

IMPLEMENTATION OF MAYOR'S REGULATION NUMBER 25 OF 2019 CONCERNING THE PONTIANAK SMART CITY MASTERPLAN 2019-2028

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Abstract

Public policy implementation is a crucial aspect in realizing the goals of effective and efficient governance. This study examines the implementation of Pontianak Mayor Regulation Number 25 of 2019 concerning the Pontianak Smart City Masterplan 2019–2028. The objective of this policy is to enhance technology-based city governance to improve public services and bureaucratic efficiency. This study uses Edward III's policy implementation theory, which emphasizes four main factors: communication, resources, disposition, and bureaucratic structure. The results show that the implementation of this policy still faces several challenges, such as a lack of inter-agency coordination, limited human and financial resources, and suboptimal technological infrastructure. One concrete example is the implementation of the *Jendela Pontianak Integrasi* (JEPIN) application, which still experiences obstacles in updating data and minimal public participation in its use. This study recommends increasing inter-agency synergy, more adequate budget allocation, and strengthening human resource capacity so that smart city policies can be implemented optimally.

Keywords: *Public Policy, Policy Implementation, Smart City, JEPIN*

INTRODUCTION

Pontianak City is experiencing rapid development, significantly impacting people's lifestyles. This rapid growth has created various problems that must be addressed through appropriate policies. To this end, the Mayor of Pontianak issued Regulation Number 25 of 2019 concerning the Smart City Masterplan 2019–2028. The smart city concept is defined as a city that utilizes information and communication technology to improve efficiency, effectiveness, public services, and community welfare. This program serves as the primary framework for Pontianak's long-term development. The Smart City Masterplan is designed for a nine-year duration to ensure comprehensive, sustainable implementation, and periodic evaluation. Through this regulation, the Pontianak City Government provides space for policy testing, achievement monitoring, and program adjustments to meet the dynamic needs of the community. This policy is reinforced by Regional Regulation Number 9 of 2022 concerning smart city implementation, which emphasizes development based on regulations, physical infrastructure, information technology, and social support. All of these steps arise from the need to address the challenges of a dynamic city with a growing population and social, economic, and environmental complexities that require innovative and sustainable solutions.

The main factor driving smart city initiatives in Pontianak is significant population growth. Data shows the population will increase from 658,685 in 2020 to 682,896 in 2024. This growth rate directly impacts the need for transportation, healthcare, education, energy, and other public facilities. Furthermore, limited infrastructure remains a challenge, particularly in the transportation, waste management, clean water supply, and electricity sectors. This challenge is driving the use of digital technology to optimize city management. Advances in information and communication technology provide significant opportunities for Pontianak to improve governance. The government is developing various digital-based initiatives, including smart transportation systems, waste management, and air quality monitoring. Public services are strengthened through applications such as the *Jendela Pontianak Integrasi* (JEPIN), SIMPONI RSUD, PIONIRS Disdukcapil, Lapor.go.id, Srikandi, SIPD, and the Satu Data portal. These applications facilitate public access to government, health, and administrative information, including complaints. JEPIN itself integrates services into a single portal, connecting the public with government institutions,

hospitals, PDAMs, and sub-districts. The presence of this system is expected to increase transparency, accelerate services, and facilitate communication between citizens and the government more effectively and efficiently. Based on observations, it was discovered that the application's implementation faced several obstacles. Food data in the JEPIN application was frequently updated late, making it unsuitable for community needs. Adoption rates were also low, with only around 10,000 downloads, less than two percent of Pontianak's total population. The Communications and Informatics Office's target of 25–35 percent was far from being achieved. JEPIN's website visits through the official portal also fell short of the monthly target, despite reaching over 48,000 in April 2024. Another obstacle was limited human resources. The Communications and Informatics Office only had ten staff members with diverse educational backgrounds, who were working to integrate data from various Regional Government Agencies (RGA). Socialization efforts had been conducted, but the application's effectiveness among the public remained low.

Budget constraints exacerbate the situation. Application development funding decreased by around five to six percent annually from 2020 to 2023, despite the increasing need for digital devices. This has hampered program implementation. High costs for device procurement, networking, and maintenance also add to the burden. Server limitations cause disruptions, such as inaccessible street CCTV due to insufficient storage capacity. This situation hampers the Communication and Information Technology Office's (Diskominfo) performance in managing digital public data and services. The limited budget also impacts the low performance of the SPBE index, which should reflect e-government governance. Pontianak City still faces serious obstacles in building an ideal smart city ecosystem. Lack of coordination between the Communications and Information Technology Office (Diskominfo) and regional government agencies (RGA), inadequate public communication, budget constraints, and inadequate infrastructure are key challenges.

Data updates are often delayed, applications are not fully integrated, and the public is less enthusiastic about utilizing digital services. Yet the primary goal of a smart city is to create an efficient, environmentally friendly, adaptive, and inclusive city for all residents. To achieve this vision, improvements are needed in regulations, human resources, budgets, and technology so that the integration of public services can run smoothly and deliver tangible impact. The purpose of this study is to examine the implementation of the *Jendela Pontianak Integrasi* (JEPIN) application within the smart city framework according to Mayor Regulation Number 25 of 2019. The focus of the study is directed at the effectiveness of the application's use in public services, obstacles that arise in implementation, and strategies to increase public participation. This research is expected to be able to provide real contributions to improving digital governance, strengthening infrastructure, and optimizing the use of technology, so that Pontianak can develop as a sustainable smart city and be more responsive to the needs of its citizens.

LITERATURE REVIEW

Public Policy

Anderson (1979) stated that public policy is a series of deliberate actions taken by the government to solve public problems. Friedrich (in Subarsono, 2016) emphasized that policy is an action proposed by an individual, group, or government within a specific environment with specific constraints and opportunities. Meanwhile, Jones (1991) defines public policy as a series of decisions taken continuously by the government with specific goals. The public policy process typically includes five stages: agenda setting, formulation, adoption, implementation, and evaluation (Dunn, 2003).

Public Policy Implementation

Van Meter and Van Horn (1975) define implementation as the actions taken by individuals or groups in government or the private sector to achieve the objectives set out in a policy. According to Mazmanian and Sabatier (1983), implementation is the process of carrying out policy decisions in the form of laws, regulations, or court decisions, which requires problem identification, resource allocation, and the establishment of working mechanisms. Grindle (1980) adds that implementation is influenced by the content of the policy and the context of implementation.

Policy Implementation Model

Edward III (1980) proposed four main variables that influence policy implementation, namely: (1) communication, including clarity and consistency in conveying policies to implementers; (2) resources, including adequate human resources, funds, information, and facilities; (3) disposition, namely the implementer's commitment and attitude towards the policy; and (4) bureaucratic structure, including SOP's, coordination mechanisms, and organizational fragmentation. If these four aspects are met, then the policy has a great chance of being implemented well.

Smart City

Giffinger et al. (2007) define a smart city as a city capable of integrating information and communication technology (ICT) in six main dimensions: smart economy, smart mobility, smart environment, smart people, smart living, and smart governance. Cohen (2012) adds that a smart city is an approach to sustainable urban development that utilizes digital technology to improve the efficiency of public services and the quality of life of the community. In the Indonesian context, the Ministry of Communication and Informatics (2017) explains that the smart city concept aims to create efficient, transparent, and participatory governance.

JEPIN (Jendela Pontianak Integrasi) Application

Based on Pontianak Mayor Regulation Number 25 of 2019, the JEPIN application is designed as a single digital-based public service portal that integrates various Regional Apparatus Organizations (RGA). Its functions include information access, licensing services, commodity price information, CCTV, public complaints, and tourism destination promotion (Pontianak City Government, 2019). According to research by Mira and Rekan (2019), JEPIN still faces obstacles such as limited data updates, a low number of users, and a minimal budget and human resources for system management.

Table 1. Relevant research results

No	Name, Year, Source, Title	Research result	Similarities & Comparisons
1	Siti Widhareto Mursalim (2017). Journal of Administrative Science — Implementation of Smart City Policy in Bandung City.	Finding implementation barriers: uneven socialization, employee placement not yet in accordance with competencies, weak disposition of implementers, less synchronized bureaucratic structure — recommendations: training and improved coordination.	Similarities: Communication, resource, disposition, and bureaucratic issues are similar to those found in Pontianak (JEPIN). Differences: Bandung, as a metropolitan city, has greater scale and infrastructure readiness; its recommendations emphasize human resource redistribution and relevant training.
2	Mira, I. & Rekan (2019). Journal of Computers & Applications — Analysis of the Service Quality of the Smart City Information System GENCIL Pontianak City (Webqual 4.0).	Assess the quality of smart city information system services (usability, information, reliability). Identify the need for web/usability improvements and data accuracy.	Similarities: Findings on service quality and interface/information improvement needs align with JEPIN's data update and access issues. Differences: This study focused on webqual metrics; the thesis added policy implementation aspects (Edward III).
3	Mulyadi, Sri Fitri (2021). Case study — Implementation of the SAMBARA Application in Taxpayer Administration, Karawang	Implementing service applications during the pandemic requires budget allocation, human resource training, and intensive outreach to increase public adoption.	Similarities: Budget constraints, human resource capacity, and socialization also emerged in JEPIN. Differences: The tax service context is different, but the managerial lessons (budget + socialization) are relevant.
4	Nuraini Zulfiani & Yayang (2020). Journal — Implementation of the SAPA WARGA Application during the COVID-19 period	Demonstrates success/dependence on infrastructure readiness and community engagement; application is less effective without RGA integration and current data.	Similarities: The need for inter-RGA integration and real-time data is also in JEPIN; without integration, the application's functionality is limited. Differences: While SAPA WARGA is in the context of a health emergency, JEPIN is a general public service.
5	Annisah (2017). Journal of Telematics & Information Society — Smart City Planning Proposal: Smart Government Governance.	Emphasizes the importance of smart governance (policies, bureaucracy, services) and public participation in smart city planning.	Similarities: At the theoretical level, the Pontianak thesis adopts smart governance as a pillar; operational implementation issues (socialization & coordination) remain a constraint.

The implementation of Mayoral Regulation No. 25/2019 (Pontianak Smart City Masterplan 2019–2028) demands the transformation of public services through a digital platform (JEPIN); however, achieving the goal of smart governance requires effective translation of policies into operational actions (implementation). Using the

Edward III framework, this study examines four key variables: communication, resources, disposition, and bureaucratic structure. These four factors collectively determine whether policy instructions will become integrated, accurate, and usable public services. Literature analysis and previous studies show similar patterns of obstacles (limited socialization, inadequate human resources/budget, bureaucratic fragmentation, and quality of information systems), thus this study focuses on evaluating how weaknesses in each of these variables concretely affect JEPIN performance and formulating targeted improvement recommendations.

METHOD

The research method used in this study is a descriptive research method with a qualitative approach, which aims to obtain an in-depth picture of the implementation of Pontianak Mayor Regulation Number 25 of 2019 concerning the Smart City Masterplan through the *Jendela Pontianak Integrasi* (JEPIN) Application. The research was conducted in Pontianak City with the main object of implementing public policies related to smart cities, while the research subjects included government officials, application managers, and community service users. Data collection techniques included in-depth interviews with purposively selected informants, field observations to directly see the implementation of services, and documentation studies of various regulations, reports, and related archives. The data obtained were then analyzed using the Miles and Huberman interactive model which includes the stages of data reduction, data presentation, and drawing conclusions, so that the research results can comprehensively describe how communication, resources, disposition, and bureaucratic structures play a role in supporting or hindering the implementation of smart city policies in Pontianak City.

RESULTS AND DISCUSSION

The location of this research is in Pontianak City, the capital of West Kalimantan Province, which is geographically located on the equator with an area of approximately 107.82 km² and is divided into six districts and 29 villages. This city has a strategic position because in addition to being the center of government, it is also a center of trade, services, education, and dense community activities. The population continues to grow from year to year, thus demanding an increase in the quality of information technology-based public services that are more effective, efficient, and transparent. The Pontianak City Government strives to realize modern governance through the development of the smart city concept as stated in Pontianak Mayor Regulation Number 25 of 2019, one of which is realized by presenting the *Jendela Pontianak Integrasi* (JEPIN) application as an integrated service portal. The geographical, demographic conditions, and the role of Pontianak City as a center of economic and social activities are important factors that encourage this research to be conducted in the region, with a focus on evaluating the implementation of smart city policies to improve the quality of public services to the community.

The *Jendela Pontianak Integrasi* (JEPIN) application is a concrete implementation of the smart city policy in the region. JEPIN was developed based on Pontianak Mayor Regulation Number 25 of 2019 as an integrated service portal that integrates various Regional Apparatus Organizations (RGA) into one digital platform. This application provides various features, including public service information, commodity price data, tourist destination maps, traffic CCTV access, health and education services, and a public complaint channel. The presence of JEPIN aims to make it easier for the public to access government services quickly, transparently, and efficiently without having to move from one agency to another. However, in its implementation, this application still faces several obstacles such as limited data updates that do not always meet needs, a relatively low number of users compared to the total population, and limitations in budget, infrastructure, and human resources handling system management. This overview confirms that JEPIN is an important instrument in realizing smart governance in Pontianak City, as well as being the focus of research to assess the extent to which smart city policies can be effective in improving public services.

The research results show that communication in the implementation of the JEPIN application has not been optimal. Socialization regarding the application's existence is still limited, so most people are still unaware of its functions and benefits. Information is also not evenly distributed to all levels of society, especially those less familiar with technology. Internally, government coordination between Regional Apparatus Organizations (RGA's) continues to face challenges due to the lack of a structured communication mechanism. As a result, policy delivery tends to be formal without consistent technical follow-up, thus reducing the understanding of implementers and the public. Limited resources are a significant obstacle to JEPIN implementation. Budgetary support for application development and maintenance tends to decline year after year, impacting both technical and operational capacity. The number of experts truly skilled in information technology remains limited, and some RGA employees lack adequate technical skills. Furthermore, supporting facilities such as internet networks, server equipment, and other

technological infrastructure are still suboptimal. This situation often results in delays in data updates and service integration between RGA's. These resource limitations demonstrate that good policy intentions will be hindered without adequate support from facilities and expertise. In terms of disposition, the study shows a fairly good commitment from policy implementers. Government officials generally have a willingness to implement smart city policies through JEPIN, although their motivation is often influenced by limited facilities and additional workloads. Some implementers have demonstrated a positive attitude by trying to introduce the application to the public, but a lack of structural support has prevented these efforts from being sustainable. Nevertheless, a willingness to learn and develop is still evident, especially among younger employees. These attitudinal and motivational factors offer potential for development, but they still require support in the form of incentives, rewards, and ongoing training to ensure they remain focused on individual enthusiasm.

The bureaucratic structure involved in JEPIN implementation still faces challenges, particularly related to coordination between regional government agencies (RGA's), which is not yet fully integrated. Task fragmentation hinders the smooth flow of data and information, resulting in the application not always displaying the most up-to-date information. Standard Operating Procedures (SOP's) exist, but their implementation is often inconsistent, even differing across agencies. This results in a lack of uniformity in digital public services. Furthermore, the lengthy bureaucracy slows down technical decision-making. This situation demonstrates that the success of the JEPIN application is determined not only by technology, but also by the effectiveness of the organizational structure and the willingness of relevant agencies to collaborate within the integrated system. In general, the implementation of the smart city policy through JEPIN shows that the four Edward III variables mutually influence its success. Weak communication results in a lack of public education about the application's benefits, while limited resources prevent optimal technical maintenance. Implementers' dispositions are generally quite positive, but their motivation is often hampered by a complex bureaucratic structure. This situation emphasizes that public policy cannot stop at the regulatory level but must be supported by a concrete implementation strategy. When there is a deficiency in one variable, the others will also be impacted. Therefore, the government needs to simultaneously organize communication, resources, disposition, and bureaucracy so that smart city policies truly provide broad benefits to the people of Pontianak.

The findings of this study align with the implementation theory proposed by Van Meter and Van Horn (1975), which emphasizes the importance of communication, resources, and organizational conditions as determining factors for successful implementation. Furthermore, the Edward III framework also proved relevant, as the main obstacles identified stemmed from the aforementioned variables, particularly limited resources and bureaucratic structure. Grindle (1980) also stated that policy content and the implementation context significantly determine implementation success, a finding evident in Pontianak where the policy was in place but the resource and bureaucratic context were not yet supportive. Therefore, the implementation theory employed is able to explain the existing empirical conditions and provide an academic foundation for understanding the limitations encountered. When compared with previous research, these results share many similarities. The Bandung study revealed obstacles in socialization, human resource placement, and coordination between regional government agencies (RGA's), a similar situation also found in Pontianak. The study of the SAPA WARGA application highlighted data integration issues and infrastructure limitations, while the study of the SAMBARA application in Karawang emphasized budgetary needs and human resource training. All of these findings are consistent with the situation in JEPIN, where resource constraints and bureaucratic fragmentation are key obstacles. The difference is that Pontianak is smaller than Bandung, yet the challenges faced are relatively similar. This suggests that the challenges of smart city implementation are essentially similar across regions, differing only in local contexts.

Based on the results and discussion, it can be concluded that the implementation of JEPIN in Pontianak City reflects the general challenges in implementing smart city policies in the regions. The existence of the application as a digital public service innovation has provided a good starting point, but limitations in communication, resources, disposition, and bureaucratic structure are real inhibiting factors. If these obstacles are not addressed, the goal of smart governance will not be fully achieved. Therefore, this study emphasizes the importance of a comprehensive approach that combines technical aspects, human resources, bureaucratic support, and community outreach strategies. Thus, the JEPIN application can truly function as an integrated service gateway that improves the quality of public services and strengthens smart city implementation in Pontianak City.

CONCLUSION

The results of this study indicate that the implementation of Pontianak Mayor Regulation Number 25 of 2019 through the JEPIN application as part of the smart city policy has not been optimal. From a communication perspective, public outreach is still limited, and coordination between Regional Government Agencies (RGA's) is not well structured. In terms of resources, limited budget, infrastructure, and the number of experts are the main obstacles in maintaining and developing the application. The disposition of implementers is relatively positive due to their commitment and willingness to support the policy, but their motivation is often hampered by the lack of support facilities and rewards. Meanwhile, a fragmented bureaucratic structure and inconsistent Standard Operating Procedures (SOP's) hinder service integration. Overall, the four factors in the Edward III model are interconnected and indicate that smart city policy requires comprehensive support to achieve smart governance goals. This study recommends strengthening coordination between Regional Government Agencies (RGA's), improving the quality of human resources in the technology sector, and developing a more effective outreach strategy so that JEPIN is truly utilized by the community.

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