

## **The Role of Civic Society on e-Governance Adoption: Study on Village-owned Enterprise of Pangkah Wetan, Gresik Regency**

Didied Poernawan Affandy<sup>1,\*</sup>, Eko Ganis Sukoharsono<sup>2</sup>, Aulia Fuad Rahman<sup>3</sup>,  
Zaki Baridwan<sup>4</sup>

<sup>1,2,3,4</sup>Fakultas Ekonomi dan Bisnis, Universitas Brawijaya, Indonesia

\*E-mail: [affandy@ub.ac.id](mailto:affandy@ub.ac.id)

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### **Abstract**

This paper aims to examine the role of civic society on e-governance adoption and to investigate factors that affect the performance of village-owned enterprises as well as their impact. This study is descriptive research using a qualitative approach. Using in-depth interviews and direct observation of informants, the study maps some problems associated with the strategy of e-governance adoption on village-owned enterprise Pangkah Wetan. The case shows that the lack of civic society participation, which is typical across different organizations, does contribute to this problem. However, the main predicament lies with the fact that a good corporate governance principle is never explicitly prioritized in the organization's information systems strategy. E-governance adoption should consider both technological innovation and organizational environment, including the role of civic society. Neglecting one aspect poses the apparent danger that the implementation is unlikely to bring about benefit to the organization. This paper presents the case of a village-owned enterprise in adopting good corporate governance principles in developing the rural economy. It is expected that this case will help substantiate an instance of good governance adoption in a village-owned enterprise and latecomer development, which might impact the operation and performance of a village-owned enterprise.

**Keywords:** civic society; village-owned enterprise; corporate governance

**JEL Classification:** O18, H83, L32

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### **INTRODUCTION**

In the management of village-owned enterprise (called "BUM Desa"), good corporate governance is a necessity for the realization of the principles of transparency, accountability and sustainability in village communities. Several studies (Saputra et al., 2019; Arifin et al., 2020) in developed countries have shown that a rapid increase in village-owned enterprise (VoE) was not followed by large utilization and no evidence of job opportunities for villagers provided by village-owned enterprise. The role of civil society in e-governance adoption is an important and relevant issue in e-governance studies, but there are several problems in the existing research that need to be addressed. Firstly, there is a lack of empirical evidence on the actual impact of civil society on e-governance adoption. While

some studies have suggested a positive relationship between civil society engagement and e-governance adoption, these findings have not been consistently replicated across different countries and contexts.

The adoption of e-governance has become a pivotal agenda in the modernization of public service delivery, particularly in developing countries seeking to improve transparency, accountability, and participatory governance. The urgency to study the role of civic society in supporting this transformation stems from the growing recognition that successful e-governance is not merely a matter of technological readiness but is deeply intertwined with the social fabric and participatory capacity of local communities. Amid growing concerns over the digital divide and administrative inefficiencies in rural areas, investigating how civic society contributes to digital governance becomes crucial to avoid further marginalization. Indonesia, with its decentralized governance structure, presents an ideal context to explore this phenomenon, especially as rural institutions such as Village-Owned Enterprises (Badan Usaha Milik Desa or BUMDes) increasingly engage in digital initiatives to optimize governance and service delivery.

Pangkah Wetan Village in Gresik Regency has emerged as a notable case within this landscape. Unlike many other BUMDesa in Indonesia that remain administratively passive and technologically stagnant, BUMDesa Pangkah Wetan has initiated several digital-based services and platforms to manage economic activities and village information systems. This distinguishes it from similar rural enterprises, where the adoption of e-governance tools often remains superficial or externally driven. The presence of a responsive and organized civic society in Pangkah Wetan has been identified as a key driver behind these developments, offering a unique opportunity to study the interplay between citizen engagement and technological institutionalization at the grassroots level. This village represents a critical case where civic society's involvement is not only supportive but structurally integrated into the governance processes, potentially serving as a replicable model for other rural areas.

This study involves several interrelated variables, including civic society participation, digital literacy, institutional readiness, and e-governance adoption. Civic society participation is examined in terms of its ability to influence decision-making, monitor governance outcomes, and co-create public services. Digital literacy and institutional readiness serve as mediating variables that enable or constrain the adoption of e-governance practices, while e-governance adoption is operationalized through the implementation of digital platforms for transparency, service delivery, and participatory planning. The mixed methods approach allows the exploration of both the quantifiable effects of civic participation and the nuanced contextual mechanisms that facilitate or inhibit digital governance at the village level.

Despite the growing literature on e-governance, limited research has investigated the role of civic society in rural digital governance using a mixed-methods approach. Previous studies, such as Purwanto et al. (2021), have highlighted the importance of community involvement in smart city development, but they rarely focus on rural or village-level governance structures. Similarly, Astuti and Martawardaya (2022) examined digital transformation in public services but did not account for civic dynamics. Most recent studies, including the work by Rachmawati and Sutopo (2023), focus on top-down policy frameworks or

technology acceptance models without sufficiently addressing civic engagement as a critical factor in rural digital transformation. This creates a gap in understanding how grassroots civic structures interact with technological adoption in decentralized contexts such as Indonesia's village system.

In light of these research gaps, this study offers a novel contribution by examining the synergistic relationship between civic society and e-governance adoption at the village level, utilizing a mixed-methods approach to capture both statistical trends and contextual insights. The novelty lies in its empirical focus on Pangkah Wetan's BUMDesa as a living model of civic-driven e-governance, providing lessons on how community agency can shape technological adoption from the bottom up. The benefits of this research extend to policymakers, village administrators, and development agencies aiming to enhance digital governance capacity in rural areas. Specifically, this study aims to (1) analyze the role and extent of civic society involvement in e-governance practices at the village level, (2) assess the mediating roles of digital literacy and institutional readiness, and (3) provide policy recommendations for scalable and participatory e-governance models rooted in civic engagement.

Secondly, there is a need for a more nuanced understanding of the role of civil society in e-governance adoption. While some studies have focused on the importance of civil society in promoting transparency and accountability in e-governance, there is a need to explore other dimensions of civil society involvement, such as its role in shaping policy agendas and facilitating citizen engagement. Social capital theory (SCT) was first defined by Bourdieu (1985) as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition".

The integration of civic society into the process of e-governance adoption represents a complex intersection of sociopolitical engagement and digital transformation. Civic society, broadly defined as the aggregate of institutions, organizations, and individuals operating in the space between the family, the state, and the market (Putnam, 1993), plays a crucial role in fostering democratic accountability and promoting public participation. E-governance, in turn, refers to the use of digital technologies by government institutions to deliver public services, enhance transparency, and engage citizens in governance processes (Heeks, 2006). The theoretical discourse on e-governance adoption has expanded beyond technological determinism to include socio-institutional factors, with civic engagement increasingly viewed as a critical enabler of digital governance, particularly in developing countries where state capacity may be limited (Bannister & Connolly, 2012).

Several studies have explored the linkage between civic society and e-governance. For instance, Bwalya and Mutula (2015) emphasized the need for inclusive participation to ensure the sustainability and legitimacy of e-governance initiatives in Sub-Saharan Africa. Similarly, Kuriyan et al. (2012) highlighted how citizen engagement can influence the responsiveness and adaptability of digital governance systems in India. These works underscore that civic society not only facilitates technological diffusion but also shapes the governance culture necessary for digital reforms to take root. In Indonesia, civic society has historically played a key role in advocating for transparency and participatory development, especially

post-Reformasi. However, much of the literature has centered on urban contexts or national-level reforms, with limited attention paid to how village-level civic structures interact with digital governance efforts.

In the context of village governance, particularly through BUMDesa, studies have begun to explore the dynamics of digitalization. Sulistiyani et al. (2020) examined how leadership and institutional support affect BUMDesa's performance but did not explicitly address the role of community participation. Arifianto (2021) noted the digital transformation of BUMDesa as a response to market demand and policy mandates but overlooked grassroots civic engagement. The relevance of digital literacy as a mediator in the adoption of e-governance has also gained scholarly traction. According to Alshehri et al. (2012), digital literacy enhances the capacity of users to access, understand, and benefit from e-government platforms, thereby linking technological infrastructure with human capability. Moreover, institutional readiness—including leadership commitment, staff competence, and organizational culture—emerges as a necessary precondition for successful e-governance (Ndou, 2004).

The interaction between these variables—civic society, digital literacy, institutional readiness, and e-governance—has not been adequately addressed in a cohesive analytical framework. While the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been widely applied in understanding e-governance adoption (Venkatesh et al., 2003), these models often fail to incorporate civic and participatory dimensions. A more integrative approach, such as the Socio-Technical Systems Theory, offers a better lens by acknowledging that both social and technical subsystems must align for innovation to succeed (Trist, 1981). In the case of village governance, this implies that technological tools alone cannot ensure transformation unless supported by civic engagement and institutional capacity.

The literature also reveals gaps in methodological application. Most studies adopt either qualitative case studies or quantitative surveys, rarely combining both to capture the full spectrum of civic-technological interactions. Mixed methods research remains underutilized in this field, despite its potential to reveal both causal patterns and contextual subtleties (Creswell & Plano Clark, 2018). Furthermore, studies specific to Indonesian village governance tend to focus on policy compliance or administrative performance, with less emphasis on civic agency or innovation from below. Recent research by Rachmawati and Sutopo (2023) points toward the need for localized digital governance frameworks that are co-designed with communities, yet empirical evidence supporting this proposition is still limited.

In conclusion, the literature affirms the critical role of civic society in facilitating e-governance adoption but reveals a significant research gap in rural, village-level contexts, especially in Indonesia. There is a paucity of empirical studies that integrate civic society, digital literacy, and institutional readiness into a single analytical framework using a mixed methods approach. This study seeks to fill that gap by examining how civic society in Pangkah Wetan supports and influences the adoption of e-governance through its BUM Desa, offering both theoretical refinement and practical insights for bottom-up digital governance.

Thirdly, there is a need for more comparative studies that examine the impact of civil society on e-governance adoption across different regions and

countries. Most of the existing research has focused on specific countries or regions, and there is a need to develop a more comprehensive understanding of the global patterns and variations in civil society involvement in e-governance adoption. While some studies have highlighted the positive impact of civil society engagement, there is a need to examine the factors that hinder civil society organizations from effectively engaging with e-governance initiatives, including issues related to resource constraints, institutional barriers, and political repression. Thus, this study aims to explore the challenges and barriers that civil society organizations face in promoting e-governance adoption and to explore how the role of civil society influences e-governance adoption, especially in the VoE of Pangkah Wetan, Gresik Regency.

## **METHOD**

This type of research is descriptive research with a qualitative approach. According to Danandjaja (2012:29), qualitative research is a type of research that aims to provide an overview of an actual problem, without concluding. This type of research does more descriptive analysis and does not test hypotheses. This type of descriptive research tries to carry out generalizations of the observed social reality. According to Siswanto (2012: 8), descriptive research is carried out by collecting data to get an overview of the research results. The results of descriptive research are limited to describing existing problems.

The analysis unit in this study is the stakeholders of the existence of village-owned enterprises (BUM Desa) in Pangkah Wetan, Ujungpangkah District, as informants. Based on the problems and objectives that have been set, the informant criteria of this study include: (1) The Chairman of BUM Desa; (2) the Secretary of BUM Desa; (3) the Treasurer of BUM Desa; (4) Supervisor of BUM Desa; (5) Manager of BUM Desa; (6) Village Head; (7) The community, and; (8) Other parties who potentially involved in BUM Desa transaction contracts, such as milkfish pond farmers, collectors, contractors, corporations, village financial institutions, and other related parties.

This study employs a mixed methods approach to comprehensively explore the role of civic society in the adoption of e-governance at the village level, specifically within the context of Pangkah Wetan's Village-Owned Enterprise (BUM Desa) in Gresik Regency. The mixed methods design integrates both quantitative and qualitative data collection and analysis strategies to ensure methodological triangulation and to enrich the interpretive depth of the findings. This approach is particularly appropriate given the complex and context-sensitive nature of civic engagement and technological adoption in rural governance settings (Creswell & Plano Clark, 2018). The research utilizes a convergent parallel mixed methods design, wherein quantitative and qualitative data are collected and analyzed concurrently but independently. The results are then integrated during the interpretation phase to provide a holistic understanding of the phenomena under study. The quantitative component aims to measure the relationship among variables—civic society participation, digital literacy, institutional readiness, and e-governance adoption—while the qualitative component explores the dynamics, perceptions, and contextual factors influencing these relationships.

The population for the quantitative strand includes community members, BUM Desa employees, and local government stakeholders in Pangkah Wetan

Village. A stratified random sampling technique was employed to ensure representation across different civic roles and demographic segments. A total of 120 respondents were surveyed using structured questionnaires. For the qualitative strand, purposive sampling was used to select 15 key informants, including BUMDesa directors, village heads, civic group leaders, and local digital service users. These participants were chosen for their relevance and knowledge of village governance and digital service implementation.

Quantitative data were collected using a structured questionnaire consisting of closed-ended questions measured on a five-point Likert scale. The instrument was pre-tested and validated to ensure reliability and content validity. Variables measured include: (1) Civic society participation (e.g., involvement in planning, feedback mechanisms); (2) Digital literacy (e.g., ability to access and use digital tools); (3) Institutional readiness (e.g., governance structure, leadership support, infrastructure); (4) e-Governance adoption (e.g., use of digital systems for transparency, service delivery, participation). Qualitative data were gathered through in-depth interviews and participant observation. Interview guides were developed to explore participants' experiences, motivations, and perceptions regarding e-governance and civic involvement. Observational data were collected by attending village meetings, public forums, and observing the use of digital systems in BUM Desa operations. All interviews were recorded, transcribed, and coded thematically.

Quantitative data were analyzed using descriptive statistics, correlation analysis, and multiple regression analysis to examine relationships among variables. Statistical analysis was conducted using SPSS software. Reliability was assessed through Cronbach's alpha, while multicollinearity and heteroscedasticity were checked to ensure model robustness. Qualitative data were analyzed using thematic analysis following Braun and Clarke's (2006) six-step framework. Coding was conducted manually and supported with NVivo software to identify recurring themes, categories, and patterns that explain the role of civic society in digital governance processes. Triangulation was employed to validate findings by comparing data across respondents and data collection methods. To enhance validity, methodological triangulation and respondent validation were applied. Quantitative instruments were statistically validated, while qualitative credibility was ensured through prolonged engagement, peer debriefing, and member checks. Reliability was reinforced by consistent application of research procedures and the use of pilot-tested instruments.

This research adheres to ethical standards in social research. Informed consent was obtained from all participants. Data confidentiality and anonymity were maintained throughout the study. The research received ethical clearance from the relevant institutional review board of the university overseeing the doctoral program. While the mixed methods design provides robust insights, the study is limited by its single case focus, which may affect generalizability. However, the depth of analysis allows for rich contextual interpretation and contributes to theory building in rural e-governance.

## **RESULTS AND DISCUSSION**

Pangkah Wetan is the name of a coastal village located near the Ujungpangkah peninsula, located in the northern part of the Gresik Regency area.

Most of the population has a livelihood in fisheries, namely aquaculture and capture fisheries. Administratively, the village is headed by a village head who is directly elected by the community. BUM Desa “Pangkah Wetan”, which focuses on milkfish farming, produces 585 tons/year with a production value of IDR 13.455 billion per year. This result was obtained from 4 groups of fish farmers (“pokdakan” as civic society) that include “Pokdakan Muara Jaya”, which has the widest pond and divides it into traditional and semi-intensive plots with a total output of IDR. 5,285,400,000. Meanwhile, “Pokdakan Makmur Bahari” and “Pokdakan Sumberarto” have almost the same production value. However, the area of “Pokdakan Sumberarto” is larger, with the production output relatively below “Pokdakan Makmur Bahari”. This is because “Pokdakan Makmur Bahari” applies 2 (two) cultivation systems, namely traditional and semi-intensive. Semi-intensive cultivation increases the productivity of the “pokdakan”, so that the total production increases very significantly when compared to traditional ponds (See table 1).

**Table 1.** Profile of BUM Desa Pangkah Wetan Civic Society

Civic society	Member	Output of Production (IDR million)
1. Pokdakan Muara Jaya	12	5,285.42
2. Pokdakan Makmur Bahari	10	3,385.60
3. Pokdakan Sumberarto	10	3,283.42
4. Pokdakan Tirta Kluwung	10	1,540.60
Total		13,455.04

Source: Pangkah Wetan village data.

It is known that the area of Ujungpangkah consists of rice fields, yards/yards, moor/gardens, ponds, and other land uses. Where it is almost as large as the land in Pangkah Wetan, or 41.8 percent has become land of accretion (see Table 2). While the second largest land use is moor/garden at 32.82%. It can be concluded that the largest source of income and the largest area of Pangkah Wetan, Ujungpangkah District, is the anchorage and plantation/moor sector. It can be seen in the many shrimp and whitefish ponds around Pangkah Wetan village. In addition to being 33 fishermen, many residents of Pangkahwetan Village also own and manage ponds. So, it is not surprising that Pangkahwetan village got the nickname of the milkfish pond village.

BUM Desa Pangkah Wetan, as a village-owned enterprise, is a business entity owned and managed by the village to develop local economic potential and improve the welfare of the village community. Village-owned enterprises (VoEs) are becoming increasingly popular and are expected to be a solution in overcoming rural poverty. However, VoE also faces several problems in its governance, including: (a) Weak management. VoEs are often run by people who do not have adequate management and financial backgrounds. This leads to a lack of ability to plan, manage, and control the VoE business operations; (b) Lack of profitable business activities. VoE may struggle to create profitable business activities due to constraints in human resource capacity and capability, as well as inadequate government policies and regulations; (c) Lack of access to capital. VoE requires sufficient capital to start and develop its businesses. However, it is often difficult for VoE to gain access to adequate capital from banks or other financial institutions as they do not have adequate financial statements or sufficient collateral; (d) Lack

of transparency in governance and accountability. VoE must exercise good governance and accountability over activities and finances. But there is often a lack of transparency in managing VoE, resulting in many non-transparent activities and decisions and poor accountability; (e) Lack of community involvement. VoE is a business entity owned and managed by the village community. However, sometimes the community is not involved in the decision-making and management of BUM Desa due to a lack of participation, inadequate information, and a lack of awareness of the importance of BUM Desa for their welfare.

Addressing these issues requires support and facilitation from the government and relevant institutions, such as management training, provision of adequate capital, supportive policies, stricter supervision and monitoring of BUM Desa governance and accountability, and more active community participation.

**Table 2.** Type of Land Utilization in the Ujungpangkah District

Type of Land Used	Area (Ha)	Percentage
Paddy field	1,068.96	11.42%
Yard	112.29	1.18%
Garden ("Tegalan")	3112.32	32.82%
Pond	3,964.46	41.80%
State forest	-	-
Other	1,225.20	12.92%
Total		100%

Source: Pangkah Wetan village data.

VoE "Pangkahwetan Corporation" was officially established on February 13, 2017, where the majority members of BUM Desa own milkfish ponds. In its organizational structure, the highest arrangement in BUM Desa Pangkah Wetan is village deliberation, which is the highest forum that can give birth to various decisions. Under this article, there is an advisor who, under Article 132 paragraph (4), has the task of supervising and providing advice to operational implementers in carrying out activities for the management and management of village businesses. The duties of advisors and supervisors are almost the same, which are supervising the operational management. However, the difference is that the inspectors do not give directions to the operational activities. In the implementation of BUM Desa, the daily ones who are responsible are the operational executors, namely the director, secretary, and treasurer. Meanwhile, the operational executives are supported by the head of the unit. The organizational structure of BUM Desa Pangkahwetan can be seen in Figure 1. Thus, in the realization of democratic governance or institutionalization of BUM Desa, the highest order is village deliberation.

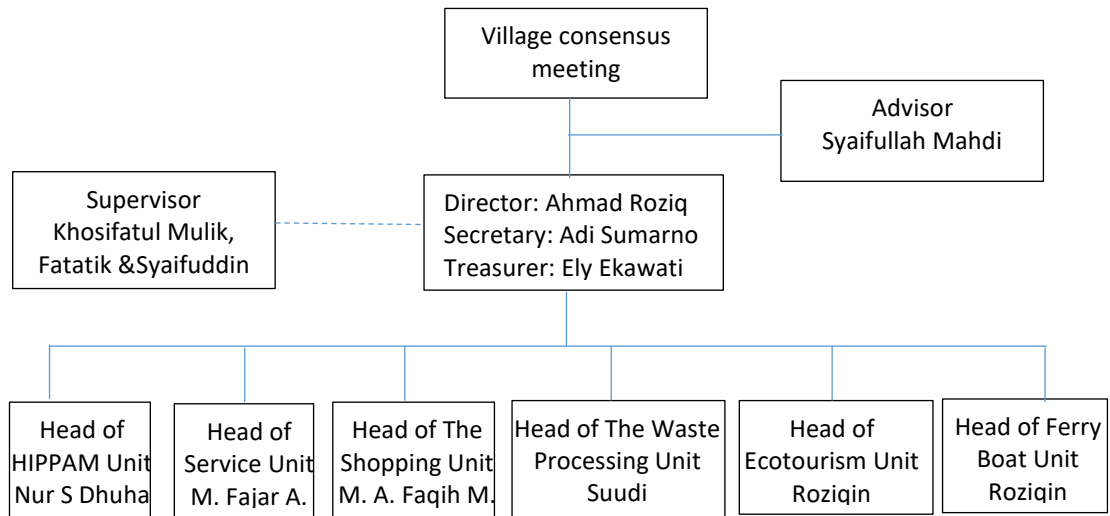


Figure 1. Organizational Structure of BUM Desa “Pangkah Wetan”, Ujung Pangkah District. Source: Pangkah Wetan Village Data.

As part of village governance, BUM Desa Pangkah Wetan is a business entity owned by the village and managed by the local community. Therefore, the role of the community or civic society is crucial in BUM Desa governance. Some of the roles of the community towards BUM Desa governance include: (1) Selection of management; (2) Monitoring and control; (3) Participation in the decision-making process; (4) Provision of civic society support.

The BUM Desa management of Pangkah Wetan is elected by the local community through a democratic mechanism, such as a general election. The community has an important role in selecting administrators who have the integrity, experience, and competence required to effectively manage BUM Desa. The civic society has a role in ensuring that the BUM Desa board manages village assets properly and in accordance with the principles of good governance. The community can conduct supervision and control through general meetings, financial reports, or through a complaint mechanism in case of violations.

The BUM Desa management should ensure that the community is involved in strategic decision-making related to the BUM Desa, such as the establishment of the BUM Desa's vision, mission, and objectives. Community participation in decision-making will increase trust and transparency in BUM Desa governance. The community can provide support to the BUM Desa through the use of products or services offered, such as purchasing agricultural products or utilizing health services provided by the BUM Desa. Community support will increase the revenue and performance of the BUM Desa so that it can provide greater benefits to the community. To ensure good BUM Desa governance, the role of civic society is not limited only to the four points above. However, the role of the community is important and must be considered so that BUM Desa Pangkah Wetan can develop and provide optimal benefits to the village community.

This section presents the integrated findings from both the quantitative and qualitative components of the study, focusing on the role of civic society in the adoption of e-governance within the Village-Owned Enterprise (BUM Desa) of Pangkah Wetan, Gresik Regency. The results are organized according to the key

research variables: civic society participation, digital literacy, institutional readiness, and e-governance adoption. Quantitative results provide statistical insights, while qualitative findings enrich these results through contextual narratives and thematic depth.

### **Civic Society Participation**

Quantitative findings reveal a high level of civic engagement in Pangkah Wetan, with 76.3% of respondents reporting active involvement in village planning and monitoring activities. The civic society participation variable scored a mean of 4.12 on the Likert scale, indicating widespread perceived involvement. A strong positive correlation ( $r = 0.62$ ,  $p < 0.01$ ) was found between civic society participation and e-governance adoption, suggesting that higher civic engagement is associated with more effective use of digital governance systems. Qualitative data support these findings. Informants emphasized that local community groups, including youth organizations, women's groups, and religious networks, played a pivotal role in advocating for digital transparency and accountability. One village leader stated, "Our citizens don't just receive services—they participate in shaping how services are provided through the digital system." Civic society was instrumental in pushing for the public disclosure of village budgets through digital platforms and in demanding online access to BUM Desa financial reports.

### **Digital Literacy**

The quantitative analysis shows moderate digital literacy among villagers, with a mean score of 3.74. Although most respondents own smartphones, only 58.5% report regular use of digital platforms for governance-related purposes. Regression analysis shows that digital literacy has a statistically significant effect ( $\beta = 0.35$ ,  $p < 0.01$ ) on e-governance adoption, acting as a partial mediator between civic engagement and technology use. Qualitative insights reveal a digital divide based on age and education level. Youth groups were reported to be more adaptive to digital tools, while older villagers often required assistance. To address this, civic organizations conducted informal training and digital inclusion campaigns. An informant from a local NGO noted, "We realized that without digital literacy, e-governance is just an idea. So, we teach people how to access village apps and explain why it's important."

### **Institutional Readiness**

Institutional readiness scored an average of 4.05, indicating a high level of administrative support for e-governance. Regression results indicate that institutional readiness has a significant direct effect on e-governance adoption ( $\beta = 0.41$ ,  $p < 0.01$ ). This suggests that even with strong civic engagement and digital literacy, e-governance adoption depends heavily on internal institutional capacity. Qualitative findings confirm that BUM Desa Pangkah Wetan has demonstrated proactive leadership, adequate infrastructure (e.g., Wi-Fi zones, digital kiosks), and trained personnel. Leadership was seen as particularly influential in driving digital change. One BUM Desa director stated, "We are not just following instructions from above. We are trying to innovate, and we listen to our community's input to improve our digital systems."

### **E-Governance Adoption**

Overall, e-governance adoption scored a mean of 4.09, with 71.8% of respondents reporting regular use of digital services for accessing village information, submitting complaints, and participating in budgeting processes. E-

governance services most frequently accessed include the digital financial transparency portal and online complaint handling system.

Thematic analysis shows that the most appreciated outcomes of digital governance were transparency and convenience. However, challenges remain, including inconsistent internet connectivity and occasional system downtime. Respondents stressed the importance of continuous engagement and feedback loops to improve digital platforms. A youth representative commented, “Digitalization doesn’t end when you launch a website. It’s about how people use it and whether they trust it.”

### **Integrated Findings**

The convergent mixed methods analysis shows alignment between quantitative and qualitative results: civic society significantly influences e-governance adoption, both directly and through enhancements in digital literacy and institutional responsiveness. Quantitative correlations are supported by narratives illustrating the mechanisms through which community engagement fosters trust, innovation, and responsiveness in digital governance. The synergy among civic society, institutional readiness, and digital competence forms a reinforcing triad driving successful e-governance in Pangkah Wetan.

The findings of this study affirm the pivotal role of civic society in the successful adoption of e-governance at the village level, offering empirical and theoretical contributions to existing literature on digital governance in rural contexts. By employing a mixed methods approach, this research uncovers both the statistical significance and the contextual mechanisms through which civic engagement, digital literacy, and institutional readiness collectively influence e-governance outcomes in Pangkah Wetan’s BUMDes.

First, the study reinforces existing theoretical arguments that civic society is not merely a passive beneficiary but an active co-creator of governance processes (Putnam, 1993; Kuriyan et al., 2012). The strong statistical relationship between civic society participation and e-governance adoption aligns with prior work by Bwalya and Mutula (2015), who argued that inclusive participation enhances the legitimacy and sustainability of digital governance systems. However, this study extends previous findings by empirically demonstrating how localized civic structures in a rural Indonesian village actively shape e-governance innovations through both demand articulation and community-led digital literacy efforts. These findings resonate with the concept of “bottom-up e-governance,” where community agency becomes central to digital transformation (Misuraca & Viscusi, 2015).

Second, digital literacy emerges as a critical mediating factor that enables civic society to engage meaningfully with digital tools. While the study echoes Alshehri et al.’s (2012) assertion that digital literacy is foundational for e-governance access and utility, it goes further by showing how civic groups in Pangkah Wetan proactively address digital divides. This grassroots initiative to enhance digital competence highlights the transformative role of civic society not only in governance participation but also in capacity building. It challenges the dominant assumption that digital literacy must be externally provided, illustrating instead how internal community dynamics can compensate for institutional gaps.

Third, the role of institutional readiness proves to be both enabling and reinforcing. Consistent with Ndou’s (2004) framework, this study finds that leadership, technical infrastructure, and organizational culture are crucial for

embedding digital practices into routine governance. Importantly, the qualitative findings suggest a reciprocal relationship between civic society and institutional readiness: while institutions provide the platform and policy environment, civic engagement ensures responsiveness, accountability, and sustainability. This dynamic interplay supports the socio-technical systems perspective (Trist, 1981), wherein both social and technical subsystems must co-evolve for systemic change to occur.

The study also addresses a notable gap in the literature regarding the integration of these variables into a single analytical framework using mixed methods. Unlike most prior research that isolates variables or limits analysis to urban or national contexts (Arifianto, 2021; Sulistiyani et al., 2020), this research provides a comprehensive and village-specific model of e-governance adoption. The convergence of quantitative and qualitative results underscores the robustness of the findings and validates the mixed methods design as an appropriate and underutilized approach in this field (Creswell & Plano Clark, 2018).

Moreover, the uniqueness of Pangkah Wetan lies in its civic proactiveness and institutional openness, distinguishing it from other BUM Desa where e-governance is often top-down, compliance-driven, or externally mandated. The presence of active community networks, informal digital education, and participatory planning platforms indicates that civic society can catalyse digital innovation even in resource-constrained settings. This represents a key theoretical and practical novelty of the study: e-governance adoption in rural villages is not solely dependent on state policy or infrastructure but is equally contingent on civic mobilization and localized agency.

Nevertheless, the study acknowledges several limitations. While the single-case design offers depth, it may limit generalizability to other regions without similar civic characteristics or leadership commitment. Furthermore, digital inclusion remains uneven, and long-term sustainability of civic-driven digital governance initiatives requires continued institutional support and policy alignment.

In conclusion, this research contributes to a growing body of scholarship emphasizing the importance of local agency in digital transformation. By highlighting the synergistic role of civic society, digital literacy, and institutional readiness in fostering e-governance, the study provides both a theoretical framework and practical insights for scaling digital governance in rural Indonesia and comparable settings. Future research should consider comparative studies across multiple villages to validate and refine the proposed model and explore the role of external actors such as NGOs, academia, and private tech providers in supporting civic-digital ecosystems.

## **CONCLUSION**

In general, the role of civic society in the governance of Village BUM, especially in BUM Desa Pangkah Wetan, Ujungpangkah District, Gresik Regency, is relatively important and becomes a key factor for the VoE sustainability. This study also proves that the influence of civic society needs attention and has the potential to be a threat to the implementation of VoE governance, especially on the dimensions of professionalism, local resources, and accountability. Furthermore, on the principle of community engagement and sustainability, BUM Desa Pangkah

Wetan has relatively potential to be a driving factor and key to success in the management development of VoE in the future. This study explored the role of civic society in the adoption of e-governance within the Village-Owned Enterprise (BUM Desa) of Pangkah Wetan, Gresik Regency, using a mixed methods approach that integrated quantitative and qualitative insights. The findings underscore that civic society is not only a supporting element but a central driver in enabling e-governance, especially in rural settings where institutional and infrastructural limitations often persist.

The study revealed that civic society participation significantly influences e-governance adoption, both directly and indirectly through its positive effects on digital literacy and institutional responsiveness. Active civic engagement fosters transparency, stimulates demand for digital access, and builds local capacity to utilize and maintain e-governance platforms. Community-led initiatives, including informal digital education and participation in village planning, were found to bridge knowledge gaps and democratize access to digital services. These efforts were bolstered by institutional readiness, marked by supportive leadership, functional infrastructure, and openness to community input.

One of the key contributions of this research lies in its integration of civic society, digital literacy, and institutional readiness into a unified explanatory framework, supported by empirical evidence from a localized Indonesian village context. This model challenges technocratic views of e-governance that often emphasize infrastructure and policy at the expense of social dynamics. Instead, the findings advocate for a socio-technical perspective that sees digital transformation as a collaborative, iterative process involving both formal institutions and community actors. The novelty of this research resides in its focus on a rural BUM Desa setting—an area often overlooked in e-governance studies—and its use of a mixed methods design to triangulate community experiences with statistical analysis. Unlike existing studies that predominantly examine top-down implementations in urban or centralized environments, this research provides an alternative narrative of bottom-up e-governance innovation, driven by civic agency and contextual adaptability.

The benefits of this research are both academic and practical. Academically, it offers a nuanced, empirically grounded framework for understanding digital governance in resource-limited environments. Practically, it informs policymakers, village administrators, and civil society actors about the critical importance of community involvement and localized strategies in ensuring the sustainability and effectiveness of e-governance initiatives. In light of these findings, the objectives of the study have been met: (1) to identify the role and mechanisms of civic society participation in e-governance adoption; (2) to evaluate the influence of digital literacy and institutional readiness in supporting such adoption; and (3) to provide a contextualized model of rural digital transformation. Future research may expand this inquiry through comparative case studies or longitudinal designs to further validate and enrich the understanding of civic-led digital governance models.

However, some limitations in this study include that the results of the study cannot conclude in general terms the theory or confirm some of the results of previous studies, caused by the subjectivity of researchers in the analysis of phenomena, which is one of the limitations of the qualitative research approach. Therefore, suggestions for subsequent research include: (1) expanding the area and

units of analysis used, (2) quantitative research approaches (using statistical tools) to confirm the results obtained, as well as (3) adding to the variables studied to contribute to and complement the development of the related theory.

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