E-Government Implementation and Citizen Satisfaction in Public Administration

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Article Info	ABSTRACT
	The implementation of e-government has become a central strategy for improving public administration performance and enhancing citizen satisfaction in Indonesia. This study aims to examine the effect of e-government implementation on citizen satisfaction in public administration. A quantitative research approach was employed using a survey method, with data collected from 300 respondents who have experience using e-government services. The measurement instrument was structured using a five-point Likert scale, capturing key dimensions of e-government implementation, including system quality, information quality, service quality, and accessibility, as well as citizen satisfaction with public services. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25, applying descriptive statistics, reliability and validity tests, and simple linear regression analysis. The results indicate that e-government implementation has a positive and statistically significant effect on citizen satisfaction. The regression analysis shows that e-government implementation explains a substantial proportion of variance in citizen satisfaction, demonstrating that effective digital public services contribute to improved efficiency, convenience, and overall service experience. These findings suggest that strengthening the quality and inclusiveness of e-government initiatives is essential for enhancing public service delivery and citizen trust in public administration in Indonesia.

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1. Introduction

The rapid development of information and communication technology (ICT) has significantly transformed the way governments deliver public services around the world. In the context of public administration, digital

transformation is no longer an option but a necessity to respond to increasing public demands for efficiency, transparency, accountability, and service quality [1], [2]. One of the most prominent manifestations of this transformation is the implementation of e-government, which refers to the use of digital technologies—particularly internet-based platforms—by government institutions to provide information and services to citizens, businesses, and other stakeholders [3].

In Indonesia, the implementation of e-government has been formally promoted as part of national bureaucratic reform and public sector modernization [4]. The government has introduced various digital initiatives, such as online licensing systems, electronic identity cards, digital tax services, and integrated public service portals at both central and local government levels. These initiatives aim to reduce bureaucratic complexity, minimize corruption, enhance service accessibility, and improve interactions between the government and citizens [5]. Despite these efforts, the effectiveness of e-government implementation remains uneven across regions and institutions, raising questions about its actual impact on citizens as the primary users of public services.

Citizen satisfaction has emerged as a critical indicator for evaluating the performance of public administration. In modern governance paradigms, citizens are no longer viewed merely as service recipients but as active stakeholders whose perceptions and experiences shape public trust and government legitimacy [6]. High levels of citizen satisfaction indicate that public services meet societal expectations, while dissatisfaction often signals inefficiencies, poor service quality, or lack of responsiveness. Consequently, understanding the relationship between e-government implementation and citizen satisfaction is essential for assessing whether digital governance initiatives truly deliver their intended benefits [7].

Several studies suggest that e-government has the potential to enhance citizen satisfaction by improving service quality, reducing processing time, increasing transparency, and providing convenient access to services regardless of time and location [8]. Digital platforms can streamline administrative procedures, limit face-to-face interactions that are prone to rent-seeking behavior, and offer more consistent service standards. However, other studies highlight challenges such as limited digital literacy, inadequate infrastructure, system reliability issues, and resistance to organizational change, which may hinder the positive impact of e-government on public satisfaction—particularly in developing countries like Indonesia [9].

In the Indonesian context, empirical evidence on the direct relationship between e-government implementation and citizen satisfaction in public administration remains fragmented, as policy documents emphasize digital government as a key reform agenda while systematic quantitative studies capturing citizens' perceptions through robust statistical methods are still limited, particularly given Indonesia's diverse socio-economic conditions, varying levels of technological readiness, and differences in administrative capacity across regions. Addressing this gap, this study aims to examine the effect of e-government implementation on citizen satisfaction in public administration in Indonesia using a quantitative approach by collecting data through a structured Likert-scale questionnaire and analyzing the results with SPSS version 25 to assess how key dimensions of e-government influence citizen satisfaction. The findings are expected to contribute theoretically by enriching the literature on e-government and public service performance in developing countries, and practically by providing insights for policymakers and public administrators to improve the design and implementation of digital public services in Indonesia. This paper is structured by first reviewing relevant literature and developing research hypotheses, followed by an explanation of the research methodology, presentation and discussion of empirical results, and a concluding section

highlighting key implications, limitations, and directions for future research.

2. Literature Review

2.1 E-Government in Public Administration

E-government broadly refers to the use of information and communication technology (ICT) by government institutions to enhance public service delivery, improve administrative efficiency, and strengthen interactions with citizens and other stakeholders, and in public administration it is widely regarded as a strategic instrument for modernizing bureaucratic processes and supporting good governance principles such as transparency, accountability, effectiveness, and citizen participation [2]. Through the digitization of administrative procedures, governments can reduce manual processes, minimize errors, and accelerate service delivery. In developing countries such as Indonesia, e-government plays a particularly important role in addressing persistent administrative challenges, including bureaucratic inefficiency, complex service procedures, and limited access to public services in remote areas [10]. National policies in Indonesia have emphasized digital governance as a key component of bureaucratic reform and public service innovation; however, the success of e-government implementation depends not only on the availability of technological infrastructure but also on organizational readiness, human resource capacity, and citizens' willingness to adopt and use digital public services [11].

2.2 Dimensions of E-Government Implementation

The effectiveness of e-government implementation is commonly evaluated through several key dimensions, including system quality, information quality, service quality, and accessibility [12]. System quality refers to the reliability, usability, and technical performance of e-government platforms, such as ease of navigation and system stability, while information quality concerns the accuracy, completeness, relevance, and timeliness of the information provided, enabling citizens to make informed decisions and reducing uncertainty when accessing public services [13]. Service quality reflects the extent to which e-government services meet citizens' needs in terms of responsiveness, efficiency, and effective problem resolution [14]. Accessibility is also a crucial dimension, as e-government platforms should be easily accessible regardless of time and location; in the Indonesian context, this is closely related to internet availability, digital literacy, and the inclusiveness of system design. Collectively, these dimensions shape citizens' overall experiences with e-government and influence their perceptions of government performance [15].

2.3 Citizen Satisfaction in Public Services

Citizen satisfaction refers to citizens' overall evaluation of public services based on the extent to which their expectations are met through actual service experiences and is widely used in public administration as an outcome indicator of service quality and government performance [16]. High levels of citizen satisfaction suggest that public services are

aligned with citizens' needs and expectations, whereas dissatisfaction often reflects shortcomings in service delivery, inefficiency, or limited responsiveness [17]. In the context of public service transformation, citizen satisfaction is shaped by multiple factors such as efficiency, transparency, fairness, and ease of access, and the transition from traditional bureaucratic systems to digital platforms has fundamentally changed how citizens interact with government institutions. Consequently, satisfaction is increasingly influenced by digital service attributes, including system usability, speed of service, and the availability of online support mechanisms [18]. Measuring citizen satisfaction within the framework of e-government therefore provides important insights into whether digital government initiatives effectively enhance public service outcomes [19].

2.4 E-Government and Citizen Satisfaction

The relationship between e-government implementation and citizen satisfaction has been widely examined in previous studies, with many scholars arguing that e-government positively influences satisfaction by simplifying administrative procedures, reducing waiting times, and increasing service transparency [20]. Through digital platforms, citizens can access public services more conveniently and minimize the need for repeated physical visits to government offices, leading to more efficient and positive service experiences [21]. However, empirical findings are not always consistent, as several studies highlight that poor system design, technical failures, inadequate user support, and the existence of digital divides can weaken the positive impact of e-government on citizen satisfaction [22]. These challenges tend to be more pronounced in developing countries due to unequal access to technology and varying levels of digital literacy [23], indicating that the effect of e-government on citizen satisfaction depends largely on the quality of implementation and the broader socio-technical context in which digital public services are delivered.

2.5 Research Gap and Hypothesis Development

Despite the growing body of literature on e-government, empirical studies examining citizen satisfaction within the context of Indonesian public administration remain limited, as existing research tends to focus on policy frameworks or qualitative assessments, while large-sample quantitative studies that systematically test the relationship between e-government implementation and citizen satisfaction are still relatively scarce [24]. In addition, regional differences in administrative capacity and technological infrastructure across Indonesia underscore the need for context-specific empirical evidence. Based on the theoretical arguments and prior empirical findings, this study proposes that effective e-government implementation has a positive influence on citizen satisfaction in public administration, leading to the formulation of the following main hypothesis:

H1: E-government implementation has a positive and significant effect on citizen satisfaction in public administration in Indonesia.

3. Research Methods

This study employs a quantitative research design to examine the effect of e-government implementation on citizen satisfaction in public administration in Indonesia. A quantitative approach is appropriate because it enables objective measurement of relationships between variables and allows hypotheses to be tested statistically based on empirical data. The study adopts a cross-sectional survey design, in which data are collected at a single point in time to capture citizens' perceptions and experiences with e-government services. The population comprises Indonesian citizens who have used e-government services provided by public administration institutions, such as online licensing systems, digital population administration, or other government service platforms. Given the size and diversity of the population, a sample-based approach was applied, resulting in 300 respondents selected through non-probability convenience sampling based on accessibility and willingness to participate. Although this sampling technique has limitations in terms of generalizability, it is widely used in studies of digital service users and provides meaningful insights into citizen experiences.

Data were collected using a structured questionnaire distributed both online and in printed form. All measurement items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), allowing respondents to indicate the intensity of their perceptions and facilitating quantitative analysis [25]. The questionnaire consisted of two main sections: the first gathered demographic information such as age, gender, education level, and frequency of e-government usage, while the second contained items measuring the study variables. The independent variable, e-government implementation, was measured using indicators commonly adopted in the literature, including system quality, information quality, service quality, and accessibility, with items reflecting ease of use, accuracy and timeliness of information, responsiveness, and access regardless of time and location. The dependent variable, citizen satisfaction, was measured through indicators related to satisfaction with service efficiency, convenience, responsiveness, and overall service experience when using e-government platforms.

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. The analysis process began with descriptive statistics to summarize respondents' demographic characteristics and describe the distribution of the data using measures such as mean, standard deviation, and frequency. Reliability and validity tests were then conducted to ensure the quality of the measurement instruments, with reliability assessed using Cronbach's alpha (values above 0.70 indicating acceptable internal consistency) and validity evaluated through item–total correlation analysis. Finally, inferential statistical analysis was performed using simple linear regression to test the research hypothesis regarding the effect of e-government implementation on citizen satisfaction. The significance of the relationship was evaluated using t-tests and p-values at a 0.05 significance level, while the coefficient of determination (R^2) was examined to assess the extent to which e-government implementation explains variations in citizen satisfaction.

4. Results and Discussion
4.1 Descriptive Statistics of Respondents

A total of 300 valid questionnaires were collected and analyzed. Table 1 presents the demographic profile of the respondents. The results indicate that the respondents represent diverse backgrounds and have adequate experience using e-government services, ensuring the relevance of the data for analysis.

Table 1. Demographic Characteristics of Respondents

Category	Description	Frequency	Percentage (%)
Gender	Male	162	54.0
	Female	138	46.0
Age	18–25 years	72	24.0
	26–35 years	114	38.0
	36–45 years	78	26.0
	>45 years	36	12.0
Education	High School	84	28.0
	Diploma	66	22.0
	Bachelor	126	42.0
	Postgraduate	24	8.0
Frequency of E-Government Use	Occasionally	96	32.0
	Regularly	204	68.0

Table 1 presents the demographic characteristics of the 300 respondents involved in this study, indicating a relatively balanced gender distribution, with male respondents accounting for 54.0% and female respondents for 46.0%. This balanced composition suggests that the findings reflect perceptions of both genders in evaluating e-government services. In terms of age, the majority of respondents are within the economically productive age groups, with 38.0% aged 26–35 years and 26.0% aged 36–45 years, while respondents aged 18–25 years account for 24.0% and those above 45 years represent 12.0%. This age distribution indicates that most participants are in age groups that are generally more active in using digital services and interacting with public administration systems.

Regarding educational background, most respondents hold a bachelor's degree (42.0%), followed by high school graduates (28.0%) and diploma holders (22.0%), while a smaller proportion have postgraduate education (8.0%).

This suggests that the sample includes respondents with sufficient educational attainment to understand and evaluate digital public services. In terms of frequency of e-government usage, a substantial majority of respondents (68.0%) reported using e-government services regularly, while 32.0% use them occasionally. This high level of regular usage indicates that respondents have adequate experience interacting with e-government platforms, enhancing the reliability of their assessments of e-government implementation and its influence on citizen satisfaction.

4.2 Descriptive Analysis of Research Variables

Descriptive statistics were calculated to examine respondents' perceptions of e-government implementation and citizen satisfaction. The results are presented in Table 2.

Table 2. Descriptive Statistics of Research Variables

Variable	Indicator	Mean	Std. Deviation
E-Government Implementation	System Quality	3.89	0.61

	Information Quality	3.94	0.58
	Service Quality	3.85	0.64
	Accessibility	4.01	0.55
Overall E-Government	—	3.92	0.59
Citizen Satisfaction	Service Efficiency	3.87	0.62
	Convenience	3.95	0.57
	Responsiveness	3.81	0.65
	Overall Satisfaction	3.90	0.60
Overall Satisfaction	—	3.88	0.61

Table 2 presents the descriptive statistics of the research variables, indicating that respondents generally perceive e-government implementation and citizen satisfaction at relatively high levels. For the e-government implementation variable, accessibility records the highest mean score (M = 4.01, SD = 0.55), suggesting that respondents perceive e-government services as easy to access regardless of time and location. This finding reflects the increasing availability of digital public services and improved internet access that facilitate citizen interaction with government platforms. Information quality (M = 3.94, SD = 0.58) and system quality (M = 3.89, SD = 0.61) also show favorable evaluations, indicating that respondents generally consider the information provided through e-government platforms to be accurate and up to date, and the systems to be relatively reliable and user-friendly. Service quality has a slightly lower mean score (M = 3.85, SD = 0.64), suggesting that while e-government services are positively perceived overall, there is still room for improvement in terms of responsiveness and problem resolution.

Regarding citizen satisfaction, the descriptive results similarly show positive perceptions across all indicators. Convenience records the highest mean score (M = 3.95, SD = 0.57), indicating that respondents value the ease and practicality of accessing public services through digital platforms. Service efficiency (M = 3.87, SD = 0.62) and overall satisfaction (M = 3.90, SD = 0.60) also demonstrate favorable evaluations, suggesting that e-government services generally meet citizens' expectations in terms of speed and overall experience. However, responsiveness has the lowest mean score among satisfaction indicators (M = 3.81, SD = 0.65), implying that timely responses and user support remain areas that require further enhancement. Overall, the mean scores for e-government implementation (M = 3.92, SD = 0.59) and citizen satisfaction (M = 3.88, SD = 0.61) indicate that respondents perceive e-government services in Indonesia positively, while also highlighting specific dimensions—particularly service quality and responsiveness—that warrant continued improvement to further enhance citizen satisfaction.

4.3 Reliability and Validity Test Results

The reliability of the measurement instruments was tested using Cronbach's alpha. The results are shown in Table 3.

Table 3. Reliability Test Results

Variable	Number of Items	Cronbach's Alpha
E-Government Implementation	12	0.884
Citizen Satisfaction	8	0.861

Table 3 presents the results of the reliability testing for the study variables, indicating strong internal consistency across all measurement scales. The Cronbach's alpha

value for e-government implementation is 0.884 across 12 items, which exceeds the recommended threshold of 0.70 and reflects a high level of reliability among the indicators measuring system quality, information quality, service quality, and accessibility. Similarly, citizen satisfaction demonstrates a Cronbach's alpha value of 0.861 across 8 items, indicating that the items used to assess satisfaction with efficiency, convenience, responsiveness, and overall service experience are consistently measuring the same underlying construct. These results confirm that the measurement instruments used in this study are reliable and suitable for further statistical analysis, including hypothesis testing.

4.4 Regression Analysis Results

To test the research hypothesis, simple linear regression analysis was conducted using SPSS version 25, and the model summary results show an R value of 0.648 and an R Square of 0.420, with an adjusted R Square of 0.418 and a standard error of 0.465. The R Square value of 0.420 indicates that e-government implementation explains 42.0% of the variance in citizen satisfaction, while the remaining 58.0% is attributable to other factors not examined in this study.

Table 4. Regression Coefficient Results

Variable	B	Std. Error	Beta	t-value	Sig.
(Constant)	1.214	0.184	—	6.598	0.000
E-Government Implementation	0.684	0.052	0.648	13.154	0.000

Table 4 presents the results of the simple linear regression analysis examining the effect of e-government implementation on citizen satisfaction. The regression coefficient for e-government implementation is positive and statistically significant (B = 0.684, β = 0.648, t = 13.154, p < 0.001), indicating that improvements in e-government implementation are associated with higher levels of citizen satisfaction. The standardized beta coefficient suggests a strong effect size, confirming that e-government implementation is a substantial predictor of citizen satisfaction in the context of public administration in Indonesia. The constant term is also significant (B = 1.214, t = 6.598, p < 0.001), representing the baseline level of citizen satisfaction when the e-government implementation variable is held constant. Overall, these findings provide strong empirical support for the research hypothesis, demonstrating that effective e-government implementation significantly enhances citizen satisfaction with public services.

4.5 Discussion

The empirical findings demonstrate that e-government implementation has a significant and positive influence on citizen satisfaction in public administration in Indonesia. The strong regression coefficient indicates that improvements in digital government systems—particularly in terms of accessibility, information quality, and system usability—play a substantial role in enhancing citizens' satisfaction with public services [26]. This suggests that well-designed and effectively implemented e-government platforms can meaningfully improve citizens' overall service experiences [27].

These results are consistent with prior studies which argue that digital public services contribute to higher satisfaction by increasing efficiency, reducing administrative burdens, and enhancing transparency [28]. The relatively high mean scores for accessibility and information quality further indicate that citizens highly value the convenience of accessing services anytime and anywhere, as well as the availability of accurate and up-to-date information without the need for repeated

physical visits to government offices. This reflects the growing importance of digital channels in shaping citizens' perceptions of government performance [29].

However, although e-government implementation explains a considerable proportion of citizen satisfaction, a substantial portion of variance remains influenced by other factors beyond digital systems. This finding highlights that citizen satisfaction is also shaped by non-digital elements such as organizational culture, staff responsiveness, policy clarity, and the integration between online and offline services. In the Indonesian context, where geographical diversity and digital inequality persist, the results emphasize the need for inclusive digital governance, including investments in infrastructure, digital literacy, and user-centered system design. Overall, the study confirms that effective e-government implementation is a key driver of citizen satisfaction and should be integrated into broader public administration reform efforts to improve public service performance in Indonesia.

5. Conclusion

This study provides empirical evidence that e-government implementation has a significant and positive effect on citizen satisfaction in public administration in Indonesia, demonstrating that well-designed and accessible digital government systems enhance citizens' perceptions of public service quality by improving efficiency, convenience, and responsiveness. Through digital platforms, citizens can access public services more easily, reduce bureaucratic complexity, and obtain accurate information in a timely manner, all of which contribute to higher satisfaction levels. However, the findings also indicate that citizen satisfaction is not determined solely by digital services, as a substantial proportion is influenced by other factors such as organizational responsiveness, service culture, and the integration of online and offline services, underscoring that e-government should be viewed as a complementary instrument within broader public administration reform rather than a standalone solution. In the Indonesian context, the results highlight the importance of improving system quality, expanding digital accessibility, and strengthening citizens' digital literacy to ensure inclusive and effective e-government implementation, while encouraging policymakers and public administrators to adopt a user-centered approach and invest in both technological and human resource capacity. Overall, this study contributes to the e-government and public administration literature by providing quantitative evidence from Indonesia and offering practical insights for enhancing digital governance and improving citizen satisfaction with public services.

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