

Development of a Collaborative Governance Model for Village Government, State-Owned Enterprises, and Communities for Sustainable Public Innovation: A Literature Review

Yusup Musyaffa^{1*}, Benni Yandiana², Yagus Triana³, Neneng Sulastri⁴, Nor Balkish Zakaria⁵

Doctoral Program, Universitas Garut, Indonesia^{1*,2,3}

Universitas Islam Nusantara Bandung, Indonesia⁴

Accounting Research Institute (ARI), Universiti Teknologi MARA (UiTM), Malaysia⁵

*Corresponding Author

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ABSTRACT

This study aims to develop a conceptual foundation for a *Collaborative Governance* model involving Village Government, state-owned enterprises (BUMN), and communities through the identification of conceptual developments, key dimensions, determinants of success, and research gaps. This study uses a literature review approach based on a qualitative synthesis of 41 international journal articles indexed in Scopus and published between 2021 and 2026. The analysis involved literature searching, data extraction, thematic categorization, comparative assessment, and conceptual synthesis. The results show that collaborative governance has shifted from an inter-organizational coordination mechanism to an adaptive, participatory governance system oriented toward public value. The consistently identified dimensions include *collaborative leadership*, *trust*, communication, coordination, participation, institutional governance, public innovation, digital transformation, data quality, transparency, accountability, community empowerment, collective learning, incentive mechanisms, and the sustainability of collaboration. The review also shows that previous studies remain sectoral and have not yet proposed a model integrating Village Government, BUMN, and communities as the three principal actors. This study establishes a conceptual basis for a more comprehensive, context-sensitive, and feasible collaborative model aimed at advancing public innovation and fostering sustainable village development.

Keywords: Collaborative Governance; Village Government; BUMN; Communities; Public Innovation

BACKGROUND

The demands of village development encompass quality public services, inclusive empowerment, and sustainable development. This complexity has prompted a paradigm shift in public administration from government to governance, where collaboration operates as a means of creating public value. Collaborative governance integrates the resources, authority, knowledge, and capabilities of different stakeholders; its effectiveness relies on communication, trust, coordination, shared roles, collaborative leadership, participation, transparency, accountability, innovation, data quality, digital transformation, collective learning, and institutional adaptation. Accordingly, collaborative governance has evolved from inter-organisational coordination into an adaptive, participatory, and sustainable public-value-oriented system.

Although it has developed rapidly, the implementation of *Collaborative Governance* remains predominantly sectoral, encompassing environmental governance, digital transformation, *smart cities*, supply chains, infrastructure, nature-based development, data governance, *Quintuple Helix*-based village innovation, and creativity-based rural development. Fang et al., (2022) emphasise the balance of incentives among government, businesses, and communities; Rohayati & Abdillah, (2024) demonstrate the importance of synergy among government, industry, higher education institutions, communities, and the environment; Sewpersadh, (2023) explains the formation of *value networks*. In line with these findings, (Bernardi et al., 2022; Groschopf et al.,

2021; Grossi & Welinder, 2024; Hong & Xiao, 2024; Nativi et al., 2021; Shan et al., 2021) emphasise the contribution of digitalisation, *blockchain*, artificial intelligence, and data quality to transparency, accountability, and coordination. Research by (Bradley et al., 2022; Collier et al., 2023; Constantino et al., 2021; Del Soldato & Massari, 2024; Khan, 2023; Li et al., 2023; Zhou & Etzkowitz, 2021) positions collaborative leadership, collective learning, creativity, actor behaviour, and social capital as important factors. However, no model has specifically incorporated the Village Government, BUMN, and communities as the three primary actors in village development.

Villages, as the frontline of development, require governance capable of integrating resources. Village Government has formal legitimacy, yet it still encounters limitations in institutional capacity, resources, technology, and financing. State-owned enterprises provide opportunities to act as strategic partners through funding programs, innovation, technology, investment, corporate social responsibility initiatives, and institutional networks. At the same time, communities have social capital, local knowledge, creativity, and the ability to take part. However, the relationships among these three actors have not yet been systematically formulated into an operational model; the business sector is still frequently positioned as a provider of investment/CSR, while communities are treated as beneficiaries rather than *co-creators*. Accordingly, coordination, role-sharing, communication, conflict resolution, collective learning, and collaborative assessment have not yet been fully integrated. This condition constitutes both an academic and practical imperative for developing a *Collaborative Governance* model involving Village Government–BUMN–communities.

The literature suggests a move away from inter-organizational coordination toward the integration of resources, collective learning, innovation, and the creation of public value. Government remains a principal institution but performs a facilitative function through collaborative leadership. Research by (Collier et al., 2023; Khan, 2023; Li et al., 2023; Zhou & Etzkowitz, 2021) demonstrates that *collaborative leadership* is important for establishing a shared vision, managing conflict, facilitating participation, and strengthening collective commitment. In the village context, the formal legitimacy and social proximity of Village Government reinforce this position.

Collaboration is likewise enabled by trust, transparent communication, efficient coordination, and the caliber of the interactions. (Constantino et al., 2021; Gori & Castellini, 2023; Kansky, 2022; Kazantsev et al., 2022) explain that *trust* develops through collaborative experience, consistent communication, openness, and collective learning. Findings from (Bradley et al., 2022; Grossi & Welinder, 2024; Kurwi et al., 2021; Rohayati & Abdillah, 2024) emphasise the importance of multi-stakeholder communication in aligning perceptions and roles. Given that actors vary in their traits, orientations, interests, and resources, communication, coordination, and trust serve as the institutional underpinnings of a collaborative model.

Brief Review of Previous Studies

Previous studies show that *Collaborative Governance* has become a major approach across various sectors, but research remains sectoral and has not yet produced a specific framework integrating Village Government, BUMN, and communities. Dimensions such as leadership, trust, communication, coordination, innovation, digital transformation, empowerment, and institutional governance have been widely recognized; however, they are typically studied in isolation. As a result, the interrelationships among these elements have not yet been developed into a single comprehensive and operational model.

In Indonesian village development, the Village Government is constrained by limitations in capacity, financing, technology, and human resources; BUMN has investment capacity, technology, networks, and corporate social responsibility programmes; and communities hold social capital, local knowledge, experience, and participatory capacity. These three actors have complementary functions, yet they have not been organised as an integrated collaborative governance system. The business sector tends to be positioned as a provider of resources/CSR, while communities are treated as beneficiaries, resulting in coordination, role-sharing, communication, conflict resolution, collective learning, and evaluation not being fully represented.

Developments in the literature demonstrate a shift from government dominance towards the capacity to establish dialogue, align interests, and facilitate adaptive cooperation. Government remains the *lead institution* with a facilitative function. (Bradley et al., 2022; Collier et al., 2023; Khan, 2023; Li et al., 2023; Zhou & Etzkowitz, 2021) emphasise *collaborative leadership* as a fundamental factor in establishing a shared vision, facilitating

participation, managing conflict, and strengthening collective commitment.

Success relies on trust, effective communication, coordination, and the overall quality of interpersonal relationships. (Constantino et al., 2021; Gori & Castellini, 2023; Kansky, 2022; Kazantsev et al., 2022) demonstrate that *trust* develops through open communication, experience, consistency of action, and collective learning; (Bradley et al., 2022; Grossi & Welinder, 2024; Kurwi et al., 2021; Rohayati & Abdillah, 2024) emphasise multi-stakeholder communication to align perceptions and responsibilities.

Digital transformation increasingly determines governance effectiveness. Sewpersadh, (2023) explains the formation of *value networks*, whereas (Bernardi et al., 2022; Groschopf et al., 2021; Grossi & Welinder, 2024; Hong & Xiao, 2024; Nativi et al., 2021; Shan et al., 2021) demonstrate the contribution of *blockchain*, artificial intelligence, data governance, and digital ecosystems to openness, traceability, and decision quality. Nevertheless, technology still operates as an enabling instrument that relies on leadership, institutional preparedness, organizational culture, human resource capacity, and cooperative relationships.

Overall, the literature has generated various concepts and approaches, but the dimensions of success are still discussed in isolation and have not been integrated for the Indonesian village context. The business sector is typically framed as offering investment and corporate social responsibility, whereas communities are cast as recipients. To date, no model has been identified that accounts for the relationships among the village government, state-owned enterprises, and communities across planning, implementation, coordination, and evaluation, leading to sustainable public innovation. This condition constitutes a *scientific space* for a *Collaborative Governance* model involving Village Government–BUMN–communities.

Research Gap, State of the Art, and Research Novelty

The literature demonstrates the dominance of sectoral studies and the identification of success factors, but no specific framework is available to explain the collaborative relationships among Village Government, BUMN, and communities. The main research gap is the requirement to bring these three actors together within a single governance framework that is comprehensive, sensitive to context, and usable at the level of village government.

The state of the art of this research lies in consolidating the dimensions of *Collaborative Governance* that have developed separately into an integrated framework: Village Government as the *lead institution*, BUMN as a *strategic development partner* through resources, technology, innovation, and institutional capacity, and communities as active *co-creators* throughout all stages of development.

The conceptual benefit stems from embedding collaborative leadership, trust, communication, coordination, institutional governance, community empowerment, public innovation, digital transformation, data quality, transparency, accountability, incentive mechanisms, collective learning, and collaborative evaluation into a single, integrated, interconnected arrangement.

On this basis, the *novelty* lies not merely in synthesising theoretical developments but in reconstructing a specific Village Government–BUMN–community model that extends *Collaborative Governance* theory in Public Administration and provides an implementation-oriented foundation for empirical research and sustainable village development in Indonesia.

Research Objectives

This study seeks to establish a conceptual basis for a Collaborative Governance model that brings together village government, state-owned enterprises, and communities in order to foster public innovation and support sustainable village development.

1. To examine the evolution of concepts, dimensions, and frameworks of Collaborative Governance grounded in relevant scholarly literature.
2. To determine the factors that consistently influence the success of *Collaborative Governance* implementation through a synthesis of previous research findings.

3. To formulate the *research gap* and establish directions for developing a *Collaborative Governance* model that integrates Village Government, BUMN, and communities as a conceptual foundation for subsequent empirical research.

Research Question

The study employs a *Literature Review* to integrate empirical and conceptual findings concerning conceptual development, dimensions, success factors, and research gaps as the basis for developing a *Collaborative Governance* model involving Village Government, BUMN, and communities.

1. How have the ideas, dimensions, and frameworks of collaborative governance advanced within the scientific literature?
2. Based on a synthesis of prior studies, what factors repeatedly shape the successful implementation of collaborative governance?
3. What *research gaps* and directions for developing a *Collaborative Governance* model remain open based on the results of the literature synthesis?

Answers to these three questions provide a conceptual foundation for a model integrating the three actors, strengthening Public Administration theory, and serving as a reference for empirical research and collaborative governance practices for public innovation and sustainable village development.

RESEARCH METHOD

This study employs a literature review method with a qualitative synthesis approach to identify, integrate, and analyze developments in Collaborative Governance as a basis for developing a model involving Village Governments, State-Owned Enterprises (SOEs), and communities. The review focuses on conceptual developments, dimensions, mechanisms, effectiveness factors, stakeholder relationships, and research gaps. The review process consisted of literature identification, screening, quality assessment, data extraction, coding, thematic grouping, comparative analysis, and conceptual synthesis.

Literature Search Strategy

The Scopus database was used as the primary source of international journal articles. The search strategy targeted studies on Collaborative Governance and its relationships with rural development, sustainable development, public innovation, environmental governance, digital transformation, community empowerment, and cross-sector collaboration. Keywords included “collaborative governance,” “collaborative governance model,” “cross-sector collaboration,” “multi-stakeholder collaboration,” “public-private-community collaboration,” “rural development,” “sustainable development,” “public innovation,” “digital transformation,” “community empowerment,” and “village governance.” Keywords were combined to capture variations in terminology and identify studies relevant to the research focus.

The selection process consisted of several stages: defining search concepts and keywords; searching the Scopus database; screening titles, abstracts, and keywords; applying inclusion and exclusion criteria; and conducting full-text assessment. A total of 41 international journal articles were purposively selected for qualitative synthesis.

Inclusion, Exclusion, and Quality Assessment

Articles were included when they were Scopus-indexed international journal articles addressing Collaborative Governance, cross-sector or multi-stakeholder collaboration, and discussing relevant concepts, dimensions, mechanisms, effectiveness factors, models, or outcomes. Studies related to public governance, rural development, sustainable development, public innovation, community empowerment, environmental governance, or digital transformation were prioritized. Articles were excluded when they were not Scopus-indexed journal articles, lacked substantive discussion of collaboration, or were insufficiently relevant to the

research objectives.

The selected articles were critically assessed based on clarity of objectives, theoretical framework, research approach, methodological consistency, findings, limitations, and contribution to Collaborative Governance. Data were extracted into a review matrix covering article identity, objectives, context, approach, concepts, dimensions, effectiveness factors, findings, limitations, and implications. The extracted data were analyzed through thematic synthesis to identify recurring dimensions, comparative patterns, research gaps, and conceptual relationships relevant to the proposed model.

At the initial stage, collaboration was primarily understood as inter-organisational coordination; however, recent literature increasingly positions it as a governance system that integrates multiple actors across planning, implementation, evaluation, and innovation. Findings from (Bradley et al., 2022; Collier et al., 2023; Fang et al., 2022; Rohayati & Abdillah, 2024; Zhou & Etzkowitz, 2021) enrich this approach through *Triple Helix*, *Quintuple Helix*, *Nature-Based Solutions*, *Digital Ecosystem*, and *Collaborative Leadership*, accompanied by *blockchain*, artificial intelligence, *smart contracts*, and data governance.

Synthesis of the Development of the *Collaborative Governance* Concept

The synthesis of 41 articles demonstrates an evolution from inter-organisational coordination towards joint processes of planning, implementation, evaluation, and public innovation. Collaborative relationships are now seen as processes that combine the resources, knowledge, authority, and capabilities of diverse actors to produce sustainable public value.

Table 1: Dimensions and Factors of Collaborative Governance Effectiveness Based on a Synthesis of 41 Articles

No.	Dimension	Occurrence in the Literature
1	Collaborative Leadership	Very dominant
2	Trust	Very dominant
3	Communication	Very dominant
4	Coordination	Very dominant
5	Participation	Dominant
6	Institutional Governance	Dominant
7	Transparency	Dominant
8	Accountability	Dominant
9	Public Innovation	Dominant
10	Digital Transformation	Dominant
11	Data Quality	Moderate
12	Incentive Mechanisms	Moderate
13	Collective Learning	Moderate
14	Community Empowerment	Dominant
15	Sustainability	Very dominant

The synthesis also demonstrates a diversity of approaches. Fang et al., (2022) employ *evolutionary game theory* to examine the balance of incentives among government, businesses, and communities; Rohayati & Abdillah, (2024) employ the *Quintuple Helix* for village innovation; Bradley et al., (2022) introduce *Integrated Collaborative Governance* through *Urban Living Labs*; Collier et al., (2023) develop the *Connecting Nature Framework*; and Zhou & Etzkowitz, (2021) develop *Triple Helix Twins*. Other research integrates digital ecosystems, blockchain technology, smart contracts, artificial intelligence, and data governance. All approaches focus on integrating resources and enhancing capacity among stakeholders.

Table 2: Factors of Collaborative Governance Effectiveness and Their Level of Occurrence Based on a Synthesis of 41 Articles

No.	Factor	Frequency of Occurrence
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1	Collaborative Leadership	Very high
2	Trust	Very high
3	Communication	Very high
4	Coordination	Very high
5	Stakeholder Participation	High
6	Institutional Governance	High
7	Transparency	High
8	Accountability	High
9	Digital Technology	High
10	Public Innovation	High
11	Data Quality	Moderate
12	Incentive Mechanisms	Moderate
13	Collective Learning	Moderate
14	Community Empowerment	High
15	Collaboration Sustainability	High

These developments demonstrate that *Collaborative Governance* is a multidimensional concept. Leadership, trust, communication, coordination, participation, transparency, accountability, digital transformation, data governance, public innovation, collective learning, incentive mechanisms, empowerment, and sustainability work together to influence collaborative effectiveness.

Table 3: Collaborative Governance Approaches Identified in the 41 Articles

No.	Approach/Model	Research Context
1	Triple Helix	Innovation and sustainable development
2	Quintuple Helix	Village innovation
3	Integrated Collaborative Governance	Smart city
4	Connecting Nature Framework	Nature-Based Solutions
5	Digital Ecosystem	Digital transformation
6	Human Behavior–Cognition in Context	Actor behaviour
7	Collaborative Plan of Work	Infrastructure
8	Smart Contract	Supply chain
9	Blockchain Governance	Digital governance
10	Evolutionary Game Theory	Environmental governance

DISCUSSION

Development of the Concept, Dimensions, and Frameworks of *Collaborative Governance* (Research Question 1)

The synthesis of 41 articles demonstrates the transformation of *Collaborative Governance* from inter-organisational coordination into an adaptive, participatory, and public-value-oriented system. Success no longer relies on government dominance; instead, it depends on integrating actors, resources, interests, collective learning, and innovation.

The *Triple Helix*, *Quintuple Helix*, *Integrated Collaborative Governance*, *Connecting Nature Framework*, *Digital Ecosystem*, and digital transformation approaches have expanded the application of *Collaborative Governance*. Despite differences in their approaches, all of them mobilize capabilities, resources, and knowledge to foster innovation and to advance sustainable development.

This concept is multidimensional, encompassing *collaborative leadership*, *trust*, communication, coordination, participation, institutional governance, transparency, accountability, public innovation, digital transformation, data quality, *collective learning*, community empowerment, incentive mechanisms, and sustainability. These dimensions reinforce one another.

Its use has broadened to encompass sustainable development, environmental governance, digital transformation, smart cities, public innovation, data governance, and community empowerment, yet the village government context remains constrained. No model has yet integrated Village Government, state-owned enterprises, and communities as the three principal actors.

This evolution provides a foundation for a more inclusive, adaptive, and network-based model through collaborative leadership, *trust*, open communication, and digital technology as supporting mechanisms for integrating Village Government, BUMN, and communities.

Factors Influencing the Success of *Collaborative Governance* (Research Question 2)

The synthesis of 41 articles shows that the success of Collaborative Governance stems from the integration of institutional, social, behavioral, and technological dimensions. Consistent factors include *collaborative leadership*, *trust*, communication, coordination, participation, institutional governance, transparency, accountability, public innovation, digital transformation, data quality, *collective learning*, incentive mechanisms, community empowerment, and sustainability.

(Bradley et al., 2022; Collier et al., 2023; Khan, 2023; Li et al., 2023; Zhou & Etzkowitz, 2021) demonstrate that *collaborative leadership* establishes a shared vision, facilitates dialogue, aligns interests, manages conflict, and strengthens commitment. In rural contexts, Village Government plays a strategic role as the principal institution because it combines formal legitimacy with social proximity.

(Constantino et al., 2021; Gori & Castellini, 2023; Kansky, 2022; Kazantsev et al., 2022) demonstrate that *trust* develops through open communication, consistency of action, experience, and collective learning. When trust levels are low, conflict may be intensified and coordination can be obstructed; by contrast, high levels of trust reinforce commitment and enhance the legitimacy of policy.

Communication and coordination sustain interaction. (Bradley et al., 2022; Grossi & Welinder, 2024; Kurwi et al., 2021; Rohayati & Abdillah, 2024) emphasise the importance of multi-stakeholder communication forums for aligning perceptions, role-sharing, and decision-making; coordination aligns activities, resources, and responsibilities.

(Bernardi et al., 2022; Groschopf et al., 2021; Grossi & Welinder, 2024; Hong & Xiao, 2024; Sewpersadh, 2023; Shan et al., 2021) demonstrate that digital technology, *blockchain*, artificial intelligence, and data governance improve transparency, accountability, information integration, and coordination efficiency. Technology continues to operate as an instrument that supports, rather than replaces, social relationships and institutional capacity. In this way, technology functions as a tool of support instead of a substitute for social relationships and institutional capacity.

Accordingly, leadership supplies direction, trust reinforces legitimacy, and communication and coordination enable the alignment of actions, while digital transformation enhances transparency and effectiveness. Together, this arrangement establishes the basis for a collaborative model involving the Village Government, BUMN, and communities.

Research Gap and Directions for Developing the *Collaborative Governance* Model (Research Question 3)

The synthesis of 41 articles demonstrates extensive developments in environmental governance, sustainable development, *smart cities*, digital transformation, village innovation, health, education, data governance, supply chains, and regional development. However, theoretical development remains sectoral, requiring a more integrative and contextual model for village governance in Indonesia.

The first *research gap* is the absence of a model that explicitly integrates Village Government, BUMN, and

communities as the three principal actors. Fang et al., (2022) examine government, businesses, and communities in environmental governance; Rohayati & Abdillah, (2024) develop village innovation through the *Quintuple Helix*; Zhou & Etzkowitz, (2021) through *Triple Helix Twins*; and (Bradley et al., 2022; Collier et al., 2023) focus on urban development and *Nature-Based Solutions*. None explains the Village Government–BUMN–community configuration as the principal system of village development.

The second gap relates to the limited scope of the existing analyses. *Collaborative leadership, trust, communication, coordination, institutional governance, transparency, accountability, innovation, digital transformation, data quality, collective learning, and empowerment* have been widely discussed, but the relationships among these dimensions have not yet been formulated within an implementation-oriented framework that explains their interactions.

The third gap concerns the empirical context. Most articles focus on local governments, public institutions, health sectors, urban areas, environmental matters, infrastructure, and digital transformation. Studies specifically addressing village government remain limited, while research linking Village Government with state-owned enterprises is rarely found. The social, institutional, and developmental features embedded in village communities imply that models developed in other settings cannot be applied directly.

The direction for model development is to integrate Village Government as the *lead institution*, BUMN as a *strategic development partner* through resources, investment, technology, and innovation, and communities as *co-creators* from planning and implementation through evaluation. These connections are reinforced through collaborative leadership, trust, communication, coordination, institutional governance, digital transformation, transparency, accountability, public innovation, community empowerment, shared learning, data quality, incentive mechanisms, and the long-term sustainability of collaboration.

The principal contribution of the study is a conceptual reconstruction that connects the identified actors, governance dimensions, collaborative processes, and expected outcomes into a comprehensive, context-sensitive, and implementation-oriented framework. This reconstruction provides the basis for the proposed Village Government–BUMN–community Collaborative Governance model presented in Figure 1.

Proposed Collaborative Governance Model for Village Government–BUMN–Community

Based on the synthesis of 41 articles, this study proposes a Collaborative Governance model integrating Village Government, BUMN, and communities as complementary actors. Village Government serves as the lead institution, BUMN as a strategic partner contributing resources, technology, investment, and innovation, and communities as active co-creators contributing local knowledge, social capital, and participation. Their collaboration is strengthened by interconnected dimensions including collaborative leadership, trust, communication, coordination, institutional governance, participation, transparency, accountability, digital transformation, data quality, public innovation, empowerment, collective learning, incentives, and sustainability. The model operates through joint planning, resource integration, implementation, monitoring, evaluation, learning, and innovation to achieve sustainable public innovation and village development.

CONCLUSION

The study demonstrates that *Collaborative Governance* has evolved from inter-organisational coordination into an adaptive, participatory, and public-value-oriented system. The synthesis of 41 international journal articles indexed in Scopus identifies *collaborative leadership, trust, communication, coordination, institutional governance, transparency, accountability, public innovation, digital transformation, data quality, collective learning, community empowerment, incentive mechanisms, and sustainability* as consistent dimensions.

The scholarly literature continues to be largely shaped by sector-specific approaches and has not yet developed a conceptual model that specifically integrates village governance, state-owned enterprises, and communities. This condition generates a *research gap* and provides space for developing a model suited to the characteristics of Indonesian village government.

However, the proposed model should be considered a conceptual framework rather than an empirically validated model. Further empirical research is required to test its relationships, feasibility, and effectiveness in real village settings and to refine the model according to different local contexts.

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