

Transformational Leadership in Smart Village Governance: Empirical Evidence from the Bangka Belitung Islands Province

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ARTICLE INFO

Keywords: Akuntabilitas, Digitalization, Innovation, Leadership, Transformational

Received : 12, October
Revised : 15, November
Accepted: 10, December

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ABSTRACT

This study aims to analyze the role of village heads' transformational leadership in promoting smart village governance through the digitalization of public services in the Bangka Belitung Islands Province. The research approach employed a descriptive qualitative approach, employing data analysis techniques modeled by Miles and Huberman (1994), through the stages of data reduction, data presentation, and conclusion drawing. Seven informants, consisting of village heads, village officials, and community members, were purposively selected to explore their direct experiences related to the implementation of digital systems at the village level.

The results indicate that transformational leadership plays a crucial role in fostering motivation, innovation, and participation of village officials in the digitalization of public services. Digitalization contributes to increased transparency, accountability, and effectiveness of village governance, while strengthening public trust in the government.

This study concludes that the success of smart village governance is determined not only by technology but also by the quality of transformational leadership, which is capable of driving social, ethical, and work culture change toward an adaptive, transparent, and sustainable village government.

INTRODUCTION

Data show that Indonesia's population has reached approximately 283.5 million people, making it the fourth most populous country in the world (World Bank, 2024). Of this number, about 40.8%, or roughly 115 million people, still live in rural areas (Trading Economics, 2024). This condition indicates that villages remain the main pillar of national development, especially in supporting economic equity and improving community welfare. According to the Central Bureau of Statistics (BPS, 2024) through the Village Potential (PODES) data, Indonesia has 75,753 villages and 8,486 urban wards, totaling 84,276 local administrative areas (BPS, 2024). This number reflects the government's significant responsibility in providing public services that are effective, efficient, and adaptive to digital developments throughout the country.

In the context of bureaucratic reform and modernization of village governance, the digitalization of public services has become a national strategic agenda aimed at accelerating access, increasing transparency, and strengthening community participation. However, the success of digitalization does not solely depend on the availability of infrastructure and information systems—it is also largely determined by the quality of village leadership. A transformational leader is needed—one who can formulate a clear vision and mission, inspire village officials and communities to innovate, foster creativity, focus on individual development, build trust, and nurture intrinsic motivation to achieve long-term change (Bass & Avolio, 1994).

The Province of Bangka Belitung Islands consists of 309 villages and 50 urban wards spread across seven regencies/cities (BPS Bangka Belitung, 2024; Ministry of Home Affairs, 2024). This province holds significant potential for developing a local resource-based economy and for implementing digital public services. However, it also faces challenges related to leadership capacity and technological readiness. Transformational leadership plays a crucial role in driving change from administrative work patterns toward an adaptive, responsive, and results-oriented public service culture.

For instance, Kapuk Village in Bakam District, Bangka Regency, has introduced a DIGIDES-based Digital Village Service that enables residents to manage administrative documents, monitor budget transparency, and access village information online (kapuk.desa.id). Meanwhile, Air Ruai Village in Pemali District, Bangka Regency, has developed the SIDAWAI application for online administrative services, improving efficiency and transparency in public service delivery (Cahaya Ilmu Bangsa Institute, 2024). In fact, Bangka Belitung has begun implementing digitalization of public services more broadly.

At the regency level, Belitung Regency became a pioneer by launching the province's first Digital Village Program in 2021, which includes a village financial system, official website, and public service system (SIPMAS) (Dukcapil Belitung, 2021).

Of the total 309 villages in Bangka Belitung Province, only a small number have sustainably implemented digital innovations. This indicates that the digitalization of village public services is still in its early stages and unevenly distributed across regions. Limited human resources, low technological capacity,

and weak transformational leadership are the main inhibiting factors. There are no official publications or systematic data recording the number of villages in Bangka Belitung that have implemented digital public services. Therefore, this research is essential to fill the data gap and analyze the extent to which transformational leadership contributes to accelerating the implementation of public service digitalization in villages throughout the Bangka Belitung Islands Province – toward the realization of innovative, adaptive, and sustainable village governance.

LITERATURE REVIEW

Transformational Leadership

The concept of transformational leadership was first introduced by Burns (1978) and later further developed by Bass and Avolio (1994). Transformational leadership is described as a leadership style that can inspire, motivate, and change the values and behaviors of subordinates to achieve organizational goals beyond personal interests. Bass and Avolio identified four main dimensions of transformational leadership:

1. Idealized Influence,
2. Inspirational Motivation,
3. Intellectual Stimulation, and
4. Individualized Consideration.

Transformational leaders are not only result-oriented but also focus on individual development and organizational culture change (Northouse, 2019). In the context of village governance, this leadership style is essential for creating innovative, adaptive, and collaborative apparatus capable of responding to technological change and demands for public transparency (Yukl, 2013).

Digitalization of Public Services in Village Governance

Digitalization of public services refers to the application of information technology to enhance efficiency, accessibility, and transparency of services provided to the public (OECD, 2020). In Indonesia, the village digitalization agenda has been strengthened through the Digital Village and Smart Village programs initiated by the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (Kemendes PDTT) and the Ministry of Communication and Information Technology (Kominfo) in 2021.

Digitalization at the village level encompasses various aspects, including online correspondence systems, citizen service applications, village financial transparency, and integration of population data. According to Kominfo (2023), digital transformation in villages is not merely a technological project but a strategy to strengthen data-driven governance and shorten the distance between public services and citizens.

However, several studies (Sari et al., 2022; Rahman, 2023) show that the challenges of village digitalization include low human resource capacity, limited internet infrastructure, and insufficient technical training. Therefore, the leadership of village heads becomes a key variable in ensuring the sustainability of public service digitalization processes.

Smart Village Governance

The concept of smart village governance is an adaptation of the smart city governance framework, emphasizing the importance of utilizing information technology to create transparent, participatory, efficient, and sustainable governance (Kamble & Bhoyar, 2021). According to the European Commission (2019), a *smart village* refers to a rural area that leverages digital innovation to improve the quality of life, resource efficiency, and responsiveness of governance to citizens' needs.

In the Indonesian context, smart village governance also encompasses community empowerment through digital participation, where rural citizens are not merely service recipients but active participants in planning, implementing, and monitoring public policies (Ministry of Villages, Development of Disadvantaged Regions, and Transmigration [Kemendes PDTT], 2023).

Thus, smart village governance integrates three key elements:

1. Technological innovation in public service delivery,
2. Information openness and transparency, and
3. Collaborative leadership that fosters community participation.

The Relationship Between Transformational Leadership, Digitalization, and Village Governance

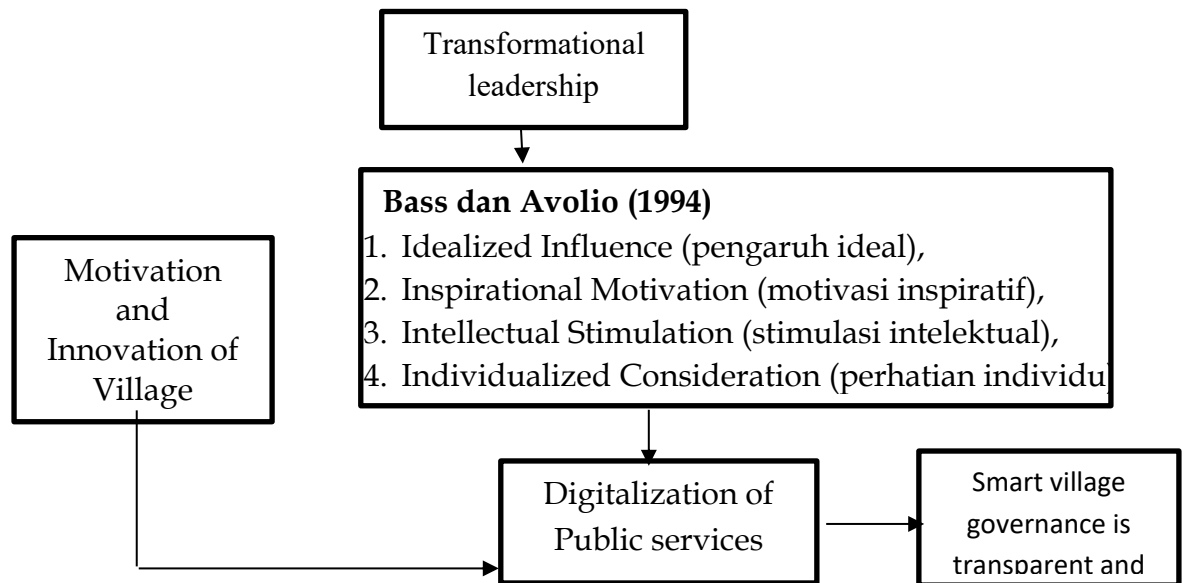
Previous studies have demonstrated a positive relationship between transformational leadership and the successful implementation of technological innovation in the public sector (Dwivedi et al., 2021; Sutrisno, 2022). Transformational leaders encourage government apparatus to learn, adapt, and develop new digital-based solutions.

In the village context, transformational leadership serves as the driving force behind the digitalization of public services because it fosters intrinsic motivation, creativity, and organizational commitment among village officials (Hendri, 2024). The motivation and innovation of these officials then act as mediating variables that connect leadership with improvements in transparency and accountability of village governance.

Therefore, smart village governance is not merely the result of technological implementation but also the transformation of values, behaviors, and leadership patterns that drive social change and strengthen the work ethics of public officials.

Research findings further affirm that the success of digitalizing public services in villages greatly depends on how effectively digital technologies are applied and integrated into the daily operational systems of local officials. Hence, the implementation of digital technology functions as an intervening variable that reinforces the relationship between innovation and digitalization implementation, ensuring that the transformation toward smart village governance does not remain at the conceptual level but is realized through transparent and accountable administrative practices.

Conceptual Framework Figure 2.1



METHODOLOGY

This study employs a descriptive qualitative approach aimed at gaining an in-depth understanding of the role of transformational leadership among village heads in promoting the realization of smart village governance through the digitalization of public services. This approach was chosen because it allows the researcher to explore meanings, experiences, and perceptions of informants contextually within the social environment of village administration.

Research Location and Informants

The study was conducted in several villages within the Province of Bangka Belitung Islands that have begun implementing the digitalization of public services. Research informants were selected using a purposive sampling technique with specific criteria, namely: village heads, village secretaries, village digital operators, village officials, and community representatives. A total of seven key informants were chosen, as they were considered to have direct knowledge and experience of the digitalization implementation process and the leadership style in their respective villages.

Data Collection Techniques

Data were collected using three main methods:

1. In-depth interviews with key informants to obtain data regarding experiences and perceptions of transformational leadership and the application of digital technology;
2. Participant observation, which involved direct observation of digital-based public service practices and the interactions between village heads and village officials;
3. Documentation, including activity archives, digital service reports, and official village policy documents related to digitalization.

Data Analysis Techniques

Data analysis employed the interactive model of Miles and Huberman (1994), which consists of three stages:

1. Data reduction – selecting, simplifying, and focusing on essential data relevant to the research focus;
2. Data display – organizing data in thematic narrative form to illustrate the relationships among variables; and
3. Conclusion drawing and verification – interpreting the meaning of the data and repeatedly verifying findings to ensure validity.

Data Validity

To ensure the credibility and reliability of the findings, this research employed source and technique triangulation, by comparing the results of interviews, observations, and document analyses to ensure consistency and accuracy of the data.

RESULTS

The findings reveal that transformational leadership of village heads plays a significant role in accelerating the process of digitalizing public services in villages throughout the Bangka Belitung Islands Province. Based on interviews with seven main informants (village heads, officials, and community members), it was found that the four dimensions of transformational leadership – idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration – had a tangible impact on officials' behavior in adapting to digital changes.

First, the idealized influence dimension was reflected in the village head's exemplary behavior, where they used the digital system themselves before instructing other officials to adopt it. This built trust and fostered a shared sense of responsibility toward change.

Second, inspirational motivation was demonstrated through the clear and consistent communication of the "Digital Village Vision," which cultivated collective enthusiasm for innovation in public service delivery.

Third, intellectual stimulation was evident when village heads encouraged staff to experiment and develop creative solutions, such as the creation of online correspondence applications, web-based financial systems, and public information portals.

Fourth, individualized consideration was observed in the efforts of village heads to provide personal guidance and training to staff who had limited technological proficiency.

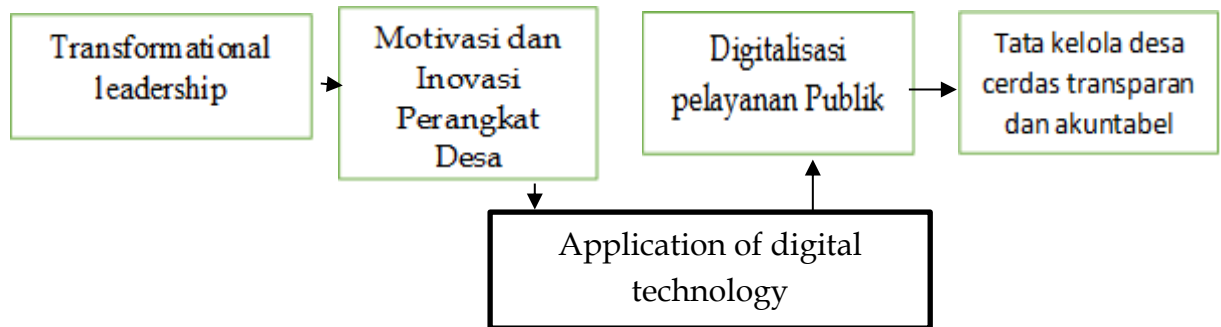
Furthermore, the study found that between staff motivation and innovation and the digitalization of public services, there exists a crucial intermediate stage – the application of digital technology as a mediating variable. Motivated and innovative officials were able to translate their ideas into practice through the direct use of digital technology in their daily tasks. This stage proved essential in ensuring that digitalization processes were implemented effectively and sustainably.

Effective digitalization of public services directly impacts the transparency and accountability of village governance. Through digital systems,

citizens can monitor public information, financial reports, and service statuses online. This enhances social oversight and strengthens public trust in village governments.

In conclusion, the study emphasizes that the success of public service digitalization depends not only on the availability of technology but also on the quality of transformational leadership—leadership capable of driving behavioral, value-based, and cultural change among village officials toward transparent, adaptive, and sustainable governance.

Figure 4.1 Key Stages of Variables in the Village Digitalization Process



DISCUSSION

The results of this study indicate that the transformational leadership of village heads plays an important role in driving the digital transformation of village public services in the Province of Bangka Belitung Islands. The four dimensions of transformational leadership—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—collectively shape behavioral change, encourage innovation, and enhance collaboration among village officials in adopting digital systems.

A key finding of this research is the emergence of digital technology implementation as an intervening variable that connects the stages of staff motivation and innovation with the process of digitalizing public services. Motivated and innovative village officials do not immediately achieve digitalization without going through the concrete stage of technology application. This implementation stage represents the tangible manifestation of transformational leadership, where officials begin to use online administrative applications, web-based financial systems, and public information portals in their daily service activities. Thus, the application of digital technology serves as a crucial bridge between motivation and real organizational change.

In addition, the findings also show that the success of village government digitalization is not solely determined by the availability of technological infrastructure but also by the leadership's ability to manage behavioral change and work culture transformation among staff. Transformational leaders build trust, cultivate a shared vision, and create a supportive work environment that encourages learning and active participation of officials in the digitalization process.

From a theoretical perspective, these findings expand the model of Bass and Avolio (1994) by emphasizing the importance of the technology

implementation stage as a behavioral dimension in public sector digital transformation. From a practical perspective, the study affirms that transformational leadership functions as both a moral and strategic foundation for building digital village governance that is transparent, accountable, and adaptive to change.

CONCLUSION

This study concludes that the transformational leadership of village heads has a significant influence on the success of public service digitalization and the realization of smart village governance in the Province of Bangka Belitung Islands. Through its four main dimensions—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—village heads are able to foster motivation, innovation, and participation among village officials throughout the digital transformation process.

A key finding from this research is the identification of digital technology implementation as a key stage (intervening variable) that bridges the relationship between motivation and innovation and the digitalization of public services. This stage represents the concrete behavioral change of officials who move beyond ideas or motivational impulses into actual digital practices. Thus, the success of digitalization depends not only on technological infrastructure but also on the quality of transformational leadership capable of driving social and cultural change toward an adaptive, transparent, and accountable village government.

Conceptually, this research reinforces Bass and Avolio's (1994) theory that transformational leadership not only influences individual behavior but also shapes organizational systems that are innovative and learning-oriented. In the context of village governance, this leadership style has proven to be the fundamental basis for developing sustainable digital village governance.

RECOMMENDATIONS

Based on the research findings, several recommendations can be proposed:

1. For Local Governments and the Ministry of Villages (Kemendes PDTT): It is necessary to expand the Digital Village Program, focusing not only on infrastructure development but also on strengthening the transformational leadership capacity of village heads and officials through structured and continuous training.
2. For Village Governments: Village heads are expected to set an example in the use of digital technology and to create a work environment that supports innovation and collaboration. Village officials should be encouraged to continuously learn and adapt to technology in order to make public services more efficient and transparent.
3. For Village Communities: Efforts to increase digital literacy among rural communities should be an integral part of the digitalization strategy so that citizens act not only as service recipients but also as active monitors in ensuring the transparency and accountability of village governance.
4. For Future Researchers: Future studies are recommended to employ mixed-methods or comparative approaches across regions to measure the effectiveness of transformational leadership in different social and cultural contexts.

SUGGESTION

The success of village public service digitalization is highly dependent on the quality of transformational leadership as well as the readiness of village officials and communities. Therefore, it is recommended that local governments and the Ministry of Villages (Kemendes PDTT) strengthen the Digital Village Program through transformational leadership training and continuous digital literacy capacity-building for village officials.

Village heads should serve as role models in technology adoption and promote an innovative, transparent, and collaborative work culture. Meanwhile, village communities should be actively involved in the digitalization process through education and mentoring programs, enabling them to participate as both users and supervisors of digital public services.

Future research is encouraged to examine the effectiveness of transformational leadership and digital technology implementation through comparative interregional studies, in order to strengthen a model of sustainable smart village governance.

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