Implementing Smart Governance in Realizing a Smart City: Case Study Catur Tourism Village, Bangli, Indonesia

Author:
I Gede Bayu Adi Prabawa[1], Kuncoro Galih Pambayun[2], Sampara Lukman[3]

Affiliation:

The Provincial Government of Bali, Jl. Basuki Rahmat No. 1 Denpasar, 80239, Indonesia[1]

Institut Pemerintahan Dalam Negeri, Jl. Ir. Soekarno KM 20 Sumedang, 45363, Indonesia[2,3]

e-Mail:

bayuprabawa15@gmail.com, pambayun@ipdn.ac.id, samparalukman@ipdn.ac.id

ABSTRACT

The implementation of Smart Governance in villages across Bangli Regency serves as a foundation for the realization of Bangli Smart City. One of the pilot villages for this initiative is Desa Wisata Catur (Catur Tourism Village). However, its implementation still faces several challenges, such as suboptimal intersectoral collaboration and limited human resources in the village. This study aims to examine how smart governance is implemented in Catur Tourism Village, Kintamani District, Bangli Regency. The research adopts a qualitative descriptive method with an inductive approach, as outlined by Sugiyono. Data were collected through interviews, observations, and documentation, and analyzed using data reduction, information presentation, and conclusion drawing techniques. The findings indicate that in the public and social services dimension, public services in Catur Village have been successfully developed through multi-stakeholder collaboration, particularly by promoting Subak Abian as a tourism asset based on traditional values and social inclusiveness. in the participation in decision-making dimension, community participation is institutionalized through customary forums and formal institutions, resulting in inclusive, transparent, and accountable village policies. In the provision of facilities and infrastructure dimension, the development of tourism and agricultural infrastructure has supported community productivity while preserving local cultural values. Lastly, in the online services dimension, digital services remain limited to a basic informational website due to constraints in human resources and funding. This study concludes that the implementation of smart governance in Catur Tourism Village has been progressing well, with local cultural values playing a central role in its realization. Nevertheless, the village still faces limitations in optimizing online services to fully leverage digitalization in rural governance.

Keywords: *Smart Governance Implementation; Smart City; Catur Tourism Village; Traditional Village.*

ABSTRAK

Implementasi smart governance di desa-desa di Kabupaten Bangli merupakan salah satu fondasi dalam mewujudkan Bangli Smart City. Salah satu desa yang menjadi project penerapan smart governance di Kabupaten Bangli yakni Desa Wisata Catur. Namun demikian, masih mengalami beberapa kendala antara lain kerjasama antar sektor kurang berjalan maksinal serta sumberdaya manusia desa catur yang terbatas. Tujuan dari penelitian ini adalah untuk mengetahui bagaimana implementasi smart governance di Desa Wisata Catur, Kecamatan Kintamani, Kabupaten Bangli. Penelitian ini menggunakan metode deskriptif kualitatif dengan pendekatan induktif melalui teknik pengumpulan data berupa wawancara, observasi, dan dokumentasi, yang dianalisis dengan reduksi data, penyajian informasi, serta penarikan kesimpulan. Hasil penelitian menunjukkan bahwa pada dimensi public and social services ditemukan bahwa pelayanan publik desa catur dapat terwujud dengan baik melalui kolaborasi multipihak dengan mengembangkan Subak Abyan sebagai aset wisata berbasis nilai adat dan inklusivitas sosial. Pada dimensi participation in decision-making ditemukan adanya partisipasi masyarakat terlembaga melalui forum adat dan lembaga resmi, sehingga kebijakan desa bersifat inklusif, transparan, dan akuntabel. Pada dimensi provision of facilities and infrastructure, penyediaan infrastruktur pariwisata dan pertanian mendukung produktivitas masyarakat sekaligus mempertahankan nilai budaya lokal. Terakhir pada dimensi online services ditemukan bahwa layanan online masih terbatas pada website informatif sederhana karena kendala SDM dan pendanaan. Penelitian ini menyimpulkan bahwa Implementasi smart governance di Desa Wisata Catur, Kecamatan Kintamani, Kabupaten Bangli berjalan dengan baik dimana nilai budaya lokal menjadi unsur penting dalam mewujudkan smart governance di desa, meskipun biasanya desa masih mengalami keterbatasan dalam pemanfaatan layanan online dalam rangka memaksimalkan aspek digitalisasi desa.

Kata Kunci: *Implementasi Smart Governance; Smart City; Desa Wisata Catur; Desa Adat.*

INTRODUCTION

An inclusive, transparent, and accountable government is a vital foundation for ensuring stability and fostering the development of Indonesia's economy and social life (Labolo, 2017). The new paradigm of governance is built upon the integration of political, economic, and social culture as an interconnected and interdependent system (Xue et. al., 2023), thus reflecting the principles of good governance that not only focus on administration but also encourage public and third-party participation without neglecting traditional values. The Indonesian government needs to enhance the quality of democratic institutions and the capacity to deliver optimal public services that are responsive to the needs of all societal groups, with governance development being a shared responsibility between central and local governments (Tresiana et. al., 2023; Ivanova, 2024). The enactment of Law Number 23 of 2014 on Regional Government grants local governments the authority to manage their own affairs and formulate policies in accordance with their socio-economic conditions, culture, geography, and local customs. In line with the view of Edwards III, successful policy implementation is influenced by clear and consistent communication to ensure accurate understanding among implementers, the

availability of adequate human, financial, and informational resources, the attitude or commitment of implementers toward the policy, and a bureaucratic structure that supports effective coordination and execution (Edward III, 1980).

After the reform era, public demands on the government increased, particularly in ensuring equitable welfare across all regions. Without prudent management, regional autonomy can create disparities between the central government as the coordinator and local governments as the policy implementers (Mukhlis, 2025). The enactment of Law Number 23 of 2014 has become a solution to accelerate the distribution of welfare, as strengthening autonomy enables local governments to be more sensitive to community issues and respond more quickly. Regional autonomy also allows for public services that directly target citizens' needs, shifting the stigma that development treats society merely as an object that can be manipulated for certain interests into the view that society is the subject of development itself. Good governance is often associated with the concept of a smart city. According to Pratama, a smart city is a concept of developing, applying, and implementing complex technologies across systems within a region as a form of interaction, with the aim of creating an integrated city through information systems and governance (Pratama, 2014). This integration can include the management of urban geographic digital networks, resources, the environment, as well as social, economic, and other conditions. Su et al. state that "The structure

of smart city includes perception layer, network layer and application layer, which can make the future world increasingly appreciable and measurable, increasingly interconnection and interoperability and increasingly intelligent" (Su et al., 2011). The structure of a smart city consists of the perception layer, network layer, and application layer, which can create a future world that is more measurable, interconnected, interoperable, and increasingly intelligent. Caragliu et al. state that a smart city is one that utilizes human resources, social capital, and modern telecommunications infrastructure to achieve sustainable economic growth and a high quality of life through the wise management of resources under a governance system based on community participation (Caragliu et al., 2011).

Although smart governance has been widely promoted as a key component of smart city development (Kaiser, 2024; Mathew & Bangwal, 2024), its implementation in traditional village contexts such as Catur Village still faces significant challenges. Interviews revealed that bureaucratic procedures remain lengthy and rigid, restricting the creativity of village officials in responding quickly to community needs. In the aftermath of Covid-19, tourism-related initiatives have not yet returned to normal, with low purchasing power and lingering fears of a resurgence slowing recovery. Moreover, limited human and financial resources make it difficult to introduce and maintain online services (Hendrawan, 2024), especially at the village government level. These conditions show a

clear gap between the ideals of smart governance and the realities faced on the ground, highlighting the need for further study and innovation tailored to the unique setting of traditional villages.

Many scholars have explored smart governance from various perspectives, yet limited attention has been given to its application in traditional village settings that present unique cultural and governance dynamics. This research focuses on Catur Village, Bali, to highlight how smart governance contributes to building a smart city based on local traditions. For instance, Sapraji, in his work entitled Implementation of Smart City in South Tangerang City, Banten, aimed to provide an overview of the implementation of smart city policies, evaluate their effectiveness, and identify both the potential and challenges in executing these strategies; his findings indicate that the South Tangerang City Government must address challenges through comprehensive evaluation focusing on aligning the vision and mission, enhancing understanding of smart city principles, addressing technical issues promptly, and conducting intensive public outreach (Sapraji, 2023). Similarly, Gede Gusta Ardiyasa and Ety Rahayu analyzed the implementation of the Smart Village policy in Banyuwangi Regency, finding success due to both internal factors—such as communication, resources, disposition, and bureaucratic structure—and external factors including community participation and stakeholder support (Ardiyasa & Rahayu, 2022). Bahrudin and Wahyuningsih explained how e-government implementation in Denpasar strengthens ICT infrastructure, improves information access, integrates public services, encourages citizen participation, and optimizes data management (Bahrudin & Wahyuningsih, 2023). Other studies also emphasize local dynamics, Wahyudi highlighted institutional synergy in Kutuh Village (Wahyudi, 2022); Yuliana stressed organizational culture in Tegal Harum Village (Yuliana, 2023); Mahardika examined bureaucratic capacity in Belalang Village (Mahardika, 2023); Susanto explored digital tourism in Bali (Susanto, 2022); Popova and Popovs analyzed efficiency and participation in smart cities (Popova & Popovs, 2023); while Ruijer et al. introduced a smart governance toolbox to support collaboration in digital policy implementation (Ruijer et al., 2023).

This research is particularly interesting because it explores how smart governance can be implemented in a rural tourism village setting, highlighting the integration of local traditions with modern digital governance to support smart city development. In this study, the author focuses on the implementation of smart governance in the Catur Village Office through the role of traditional villages as a government strategy to improve the quality of public services for the community. This approach leverages technological advancements while preserving local cultural values (local genius). Based on this description, it is clear that the focus of this study differs from previous research.

This research aims to analyze and comprehensively describe the implementation of smart governance is

implemented in Catur Tourism Village, Kintamani District, Bangli Regency.

METHODS

In this research, the author applies a descriptive qualitative research design, allowing direct involvement in the research process, from observing, recording, and analyzing to describing smart governance issues based on actual field conditions. Data were collected through interviews, observations, and documentation to obtain a comprehensive understanding of the problems encountered (Sugiyono, 2013). Data analysis was carried out by reducing, presenting, and then drawing conclusions from the findings. This approach enables the author to provide a detailed account based on real events and factual field data. The selection of indicators as analytical tools in this study involves a collaboration between Grindle's dimensions of content of policy, including Interest Affected (community contribution in decision-making), Type of Benefits (facilities such as infrastructure, public, and social services), and Resources Committed (supporting resources for policy implementation such as online services) and research indicators by Giffinger's of Participation in Decision-Making and Public and Social Services (Grindle,1980; Giffinger, 2007). The researcher identified informants for data and information collection using purposive sampling techniques. Informants were selected based on specific criteria, including policymakers, individuals with an in-depth understanding of customary village values, implementers or supervisors of smart governance, and recipients of public services

in Catur Village. A total of 11 informants were involved, comprising: the Village Head, the Traditional Village Leader (Bendesa Adat), the Chairperson of the Village Consultative Body (BPD), the Village Secretary, the Head of the Government Section, the Chairperson of the Family Welfare Empowerment (PKK) movement, two Micro, Small and Medium Enterprises (MSMEs) actors, two employees of Small and Medium Industries (IKM), and two community representatives. The research documentation included various sources such as regulations, location maps, photographs of smart city implementation activities at the Catur Village Office, images of traditional village activities reflecting local genius, sketches related to spatial mapping, interview documentation with informants, and data relevant to the implementation of the smart city concept in Catur Village. This study was conducted over a period of six months, from December 2024 to April 2025, and was situated in Catur Tourism Village, Kintamani District, Bangli Regency, Bali Province, Indonesia.

RESULT AND DISCUSSION

Based on the results of interviews, observations, and documentation, the author analyzes the implementation of smart governance in Catur Village, Kintamani District, Bangli Regency, using four indicators. These indicators are selected and adapted from various elements of Grindle's and Giffinger's theoretical frameworks, namely Public and Social Services, Participation in Decision-Making, Provision of Facilities and Infrastructure, and Online Services (Grindle, 1980; Giffinger, 2007). Further discussion of

each indicator is elaborated in the following subchapters.

a. Public and Social Services

According to Endar Sugiarto (1999:36), service refers to actions undertaken to meet the needs of others, where satisfaction is mutually experienced by both provider and recipient. Within the context of a tourism village, public and social services are reflected in the initiatives of the Catur Village Government, which implements tourism village policies in collaboration with communities and third parties. One key strategy is the development of subak abyan (dry-field irrigation systems) as tourism assets. Through the Tourism Awareness Group (Pokdarwis), the village government involves academics, state-owned enterprises, financial institutions, and the media. A partnership with Dhyana Pura University produced a guidebook and identified the potential of subak abyan. Customary values parhyangan, pawongan, palemahan, sareng-sareng, and paras-paros are embedded in governance, exemplified by Chinese community participation in ceremonies, solidarity groups, and village assemblies.

Several subak have been developed to showcase diverse potentials. Subak Abyan Sega emphasizes biodynamic agriculture initiated by the Langit Bali MSME, which applies Rudolf Steiner's holistic approach. This practice minimizes pesticides, follows the Balinese calendar, and ensures harmony between soil, plants, animals, and humans, supported by CSR initiatives from Askrindo Peduli. Subak Kinjung has been promoted as an herbal tourism village by the Village Family Welfare Movement Team (PKK), empowering women to produce processed herbal products such as ginger powder, butterfly pea tea, and herbal oils. Meanwhile, Subak Lalang highlights sustainable coffee cultivation through the Gunung Catur Coffee MSME, in collaboration with UNEP and PT. Coop Coffee via the Tropical Landscape Granting Funding program. These initiatives reflect smart governance through collaborative engagement among government, community, and the private sector.

Beyond economic development, public services also manifest in fostering inclusivity and cultural diversity. The presence of a Buddhist temple (vihara) within the Penyagjagan Temple complex accommodates the religious practices of the Chinese community, symbolizing openness and interfaith harmony. Active participation of residents in customary, cultural, and social activities further reinforces community cohesion. Overall, observations, interviews, and documentation demonstrate that the Catur Village Government has succeeded in creating a supportive environment for diversity, welfare, and culture-based tourism. This aligns with the principles of smart governance and the values of tri hita karana, which emphasize harmonious relations between humans and God, among human beings, and with the natural environment.

b. Participation in Decision-Making

Community involvement is a crucial element in policy decision-making. According to Cohen and Uphoff (1980), community participation in rural development is defined

as active engagement in various aspects, including decision-making, program implementation, benefit distribution, and program evaluation. In Catur Village, this principle is considered fundamental in governance. As stated by the village head (Perbekel) I Wayan Sukarata, policies must involve community participation to ensure effective village governance. Decision-making forums are held through paruman (customary meetings) at the hamlet (dusun) level or in coordination between the village head and the Village Consultative Body (Badan Permusyawaratan Desa / BPD). These forums are regulated in the awig-awig (customary law), particularly in Chapter Four, Article 18, which outlines the procedures for collective deliberation.

In practice, village meetings (paruman desa ngarep) are attended by family representatives, typically the eldest household member, along with unmarried children. These meetings are conducted routinely every Anggara Kasih Saha (the first day in the Balinese calendar) or every six months, without prior notification (arah-arah). For additional or incidental meetings, announcements are made by sinoman, a rotating messenger who visits each household every 35 days. Other routine meetings are tied to the Balinese ceremonial cycle, known as tumpek, which occur six times within 210 days. Similarly, village hamlets (banjar) conduct their own paruman, scheduled according to customary needs, such as Paruman Banjar Catur held every tumpek, Banjar Lampu every Buda Kliwon, and Banjar Mungsengan every Tilem.

Apart from routine forums, specialized meetings are also held. These include Paruman Dulun Desa lan Prajuru, which involves village leaders and administrators, as well as Paruman Sekaa, or sector-based meetings, where each household contributes according to their cultural specialization, such as dance, gamelan, pecalang (village security), or ebat (ritual duties). The Village Consultative Body (BPD) also plays an active role in encouraging community aspirations, both in village assemblies and in hamlet-level discussions. According to BPD Chair I Wayan Arsila, the institution provides an additional platform for residents to express opinions, ensuring that decisions incorporate community perspectives and align with both administrative and customary structures.

Observations, interviews, and documentation reveal that Catur Village has effectively institutionalized active community participation in governance. This is evident in the consistent implementation of customary assemblies, hamlet meetings, and village forums that accommodate diverse voices in policy-making. Figure 4.7, for example, illustrates a hamlet-level deliberation on January 15, 2023, where community leaders and residents gathered at the bale banjar wearing Balinese traditional attire, symbolizing both formality and cultural identity. Such practices demonstrate that village governance is participatory, transparent, and accountable, reflecting the principles of smart governance. Moreover, the integration of traditional values with modern governance frameworks strengthens inclusivity and collective responsibility,

thereby positioning community participation as a cornerstone of sustainable rural development in Catur Village.

c. Provision of Facilities and Infrastructure

The implementation of a tourism village requires special attention from the Catur Village Government, particularly in meeting the infrastructural needs of the community. One of the initiatives is the establishment of a tourism village secretariat, which functions as an information center for visitors. According to Village Head I Wayan Sukarata, the secretariat was built to provide clear guidance to tourists regarding attractions in Catur Village, ensuring they are not confused upon arrival and can access guides to accompany their journey. The presence of this secretariat demonstrates the government's commitment to promoting subak abyan as a tourism destination while embodying the principles of good governance. It also reflects a community-based tourism approach that prioritizes the cultural values of the traditional village (desa adat) in daily governance.

In addition to the secretariat, the Catur Village Government has also improved facilities and infrastructure to support tourism and agriculture. Secretary of Catur Village, I Made Serinteg, emphasized the importance of providing infrastructure such as asphalt roads, with 150 meters constructed in each subak abyan. These improvements enhance accessibility for transportation and economic transactions, benefiting local farmers and traders. Better road networks allow trucks and pickups to enter farming areas, which increases the selling price of agricultural products and eases distribution. Support has also come from national-level institutions, such as the Ministry of Industry, which provided Langit Bali MSME with packaging machines to improve coffee processing efficiency. This assistance reduced reliance on manual methods, significantly increasing productivity and competitiveness.

Government attention is also evident in direct support to farmers. As noted by I Wayan Suparta, a farmer from Subak Abyan Tibu, assistance includes coffee seedlings, fertilizers, and machinery distributed through subak leaders in coordination with the district government. These efforts highlight the government's role not only in boosting the economic capacity of local communities but also in reinforcing traditional values. The provision of seedlings reflects palemahan, maintaining harmony between humans and nature, while infrastructure and equipment support represent pawongan, strengthening social and economic relations among community members. Thus, the development of tourism and agriculture in Catur Village demonstrates an integrated approach that balances economic progress with cultural values and environmental sustainability.

d. Online Services

The provision of online services by the management of Catur Tourism Village is currently limited to informational services through the official website of Catur Village. The Village Secretary, I Made Serinteg, stated that the village government has not yet provided specific online services for tourism

village management. At present, the information shared is limited to the tourism potential of Catur Village via the village website, with plans to enhance it in the future to attract more visitors.

As of now, Catur Tourism Village does not have a dedicated website, Instagram account, or other social media platforms specifically for tourism branding. This condition is reinforced by the statement of Ketut Jati, who explained that the marketing of the Gunung Catur Coffee MSME still relies heavily on building consumer trust through word of mouth. Efforts are focused on improving product quality and collaborating with several state-owned enterprises (SOEs) to support marketing, but branding through social media or online ordering via a website has not been implemented. Orders are currently placed online only through WhatsApp. A similar situation was expressed by Made Sukayana, the owner of Langit Bali MSME, who explained that the business has not yet engaged in optimal branding via social media or websites. Due to limited resources and being managed independently, priority is given to improving product quality rather than branding. As a result, product sales continue to depend primarily on WhatsApp-based ordering.

The limited provision of online services is mainly caused by constraints in human resources and funding, which hinder the focus on developing social media branding, despite awareness of the importance of digital technology for promotion. The Head of Catur Village emphasized that the village is still in the development phase regarding the use of online services for tourism management. He acknowledged the importance of technology and social media in attracting tourists and promoting local potential, but the lack of financial resources has prevented optimal utilization. The village government has only taken an initial step by providing basic information on the website, while future efforts will aim to strengthen branding and enable online ordering so that both MSMEs and tourism destinations in Catur Village can gain greater recognition. The village head further added that the government will continue to encourage MSME initiatives and seek collaborations with private and public institutions to expand the promotional reach of Catur Tourism Village.

This perspective aligns with the views expressed by MSME managers and the Village Secretary, affirming that Catur Village is still in the early stages of developing online services, constrained by limited resources and budget. Documentation shows that the Catur Village website currently functions as a basic information platform containing the village profile, tourism, and agro-tourism potential. Its features include a profile page describing the village's history, geographical context, and development vision, along with a section showcasing key commodities such as Arabica coffee, citrus, and Balinese cattle. However, the website does not yet provide transactional features and remains simple in design. Observations reveal that the website's appearance is less engaging, navigation is not intuitive, and content is infrequently updated, which makes it difficult for visitors to find relevant information. The absence of interactive visual elements, such

as promotional videos, further reduces the website's attractiveness and results in low user interaction.

The findings from interviews, observations, and documentation highlight that the utilization of online services in Catur Village remains highly limited. The village website serves primarily as a basic informational medium and does not yet effectively support tourism management. Constraints in design, navigation, and content hinder the effectiveness of tourism promotion, while MSMEs continue to rely on traditional marketing methods such as word of mouth and WhatsApp-based ordering. This demonstrates that although digital technology is recognized as crucial for expanding promotional reach, the optimization of online services is still challenged by limitations in human resources and financial capacity.

e. Discussion of the Main Research Findings

In Catur Tourism Village, public and social services include developing the potential of Subak Abyan as a tourist attraction. The village government collaborates with academics, state-owned enterprises, and social media networks to promote the tourism sector, one example being a partnership with the community service team from Dhyana Pura University to create a tourism village guidebook. Potential mapping shows that Subak Abyan Sega reflects the cultural acculturation of Chinese and Hindu traditions, Subak Abyan Kinjung focuses on herbal tourism, and Subak Abyan Lalang develops Kintamani's specialty coffee. Cultural acculturation in Catur Village has

existed for a long time. The Chinese community, which once resided in Banjar Lampu, contributed to various aspects of social and customary life, including mutual assistance activities, the arts, and customary security. The village government also provides space for them to practice their faith, such as during Chinese New Year celebrations and barongsai performances at temple areas. The harmonious coexistence between the Hindu and Chinese communities reflects the values of tri hita karana such as parhyangan (maintaining a relationship with God), pawongan (strengthening social bonds), and palemahan (protecting the environment and cultural heritage). Subak Abyan Sega implements biodynamic farming by utilizing the Balinese calendar system to naturally improve crop yields. The government supports this initiative through training and assistance from state-owned enterprises, such as Askrindo Peduli. The application of smart governance is reflected in the collaboration between the government, MSMEs, and the private sector to maintain the village's economic sustainability. Subak Abyan Kinjung develops herbal tourism by empowering women from the PKK organization to produce simplicia and herbal products, while Subak Abyan Lalang collaborates with the United Nations Environment Programme (UNEP) to revitalize Kintamani coffee, create job opportunities, and preserve the ecosystem.

The other findings that community participation in decision-making is a top priority. The village government facilitates this through paruman or traditional meetings regulated by awig-awig, allowing residents to

actively engage in policy discussions from the planning stage to program evaluation. This involvement ensures that village development aligns with the community's needs and aspirations, while reflecting the principles of good governance that foster an inclusive and sustainable village environment. In terms of facilities, the government has built a tourism village secretariat, improved roads in each subak, and provided assistance in the form of seeds, fertilizers, and agricultural machinery. Meanwhile, online services are independently managed by each MSME, subak abyan, and product owner.

These findings are worth further examination by comparing them with previous studies to identify their relevance, similarities, and differences. In line with the study by Ardiyasa and Rahayu on the Smart Village policy in Banyuwangi Regency, the implementation of smart governance in Catur Village is also supported by internal factors such as communication through traditional council meetings (paruman adat), the utilization of coffee and tourism as local resources, and a strong, distinctive traditional bureaucratic structure (Ardiyasa & Rahayu, 2022). Both studies indicate that the success of policy implementation relies heavily on community participation and the support of local actors, including traditional and community leaders. However, unlike Banyuwangi, which has a more established and integrated bureaucratic system, Catur Village faces challenges in the form of lengthy bureaucratic procedures and the absence of a Technical Implementation Unit (UPTD),

which serve as major obstacles to program execution.

According to Nuryanti, a tourism village is an integration of attractions, accommodations, and supporting facilities embedded within the community's way of life and in harmony with prevailing customs and traditions (Nuryanti, 1993). The main goal is to create an authentic tourism experience, empower the local economy, and preserve the village's culture and environment. Yoeti adds that a tourism village must be able to offer visitors a unique and authentic experience without eroding the community's original values (Yoeti, 1996). Sutawa emphasizes its role as a means of economic empowerment and environmental preservation through sustainable tourism (Sutawa, 2012). Similarly, Sunaryo highlights the importance of synergy between the government, the community, and tourism stakeholders to achieve professional tourism village governance based on local competitive advantages (Sunaryo, 2013).

In contrast to the findings of Sapraji, which emphasize the need for a comprehensive evaluation in the implementation of the smart city policy in South Tangerang City, this study found that Catur Village has been relatively able to build a smart governance system independently through the strengthening of traditional institutions and local wisdom (Sapraji, 2023). However, bureaucratic weaknesses and limited resources have hindered the optimization of online services, particularly in the Tourism Village program, challenges similar to the technical obstacles faced by South Tangerang City in its smart city

implementation. These findings align with the study by Bahrudin & Wahyuningsih, which asserts that the success of e-government implementation to support a smart city largely depends on the availability of ICT infrastructure and integrated public services (Bahrudin & Wahyuningsih, 2023). Catur Village's integration efforts are reflected in the development of an online marketplace for coffee products and the provision of digital information on tourism potential. Nevertheless, in contrast to Denpasar City, which already has a relatively mature e-government system, Catur Village continues to face major challenges in delivering comprehensive digital services due to limited human resources and the post-pandemic impact.

Local cultural values (such as tri hita karana and customary collectivism) playing a central role in its realization. Similar with research in Kutuh Village shows that collaboration between the village government and traditional institutions is key to the success of the Village Information System (SID) (Wahyudi, 2022). Governance development in Tegal Harum Village emphasizes the importance of institutional culture and adaptive policies (Yuliana, 2023). Research in Belalang Village highlights the effectiveness of ICT-based programs (Mahardika, 2023), while studies on digital tourism management in Bali discuss aspects of e-government (Susanto, 2022). Other studies underline that smart governance enhances efficiency, transparency, and participation (Popova & Popovs, 2023), and emphasize the importance of multi-stakeholder collaboration through ICT in smart city projects (Ruijer et al., 2023).

The implementation of smart governance in Desa Catur is supported by two main factors. First, its strategic location, both as a tourist destination and as the center of Kintamani coffee production. In terms of tourism, Desa Catur fulfills the 4A concept (Attraction, Accessibility, Amenity, and Institutional Support). Attractions include coffee plantations, oranges, flowers, herbal products (loloh), as well as the unique Hindu–Chinese cultural acculturation. Accessibility is ensured by well-maintained road infrastructure, while facilities such as ashrams, homestays, and agro-tourism sites support visitor comfort. Institutional support is strengthened through the synergy of traditional villages (desa adat), administrative villages (desa dinas), private actors, and academics. Moreover, the existence of the IKM Coffee Center of Desa Catur positions the village as a hub for Arabica coffee processing, equipped with roasting, grinding, packaging, and laboratory facilities that also benefit surrounding villages. Second, the presence of strong traditional values, reflected in awig-awig, dresta, and the philosophies of tri hita karana, paras-paros, and sareng-sareng. These values serve as the foundation for decision-making based on deliberation and community participation, leading to more civilized, inclusive, and sustainable policies. The harmonious collaboration between the desa adat and the desa dinas further reinforces socio-cultural legitimacy in the implementation of smart governance.

However, several challenges still hinder the optimal implementation of smart governance in Desa Catur. First, lengthy bureaucracy, where decision-making requires cross-departmental coordination, often resulting in delays and the loss of opportunities for tourism and MSME development. Second, the absence of a Head of the IKM Coffee Center, which causes programs to focus solely on production without marketing strategies or event initiatives, thereby limiting sustainability. Third, the post-pandemic impact of Covid-19, which weakened community enthusiasm and reduced purchasing power, preventing the village tourism program from fully recovering despite efforts to establish a tourism village secretariat. Fourth, insufficient resources, particularly in terms of human capital and budget, which constrain the development of integrated online services. The community also experiences digital illiteracy, resulting in suboptimal implementation of digitalized village services.

CONCLUSION

This study concludes that the implementation of smart governance in Catur Tourism Village Kintamani District, Bangli Regency, Bali Province, indonesia has been progressing well, with local cultural values playing a central role in its realization. Nevertheless, the village still faces limitations in optimizing online services to fully leverage digitalization in rural governance.

This study recommends that the implementation of smart governance in Catur Village should prioritize simplifying bureaucratic procedures to enhance policy responsiveness, strengthening institutional capacity through the formal appointment of leadership, and revitalizing post-pandemic community participation to ensure the sustainability of both tourism and SME programs. In addition, investment in human capital, particularly through digital literacy training, is essential to enable the effective development of online village services that can improve efficiency and accessibility. Equally important, the integration of information and communication technology with traditional cultural values and governance structures should remain a central consideration, ensuring that the pursuit of modernization does not erode local wisdom but instead reinforces inclusive and sustainable village governance.

The main limitations of this study are time and budget constraints. In addition, the research focuses only on one village as a case study, selected based on Cresswell's perspective. The author recognizes that the findings are still preliminary. Therefore, further research in similar locations on the implementation of traditional-village-based smart governance, particularly in the Catur Village Office, Kintamani District, Bangli Regency is recommended to obtain more comprehensive results.

ACKNOWLEDGMENT

the success of this research.

REFERENCES

1. Agus Bahrudin, & Wahyuningsih, C. D. (2023). Implementasi sistem pemerintah berbasis elektronik dalam mewujudkan smart city di Dinas Kominfos Denpasar Bali. Mimbar Administrasi FISIP UNTAG Semarang, 20(1). https://doi.org/10.56444/mia.v20i1.676

2. Ardiyasa, G. G., & Rahayu, E. (2022). Implementasi kebijakan Smart Kampung di Kabupaten Banyuwangi. Moderat: Jurnal Ilmiah Ilmu Pemerintahan, 8(4). https://doi.org/10.25157/moderat.v8i4.2863

3. Caragliu, A., Del Bo, C., & Nijkamp, P. (2011). Smart cities in Europe. Journal of Urban Technology, 18(2), 65–82. https://doi.org/10.1080/10630732.2011.601117

4. Cohen, J. M., & Uphoff, N. T. (1980). Participation's place in rural development: Seeking clarity through specificity. World Development, 8(3), 213–235. https://doi.org/10.1016/0305-750X(80)90011-X

5. Edward III, C. G. (1980). Implementing public policy. Congressional Quarterly Press.

6. Faisal, F. (2013). Pemberdayaan Industri Kecil dan Menengah di Daerah. Jurnal Ekonomi Pembangunan, 12(3), 35–45.

7. Giffinger, R., Fetner, C., Kramar, H., & Kalasek, R. (2007). Smart cities – Ranking of European medium-sized cities. Vienna University of Technology.

8. Grindle, M. S. (Ed.). (1980). Politics and Policy Implementation in the Third World. Princeton University Press. http://www.jstor.org/stable/j.ctt1m323qj

9. Hendrawan, S. A., Chatra, A., Iman, N., Hidayatullah, S., & Suprayitno, D. (2024). Digital transformation in MSMEs: Challenges and opportunities in technology management. Jurnal Informasi dan Teknologi, 6(2), 141–149. https://jidt.org/jidt/article/view/551/354

10. Ivanova, T. (2024). Assessing the influence of local government capacity on public service delivery: Insights from Indonesia's decentralization experience. Integra Business Review, 2(1). https://www.iacs.co.id/ibr/article/view/50

11. Jiang, H., Geertman, S., & Witte, P. (2022). Smart urban governance: An alternative to technocratic "smartness". GeoJournal. https://doi.org/10.1007/s10708-022-10481-9

12. Kaiser, Z. A. (2024). Smart governance for smart cities and nations. Journal of Economy and Technology, 2, 216–234. https://www.sciencedirect.com/science/article/pii/S2949948824000313

13. Labolo, M. (2014). Memahami ilmu pemerintahan: Suatu kajian, teori, konsep, dan pengembangannya (Ed. revisi, cet. ke-7). Jakarta: PT RajaGrafindo Persada.

14. Mahardika, I. G. (2023). Pengembangan smart village di Desa Belalang: Implementasi teknologi informasi dan komunikasi dalam pemerintahan desa. Jurnal Teknologi dan Inovasi Desa, 5(2), 45–56.

15. Mathew, B. P., & Bangwal, D. (2024). People centric governance model for smart cities development: A systematic review, thematic analysis, and findings. Research in Globalization, 9, 100237. https://www.sciencedirect.com/science/article/pii/S2590051X24000467

16. Mukhlis, M. M. (2025). Regional Government Autonomy in Indonesia: The Ambiguity of the Federalism of Republic Model. Malaysian J. Syariah & L., 13, 35. https://heinonline.org/HOL/LandingPage?handle=hein.journals/mlsnjl13&div=5&id=&page=

17. Nuryanti, W. (1993). Concept, perspective and challenges of rural tourism in Indonesia. Tourism in Indonesia, 1(1), 1–8.

18. Popova, Y., & Popovs, S. (2023). Effects and externalities of smart governance. Smart Cities, 6, 1109–1131. https://doi.org/10.3390/smartcities6020053

19. Pratama, A. (2014). Smart city: Konsep dan implementasinya di Indonesia. Jakarta: PT Elex Media Komputindo.

20. Ruijer, E., Van Twist, A., Haaker, T., Tartarin, T., Schuurman, N., Melenhorst, M., & Meijer, A. (2023). Smart Governance Toolbox: A Systematic Literature Review. Smart Cities, 6(2), 878–896. https://doi.org/10.3390/smartcities6020042

21. Sapraji, S. (2023). Implementasi smart city di Kota Tangerang Selatan Banten. Jurnal Ilmu Sosial Indonesia (JISI), 4(2). https://doi.org/10.15408/jisi.v4i2.37124

22. Su, K., Li, J., & Fu, H. (2011). Smart city and the applications. In 2011 International Conference on Electronics, Communications and Control (ICECC) (pp. 1028–1031). https://doi.org/10.1109/ICECC.2011.6066743

23. Sugiyono, D. R. (2013). Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif dan R&D.

24. Sunaryo, B. (2013). Kebijakan pembangunan destinasi pariwisata: Konsep dan aplikasinya di Indonesia. Yogyakarta: Gava Media.

25. Susanto, P. (2022). Pengelolaan pariwisata berbasis digital di Bali: Peran e-government dalam sektor pariwisata. Jurnal Pariwisata Digital, 8(3), 88–102.

26. Sutawa, G. K. (2012). Issues on Bali tourism development and community empowerment to support sustainable tourism development. Procedia

Economics and Finance, 4, 413–422. https://doi.org/10.1016/S2212-5671(12)00356-5

27. Tresiana, N., Duadil, N., & Damayantie, A. (2023). Deliberative democracy innovations at citizen level: Challenges of local government in Indonesia. Lex Localis, 21(4), 807–832. https://www.proquest.com/openview/16f08131a53770c7427870c5b543dfdc/1?pq-origsite=gscholar&cbl=55210

28. Wahyudi, D. (2022). Implementasi Smart Village di Desa Kutuh: Kolaborasi Pemerintah Desa dan Lembaga Adat dalam Pengembangan Sistem Informasi Desa. Jurnal Pembangunan Desa, 7(1), 112–125.

29. Xue, B., Han, B., Li, H., Gou, X., Yang, H., Thomas, H., & Stückrad, S. (2023). Understanding ecological civilization in China: From political context to science. Ambio, 52(12), 1895–1909. https://link.springer.com/article/10.1007/s13280-023-01897-2

30. Yoeti, O. A. (1996). Pengantar ilmu pariwisata. Bandung: Angkasa.

31. Yuliana, T. (2023). Perspektif Governance dalam Pengembangan Desa Tegal Harum sebagai Smart Village. Jurnal Pemerintahan dan Pembangunan, 10(2), 50–62.