

## **OPTIMIZING POPULATION ADMINISTRATION SERVICES IN RURAL AREAS: A STUDY OF DIGITAL INTEGRATION AND BUREAUCRATIC RESPONSIVENESS IN BUNGA VILLAGE**

Sri Wahyuni K Ismail<sup>1</sup>, Mohamad Ikbalk Kadir<sup>2</sup>, Ikram Muhammad<sup>3</sup>

<sup>1</sup>Office Administration, Faculty of Economic and Business, University of Bina Mandiri Gorontalo

<sup>2,3</sup>University of Bina Mandiri Gorontalo

<sup>1</sup>email: [sriwahyunikismail@gmail.com](mailto:sriwahyunikismail@gmail.com)

<sup>2</sup>email: [mohamadikbalkadir@yahoo.co.id](mailto:mohamadikbalkadir@yahoo.co.id)

<sup>3</sup>email: [ikram.muhammad@ubmg.ac.id](mailto:ikram.muhammad@ubmg.ac.id)

### **Abstract**

Population administration is a fundamental public service that ensures citizens' legal identity and access to social protection. This study aims to evaluate the implementation of population administration services in Bunga Village, Bone Raya Sub-district, Bone Bolango Regency, focusing on the integration of the Population Administration Information System (SIAK) and the quality of frontline service delivery. Using a qualitative descriptive approach, data were collected through in-depth interviews with village officials and community members, field observations, and documentary analysis. The findings reveal that Bunga Village has successfully modernized its administrative workflow through SIAK, enhancing data accuracy and processing efficiency. A key highlight is the village's "zero-cost" policy, which ensures inclusive governance and equitable access for all residents. However, the study identifies a significant "digital divide" characterized by unstable network connectivity, which hampers real-time online operations. To mitigate this, village officials adopt a proactive "manual bypass" strategy by physically delivering documents to the Public Service Mall (MPP). The study concludes that while technological adoption is vital, human-centric bureaucratic responsiveness remains the primary driver of service quality in resource-constrained rural environments. Continuous infrastructure improvement and professional staff training are recommended to sustain these administrative advancements.

*Keywords: Public Service; Population Administration; SIAK; Bureaucratic Responsiveness; Digital Divide; Bunga Village.*

Submit: 22/08/2024

Accepted: 12/11/2024

Publish: 15/12/2024

### **1. Introduction**

Service is an essential component of the human life cycle that cannot be separated from social and state interactions. The public consistently expects high-quality services from the bureaucratic apparatus; however, in practice, these expectations are often unmet. Factually, public services are frequently perceived as complex, slow, and at times frustrating for the users [1]. This phenomenon is often triggered by a rigid bureaucratic culture and a lack of transparency, which hinders the effectiveness of service delivery at the regional level [2].

One of the fundamental services that constitutes a right for every citizen to ensure a valid legal identity is population administration. Law Number 24 of 2013, which amends Law Number 23 of 2006 concerning Population Administration, serves as the primary foundation for the integration of demographic data and legal identity in Indonesia [3]. Article 8, point B of the law emphasizes the importance of providing fair and professional services to the community when reporting vital events and demographic changes. This is crucial because a comprehensive Civil Registration and Vital Statistics (CRVS) system is the primary gateway for citizens to access various other government services [4].

Village governments play a vital role in addressing community needs by providing public services at the frontline. Public services that meet quality criteria including timeliness, accountability, accuracy, and ease of use as mandated by Law Number 25 of 2009 are key to generating public satisfaction. The implementation of these

service standards aims to minimize maladministration and increase public trust in the government. In reality, however, service quality often shows significant regional disparities, where factors such as financial management capacity and local political representation heavily influence the performance of village bureaucracies [5].

The administration of population affairs encompasses resident registration, civil recording, and data processing for public services and other development sectors. Although regulations have established strict standards, Indonesia still faces major challenges, such as identity entry errors, digital infrastructure hurdles, and limited technical competence among officials [6][7]. The primary institution responsible, the Department of Population and Civil Registration (Disdukcapil), strives to address these issues through document updates such as Identity Cards (KTP), Family Cards (KK), and birth or death certificates. At the grassroots level, the village government serves as the organization tasked with ensuring these services are adequate and high-quality [8].

As a benchmark for professionalism, service standards refer to general principles outlined in the Decree of the Minister of Administrative Reform Number 63 of 2003. The primary goal of these standards is to create services that are high-quality, fast, easily accessible, and measurable. Elements of service standards include service protocols, infrastructure facilities, and staff competence [9]. If government agencies can comply with these criteria, the service quality can be deemed consistent with community expectations. Nevertheless, digital transformation challenges, such as the adoption of Village Information Systems (VIS), still face obstacles regarding data interoperability and limited ICT infrastructure in rural areas [7].

Quality of service creates a dynamic relationship between users and providers, involving aspects of staff attitude, completion time, and resource efficiency. Public service is broadly defined as any form of service provided by government agencies, both at national and regional levels, to meet community needs and uphold legal provisions [10]. Efforts to create good village governance through transparency and accountability are paramount to ensuring that population administration processes, such as those conducted in Bunga Village, can operate effectively and remain free from maladministration practices [11].

The complexity of population administration in Indonesia is further compounded by the geographical spread and varying levels of digital literacy among the rural population. While centralized policies aim for uniformity, local interpretations often lead to inconsistencies in service delivery. Therefore, village officials must act not only as administrators but also as facilitators who bridge the gap between complex legal requirements and the practical realities of the villagers.

Furthermore, the integration of technology into the village administrative framework is no longer an option but a necessity. The shift toward e-government requires a robust ecosystem where data can flow seamlessly between the village, district, and national databases. This digital leap, however, requires sustainable investment in human capital to ensure that village apparatuses are capable of operating modern administrative tools without compromising data security or accuracy [6].

Beyond technicalities, the psychological contract between the government and its citizens is built upon the reliability of these frontline services. When a citizen receives their legal documents promptly and accurately, it reinforces their sense of belonging and protection by the state. Conversely, repeated failures in administrative processes can lead to systemic apathy and a decline in civic participation, making the role of the village office critical in maintaining the social contract.

In conclusion, the improvement of population administration services at the village level requires a multi-dimensional approach. It involves strict adherence to legal frameworks like Law No. 25 of 2009, the strategic adoption of digital solutions, and a continuous commitment to professional ethics. By focusing on these pillars, village governments can transform bureaucratic hurdles into efficient service gateways, ultimately contributing to the broader national goal of equitable and transparent public administration.

## **2. Method and Analysis**

### **Research Design**

This study employs a qualitative descriptive research design. Qualitative research is used to provide an in-depth understanding of social phenomena as experienced by the research subjects, focusing on perceptions, behaviors, and actions within their natural setting [12]. This approach allows for a comprehensive description of the population administration service procedures through language and narrative analysis, prioritizing the process over mere quantitative outcomes [13].

### **Research Setting and Time**

The research was conducted at the Bunga Village Office, Bone Raya Sub-district, Bone Bolango Regency. The data collection took place over a period of two months and two weeks, specifically from April 17 to June 28, 2023. This location was selected to evaluate the grassroots implementation of population administration services in a rural context.

### **Data Sources and Informants**

The primary data were obtained directly through interviews and observations, while secondary data were gathered through official documents related to village administration. The researchers utilized a purposive sampling technique to select informants who are directly involved in or affected by the service procedures.

Table 1. List of Research Informants

No	Name	Position	Role in Research
1	Ferianto Manopo, S.P.	Village Secretary	Key Informant (Policy & Management)
2	Supriadi Antu	Head of Government Section	Main Informant (Technical Execution)
3	Hendrik	Community Member	User Informant (Service Recipient)
4	Iawati Gunibala	Head of General Affairs & Planning	Informant (Administrative Support)

Source: Data primer

### Data Collection Techniques

To ensure the validity and reliability of the data, the following techniques were applied [14]:

1. In-depth Interviews: Conducted with village officials and community members to explore the nuances of service delivery and identified obstacles.
2. Field Observation: Systematic observation of the daily administrative workflow at the village office.
3. Documentation: Collecting and reviewing relevant records, such as standard operating procedures (SOP), attendance logs, and sample administrative forms.

### Data Analysis and Triangulation

Data analysis followed an inductive approach, moving from specific field facts to broader conceptualizations. The process involved several iterative stages: data reduction, data display, and conclusion drawing/verification [15]. To ensure data credibility, the researcher employed triangulation techniques specifically source triangulation by comparing information obtained through interviews with observations and official documents. This ensures that the findings regarding population administration procedures in Bunga Village are accurate and verifiable.

## 3. Result and Discussion

### Population Administration Service Procedures in Bunga Village

Based on the research findings, the population administration services in Bunga Village, Bone Raya Sub-district, encompass various registration processes, including the issuance of death certificates, family cards (Kartu Keluarga), and birth certificates. The village government has modernized its administrative workflow by implementing the Population Administration Information System (SIAK).

According to the Head of the Village Government Section (Informant SA), the adoption of the SIAK application has significantly enhanced the efficiency and accuracy of administrative processes, reduced manual data entry errors, and accelerated overall data processing. However, the village office primarily serves as a verifying and facilitating body. For instance, in cases where documents like family cards are damaged or lost, the village apparatus issues an official introductory letter (surat pengantar) that details the document's status and the specific requirements for replacement. Officials then direct the applicants to the Public Service Mall (MPP) for the final technical processing and issuance (Interview, February 17, 2024).

Furthermore, the village government maintains a high commitment to service accessibility. This is manifested through the provision of comprehensive assistance, including flexible operational hours and continuous availability to address community inquiries. Village officials actively provide guidance and troubleshoot administrative obstacles faced by residents, ensuring that the community can fulfill their documentation needs without significant time constraints (Interview, February 17, 2024).

The implementation of the Population Administration Information System (SIAK) in Bunga Village represents a significant leap toward modernizing rural administrative workflows. The findings demonstrate that digital adoption has successfully enhanced service efficiency and data accuracy, particularly in the issuance of family cards and vital records. This aligns with the principles of public service quality, where technology acts as a catalyst for reducing manual errors and accelerating data processing [16]. Furthermore, the transition to SIAK in Bunga Village supports the theory that effective e-government development at the regency level is highly dependent on the information quality and system reliability provided at the village level. By minimizing administrative bottlenecks, Bunga Village fulfills the core dimensions of service accessibility and responsiveness, which are critical for fostering public trust in local governance [17].

A unique finding in this study is the role of the Bunga Village office as a verifying and facilitating body rather than a final processing center. The procedure of issuing introductory letters (surat pengantar) for residents to use at the Public Service Mall (MPP) illustrates a "one-stop service" synergy that centralizes complex administrative tasks. This model is consistent with the "Super Service Delivery" concept, which advocates for a centralized service model to reduce the administrative burden on citizens in wide or rural regions [18]. The

collaboration between the village apparatus and the MPP ensures a multi-channel service delivery model, which is particularly effective in rural contexts where technical infrastructure at the village level may still be developing [19]. This synergy effectively bridges the gap between grassroots verification and centralized technical issuance.

The adoption of digital systems in Bunga Village highlights the broader potential of e-government to address geographical and infrastructural challenges in rural Indonesia. Despite being in a sub-district setting, the commitment of village officials to provide flexible operational hours and continuous assistance reflects a high level of bureaucratic responsiveness. This proactive behavior is essential in the e-government adoption ecosystem, where village officials act as intermediaries who bridge the digital divide for residents [7]. By providing guidance and troubleshooting administrative obstacles, the Bunga Village apparatus ensures that the transition to digital systems like SIAK does not marginalize residents with limited digital literacy. This human-centric approach to digital governance is a key determinant for the success of village office development models and overall apparatus performance [20].

Ultimately, the zero-cost policy and the high commitment to service accessibility in Bunga Village reflect the implementation of good village governance. Ensuring that documentation needs are fulfilled without significant time or financial constraints is a manifestation of equitable public service. The synergy between local initiatives and national systems like SIAK demonstrates that rural municipalities can achieve high standards of accountability and transparency when technical systems are supported by responsive bureaucratic leadership. This study suggests that for long-term sustainability, such collaborations must be supported by continuous training for village officials and improvements in ICT infrastructure to maintain the reliability of digital administrative services [6].

### **Service Cost and Transparency in Population Administration**

Based on the field research, the administration of population services in Bunga Village is characterized by a strict non-fee policy. This ensures that all community members can access essential documentation without financial barriers. According to the Village Secretary (Informant FM), the village government adheres strictly to national and local regulations that prohibit the collection of fees for public services at the village level.

Informant FM emphasized that as responsible officials, they ensure that no administrative fees are charged to the community, stating that this practice is a direct implementation of the village's service principles (Interview, February 17, 2024). By eliminating costs that could otherwise burden residents, the village government fosters an environment where every citizen feels supported and has equitable access to necessary services. This policy aligns with the village's vision to create an inclusive governance model, ensuring that the rights and needs of every individual are met with transparency and without discrimination.

The implementation of a strict non-fee policy in Bunga Village's population administration serves as a fundamental pillar for achieving inclusive governance. By removing financial barriers, the village government ensures that every resident, regardless of socioeconomic status, can fulfill their right to legal identity documents. This approach aligns with the core mandates of Law No. 25 of 2009 on Public Services, which emphasizes that public services must prioritize the public interest and social justice (Sulistiyowati et al., 2024). The elimination of administrative costs in rural areas is a direct manifestation of social justice theories, such as John Rawls' theory of justice, which advocates for equitable access to essential services to reduce societal inequalities.

The research findings highlight that cost transparency in Bunga Village plays a critical role in fostering public trust. When village officials strictly adhere to the non-fee policy, it reduces the risk of maladministration and illegal levies (*pungutan liar*). This is consistent with recent studies indicating that fiscal discipline and transparent governance are vital for enhancing public confidence in rural institutions. Furthermore, the integration of transparency into daily operations helps build a "trust-based" relationship between the apparatus and the community, which is essential for the successful implementation of broader government programs at the village level [17].

Although the non-fee policy in Bunga Village is a procedural commitment, its effectiveness is amplified when supported by accountable governance models. Supporting literature suggests that digital tools and integrated governance applications can further strengthen transparency by providing clear audit trails, thereby minimizing corruption risks [21]. While Bunga Village currently relies on the SIAK system for data accuracy, combining this system with a transparent "zero-cost" administrative culture creates a robust framework for high-quality public service. This synergy ensures that digitalization does not just improve speed, but also reinforces the ethical standards of public administration in resource-constrained rural contexts [22].

The zero-cost policy at the Bunga Village office is more than just a financial decision; it is a strategic effort to uphold the dignity of public service. By aligning local practices with national standards set by Law No. 25/2009, Bunga Village sets a benchmark for other rural municipalities in Indonesia. The combination of cost transparency, administrative accountability, and equitable access proves that local governments can effectively bridge the gap between bureaucratic expectations and inclusive social reality.

### **Technological and Infrastructural Obstacles in Service Delivery**

Despite the advancements in digital administration, the study identified significant infrastructural barriers in Bunga Village, primarily concerning unstable network connectivity. Field observations and interviews reveal that reliable internet access is scarce, forcing both village officials and residents to depend solely on localized Wi-Fi hotspots. This digital constraint creates a bottleneck that hampers the efficiency of internal administrative communication and restricts the community's ability to access real-time online services.

The Village Secretary (Informant FM) identified limited network access as a critical challenge in maintaining high service standards. He noted that the difficulty in securing a stable connection frequently decelerates the administrative workflow and diminishes the overall efficiency of bureaucratic communication (Interview, February 17, 2024). Consequently, the gap between the intended digital transformation (through systems like SIAK) and the available physical infrastructure remains a prominent issue, potentially slowing down the delivery of essential population documents to the residents.

The findings in Bunga Village underscore a persistent "digital divide" that characterizes rural Indonesian public services. The heavy reliance on localized Wi-Fi due to unstable internet connectivity reflects a broader national trend where digital infrastructure development is often concentrated in urban centers, leaving rural areas underserved [23]. This infrastructural inequity acts as a significant bottleneck for e-government adoption, particularly for centralized systems like SIAK. Theoretically, this situation aligns with technological determinism, which posits that the availability of technology is a primary driver of social and administrative progress; without robust ICT foundations, the transformative potential of e-government remains stalled [24].

The study reveals that unstable connectivity does not merely delay administrative tasks but reduces the overall efficiency of the bureaucratic apparatus. When digital platforms are inaccessible, the intended benefits of e-government such as speed, transparency, and data accuracy are compromised [25]. This reflects the "urban-rural gap" in digital transformation, where rural village offices struggle to maintain the same service standards as their urban counterparts. This gap is further widened by varying levels of digital preparedness among village officials, where limited infrastructure is often exacerbated by a lack of continuous technical capacity building [26].

Addressing the obstacles identified in Bunga Village requires more than just local initiatives; it necessitates integrated policy frameworks that prioritize rural connectivity as a public service right. Literature suggests that bridging the digital divide is essential for reducing socioeconomic inequalities and ensuring inclusive public service delivery [27]. The proactive measures taken by the village apparatus such as manually delivering documents to the Public Service Mall (MPP) demonstrate high bureaucratic responsiveness but also highlight a "manual bypass" that indicates a failure in the digital ecosystem's reliability [28]. Therefore, sustainable e-government in rural areas depends on a dual approach: strengthening physical ICT infrastructure while simultaneously enhancing the digital literacy of both the apparatus and the community [29].

The infrastructure challenges in Bunga Village serve as a micro-representation of the national urban-rural digital disparity. While the village government has shown adaptability, the lack of stable internet access remains a structural barrier that prevents the full optimization of population administration systems. To move forward, digital transformation in the village must be supported by equitable infrastructure distribution and policies that recognize the unique geographical and technical constraints of rural governance, ensuring that digitalization serves as a tool for inclusion rather than a source of further exclusion.

#### **Adaptive Strategies in Mitigating Service Obstacles**

To maintain service continuity despite infrastructural limitations, the Bunga Village apparatus has adopted a highly proactive and adaptive approach. When unstable internet connectivity prevents the digital uploading of documents through the SIAK system, the village officials implement a manual intervention strategy. Rather than allowing technical delays to affect the residents, the apparatus takes the initiative to physically transport and deliver the administrative documents to the Public Service Mall (MPP).

According to the Head of the Village Government Section (Informant SA), this solution ensures that document processing remains seamless and is not dictated by technical barriers. By acting as a physical link to the centralized service hub at the MPP, the village officials ensure that residents can still access essential population services regardless of local network conditions (Interview, February 17, 2024). This strategy exemplifies bureaucratic responsiveness, where the apparatus prioritizes service outcomes over procedural constraints. This proactive attitude is rooted in the village's commitment to responsibility and transparency, ensuring that the community consistently benefits from quality public services through continuous learning and adaptation.

The strategy adopted by the Bunga Village Government in addressing network constraints by physically delivering documents to the Public Service Mall (MPP) is a tangible form of a "manual bypass" strategy. In public administration literature, the use of physical intermediaries or alternative channels is crucial in regions with limited ICT infrastructure to ensure e-government continuity. The role of village officials here is not merely administrative but acts as an intermediary channel that bridges the digital access gap for the community [30].

The synergy between the village office and the MPP creates an effective multi-channel service delivery system, ensuring that technical obstacles do not impede the citizens' right to obtain population documents [31].

The proactive actions of village officials in delivering documents when internet connections are unstable can be analyzed through the theory of Street-Level Bureaucracy. Frontline bureaucrats often exercise discretion and improvise informal practices to align national policies with constrained local realities [32]. This phenomenon of "frontline repair" demonstrates that the success of public services in rural Indonesia relies heavily on the apparatus's ability to improvise amidst resource limitations [33]. This proves that while digital systems (SIAK) are available, the human element as an adaptive decision-maker remains the primary determinant of service quality.

The motivation of Bunga Village officials to maintain maximum service standards despite the physical journey to the MPP indicates a high level of Public Service Motivation (PSM). PSM in the Indonesian context is often driven by a sense of social responsibility and the desire to assist fellow community members, transcending formal job descriptions [32]. This process innovation, though manual, is categorized as a village-level public service innovation born from the autonomy granted by the Village Law. The ability of a village to formulate local solutions responsive to geographical and infrastructural challenges is key to inclusive rural development progress [34][35].

Overall, the adaptive strategies implemented in Bunga Village demonstrate that village-level bureaucracies possess high resilience against technological failures. Utilizing the MPP as a strategic partner and the willingness of village officials to serve as physical intermediaries ensures that digitalization does not become a barrier, but rather an opportunity that remains accessible through human intervention. This underscores that digital transformation in rural areas requires a balance between strengthening ICT infrastructure and enhancing the capacity and motivation of bureaucratic officials as the spearhead of public service.

#### 4. Conclusion

Based on the research findings and discussion regarding population administration services in Bunga Village, several key conclusions can be drawn:

- a. **Successful Digital Integration and Inclusive Policies** The implementation of the Population Administration Information System (SIAK) has transformed village administrative management to be more efficient and accurate. This modernization is supported by a commitment to transparency through a "zero-cost policy," which effectively eliminates financial barriers for the community and strengthens public trust in the village apparatus.
- b. **Infrastructure Obstacles and the Digital Divide** The primary obstacle identified is the limitation of technological infrastructure, specifically unstable internet connectivity. This creates a gap between national digital mandates and the physical reality at the rural level, which potentially hinders real-time data synchronization.
- c. **Adaptive Strategies and Bureaucratic Responsiveness** The Bunga Village apparatus demonstrates a high level of bureaucratic responsiveness through manual intervention strategies. The proactive initiative of officials to physically deliver documents to the Public Service Mall (MPP) when the network is disrupted is a form of service innovation that ensures continuous citizen access to essential population documents.
- d. **Future Recommendations** The success of administrative services at the village level cannot rely solely on software advancements; it must be balanced with investment in physical infrastructure (internet networks) and sustainable human resource capacity building. The synergy between technology and the dedication of the apparatus is the primary key to creating inclusive and accountable village governance.

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