

Digital Transformation in Rural Governance: A Case Study of E-Government Implementation in Sukamakmur Village, Bogor

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ABSTRAK

Studi ini mengeksplorasi proses transformasi digital dalam tata kelola desa di Indonesia, dengan fokus pada penerapan sistem e-government untuk meningkatkan layanan publik, transparansi, dan efisiensi administrasi. Dengan menggunakan studi kasus kualitatif di Desa Sukamakmur, Kabupaten Bogor, penelitian ini menyelidiki faktor-faktor yang memungkinkan, tantangan, dan dampak digitalisasi administrasi desa. Temuan penelitian menunjukkan bahwa meskipun adopsi digital telah meningkatkan pemberian layanan dan keterlibatan warga, adopsi digital juga menghadapi hambatan seperti keterbatasan infrastruktur, kesenjangan literasi digital, dan kelesuan kelembagaan. Rekomendasi diberikan untuk meningkatkan skala transformasi digital di seluruh konteks tata kelola pedesaan.

Kata kunci: transformasi digital, tata kelola desa, e-government, inovasi pedesaan, Bogor

ABSTRACT

This study explores the digital transformation process in village governance in Indonesia, focusing on the implementation of e-government systems to improve public services, transparency, and administrative efficiency. Using a qualitative case study in Sukamakmur Village, Bogor Regency, the research investigates enabling factors, challenges, and impacts of digitizing village administration. The findings indicate that while digital adoption has enhanced service delivery and citizen engagement, it also faces barriers such as limited infrastructure, digital literacy gaps, and institutional inertia. Recommendations are offered for scaling digital transformation across rural governance contexts.

Keywords: digital transformation; village governance; e-government; rural innovation; Bogor

INTRODUCTION

In the era of digital transformation, governments worldwide are leveraging

technology to improve efficiency, responsiveness, and accountability. In Indonesia, e-government initiatives have been primarily focused at the national and

provincial levels. However, with the rise of decentralization, village governments are also increasingly expected to embrace digital tools to enhance local service delivery and citizen participation.

The transformation of village governance through digital platforms aligns with the national agenda on smart government and the Sustainable Development Goals (SDGs), particularly Goal 16 on inclusive institutions. Presidential Instruction No. 3 of 2003 and the Ministry of Villages' Digital Village Program underscore the urgency of bridging the digital divide at the grassroots level.

Despite growing policy support, the actual implementation of digital systems in village governance remains uneven. Many villages struggle with basic infrastructure, limited technical human resources, and lack of awareness among citizens. At the same time, successful cases demonstrate that with strong leadership, community engagement, and partnerships, digital innovation can transform how rural governments operate and interact with their residents.

This study investigates the case of Sukamakmur Village in Bogor that has initiated an e-government platform for administrative services, citizen complaints, and transparency of village funds. The research seeks to understand:

1. What factors enable or hinder digital transformation in village governance?
2. How do village officials and residents perceive the impact of digital tools?
3. What institutional arrangements support sustainability of e-government practices?

Theoretically, the research draws on digital transformation frameworks (Vial, 2019) and institutional theory, emphasizing how change is shaped by culture, structure, and leadership at the local level. Understanding these dynamics is crucial for informing policy design and scaling digital initiatives in rural areas across Indonesia.

METHOD

This study employs a qualitative case study approach to investigate the digital transformation of village governance in Sukamakmur Village, Bogor. The case study method enables a detailed understanding of contextual dynamics and stakeholder perspectives in the implementation of e-government at the rural level.

Data collection was conducted from January to November 2021 using three primary techniques: in-depth interviews, document analysis, and direct observation. A total of 12 informants were interviewed, including:

- Village head (**kepala desa**) and staff from the administrative and IT sections,
- Community members who used the digital service portals,
- Representatives from NGOs or private tech providers supporting the digitalization process,
- Sub-district and regency-level officials overseeing village governance.

Documents analyzed included digital service regulations, village development planning documents (RPJMDes), e-service user manuals, and reports from digital literacy training programs.

Observation was conducted during public service interactions at the village office, including resident use of online complaint systems, digital administrative form submission, and interactions through village information systems.

Data analysis followed the Miles and Huberman (1994) model with three steps: data reduction, data display, and conclusion drawing. Emerging themes focused on digital readiness, leadership,

citizen engagement, technology use, and sustainability.

Ethical procedures were followed, with informed consent obtained from all participants. Confidentiality was maintained through anonymization of individual responses.

This methodology provided a comprehensive picture of how digital transformation is conceptualized and operationalized at the village level, particularly in terms of governance outcomes and institutional adaptation.

RESULTS AND DISCUSSION

3.1 Digital Readiness and Infrastructure

Sukamakmur Village began its digital transformation journey in 2020, starting with modest internet connectivity improvements and the procurement of basic ICT equipment such as computers, printers, and wireless routers. The village partnered with a regional internet provider to establish stable connectivity. Despite initial success, internet speed remains inconsistent during peak hours, affecting service quality.

3.2 Community Engagement and Literacy

Community engagement emerged as both a challenge and opportunity. While younger residents adapted quickly to digital platforms, older populations faced difficulties. The village government conducted several training sessions and collaborated with local universities to improve digital literacy. However, participation remained limited to active community members, with marginalized groups less involved.

3.3 Institutional Leadership and Vision

Leadership from the village head played a critical role in championing the digital agenda. By allocating funds from the Village Fund (Dana Desa) and engaging stakeholders across administrative levels, the leadership ensured continuous support and legitimacy. The head's background in IT was a unique advantage, enabling more technical oversight and confidence in decision-making.

3.4 Service Innovation and Accessibility

The implemented e-government system includes an online complaint portal, digital population administration services, and an information dashboard for budget transparency. Residents reported faster processing times for birth certificates and ID renewals. However, usability remains an issue for non-digital natives, and technical glitches have occasionally interrupted services.

3.5 Sustainability and Replicability

Sustainability of digital transformation depends on continuous funding, staff capacity, and institutional embedding. Sukamakmur's initiative is supported by a Memorandum of Understanding (MoU) with a local university for technical assistance. However, institutionalization is still weak—documentation is informal, and systems rely on a few individuals. Replication in other villages requires a more standardized framework and regional support.

Overall, Sukamakmur Village represents a promising model of rural digital transformation in Indonesia.

Despite infrastructural and human resource challenges, the case demonstrates that with leadership,

CONCLUSION

This study concludes that digital transformation in village governance, as observed in Sukamakmur Village, Bogor, offers both significant opportunities and notable challenges. The implementation of e-government systems has improved administrative efficiency, expanded access to services, and fostered transparency. However, sustainability depends on continued leadership commitment, inclusive community engagement, and robust technical infrastructure.

Institutionalizing digital practices within formal governance structures and ensuring digital inclusion for all residents, particularly marginalized

community engagement, and partnerships, local governments can innovate effectively.

groups, remain critical. Partnerships with external stakeholders, including universities and private technology firms, can support capacity building and innovation.

The experience of Sukamakmur underscores the importance of visionary leadership, resource mobilization, and adaptive learning in realizing the promise of digital governance at the village level. Future research could explore comparative experiences across regions to develop scalable digital transformation models for rural Indonesia.

REFERENCES

- Miles, M. B., & Huberman, A. M. (1994). **Qualitative Data Analysis: An Expanded Sourcebook**. Sage Publications.
- Presidential Instruction No. 3 of 2003 on National Policy and Strategy for the Development of E-Government.
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. **The Journal of**

Strategic Information Systems,
28(2), 118–144.

Ministry of Villages, Development of
Disadvantaged Regions, and
Transmigration. (2020). **Program
Desa Digital: Pedoman
Implementasi.**

OECD. (2020). **Digital Government
Index: 2019 results.** OECD
Public Governance Reviews.