Digital Innovation Strategy in Governance Original Regional Income of Makassar City

Muhammad Fuad Arfandi[1], Muh. Akmal Ibrahim[2], Hasniati[3], Didik Iskandar[4]

[1] Doctoral Student of Public Administration, Faculty of Social and Political Science, Hasanuddin University, Makassar, Indonesia.

[2]Department of Administrative Science, Faculty of Social and Political Science, Hasanuddin University, Makassar, Indonesia.

[3]Department of Administrative Science, Faculty of Social and Political Science, Hasanuddin University, Makassar, Indonesia.

[4]Public Administration, Makassar State University, Indonesia;

HOW TO CITE:
Muhammad Fuad Arfandi, Muh. Akmal Ibrahim, Hasniati, Didik Iskandar (2026). Digital Innovation Strategy in Governance Original Regional Income of Makassar City. International Journal of Special Education, 41(10s), 843-850

COPYRIGHT STATEMENT:
Copyright: © 2026 Authors.
Open access publication underthe terms and conditions of the Creative CommonsAttribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

ABSTRACT:
Digital transformation encourages local governments to develop digital innovation strategies to improve the quality of public services and the effectiveness of Locally Generated Revenue (PAD) governance. The Makassar City Government has implemented various digital-based tax service innovations, but their implementation still faces challenges related to organizational readiness, technological adaptation, and community needs. This study aims to analyze digital innovation strategies in the governance of Locally Generated Revenue (PAD) in Makassar City based on product, environment, and organization aspects. This study uses a qualitative approach. Data collection was conducted through observation, interviews, and documentation studies. Key informants were Bapenda and other Regional Apparatus Organizations (OPD), taxpayers, banks, and third parties (digital innovation developers). Data analysis went through the stages of data reduction, data presentation, and drawing conclusions. The results show that the digital innovation strategy in the governance of Locally Generated Revenue (PAD) in Makassar City has developed through the development of electronic payment services that adapt to the development of digital transactions in the community, support the digital environment, and the readiness of local government organizations and banking institutions in managing electronic payment services.

Keywords: Digital Innovation Strategy; Governance; Local Original Income.

Introduction.

Digital transformation in public services encourages local governments to continuously innovate in managing public services. In the context of managing Locally Generated Revenue (PAD), digital innovation is crucial for increasing the effectiveness of local tax services, accelerating administrative processes, and enhancing the quality of regional revenue management. The Makassar City Government, through the

Regional Revenue Agency (Bapenda), has developed various digital-based local tax services as part of its efforts to modernize PAD governance.

The development of digital service applications, cashless payment systems, and the integration of regional tax services demonstrate a shift in public service toward a technology-based system. These innovations are expected to facilitate public access to regional tax services, expedite the service process, and improve the quality of regional tax data management. Furthermore, digitalization of services is also expected to foster a more responsive service delivery to community needs and technological developments.

Despite the development of various digital innovations, the management of digital-based regional tax services in Makassar City still faces numerous challenges. One apparent issue is that the development of digital services has not fully adapted to the needs of the community. Some digital services are still considered difficult to use by some, especially those with limited digital literacy. The service interface, application usage procedures, and certain digital service processes are still considered difficult for users to fully understand.

Furthermore, the rapid development of the digital environment also presents a unique challenge for local governments. Technological changes, the development of digital payment systems, and the growing public demand for fast and flexible services require local governments to continuously adapt their digital services. In practice, local governments still face limitations in adapting their service systems to technological developments and the changing needs of the public.

Another issue is the readiness of government organizations to manage digital transformation. Not all government officials possess the same digital capabilities to manage technology-based services. Some officials are still accustomed to manual work patterns, so the adaptation process to digital services has not been uniform. Furthermore, the process of developing civil servant capacity and establishing a digital work culture still requires ongoing strengthening.

On the other hand, the development of digital innovation in local revenue (PAD) management still faces challenges related to coordination between regional government agencies and dependence on external parties, such as technology providers and the banking sector. When external system support is disrupted, digital-based regional tax services are also impacted. This situation demonstrates that developing digital innovation requires organizational readiness and strong environmental support for optimal digital service delivery.

These various issues demonstrate that the development of digital-based regional tax services is not only related to the provision of technology, but also related to the ability of regional governments to develop digital services that meet community needs, adapt services to developments in the digital environment, and strengthen the readiness of government organizations in managing digital transformation.

These previous studies indicate that research on digital innovation strategies in Indonesia generally focuses on public service innovation and the digital transformation of government organizations in general. Previous research has not specifically examined digital innovation strategies in the context of local revenue (PAD) governance using the Nylén and Holmström (2015) framework, particularly regarding products, environments, and organizations. Therefore, this study is crucial for examining digital innovation strategies in digital-based local revenue (PAD) fiscal governance.

Methods

This study uses a qualitative approach with an exploratory research type. The qualitative approach was chosen because this study aims to understand in depth the phenomenon of digital governance in the governance of Locally Generated Revenue (PAD) in Makassar City, specifically related to the implementation of digital governance, digital innovation strategies,

and the sustainability of digital-based regional tax services. The type of research used is descriptive exploratory. Descriptive research is used to describe in depth the empirical conditions regarding digital-based PAD governance in Makassar City, while the exploratory approach is used to explore various dynamics, challenges, obstacles, and opportunities in the implementation of digital-based regional tax services. This research was conducted in Makassar City, specifically at the Makassar City Regional Revenue Agency (Bapenda), as the regional apparatus responsible for managing digital-based Locally Generated Revenue. The focus of this research refers to digital innovation strategies in PAD governance which includes product, environmental, and organizational aspects. Data sources in this study consist of primary data and secondary data. Primary data were obtained directly through in-depth interviews with research informants who are related to the implementation of digital-based PAD governance in Makassar City. Meanwhile, secondary data was obtained through documents, reports, regulations, archives, regional tax service data, and various other supporting documents related to digital-based PAD management. The research informants consisted of: a) Secretary of the Makassar City Regional Revenue Agency; b) Head of the Planning and Reporting Sub-Division of the Makassar City Bapenda Secretariat; c) Reviewer of Technical Policy Analysts of the Makassar City Bapenda; d) Information Technology (IT) Team of the Makassar City Bapenda; e) Head of the Entertainment Tax and Street Lighting Tax Sub-Division of the Makassar City Bapenda; f) Head of Manggala District, Makassar City; g) Bank Sulselbar; h) Technical Implementation Unit for Regional Revenue Management; i) Business Taxpayers; and j) Land and Building Tax (PBB) Taxpayers. Data collection techniques were carried out through in-depth interviews, observation, and documentation. The data analysis technique in this study used the interactive analysis model of Miles, Huberman, and Saldaña (2014) which consists of three stages: data condensation, data presentation, and conclusion drawing. The validity of this research data uses source triangulation and technical triangulation techniques.

Results

The results of this study are based on empirical findings obtained through in-depth interviews, observations, and document reviews related to digital innovation strategies in managing Makassar City's Locally Generated Revenue (PAD). The analysis in this study uses the Digital Innovation Strategy theory proposed by Nylén and Holmström, which consists of three main elements: product, environment, and organization. These three elements are used to understand how digital innovation in PAD management is not only related to the development of service technology, but also related to the readiness of government organizations, the condition of the digital environment, community needs, and the ability of local governments to manage digital-based service transformation.

Product on Digital Innovation Strategy in Local Original Income Management of Makassar City

The research results show that digital innovation in the management of Makassar City's Regional Original Revenue (PAD) is realized through the development of the Pakinta application as a digital-based regional tax payment service. This service development was carried out to expand access to regional tax payments, increase the use of non-cash transactions, and facilitate the monitoring of regional revenue transactions. Based on the research results, digital innovation products in the management of Makassar City's PAD are not only in the form of payment applications, but also include the integration of various electronic payment channels directly connected to the regional revenue system.

Information from the Secretary of the Makassar City Regional Revenue Agency (Bapenda) explains that Pakinta was developed to provide payment convenience to the public while supporting the increase in regional digital payment transactions. Prior to Pakinta, regional

tax payments were often made manually through service counters or bank offices. After digitalization was developed, the public can make payments through QRIS, virtual accounts, marketplaces, mobile banking, and various other electronic payment channels. According to the Bapenda Secretary, the use of these various payment channels makes it easier for the public because payments can be made at any time without having to visit the service office in person.

The use of QRIS in regional tax payments has increased year after year since Pakinta was introduced as a regional digital payment service. This situation indicates that the public is becoming accustomed to using cashless transactions for regional tax payments, as they are considered more practical than manual payments. Digital product development in PAD management is directed at building payment services that can connect with various electronic payment systems already used by the public. Pakinta's development is no longer focused solely on a single application, but is directed at integrating with various digital payment platforms such as QRIS, Tokopedia, Shopee, OVO, and virtual accounts.

Digital product development for local revenue (PAD) management is not only about application appearance, but also server and network readiness, as well as payment transaction data integration. System development is carried out to ensure payment transactions are recorded in real time and directly credited to regional treasury accounts. Furthermore, digital product development is also directed at supporting the integration of Makassar City Government digital services through the development of Lontara Plus, which connects various public services within a single digital platform.

Bank Sulselbar acts as a payment channel partner in supporting the development of regional digital payment services. The integration of QRIS, virtual accounts, and mobile banking makes it easier for the public to pay regional taxes without having to visit a bank branch. The use of digital payments simplifies recording regional revenue transactions because all transactions are automatically recorded in the electronic system. The use of QRIS and virtual accounts speeds up the payment verification process compared to manual payments because payment data is directly connected to the regional revenue system.

The results of the study indicate that the product in the digital innovation strategy for Makassar City's PAD governance is realized through the development of Pakinta and the integration of various electronic payment channels that simplify regional tax payment transactions and expand the use of non-cash transactions. The development of digital products is aimed at adapting to the transaction patterns of people who increasingly use electronic payments in their daily activities. Digital innovation products in the management of Makassar City's PAD have been actively used in regional tax payment services, although network stability, payment system synchronization, and the community's ability to use digital technology still affect the overall use of digital payment services.

Environment on Digital Innovation Strategy in Local Original Income Governance of Makassar City

The research results show that the development of digital innovation in the governance of Makassar City's Regional Original Revenue (PAD) is influenced by the development of the digital environment, changes in community transaction patterns, demands for electronic-based public services, and government policies regarding the digitization of regional services. The use of non-cash payments in public services is one factor driving the Makassar City Government to develop digital-based regional tax payment services through the Pakinta application and the integration of various electronic payment channels.

The digitalization of regional tax payments is evolving alongside the increasing use of electronic transactions in everyday life. As people become accustomed to using digital payments in various daily activities, local government services

must also adapt to these developments. The development of regional digital payment services is influenced by central government policies and the push to accelerate the digitalization of regional government transactions through the Regional Digitalization Acceleration and Expansion Team (TP2DD). Regional payment digitalization is seen as part of the development of non-cash transactions within regional governments, thus directing tax payment services to reduce the use of cash. Developing digital innovations in regional tax services requires the support of stable internet infrastructure and technology systems. The use of digital payments is heavily influenced by the quality of the internet network, as all payment transactions are conducted electronically and require real-time data synchronization.

The development of the digital environment requires local governments to adapt their public service delivery to the development of electronic transaction technology. He explained that people are now increasingly using mobile phones and digital payment applications in their daily activities, so local governments need to provide payment services that can be accessed through people's digital devices. Pakinta was developed to address the changing behavior of people who are increasingly using electronic payments rather than cash. The rapid development of digital payment services requires local governments to continuously adjust their systems and develop service features. Payment integration with various digital platforms is being implemented to ensure that local tax payment services remain abreast of developments in the electronic payment systems used by the public.

The growth of cashless transactions in the community is a driving factor in the expansion of regional digital payment services. According to banks, the use of QRIS, mobile banking, and e-wallets has increased significantly in recent years, leading people to become accustomed to electronic transactions rather than cash payments. The development of digital transactions also increases the need for security in electronic payment systems. The increasing use of cashless transactions makes securing digital transaction systems a crucial part of managing regional payment services. Strengthening security systems is carried out to maintain transaction stability and protect the public's electronic payment data.

The development of the digital payment ecosystem requires banking institutions to adapt their service systems to the electronic transaction needs of local governments. Integrating digital payments with local government systems allows tax payments to be processed through various payment applications without requiring in-person visits to bank offices.

The research results show that the environment in the digital innovation strategy for Makassar City's PAD governance is influenced by the development of non-cash transactions, changes in community behavior in the use of electronic payments, local government digitalization policies, and the development of the digital payment ecosystem. The evolving digital environment has prompted the Makassar City Government and Bank Sulselbar to adapt regional tax payment services to the electronic transaction systems used by the public daily. The development of the digital environment has also encouraged the expansion of the use of non-cash payments in regional tax services, although internet network quality, digital literacy distribution, and the community's ability to use technology still influence the even use of digital payment services.

Organization on Digital Innovation Strategy in Local Original Income Management of Makassar City

The research results show that the development of digital innovation in the governance of Makassar City's Regional Original Revenue (PAD) is influenced by the readiness of local government organizations in managing digital-based service transformation. The development of the Pakinta application and the integration of electronic payments are not only related to the use of digital payment technology, but also related to human resource readiness,

strengthening information technology infrastructure, inter-sectoral coordination, and adjustments to the regional tax service work system. Based on the interview results, organizational management in digital innovation in PAD involves Bapenda Makassar City as the manager of regional tax services and Bank Sulselbar as a digital payment channel partner.

The development of digitalization of regional tax services requires organizational support capable of adapting service patterns from manual to electronic systems. This change relates not only to the use of digital payment applications but also to changes in service work patterns, transaction monitoring, and electronic management of regional revenue data. The Makassar City Government then established internal support through the development of an information technology team and inter-sectoral coordination to support the sustainability of digital services.

Digital transformation in regional tax services cannot be achieved instantly, as it requires organizational adjustments, staff capacity building, and public service adaptation to electronic systems. Changing digital services requires a learning process within both local governments and the public using digital payment services. Managing digital services requires more than just creating a payment application; it requires system maintenance, server monitoring, firewall strengthening, and data backup to maintain the stability of electronic payment services.

Coordination between sectors within the Regional Revenue Agency (Bapenda) is crucial for developing digital services. Developing electronic payment applications and systems requires the involvement of the service sector, regional tax division, and information technology teams to ensure digital payment services meet the operational needs of regional tax services. Coordination is achieved through internal discussions regarding feature development, service evaluation, and addressing digital payment system issues.

Integrating regional digital payments also requires adjustments to banking service organizations. Bank Sulselbar must align its payment transaction system with the local government's electronic payment system so that QRIS, virtual account, and mobile banking transactions can be recorded directly in regional treasury accounts. This adjustment is being achieved through the development of an electronic payment system and regular coordination with the Makassar City Regional Revenue Agency (Bapenda).

The results of the study indicate that the organization in the digital innovation strategy of Makassar City's PAD governance is realized through adjustments to the service organizations of local government and banking institutions in supporting the regional electronic payment system. The development of digital innovation is carried out through strengthening the information technology team, coordination between sectors, server development and data security, and adjustments to the digital payment service system. The management of digital organizations in Makassar City's PAD governance has been running in supporting regional electronic payment services, although limitations in information technology human resources, digital infrastructure development, and the need for system updates still affect the sustainability of the development of regional digital payment services.

5. Conclusion

The digital innovation strategy for managing Makassar City's Regional Original Revenue (PAD) has been implemented through the development of electronic tax payment services integrated with various digital payment channels. The use of the Pakinta application, QRIS, virtual accounts, mobile banking, marketplaces, and various other non-cash payment methods demonstrates that the Makassar City Government has adapted its regional tax payment services to the development of electronic transactions, although the digital innovation strategy implemented is not yet optimal and needs improvement.

In the product element, the digital innovation strategy in Makassar City's PAD governance is realized through the development of Pakinta and the integration of various electronic payment channels that simplify regional tax payments and expand the use of non-cash transactions. Digital product development is aimed at adapting to the increasingly widespread use of electronic payments in daily activities. Digital innovation products in Makassar City's PAD management have been actively used in regional tax payment services, although network stability, payment transaction synchronization, and the community's ability to use digital technology still affect the overall use of digital payment services.

In terms of the environment, the digital innovation strategy in Makassar City's PAD governance is influenced by the development of non-cash transactions, changes in public behavior regarding the use of electronic payments, local government digitalization policies, and the development of the digital payment ecosystem. The evolving digital environment has prompted the Makassar City Government and Bank Sulselbar to adapt regional tax payment services to the electronic transaction systems used by the public daily. The development of the digital environment has also encouraged the expansion of the use of non-cash payments in regional tax services, although internet network quality, digital literacy distribution, and the public's ability to use technology still influence the even use of digital payment services.

In the organizational element, the digital innovation strategy in the governance of Makassar City's PAD is realized through adjustments to the service organizations of local government and banking institutions to support the regional electronic payment system. The development of digital innovation is carried out through strengthening the information technology team, coordination between sectors, server development and data security, and adjustments to the digital payment service system between the Makassar City Bapenda and Bank Sulselbar. The management of the digital organization in the governance of Makassar City's PAD has been running in supporting regional electronic payment services, although limitations in information technology human resources, digital infrastructure development, and the need for system updates still affect the sustainability of the development of regional digital payment services.

Overall, the digital innovation strategy in Makassar City's local revenue (PAD) governance has created a more integrated electronic-based regional tax payment service compared to the previous manual service model. The development of digital innovation in Makassar City's PAD management demonstrates the adaptation of digital service products, responses to developments in the digital environment, and strengthening of service organizations to support regional electronic payments, but improvements are needed.

References

Bharadwaj, A., El Sawy, O.A., Pavlou, P.A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. MIS Quarterly, 37(2), 471–482. https://doi.org/10.25300/MISQ/2013/37:2.3

Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage Publications.

Kane, G.C., Palmer, D., Phillips, A.N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. MIT Sloan Management Review and Deloitte University Press.

Mergel, I. (2019). Digital Service Teams in Government. IBM Center for The Business of Government.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative Data Analysis: A Methods Sourcebook (3rd ed.). Thousand Oaks, CA: Sage Publications.

Nugroho, R. (2020). Digital transformation of government and the challenges of public service innovation in Indonesia. Journal of Public Administration, 16(2), 145–158.

Nylén, D., & Holmström, J. (2015). Digital innovation strategy: A framework for diagnosing and improving digital product and service innovation. MIS Quarterly Executive, 14(1), 57–67.

Rogers, E.M. (2003). Diffusion of Innovations (5th ed.). Free Press.

Sari, DN, & Winarno, B. (2022). Digital innovation in regional tax services in Indonesia. Journal of Public Administration, 18(1), 88–101.

Schumpeter, J. A. (1934). The Theory of Economic Development. Harvard University Press.

Setiawan, A., & Mahsyar, A. (2015). Information technology-based public service innovation in local government. Journal of Public Administration, 21(1), 30–42.

Westerman, G., Bonnet, D., & McAfee, A. (2014). Leading Digital: Turning Technology into Business Transformation. Harvard Business Review Press.

Yin, R. K. (2018). Case Study Research and Applications: Design and Methods (6th ed.). Thousand Oaks, CA: Sage Publications.