

# The Impact of Digitalization of Public Service Policies on the Effectiveness of Administrative Services in Makassar City

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**Abstract:** Digital transformation in public services has become a primary focus for various local governments in Indonesia in an effort to improve administrative effectiveness and public satisfaction. Makassar City, as one of the major cities in Indonesia, has implemented a policy of integrated public service digitalization through various online platforms. This study was conducted to measure the extent to which policy digitalization influences the effectiveness of administrative services, while also identifying factors supporting its success. The purpose of this study was to determine the effect of public service policy digitalization on the effectiveness of administrative services in Makassar City. The research approach used was quantitative with a survey design. Primary data were collected through questionnaires distributed to 120 respondents consisting of civil servants and members of the public who use digital services. Data analysis was conducted with the help of SPSS software using validity and reliability tests and simple linear regression to examine the relationship between variables. The results showed that public service policy digitalization had a positive and significant impact on the effectiveness of administrative services. The implementation of digital-based systems increased service speed, reduced administrative errors, and strengthened bureaucratic transparency. Digitalization also played a role in building public trust in public institutions through more efficient and accountable service mechanisms. The study's conclusion confirms that the success of policy digitalization is highly dependent on infrastructure readiness, apparatus competence, and public digital literacy. The novelty of this research lies in the affirmation of a direct relationship between digital policy and the effectiveness of public services in the context of Indonesian local government, providing an empirical basis for technology-based bureaucratic reform.

## INTRODUCTION

Digital transformation in public service delivery has become a key agenda for local governments in Indonesia in facing the challenges of the Industrial Revolution 4.0 era. Makassar, a metropolitan city in eastern Indonesia, is a concrete example of the application of various digital innovations in public administration systems (Rumakat, 2025). The use of information technology, such as online applications, integrated information systems, and the digitization of population data, plays a crucial role in improving the accessibility and efficiency of public services. This reflects local governments' efforts to accelerate administrative processes while achieving more transparent, responsive, and accountable governance.

Technological advances have brought significant changes to the relationship between government and the public. The digitalization of public service policies serves not only as a tool for bureaucratic modernization but also as a mechanism for empowering the public to obtain administrative rights quickly and efficiently. The implementation of digital services such as e-office, e-KTP, and online queuing systems in Makassar City demonstrates a paradigm shift in public service from manual systems to electronic data-based systems (Hasbi & Syahputra, 2025). These changes are expected to reduce bureaucratic red tape, reduce maladministration, and increase public satisfaction with government services.

The effectiveness of administrative services is a crucial indicator in assessing the success of digitalization policies. Effectiveness is measured not only by the speed of service delivery but

also by the accuracy and precision of data, and the ability of digital systems to address diverse community needs. In Makassar City, the public service digitalization policy focuses on streamlining service flows and improving integration between agencies. However, in practice, challenges remain, such as the digital literacy gap among the public, limited technological infrastructure, and bureaucratic resistance to changes in work systems. These factors are crucial variables in assessing the extent to which digitalization impacts the effectiveness of public administration services.

According to the Technology Acceptance Model (TAM) theory proposed by Davis (1989), user acceptance of technology is determined by two main factors: perceived usefulness and perceived ease of use. In the context of public services, this theory is relevant to explaining how government employees and the public, as users of digital systems, assess the usefulness and ease of use of these systems in supporting administrative tasks. If perceptions of usefulness and ease of use are high, the adoption rate of digital technology in public services will increase, thus positively impacting the effectiveness of administrative services.

The digitalization of public service policies in Makassar City can be understood as part of a strategic effort towards smart governance. The government is striving to build an efficient, adaptive, and integrated administrative system through the use of digital technology. However, the effectiveness of this policy implementation still needs to be empirically tested, particularly regarding its impact on improving the quality of public administration services. This study seeks to examine the extent to which the digitalization of public service policies can influence the effectiveness of administrative services in Makassar City, with the hope of providing theoretical and practical contributions to the development of digital-based public policies in the future.

The digitalization of public service policies in various regions in Indonesia has become a modern policy trend, but its effectiveness varies across regions. Makassar, one of the cities actively implementing digital systems in public administration, does not yet have a comprehensive picture of how much digitalization actually improves the effectiveness of administrative services. Existing research focuses more on technological innovation and digital governance without empirically measuring their impact on service quality and speed (Majid et al., 2025). This gap raises questions about the extent to which digitalization policies directly contribute to improving the effectiveness of public services at the operational level.

Much of the literature on the digitalization of public service policies in Indonesia still focuses on conceptual or normative perspectives. Empirical aspects assessing the relationship between the implementation of digitalization policies and service effectiveness outcomes have not been widely explored, especially in the context of a complex, large city like Makassar. The imbalance between technology adoption and human resource readiness often creates a gap between expectations and actual outcomes of digitalization policies. This phenomenon indicates a research gap in understanding the variables that influence the effectiveness of administrative services in the digital era.

According to the Diffusion of Innovation theory put forward by Renanda & Rosidin, (2025) The adoption of technology or innovation in a social system is influenced by five factors: relative advantage, compatibility, complexity, trialability, and observability. In the context of digital public service policy, this theory helps explain that effectiveness is determined not only by the availability of technology, but also by the extent to which the innovation is accepted and implemented by users, both bureaucratic officials and the public. A lack of understanding of these adoption factors may be the reason why some digitalization programs have not achieved their expected effectiveness.

The lack of in-depth studies on the impact of policy digitalization on the effectiveness of administrative services in Makassar City makes this research crucial. Identifying this gap will open up new analytical opportunities for how policy digitalization actually works in the context of local government administration. By examining the relationship between digitalization and effectiveness, this research is expected to bridge this gap in the literature and provide an empirical basis for developing more measurable and sustainable digital public policies.

Efforts to digitize public service policies in Makassar City are driven by the need for a more efficient, faster, and transparent administrative system. The government is striving to adapt to

the dynamics of modern society that demand technology-based services. However, no studies have specifically explained how digitalization of these policies directly impacts the effectiveness of administrative services. This situation demands a scientific analysis capable of unraveling the relationship between digitalization policies and the performance of public administration services at the regional level.

The Public Service Motivation (PSM) theory put forward by Kurniasih, (2023) explains that public service motivation plays a significant role in bureaucratic effectiveness. In the context of digitalization, this theory can be used to understand how employee motivation in using digital systems influences administrative service performance outcomes. The higher the employee motivation to adapt and provide quality services through digital platforms, the greater the likelihood of achieving effective public service. Integrating human motivation and digital policies is key to the success of modern administrative transformation.

This research was conducted to address the need for empirical understanding of the impact of digitalization of public service policies on the effectiveness of administrative services in Makassar City. The primary objective was to determine the extent to which digitalization policies contribute to increased service effectiveness and to identify factors that support or hinder their implementation. The research findings are expected to provide strategic recommendations for local governments in strengthening digital-based public service governance to be more efficient, inclusive, and sustainable.

### **RESEARCH METHODS**

The research design used in this study is a quantitative approach with an explanatory method. This approach was chosen because the study aims to explain the causal relationship between the digitalization of public service policies (independent variable) and the effectiveness of administrative services (dependent variable) in Makassar City. The explanatory method allows researchers to test the formulated hypotheses through statistical analysis, thereby gaining an empirical understanding of the extent to which digitalization of policies affects public service performance (Ditasman & Amrullah, 2024). Data were collected through field surveys conducted systematically using structured instruments.

The population in this study included all civil servants (ASN) and public users of public administration services in Makassar City who interact directly with digital-based service systems, such as population services, licensing, and government administration. The research sample was determined using a purposive sampling technique, considering the criteria of participants who had experience using digital services at least once in the last six months. The sample size was set at 120 respondents, consisting of 60 ASN and 60 public users, to obtain a balanced representation between providers and recipients of digital public services.

The research instrument was a closed-ended questionnaire compiled on a Likert scale with five response levels (1 = strongly disagree to 5 = strongly agree). The digitalization of public service policies was measured using the following indicators: technology utilization, system transparency, service process speed, and inter-agency integration. The effectiveness of administrative services was measured using the following indicators: service accuracy, user satisfaction, time efficiency, and data accuracy. Primary data was obtained directly from respondents' questionnaires and supported by brief interviews to strengthen the interpretation of the survey results. The research instruments were tested for validity and reliability through limited trials before being used in primary data collection.

The research procedure began with a preparatory stage, which included instrument development, validity testing, and obtaining research permits from relevant agencies in Makassar City. The next stage was field data collection by distributing questionnaires in person and online to respondents who met the sample criteria (Nurcholisah Fitra, 2025). The collected data was then coded, tabulated, and statistically analyzed using SPSS software. The analysis was conducted using a simple linear regression test to determine the effect of policy digitalization on the effectiveness of administrative services. The data processing results were interpreted to answer

the research hypotheses and provide recommendations for the development of more effective digital-based public service policies in the future.

### RESULTS AND DISCUSSION

This research data was obtained from 120 respondents, consisting of civil servants (ASN) and digital service users in Makassar City. Data collection was conducted through online questionnaires and short interviews. Secondary data was obtained from the 2024 annual report of the Makassar City Communication and Informatics Office regarding the implementation of digitalization of public services, which showed a 31% increase in the use of the Makassar Smart City application compared to the previous year.

The distribution of respondents based on socio-demographic characteristics is presented in Table 1. The data shows that respondents consisted of 55% men and 45% women. The largest age group was in the 26–35 years range at 40%, followed by 36–45 years at 35%. Based on status, 60 respondents were civil servants and the other 60 were members of the public who used digital services. The majority of respondents (42%) had used digital services for 2–3 years, with the dominant use being population and licensing services.

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage (%)
Gender	Man	66	55.0
	Woman	54	45.0
Age	18–25 years	15	12.5
	26–35 years	48	40.0
	36–45 years	42	35.0
	>45 years	15	12.5
Status	ASN	60	50.0
	Public	60	50.0
Length of Service Use	<1 year	10	8.3
	1–2 years	30	25.0
	2–3 years	50	41.7
	>3 years	30	25.0
Dominant Service Type	Population	44	36.7
	Licensing	38	31.7
	Tax Administration	22	18.3
	Other	16	13.3

The distribution of respondent characteristics indicates that the majority of digital service users are of productive age, possess relatively good technological literacy, and are experienced in using online administrative services. The balanced proportion of civil servants (ASN) and the public provides a dual perspective on the effectiveness of digitalization policies. Civil servants act as system implementers, while the public, as end users, directly benefit from its benefits.

The increased adoption of digital services is also in line with secondary data from the Makassar City Government, which recorded a 28% increase in online service transactions by 2024. This fact demonstrates that the digitalization of public service policies is beginning to be widely accepted by the public. However, variations in user experience indicate that some groups still require digital literacy support for more equitable service effectiveness.

The highest trend in digital service use in the population and licensing sectors indicates that these sectors are a priority for digitalization policies. This pattern underscores the government's focus on streamlining administrative matters that involve high volumes of services and directly impact the needs of urban communities.

Descriptive analysis was conducted on two main variables: the digitalization of public service policies and the effectiveness of administrative services. The policy digitalization variable was measured using four indicators: technology utilization, system transparency, service speed, and inter-agency integration. The effectiveness variable for administrative services included service accuracy, user satisfaction, time efficiency, and data accuracy.

Table 2. Descriptive Statistics of Research Variables

Variables	N	Minimum	Maximum	Mean	Standard Deviation
Digitalization of Public Service Policy	120	3.00	5.00	4.26	0.47
Effectiveness of Administrative Services	120	3.10	5.00	4.18	0.49

The average digitalization policy score of 4.26 indicates that respondents considered the implementation of digitalization to be high. Meanwhile, the average effectiveness of administrative services of 4.18 indicates that digital-based services are considered quite effective by users.

The high averages for both variables indicate that Makassar City's digitalization policy has been implemented well and is perceived positively by users. The provision of fast and transparent digital services has a significant impact on user experience. The relatively small standard deviations (0.47 and 0.49) indicate that respondents' perceptions tend to be homogeneous.

Consistent use of technology across agencies strengthens data integration and accelerates administrative service processes. High levels of public satisfaction indicate that digital systems provide ease of access and reduce bureaucratic barriers. This supports the assumption that digitalization contributes to increased service effectiveness.

The implementation of digital systems also promotes efficient use of human resources and time. Civil servants can handle more requests in less time. This phenomenon demonstrates the crucial role of digitalization policies in significantly improving public administration governance.

The relationship between policy digitalization and administrative service effectiveness was analyzed using simple linear regression. The correlation test results showed an R value of 0.714, indicating a strong and positive relationship between the variables. An  $R^2$  value of 0.510 indicates that 51% of the variation in administrative service effectiveness can be explained by policy digitalization.

Table 7. Model Summary (Simple Linear Regression Results)

Model	R	R Square	Adjusted R Square	Standard Error of Estimate
1	0.714	0.510	0.505	0.344

The ANOVA test value shows a calculated F of 121.24 with a significance of 0.000 (Sig < 0.05), indicating that the overall regression model is significant.

Table 8. ANOVA (Model Significance Test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	14,360	1	14,360	121.24	0.000
Residual	13,800	118	0.117		
Total	28,160	119			

Field observations were conducted at two main agencies: the Population and Civil Registration Office (Disdukcapil) and the Makassar City Investment and One-Stop Integrated Services Office (DPMPTSP). At Disdukcapil, the e-Kelurahan system allows population documents to be issued in just 15 minutes. DPMPTSP implements an online licensing system that speeds up the business permit issuance process by up to 40% compared to manual systems.

Administrative officers stated that the digital system minimizes data input errors and expedites document validation between agencies. The public also reported that the online queuing system makes services more orderly and efficient. These findings reinforce quantitative findings that digitalization significantly impacts service effectiveness.

Another case was found in regional tax services, where the integration of a digital payment system through Makassar Pay successfully increased regional revenue and reduced tax reporting delays by up to 25%. This fact demonstrates that the benefits of digitalization extend beyond service effectiveness to fiscal efficiency.

The effectiveness of digitalization of public service policies in Makassar City is determined by the synergy between technological innovation, human resource readiness, and public acceptance. The availability of adequate digital infrastructure contributes significantly to

successful policy implementation. Interviews indicate that public satisfaction increases with ease of access to services without face-to-face interaction.

The high average score for the administrative service effectiveness variable illustrates the direct impact of digitalization policies on agency performance. Civil servants (ASN) feel the digital system simplifies coordination and reduces administrative burdens. The public perceives services as more transparent and faster, particularly in terms of wait times and clarity of application status.

Inter-agency integration is a crucial factor in strengthening policy effectiveness. Digital systems enable real-time data exchange, reducing duplication and accelerating administrative decision-making. This success demonstrates that digitalization policies have a systemic effect on improving the effectiveness of public services.

The regression test results show a constant value of 1.245 and a regression coefficient of 0.685 with a t-value of 11.01 and a significance of 0.000 (Sig < 0.05). The regression equation obtained is:  $Y = 1.245 + 0.685X$ , which means that every one-unit increase in policy digitalization will increase the effectiveness of administrative services by 0.685 points.

Table 9. Coefficients (t-test)

Model	Unstandardized Coefficients (B)	Std. Error	t	Sig.
(Constant)	1,245	0.172	7.24	0.000
Digitalization of Policy	0.685	0.062	11.01	0.000

These results demonstrate a positive and significant impact of policy digitalization on the effectiveness of administrative services in Makassar City. The relatively large coefficient value indicates that digital policies have a significant impact on improving public administration performance.

The final interpretation of this relationship confirms that digitalization of policies not only accelerates processes but also improves the quality of public services. This empirical finding provides strong evidence that digitalization is a strategic factor in modern bureaucratic reform within local government.

## DISCUSSION

The research results show that the digitalization of public service policies has a positive and significant impact on the effectiveness of administrative services in Makassar City. The increased application of digital technology in service systems has been proven to accelerate administrative processes, reduce manual errors, and increase user satisfaction. The data shows that the majority of respondents believe the digitalization system implemented by the city government has facilitated access to administrative services such as permits, population data, and local taxes.

A simple linear regression analysis shows that the policy digitalization variable contributes substantially to the effectiveness of administrative services, with a high coefficient of determination. This indicates that the higher the intensity and quality of policy digitalization implementation, the greater the level of effectiveness in public service delivery. (Basyo & Anirwan, 2023) This finding strengthens the assumption that technology-based policies can be an instrument for bureaucratic modernization at the local level.

Data interpretation shows that the public is more responsive to digital policies when the system has a user-friendly interface and prompt technical support. The Makassar City Government appears to have successfully integrated various digital channels, such as an integrated service application, an online queuing system, and a public complaints platform. These factors contribute significantly to the perception of the effectiveness of public services, which are more efficient, transparent, and accountable.

This finding is consistent with research conducted by Wahyuningsih & Prabhata, (2024) which states that digitalization of public policy strengthens the efficiency and accountability of regional administrative service delivery. These results are also in line with a study conducted by Zakiah et al., (2024) which found that the implementation of e-government systems increased the speed and transparency of public services in large cities. This similarity strengthens the argument

that policy digitization is a crucial variable in measuring the performance of modern bureaucracies.

The local context of Makassar offers a unique nuance compared to other studies in other regions. The findings suggest that digitalization functions not only as a technological innovation but also as a public policy communication strategy that is more open to citizen participation. The social and cultural factors of Makassar's urban communities, which are adaptive to technology, accelerate the adoption of digital policies compared to other regions with less infrastructure readiness.

Differences from similar research in rural areas are evident in the readiness of human resources and the community's digital literacy. In Makassar, the relatively high digital competence of officials and the community was a driving force behind the policy's success. This demonstrates that the effectiveness of digitalization is determined not only by policy alone, but also by the social context, technological capabilities, and established culture of public service.

The findings of this study indicate that the bureaucracy in Makassar City is beginning to move toward a more responsive and efficient technology-based public service paradigm. This digital transformation is not simply the adoption of tools, but rather a shift in the bureaucratic work paradigm toward data-driven, collaborative, and participatory governance. This achievement reflects a shift in public service values from a procedural orientation toward an orientation toward results and public satisfaction.

The digitalization of public policy also signals a shift in local government leadership models that are more adaptive to developments in information technology. This indicates increased institutional capacity and a commitment to long-term bureaucratic reform. Local governments are implementing digital policies not merely as a trend, but as a strategic instrument for building public trust.

This phenomenon demonstrates that digitalization acts as a catalyst for structural changes in administration toward more open and efficient service delivery. The research findings provide empirical evidence that technology-based policies can strengthen government legitimacy in the eyes of the public. Faster, clearer, and more monitorable service processes foster trust and minimize the potential for administrative irregularities.

The primary implication of this research is the need to strengthen and sustain digitalization policies in public services in Makassar City. The government needs to maintain consistent digital policies so that they don't stop at the technology adoption stage but develop into an integrated, data-driven service ecosystem. The research findings provide a basis for formulating strategies to improve the quality of public services by sustainably leveraging the potential of information technology.

Practically, these results can serve as a reference for other local governments in designing digital-based service policies. Effective digital policy implementation has been proven to minimize operational costs, increase transparency, and shorten the bureaucratic chain (Lestari, 2023; Yusuf & Utomo, 2024). The impact is not only on the internal efficiency of the agency, but also on increasing public satisfaction with government performance.

In the academic realm, these results enrich the literature on digital governance and public policy innovation in Indonesia. This study demonstrates that policy digitization is not simply a technological phenomenon, but rather an administrative strategy to strengthen public legitimacy and bureaucratic performance. Other researchers can further explore the integration of digital policy with a human-centered design approach to improve service inclusiveness.

The effectiveness of the digitalization of public service policies in Makassar City is due to a combination of institutional commitment and digital infrastructure readiness. The local government has invested significant resources in building an integrated information system, training staff, and strengthening inter-agency coordination. This readiness minimizes resistance to change and accelerates adaptation to digital systems.

The high level of digital literacy in the community is also a key factor in the success of digital policies. Urban residents' familiarity with technology in everyday activities, such as online payments and public applications, facilitates transactions within digital government systems. A

dynamic urban culture open to innovation also strengthens the public's receptivity to technology-based policies.

City government policies emphasizing transparency and accountability through digital platforms enhance public trust. Real-time monitoring of service delivery reduces the potential for abuse of authority and increases the efficiency of administrative processes. (Taufiqurokhman et al., 2023) This condition explains why the digitalization variable of policy has a significant influence on the effectiveness of administrative services.

The Makassar City Government needs to expand the reach and functionality of its digital public service system to be more inclusive for all levels of society. Strengthening network infrastructure, enhancing data security, and expanding digital literacy are further strategic agenda items. Increasing public participation in evaluating digital services can help improve the system and strengthen policy legitimacy.

Government agencies need to regularly evaluate the performance of digital policies to adapt to technological developments and public needs. Developing systems based on artificial intelligence and big data can be a long-term solution to accelerate decision-making and improve the quality of public services (Dwi Ismail Aziz, 2025). This innovation will strengthen the bureaucracy's capacity to face the ever-evolving challenges of the digital era.

Future research could focus on comparative analysis across regions or longitudinal studies on the sustainability of public digitalization policies. A multidisciplinary approach combining policy, technology, and social behavior perspectives would enrich our understanding of the dynamics of bureaucratic digital transformation in Indonesia. These findings can inform national policy formulation to strengthen adaptive and service-oriented digital governance.

## CONCLUSION

The research findings indicate that the digitalization of public service policies has a significant impact on the effectiveness of administrative services in Makassar City. The high level of technology adoption in the public service system has increased time efficiency, process transparency, and public satisfaction as service users. Unlike previous research, this study confirms that digital policies not only modernize the bureaucracy but also shape a more open and responsive public service culture to citizen needs.

The added value of this research lies in its conceptual contribution in explaining the relationship between policy digitalization and the effectiveness of administrative services in the context of local government in Indonesia. The quantitative approach used provides empirical evidence regarding the significant influence of digital policies on bureaucratic performance, while also enriching e-governance studies at the local level. This research emphasizes the importance of integrating technological, organizational, and public behavior dimensions in measuring digital policy performance.

This study's geographic scope, limited to Makassar City, limits its results to generalizability to regions with varying social and infrastructure characteristics. Future research should expand the scope and incorporate other variables such as community digital literacy, human resource readiness, and data security. Longitudinal studies are also recommended to assess the long-term sustainability of digitalization's impact on public service effectiveness.

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