quality on public satisfaction at the Garut Regency Population and Civil Registration Office.

Overall, the research results show that the quality of Digital Population Identity (IKD) services has a positive and significant impact on public satisfaction. This indicates that the successful implementation of digital services in the population administration sector is determined not only by the use of technology, but also by the quality of services provided to the public. Therefore, the Garut

Regency Population and Civil Registration Office (Disdukcapil) needs to continuously improve service quality by enhancing staff competency, providing clear service information, and optimizing the digital service system to ensure continued public satisfaction with IKD services.

Discussion of the Influence of IKD Service Quality on Public Satisfaction

The research results show that the quality of Digital Population Identity (IKD) services has a positive and significant impact on public satisfaction at the Garut Regency Population and Civil Registration Office (Disdukcapil). These findings demonstrate that fast, responsive, and easy-to-understand services, supported by the ability of officers to provide digital services, can increase public satisfaction among IKD service users.

The IKD service is a form of digital transformation in population administration that aims to facilitate public access to population documents electronically. In its implementation, service quality is a critical factor in determining the program's success. The public will be satisfied if the service provided meets their expectations, including speed, ease of access, clarity of information, and the attitude of service personnel.

The results of this study are consistent with service quality theory, which suggests that public satisfaction is largely determined by an organization's ability to deliver services that meet citizens' expectations. In the context of Digital Population Identity (IKD) services, higher service quality – reflected in reliable service processes, responsive officers, clear information, secure digital systems, and accessible service facilities – contributes to higher levels of public satisfaction.

Furthermore, the structural model evaluation indicates that service quality explains 56.0% of the variance in public satisfaction ($R^2 = 0.560$), while the remaining 44.0% is explained by other factors outside the research model. This finding suggests that although service quality is a major determinant of public satisfaction, citizens' experiences with IKD services are also influenced by factors such as digital literacy, internet accessibility, application performance, and other contextual conditions. These results highlight the importance of continuously improving both the quality of public services and the supporting digital ecosystem to enhance citizens' satisfaction with IKD services in Garut Regency.

Although service quality was found to have a significant positive effect on public satisfaction, the R^2 value of 0.560 indicates that service quality explains only part of the variation in citizens' satisfaction. The remaining 44.0% may be influenced by other contextual factors beyond the scope of this study. In the context of Garut Regency, these factors may include unequal internet connectivity, particularly in mountainous and remote areas, differences in digital literacy among citizens, and variations in access to smartphones and digital infrastructure. Since the Digital Population Identity (IKD) service depends heavily on digital technology, these contextual conditions may affect citizens' ability to access and fully benefit from the service, regardless of the quality of services provided by the Population and Civil Registration Office.

These findings suggest that improving service quality alone may not be sufficient to maximize public satisfaction with IKD services. The effectiveness of digital public service implementation also depends on supporting conditions that enable citizens to access and utilize digital services effectively. Therefore, the Garut Regency Population and Civil Registration Office should complement service quality improvements by strengthening digital infrastructure, expanding public education and digital literacy programs, and collaborating with relevant stakeholders to improve internet accessibility, particularly in geographically challenging areas. Such efforts would help reduce disparities in digital service access and ensure that the benefits of IKD implementation can be experienced more equally across different communities.

Overall, this study demonstrates that service quality remains a key determinant of public satisfaction with Digital Population Identity (IKD) services. However, the findings also highlight that the success of digital public service implementation cannot be explained solely by service quality. Local socio-geographical conditions and citizens' digital readiness play an important role in shaping their experiences with digital government services. By incorporating these contextual factors into the discussion, this study contributes to a better understanding of digital public service implementation in developing regions and provides practical implications for designing more inclusive and context-sensitive digital public service policies.

Conclusion

Based on the research results, it can be concluded that the quality of Digital Population Identity (IKD) services has a positive and significant impact on public satisfaction at the Garut Regency Population and Civil Registration Office (Disdukcapil). PLS-SEM testing results indicate that the better the quality of service provided, the higher the level of public satisfaction with IKD services. The quality of service referred to includes speed of service, ease of access to digital services, clarity of information, responsiveness of officers, and the ability of officers to assist the public in using the IKD application.

The R-square value of 0.560 indicates that service quality can explain 56.0% of the variation in public satisfaction, while the remainder is influenced by other factors outside the study, such as the quality of the application system, public digital literacy, and internet network infrastructure. This finding indicates that the success of implementing digital-based public services depends not only on the technology used, but also on the quality of service interactions perceived by the public.

This study also implies that improving the quality of Digital Population Identity (IKD) services requires policies that are responsive to the local characteristics of Garut Regency. Considering the geographical challenges of mountainous and remote areas, the Population and Civil Registration Office (Disdukcapil) should implement mobile IKD activation services by deploying outreach teams to villages with limited access to public service offices and internet infrastructure. In addition, collaboration with village governments and community

leaders can be strengthened to provide digital literacy assistance and facilitate the registration and activation of IKD for citizens who have limited experience with digital technologies. These context-specific strategies are expected to reduce disparities in access to digital public services and improve citizens' satisfaction with IKD implementation across different regions of Garut Regency.

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References

- Chan, F. K. Y., Thong, J. Y. L., Brown, S. A., & Venkatesh, V. (2021). Service design and citizen satisfaction with e-government services: A multidimensional perspective. *Public Administration Review*, 81(5), 874–894. <https://doi.org/10.1111/puar.13308>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*, 19(4), 9–30. <https://doi.org/10.1080/07421222.2003.11045748>
- Global Government Forum. (2023). *Digital Leaders Study 2023: Digital identity systems as an essential capability for seamless citizen-centric services*. Global Government Forum.
- 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. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hardiyansyah. (2018). *Quality of public services: Concept, dimensions, indicators, and implementation* (Revised Edition). Gava Media.
- Kala, D., Chaubey, D. S., Meet, R. K., & Al-Adwan, A. S. (2024). Impact of user satisfaction with e-government services on continuance use intention and citizen trust using TAM-ISSM framework. *Interdisciplinary Journal of Information, Knowledge, and Management*, 19, Article 1. <https://doi.org/10.28945/5248>
- Ministry of Home Affairs of the Republic of Indonesia. (2022). *Regulation of the Minister of Home Affairs Number 72 of 2022 concerning Digital Population Identity*.
- Ministry of Home Affairs. (2024, January 11). *The Ministry of Home Affairs is developing a Digital Population Identity to facilitate public access to*

- government services. Directorate General of Population and Civil Registration.
<https://dukcapil.kemendagri.go.id>
- Kurniawan, B., Sihombing, M., & Ridho, H. (2023). The influence of service quality on public satisfaction in population administration services at the North Padang Lawas Population and Civil Registration Office. *PERSPECTIVE*, 12(2), 526–541. <https://doi.org/10.31289/perspektif.v12i2.8696>
- Lestari, S. R., & Rijali, S. (2025). Implementation of Digital Population Identity (IKD) in Tanjung District. *JAPB: Journal of Public Administration and Service*, 8(1), 521–540. <https://doi.org/10.35722/japb.v8i1.1189>
- Lippert, S., Dlamini, S., & Ajayi, O. (2024). Considerations for trustworthy cross-border interoperability of digital identity systems in developing countries. *AI & Society*. <https://doi.org/10.1007/s00146-024-02008-9>
- Lubis, T. A., & Ginting, W. O. (2024). The influence of service quality on public satisfaction in using the IKD application at the Medan City Population and Civil Registration Office. *Journal of Public Administration*, 10(2), 104–108.
- Lwanga, S. K., & Lemeshow, S. (1991). Sample size determination in health studies: A practical manual. World Health Organization.
- Marwiyah, S. (2023). Strategies for improving the quality of public services in the digitalization era. CV Mitra Ilmu.
- Nurdiana, O., Iriany, I. S., & Ulumudin, A. (2024). The influence of public service quality on public satisfaction in Tarogong Kidul District, Garut Regency. *Journal of Development and Public Policy*, 15(1).
- OECD. (2024). OECD survey on drivers of trust in public institutions – 2024 results. OECD Publishing. <https://doi.org/10.1787/9a20554b-en>
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460–469. <https://doi.org/10.2307/3150499>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- Patergiannaki, Z., & Pollalis, Y. A. (2024). E-government quality from the citizen's perspective. *International Journal of Public Sector Management*, 37(2), 232–254. <https://doi.org/10.1108/IJPSM-07-2023-0229>
- Pham, L., Limbu, Y. B., Le, M. T. T., & Nguyen, N. L. (2023). E-government service quality, perceived value, satisfaction, and loyalty. *Journal of Public Policy*, 43(4), 812–833. <https://doi.org/10.1017/S0143814X23000296>
- Razanakoto, M. F. (2026). A systematic literature review of empirical research on e-government and trust. *Administration & Society*. <https://doi.org/10.1177/15396754251413048>
- Riauwati, J., & Dwiyanti, N. T. (2023). Analysis of the influence of the quality of population administration services on public satisfaction. *REMIK*, 7(1), 784–794. <https://doi.org/10.33395/remik.v7i1.12163>

- Ringle, C. M., Wende, S., & Becker, J.-M. (2022). SmartPLS 4. SmartPLS GmbH.
<https://www.smartpls.com>
- Sekaran, U., & Bougie, R. (2019). Research methods for business: A skill-building approach (8th ed.). Wiley.
- Siagian, T. H., & Hasibuan, M. (2025). Analysis of the implementation of IKD at the Dairi Regency Population and Civil Registration Office. GOVERNANCE, 11(3).
- Tui, F. P., Ilato, R., & Katili, A. Y. (2022). Public service innovation through e-government. Public: Journal of Human Resource Management, Administration and Public Service, 9(2), 254–263.
<https://doi.org/10.37606/publik.v9i2.338>
- Widiyarta, A., & Zunaidi, R. A. (2024). Digitalization of public services and public unpreparedness. Policy: Journal of Administrative Science, 15(2).
- Wulandari, A. A. (2023). The influence of service quality on public satisfaction at the Sidenreng Rappang Population and Civil Registration Office. JIA: Scientific Journal of Administration, 11(1), 90–102.
<https://doi.org/10.55678/jia.v11i1.1062>
- Yaakoubi, O., El Guenuni, Y., Srainy, N., Iraqi, I., & Boubker, O. (2025). Mapping research trends on quality in electronic services. Administrative Sciences, 15(9), 373. <https://doi.org/10.3390/admsci15090373>