



Governing Complexity in Multi-Level Projects: Evaluating a Collaborative Governance Regime in the Prambanan-Klaten Toll Road

Sri Mulyani¹ * Reza Noormansyah² Matheus Gratiano Mali³

¹Department of Public Administration, Universitas Tidar, Magelang, Indonesia
srimulyani@untidar.ac.id

Abstract. The Prambanan-Klaten Toll Road exemplifies multi-level infrastructure delivery within Indonesia's National Strategic Projects (*Proyek Strategis Nasional*, *PSN*), spanning central ministries, land agencies, provincial governments, a state-owned toll-road, and the Yogyakarta Sultanate as a traditional authority. Guided by Emerson, Nabatchi, and Balogh's Collaborative Governance Regime (CGR) framework, the analysis draws on Board-level documents from PT Jasamarga Jogja Solo and triangulates regulatory and media sources. Findings show a formally coordinated, hierarchy-inflected arrangement that nonetheless displays adaptive capacity through contract addenda, revisions to site determination (*Penlok*), and the documented termination of a rest-area partnership. Institutional design enables cross-actor coordination, yet public participation remains limited. The study argues for the institutionalization of public participation and strengthen deliberative mechanisms in projects that intersect with living spaces and land regimes such as Sultan Ground (SG) and Tanah Kas Desa (TKD). It contributes to Indonesian infrastructure governance literature and specifies design levers for trust-based, transparent, co-produced policy approaches.

Keywords: collaborative governance, deliberative mechanism, Prambanan-Klaten toll road, *Proyek Strategis Nasional*

1 Introduction

Over the past decade, the Indonesian government has prioritized connectivity as a central focus of infrastructure development. This policy is reflected in the National Medium-Term Development Plan (*RPJMN*) and the National Strategic Projects (*PSN*), which emphasize the importance of expanding the toll road network as the backbone of logistics and interregional mobility [1,2]. Toll roads have become strategic instruments to accelerate economic integration, reduce regional disparities, and drive investment.

The construction of interprovincial toll roads such as the Solo-Yogyakarta-NYIA Kulonprogo Toll Road, which includes the Prambanan-Klaten segment, represents a concrete manifestation of this policy direction. This project, besides serving as a con-

nector between two growth centers in Central Java and the Special Region of Yogyakarta, also opens direct access to strategic areas such as YIA Airport and surrounding industrial corridors [3,4]. Therefore, the construction of this toll road is categorized as a priority project with transformative regional impacts.

Nevertheless, the implementation of toll road projects as PSNs also brings complexity to governance. This complexity includes land acquisition issues, the involvement of cross-sectoral and cross-regional actors, as well as the dynamics of relationships between central government, local governments, toll road business entities (*BUJT*), and local communities [5-7]. Within this context, the collaborative governance approach becomes relevant as a framework to understand how various actors work together in situations that are not always symmetrical in terms of power, resources, and interests.

As part of the Solo-Yogyakarta-NYIA Kulonprogo toll road project, the development of the Prambanan-Klaten segment displays a governance configuration involving actors from various levels of government and sectors. At the central level, the Ministry of Public Works and Housing (*PUPR*) and the State Asset Management Agency (*LMAN*) play roles in macro planning, budgeting, and land acquisition. On the other hand, actors at the regional level such as the Housing and Settlement Area Office (*Disperakim*), the National Land Agency (*BPN*), and traditional governance elements such as the Panitikismo of the Yogyakarta Sultanate are integral to field-level implementation.

In the private sector, the *BUJT* role is held by PT Jasamarga Jogja Solo (PT *JMJ*), which acts as the technical executor of construction and as a mediator among various inter-institutional interests. The *BUJT*, aside from dealing with construction aspects, is also involved in cross-sectoral and cross-jurisdictional coordination forums. This involvement places the *BUJT* in a unique position. On one hand, it is an infrastructure operator; on the other hand, it functions as a coordinator between the central government, local governments, and local communities.

This complexity is heightened by the presence of customary land entities such as Village Treasury Land (*TKD*) and Sultan Ground (*SG*) in the Special Region of Yogyakarta, which are not fully subject to conventional land acquisition mechanisms. The planning and negotiation processes require the involvement of cultural actors and symbolic authorities such as the Yogyakarta Sultanate, thereby expanding the meaning of governance in the context of public infrastructure collaboration. Thus, the construction of the Prambanan-Klaten toll road segment cannot be viewed merely as a technocratic construction activity, but rather as a dynamic arena of interaction among state and non-state actors who continuously adapt, network, and renegotiate boundaries of authority and interest.

During its implementation, the development of the Prambanan-Klaten Toll Road has faced various challenges concerning socio-political and institutional dimensions. One major issue is land acquisition involving private land, *TKD*, and *SG* [8,9]. Although administratively the land acquisition process had reached over 95% as of April 2025, several strategic areas such as access to the rest area and on/off ramps in Klaten and Trihanggo had yet to be acquired due to community resistance, delays in location determination (*Penlok*), and disagreements over compensation valuation.

On the other hand, the management of the rest area also faced obstacles. The initial business partnership plan between the BUJT and an investor partner was canceled because the potential partner expressed disinterest in continuing the project. This impacted the redesign process, feasibility study revisions, and delays in selecting a new partner. In fact, rest areas are a vital component of toll user services and a strategic opportunity for local economic empowerment. Uncertainty in this aspect raises questions about the consistency of public asset governance and inter-party coordination mechanisms.

Another notable challenge is the public consultation mechanism, which some parties consider not aligned with participatory and deliberative principles. In several locations such as Gergunung and Trihanggo villages, residents protested due to feeling insufficiently involved in voicing their aspirations regarding plans for toll access or rest areas. Criticism emerged against consultation models that were merged with socialization events, thus blurring the lines between information delivery and consent acquisition. This issue underscores the importance of designing substantive public participation in large-scale infrastructure projects.

Amid the complexity of actors, institutional dynamics, and social challenges accompanying the construction of the Prambanan-Klaten Toll Road, the collaborative governance approach serves as a relevant analytical framework to examine how governance processes unfold. This concept emphasizes the direct involvement of various actors, both from state and non-state sectors, in public decision-making processes that are collective, deliberative, and consensus-based. In the context of strategic infrastructure projects such as toll roads, collaborative governance becomes a practical field filled with negotiations of power, technocratic legitimacy, and articulation of community interests [10,11].

This study aims to understand how collaborative governance is practiced, particularly through the processes of planning, land acquisition, design preparation, and rest area management in the Prambanan-Klaten Toll Road project. By examining the minutes of meetings of the Board of Commissioners and Directors of PT JMJ, as well as interpreting strategic documents and the dynamics of public consultation, this study seeks to unravel how collaboration is built, institutionalized, and sustained within this project, including how tensions, resistance, or inconsistencies emerge.

This research will map actor-structure relations and analyze the dynamics of interaction, social capital, institutional capacity, and forms of adaptation that occur. Thus, this study contributes to enriching the discussion on collaborative governance in the context of national strategic projects in Indonesia, which often intersect with sectoral bureaucracy, local elite interests, and civil society resistance.

2 Literature Review

2.1 Practical dynamics in Collaborative Governance

The concept of collaborative governance emerged as a response to the limitations of governance models based on state hierarchy and market mechanisms in addressing

complex, cross-sectoral public policy issues laden with conflicting interests [12]. Collaborative governance emphasizes the importance of cooperation between state and non-state actors in deliberative and consensus-based public decision-making processes [13]. In its basic definition, collaborative governance refers to a governance arrangement in which one or more government institutions directly engage non-state actors in a collective policy-making process that is formal, egalitarian, and open to dialogue .

According to Ansell and Gash (2008), there are four elements that constitute the success of collaboration. First, starting conditions, which include power balance and levels of trust among actors. Second, institutional design that ensures inclusivity and transparency. Third, facilitative leadership capable of bridging differences. Fourth, a collaborative process that encompasses face-to-face dialogue, trust-building, shared understanding, and commitment to joint outcomes. These four elements serve as the foundation for analyzing collaboration across various policy contexts, including strategic infrastructure development [10].

This model was later conceptually expanded by Emerson, Nabatchi, and Balogh (2012) into the Collaborative Governance Regime (CGR) framework. In this approach, collaborative governance is understood not only as an ad-hoc mechanism or forum but also as a systemic and dynamic governance regime. CGRs consist of three main components. First, drivers, which are triggering conditions such as crises, shared interests, or external pressures. Second, collaborative dynamics, which include principles of engagement, shared motivation, and capacity for joint action. Third, outcomes, which are the results of collaboration in the form of joint actions, new policies, or institutional transformation [11].

The CGR framework offers analytical advantages in examining projects with high interdependence intensity and complex governance challenges, as found in the Prabanan-Klaten Toll Road development project. In addition to analyzing actor configurations and power relations, this framework also enables the examination of negotiation processes, institutional adaptation, and the legitimacy dynamics that emerge over the course of the project [14]. By combining perspectives from both approaches, this study positions collaborative governance as an interaction arena that shapes the course of development.

2.2 Network Governance

In the context of policy governance involving multiple actors and jurisdictions, the network governance approach becomes relevant. Network-based governance emphasizes the importance of horizontal relationships among institutions and actors who do not necessarily hold authoritative hierarchies over one another but are interdependent in achieving shared goals [15]. In this model, the decision-making process is influenced by the actors' ability to form coalitions, build trust, and negotiate under conditions of uncertainty and limited resources [12,16]. This becomes a defining characteristic of strategic infrastructure projects that cross administrative boundaries and involve central government, local government, private sector, and local communities.

Network governance serves as an analytical foundation for interpreting coordination patterns among institutions such as PUPR, BPN, regional governments, the Sultanate, and BUJT-JMJ, where no single actor holds full dominance over the toll road development process. On the contrary, the success of project implementation depends on each party's ability to build cooperative relationships that are interdependent and continuous. Under such conditions, informal mechanisms such as inter-agency coordination meetings, the formation of ad hoc technical teams, and non-bureaucratic communication become crucial to overcoming structural coordination limitations [17].

However, such collaborative networks are also prone to institutional dilemmas, especially when each actor's interests are autonomous and at times conflicting. In this regard, the institutional collective action offers a conceptual framework for understanding how cross-institutional actors confront and manage collective dilemmas. Institutional collective action highlights the conditions under which institutional actors, such as local governments and technical agencies, face incentives and barriers in forming alliances, particularly when they encounter high transaction costs, outcome uncertainty, or risks of opportunism [18].

The Prambanan-Klaten Toll Road project can be read as an arena where actors must balance local interests (for instance, in the case of community resistance to toll access in Klaten), national project efficiency, and the pressures of time and budget targets. Dynamics such as delayed Penlok, termination of rest area partnership agreements, and negotiation processes with traditional authorities demonstrate that project governance is the result of a series of collective calculations shaped by incentive structures, inter-institutional trust, and the capacity for cross-jurisdictional coordination [19].

Thus, the integration of the network governance and institutional collective action approaches provides a foundational theoretical framework for understanding how collaboration unfolds in development projects that are complex, political, and involve various institutional entities in Indonesia.

2.3 Governance challenges in PSN

PSN is state initiative aimed at accelerating infrastructure development to support economic growth and interregional connectivity. Through Presidential Regulation Number 3 of 2016, the central government established a list of priority projects, provided regulatory support, and prepared financing through public-private partnership schemes as well as state capital participation [20,21]. However, in practice, the implementation of PSNs faces multidimensional governance challenges, particularly when projects cross administrative boundaries, involve customary or socio-historical land, and confront resistance from local communities.

Studies highlight three issues in PSN governance. First, the dominance of technocratic and sectoral approaches makes decision-making tend to be elitist and lacking in public deliberation [6,21]. This results in public outreach and consultation processes often being perceived as mere formalities, without substantive involvement from affected citizens. Second, weak coordination across institutions and levels of government leads to overlapping authorities, differences in administrative speed, and delays in field

implementation, for instance in land acquisition processes or issuance of technical permits [22,23]. Third, the absence of horizontal and participatory accountability mechanisms makes projects vulnerable to social conflict and legitimacy crises [6,21-23].

In the context of toll road development, these problems emerge in the form of rejection of land acquisition, information asymmetry between government and citizens, and power imbalances in compensation negotiations. The Prambanan-Klaten Toll Road Project is a concrete example where a PSN intersects with local sensitivities, ranging from the use of SG, the presence of TKD, to the involvement of communities in planning the location of rest areas and road access. Governance of such projects concerns not only technical efficiency but also demands social sensitivity, institutional flexibility, and political legitimacy.

Local institutional capacity is crucial in supporting the success of PSNs. The success of national projects is influenced by the ability of local actors to translate, adapt, and renegotiate central policies [24]. In this regard, infrastructure projects are socio-political processes that require collaborative adaptation between central actors, regional governments, communities, and private stakeholders. Thus, understanding the governance challenges of PSNs requires a theoretical framework that pays attention to the dynamics of actor interaction, institutions, and the local values embedded in society.

2.4 Public participation in infrastructure project

Public participation in infrastructure development is a functional prerequisite for the successful implementation of policy [25,26]. In public policy literature, participation is defined as citizen involvement throughout the entire policy cycle, from planning and implementation to evaluation, with the aim of enhancing legitimacy, responsiveness, and the effectiveness of policy outcomes [13,27]. In the context of strategic infrastructure projects such as toll roads, participation is crucial because technical and spatial decisions taken will directly impact the living space, economic access, and social order of local communities.

However, participation in infrastructure projects in Indonesia tends to be procedural and formalistic. Studies show that public consultation forums more often serve as one-way socialization spaces rather than deliberative arenas that allow communities to express aspirations or negotiate policy alternatives [6,7]. Limited information, power imbalances, and low infrastructure literacy result in public participation often being perceived as passive approval, not active engagement [22]. This contributes to a sense of injustice and rejection at the local level, as reflected in various protests against toll road, dam, and industrial zone projects.

Public trust becomes a crucial element intertwined with participation. In the context of infrastructure projects, trust refers to the perception that the development process is carried out fairly, inclusively, and with respect for the interests of affected communities [28]. This trust is formed through the collective experience of communities in interacting with the state and project implementers, including in the provision of information, compensation valuation, and handling of social and environmental impacts.

The failure to build public trust can hinder project progress, prolong land negotiation processes, and even trigger open conflict. Therefore, participation models in strategic projects need to shift from a technocratic logic to a co-productive approach that enables communities to have bargaining power in project design, in line with the argument in collaborative governance that the legitimacy of public policy depends on the quality of actor interaction, including how citizen voices are made part of collective decision-making [8,9].

In the context of the Prambanan-Klaten Toll Road development, the dynamics of community resistance to entry access and rest area locations highlight the importance of strengthening more substantive participation mechanisms. When consultation forums are merely informative rather than deliberative, the potential for resistance will continue to emerge as a form of correction to governance perceived as exclusive. This study, therefore, positions participation and public trust as key indicators of successful infrastructure governance at the local level.

In the Indonesian context, infrastructure development projects cannot be separated from distinct local dynamics, including the existence of customary land, cultural institutions such as royal palaces (*Keraton*), and social structures that influence the decision-making process. These characteristics make infrastructure project governance not only a matter of administration and technicality but also one that touches on historical, symbolic, and local political aspects. In many regions, especially outside the centers of administrative power, land is not merely an economic asset but a socio-cultural entity rich in identity and legitimacy.

Studies show that infrastructure projects intersecting with customary land or symbolic areas such as sultanate or *ulayat* lands often encounter resistance not merely because of compensation values, but because the projects are perceived to disregard the local values that bind communities [29,30]. In the Yogyakarta context, the existence of SG and Village TKD are entities that fall outside the formal land acquisition scheme as regulated by Law No. 2 of 2012 [31,32]. The procedure for managing this land must go through permission from the Sultanate and be facilitated by the *Panitikismo*, making the process more complex as it involves cultural authorities beyond the state's bureaucratic structure.

Furthermore, territorial structures that still honor cultural entities such as the *keraton* have implications for forms of local participation that cannot always be reached through formal public consultation schemes. Community participation in these areas is more often mediated through informal structures such as traditional leaders, village officials, or even networks of loyalty to the royal court. When technocratic approaches fail to read this social logic, participation becomes merely procedural and risks generating rejection or passive sabotage. As noted by Erb, Sulistiyanto, and Faucher (2005), development projects in Indonesia often fail due to insensitivity to the socio-cultural landscape that shapes local dynamics.

In the development of the Prambanan-Klaten Toll Road, the presence of SG and TKD demands a governance approach that is sensitive to symbolic values, social legitimacy, and traditional authority. Collaboration with the *Panitikismo*, along with negotiations involving village apparatus and local communities, shows that the infrastructure governance process must be redesigned to be compatible with local socio-political

structures. Here lies the urgency of collaborative governance as an approach that enables institutional design flexibility, cross-cultural adaptation, and empowerment of local actors in jointly designing decisions [10,11].

3 Methodology

This study employs a qualitative approach with the aim of understanding the dynamics of collaborative governance in the development of the Prambanan-Klaten Toll Road as part of a national strategic project. The main focus of the research lies in actor interactions, decision-making mechanisms, and institutional adaptation in response to the challenges of project implementation on the ground.

Primary data for this research were obtained from official documents of meetings held by the Board of Commissioners and Directors of PT JMJ during the period from December 2024 to May 2025. These documents contain important information regarding strategic decision-making, inter-agency coordination dynamics, land acquisition processes, and the termination of cooperation with the rest area partner. To enrich the context and broaden the analytical perspective, this study also utilizes secondary data in the form of previous academic studies on collaborative governance and infrastructure governance in Indonesia, media reports related to community protests and project developments.

As an analytical framework, this study uses CGR by Emerson, Nabatchi, and Balogh (2012). The CGR allows the study to examine how collaborative regimes are formed and operate within the context of complex infrastructure projects, by emphasizing three main components, namely drivers (the conditions that trigger collaboration), collaborative dynamics (mechanisms of interaction, shared motivation, and capacity for joint action), and outcomes (institutional or policy results).

The unit of analysis in this study includes the roles and configurations of actors (including central government, regional government, the Sultanate, and private sector), institutional designs that support collaboration, the dynamics of collaborative processes (including coordination forums, public consultation mechanisms, and stakeholder negotiations), as well as the various challenges and forms of adaptation that emerge during project implementation. Thus, this method enables an in-depth exploration of the complexities of governance in the Prambanan-Klaten Toll Road project as a collaborative arena laden with negotiations of interest, power, and legitimacy.

4 Results

4.1 The collaborative relations

The Prambanan-Klaten Toll Road development project reveals a complex collaborative structure involving various actors from multiple sectors and levels of government. At the central level, PUPR, through Ditjen Bina Marga, acts as the holder of technical authority, while BPN and LMAN carry out strategic functions in the land acquisition process and the disbursement of compensation funds.

The BUJT, in this case PT MJJ, holds the position of main executor of the construction and as a bridge between central authorities, local governments, and implementing contractors. At the local level, the governments of the Special Region of Yogyakarta (DIY) and Central Java play coordinating roles, especially in ensuring administrative and social support from affected communities. Outside the state structure, the Panitikismo of the Yogyakarta Sultanate serves as a non-state actor with a central role in land management legitimacy, particularly concerning the status of SG and TKD.

One distinctive form of collaborative relation in this project is the tripartite coordination scheme between BUJT, Panitikismo, and BPN regarding the acquisition of SG and TKD land. The land management procedures in the DIY area require approval from the Yogyakarta Sultanate through the Panitikismo as the cultural and historical authority, which in practice serves as a bridge between modern bureaucratic logic and local value systems.

In PT MJJ Board of Commissioners coordination meetings (January 24 and May 22, 2025), it was revealed that most of the SG plots had completed the documentation process, but disbursement from LMAN depended on administrative legal clarity that required confirmation from the Panitikismo. This coordination model demonstrates that collaborative governance in this project context involves vertical and symbolic relationships with traditional actors.

The role of implementing contractors, namely PT Adhi Karya and PT Daya Mulya Turangga, is also important in both the technical and social dimensions of the project. Beyond building physical infrastructure, contractors are also involved in technical dialogue processes with communities, especially in areas experiencing resistance to the planned construction of toll access or rest areas.

In several cases, such as the redesign of the on/off ramps and the canceled rest area access from the Klaten segment, contractors were asked to prepare technical scenarios adapted to the socio-political dynamics on the ground. The role of the contractors becomes crucial in maintaining project continuity amid design changes, land acquisition delays, or the termination of cooperation with rest area investment partners.

However, the dimension of public participation in this project presents challenges that illustrate the limits of collaboration. Public consultation, which is a formal mandate in every land acquisition and design change, is not always substantively accessed by the community. A prominent case occurred in Gergunung Village, Klaten, where residents voiced objections to the toll access location, which they believed disrupted residential areas and productive land.

Based on PT MJJ coordination meeting minutes and local media reports, residents perceived the consultation forums as one-way socialization and felt that they did not provide space for deliberative dialogue. This indicates an imbalance of information and power in collaboration forums that should be inclusive in nature. This problematic consultation model suggests that collaborative governance has not yet been fully institutionalized as an interaction based on equality and mutual trust between state actors, project implementers, and affected residents.

4.2 Institutional design

The institutional design of the Prambanan-Klaten Toll Road development project reflects a governance structure that is formally organized through regular coordination forums, particularly within PT JMJ coordination meetings. These forums, aside from serving as spaces for technical and financial evaluation, also function as institutional mechanisms that consolidate various information, strategic decisions, and responses to socio-political dynamics on the ground.

Based on the The Board of Commissioners and Directors meetings materials from December 2024 to May 2025, PT JMJ meetings were used to manage critical issues such as construction progress, land acquisition obstacles, and strategies for revising the design of on/off ramps and rest areas. The presence of this forum indicates that the project possesses strong institutional memory, though its effectiveness still depends on the quality of actor representation and the willingness to reposition when discrepancies between targets and realities arise.

The strength of the institutional design is also evident in its success in incorporating non-state actors into formal mechanisms. One notable achievement in this context is the signing of a cooperation agreement (*Memorandum of Agreement, MoA*) between PT JMJ and the Panitikismo of the Yogyakarta Sultanate, which serves as the legal and social basis for the use of SG land. The involvement of Panitikismo is substantive in ensuring the alignment of project planning with local legitimacy.

In this regard, an institutional design that is responsive to local value systems becomes a distinguishing factor of the Prambanan-Klaten Toll Road project compared to other infrastructure projects that often clash with customary communities or historical authorities. Institutions that recognize traditional authority and incorporate it into formal processes represent a form of adaptive institutional design.

Nevertheless, the resilience of this institutional design is tested when facing the dynamics of private actors, as seen in the case of cooperation on rest area development and management. According to the minutes of the board meetings and updates from the technical team, the cooperation scheme with the prospective rest area partner was unilaterally terminated as the partner expressed disinterest in continuing. This discontinuity created an institutional vacuum, considering that the rest area is a vital component of toll service and a potential point of local economic integration.

The absence of a contingency scheme ready to be implemented after the partner's withdrawal reveals a gap in the institutional design that relies too heavily on a single business relationship pathway. The process of selecting a new partner could not proceed due to the lack of a revised feasibility study and a new business plan agreed upon by all stakeholders.

In addition, the project's technical design also requires a complex and layered consignment process. Consignment, or synchronization between technical actors, cannot be carried out instantly, as it must go through stringent stages, including Final Technical Review (*RTA*), official minutes of design conformity, and design certification by the relevant agencies.

This process, as noted in the meetings on March 21 and May 22, 2025, takes a considerable amount of time because it involves cross-coordination among BUJT engineering teams, Bina Marga, and contractor partners. When a design change is needed, for example, due to the cancellation of a rest area or relocation of toll access, then the entire consignment process must be repeated, resulting in consequences for the construction schedule, budget allocation, and other administrative matters such as the submission of new *Penlok* or revisions to the Detailed Engineering Design (DED). This complexity confirms that the institutional design of this project is dynamic, but not yet fully responsive to the need for rapid adaptation in a project context that is highly sensitive to time and public trust.

Thus, the institutional design in this project reflects a model of collaborative institutional arrangement that attempts to bridge state actors, traditional authorities, and private entities within a shared working framework. However, the resilience of this design still faces pressure from both external and internal dynamics, especially when required to respond to sudden changes or the failure of non-government actors to maintain long-term commitments. This highlights the importance of designing institutions as adaptive arenas capable of coping with uncertainty and sustaining collaborative continuity.

4.3 Collaboration challenges

Although the Prambanan-Klaten Toll Road project was designed within a collaborative framework involving various actors across levels and sectors, field dynamics reveal multiple collaboration challenges that directly impact implementation effectiveness. One of the most prominent challenges is community resistance to several components of the project design, particularly the planned expansion of access from the Klaten area and the construction of a rest area.

In Gergunung Village, for instance, residents' opposition emerged because the access expansion was perceived to cut through residential areas, productive land, and even social facilities such as cemeteries. The proposed addition of a rest area also drew protests due to concerns about traffic congestion and disruption of village spatial planning. This resistance, beyond being technical, also reflects a lack of trust toward the project authority and the perception that local voices are not seriously considered in decision-making.

Information asymmetry and inadequate community representation in the location *Penlok* are major causes of this resistance. Based on the board meeting documents and reports from the technical team, public consultations conducted were still relatively one-way in nature, without offering an equal deliberative space.

Residents lacked sufficient access to technical maps, impact analyses, or effective objection mechanisms. This has reinforced perceptions of exclusion and weakened the project's social legitimacy, even though it has legally fulfilled procedural requirements. This situation highlights that collaborative governance has yet to establish authentic representation mechanisms that are sensitive to local social structures. When power relations in consultation forums are imbalanced, participation tends to become a formality that instead fuels delegitimization.

On the institutional side, the project also faces serious challenges related to budget constraints. A critical issue is the delayed disbursement of funds from LMAN, which hampers the land acquisition process. In the December 2024 and January 2025 meetings, the PT JMJ and BPN teams reported that most administrative processes for the land were ready, but disbursement from LMAN was held up due to incomplete documentation, unverified land parcel maps, or the absence of an RTA from Bina Marga. This delay, beyond being a fiscal-technical issue, also creates bottlenecks in the entire collaboration chain, where local actors such as regional governments and village apparatuses are placed in a dilemma when facing residents without being able to promise concrete payment certainty.

Delays also occurred in the staking out of the Right of Way (ROW) in the DIY, which is a crucial early stage in the land acquisition process. The staking, which should have marked the construction boundaries and provided certainty to residents, was instead postponed due to unfinished land parcel mapping by BPN and spatial data mismatches between PT JMJ and local governments.

As a result, the identification and measurement of land became uncertain, opening space for social speculation and prolonging tensions on the ground. In the context of collaborative governance, such delays indicate weak data integration and a lack of coordinated leadership capable of synchronizing inter-agency workflows in real time.

Furthermore, stagnation also arose due to the replacement of a strategic partner in the rest area development project. As revealed in the February and March 2025 coordination meetings, the initial rest area partner withdrew due to internal reasons and uncertainty in the technical design. This partner replacement triggered a vacuum in the cooperation scheme, affecting technical replanning, feasibility study revisions, and delays in physical progress.

The absence of a risk mitigation scheme for the withdrawal of private partners indicates that the institutional design was not sufficiently anticipatory of private sector dynamics. This situation illustrates that the sustainability of collaboration is not only determined by initial intentions and formal agreements, but also by adaptive readiness in dealing with economic-political uncertainties among actors.

Overall, these challenges demonstrate that collaborative governance in this project remains fragile and not yet fully institutionalized. Collaboration operates on the foundation of administrative coordination but has not yet succeeded in delivering a model of participatory, responsive, and resilient decision-making. There is a need to strengthen coordinative capacity, develop authentic participation mechanisms, and establish fairer risk-sharing and incentive systems so that project governance truly reflects the spirit of substantive collaboration.

4.4 Multi-actor partnerships

Amid various technical, social, and institutional challenges encountered during the implementation of the Prambanan-Klaten Toll Road project, key actors demonstrated adaptive capacity essential for maintaining collaboration continuity. One clear form of institutional adaptation was the project rescheduling followed by the issuance of a contract addendum.

This addendum, aside from marking temporal adjustment capacity, also carried structural implications for the rhythm of technical work, distribution of burdens between the BUJT and contractors, and the project's payment term scheme. In the coordination meetings on February 20 and May 22, 2025, it was explained that the addendum was issued in response to on-site realities, particularly land acquisition delays and design changes due to local resistance. This strategy reflects an adaptive contracting approach, an institutional model that acknowledges the dynamic nature of strategic projects and the need for flexible legal frameworks grounded in periodic evaluations.

The Board of Commissioners and Directors meetings of PT JMJ also transformed from merely evaluative spaces into instruments for conflict management and policy resolution. These forums were routinely used to address horizontal tensions (between institutions) as well as vertical ones (between central and regional levels or between project implementers and local communities). For instance, when facing stagnation in cooperation with the rest area partner, the forum became a venue for formulating administrative solutions and seeking a replacement partner.

The role of the forum was both technocratic and deliberative, integrating technical reports, legal input, and social conditions into a collective decision. In the context of a collaborative governance regime, this forum functions as an arena for institutionalizing shared norms, where decisions are not made sectorally but are the result of cross-actor information accumulation.

Another adaptive strategy reflecting the value of collaborative accountability was the drafting of a formal Minute of Termination (*Berita Acara, BA*) for the rest area partnership. This step, besides formally ending the contractual relationship, also served to document administrative and managerial reasons in writing, from partner performance evaluations and investment commitment mismatches to technical implications for the project.

Such practice signifies institutional maturity, as it shows that collaboration is built on responsibility when facing cancellation or implementation failure. From a governance perspective, the drafting of a BA embodies reflexive governance, namely, the system's ability to reassess power relations and openly correct course through legitimate institutional mechanisms.

One of the most concrete forms of adaptation to local socio-political dynamics was the adjustment of the *Penlok* in response to community resistance. As noted in meeting documents and media reports, the originally planned toll access and rest area in Gergunung Village were ultimately reconsidered due to pressure from local communities concerned about their living space and socio-economic access.

This adjustment signifies governance flexibility, the readiness of implementing actors to revise policies based on community input without losing the project's strategic direction. This step also reflects differentiated roles among actors. The BUJT and contractors formulated alternative design options, while local governments and community figures mediated communication to avoid prolonged polarization.

Overall, the adaptive strategies undertaken in this project show that collaborative governance constitutes a dynamic governance arrangement shaped by the interaction between external pressures, internal capacity, and tiered evaluation mechanisms. When

formal forums such as board meetings are empowered, legal decisions are drafted transparently, and technical policies are adjusted based on public input, project governance internalizes the principles of collaboration, namely transparency, flexibility, and accountability. As such, the institutional dynamics of this project can serve as a concrete example of how collaborative regimes in the infrastructure sector can evolve adaptively in response to field-level complexity.

4.5 Collaborative governance regime

This study's findings demonstrate that the construction of the Prambanan-Klaten Toll Road represents a form of collaborative governance that is complex, contested, yet also adaptive. Within the CGR, collaboration is understood as a governance regime comprising drivers, collaborative dynamics, and outcomes [11]. These three components are observable in the dynamics of this project.

First, in terms of drivers, the project has strong collaborative triggers in PSN status, complex land ownership (SG, TKD), and cross-regional interests (DIY-Central Java). The need to bridge the technocratic interests of the state, the cultural authority of the Sultanate, and local community aspirations made collaboration a structural necessity. These drivers compelled the creation of formal collaborative platforms such as Board of Commissioners meetings and encouraged the formation of MoA between the BUJT and the Panitikismo.

Second, in the dimension of collaborative dynamics, the project displays fluctuating yet significant dynamics such as shared motivation, capacity for joint action, and principled engagement. Shared motivation is evident in efforts to sustain the project despite resistance and stagnation. The capacity for joint action is reflected in the function of coordination forums as conflict resolution arenas, the drafting of the termination minutes for the rest area partner, and the adoption of alternative strategies when the *Penlok* was contested by residents. Meanwhile, principled engagement emerged through the effort to create deliberative forums, although still unequal, such as the revision of the *penlok* based on input from the Gergunung community.

However, these three dynamics have not proceeded smoothly. Inequality in community representation, delays in ROW staking, and the dominance of technocratic narratives in public consultations indicate that collaborative dynamics in this project remain partial and not fully inclusive. This suggests that even though collaborative structures have been established, trust-building and shared understanding have not been fully internalized across all actor levels, particularly within local communities.

Third, in terms of outcomes, the study finds the presence of intermediate outcomes, such as the formation of adaptive institutional structures (e.g., contract addendum, repositioning of technical designs, and cross-cultural authority cooperation), although it has not yet reached transformational outcomes that reflect a fundamental shift in governance mindsets. In other words, the collaborative regime in this project is moving toward the institutionalization of collaboration, but it still faces challenges in terms of sustainability, equity, and public value responsiveness.

Thus, the Prambanan-Klaten Toll Road project illustrates the formation process of a collaborative governance regime that is dynamic, not free from conflict, but gradually

experiencing institutionalization in structure and procedure. Collaboration in this project is a process that is continuously negotiated, maintained, and tested by both internal and external pressures. By interpreting this project through the CGR, it can be concluded that collaborative governance in the context of national strategic projects is shaped by a combination of structural pressures, institutional capacity, and the local socio-political space.

5 Conclusion

This study demonstrates that the practice of collaborative governance in the development of the Prambanan-Klaten Toll Road possesses a formal and hierarchical character, while also displaying adaptive capacity that is crucial in responding to technical, social, and political dynamics.

Cross-actor collaboration, among central government agencies (PUPR, LMAN, BPN), local governments, the toll road business entity (PT JMJ), and traditional authorities such as the Panitikismo of the Yogyakarta Sultanate, was built through an organized coordination structure involving board meetings, cooperation agreements, and technical design mechanisms. Although still embedded within a top-down structure, the project has shown a tendency toward governance flexibility, particularly in design adjustments and rescheduling as responses to field realities.

On the institutional side, the project has developed an institutional design to support collaboration through decision-making forums, the drafting of termination minutes with partners, and inter-agency technical consignment processes. However, such a design has yet to be fully participatory. Community involvement remains limited to the informative level, not yet deliberative. Public consultation procedures tend to be one-directional, with public participation being passive and formalistic. As a result, civil society does not emerge as an equal actor in planning and decision-making processes, but rather as a policy object and technical implementer that merely receives information.

This imbalance marks the absence of institutionalized mechanisms for community representation in the processes of site determination and land acquisition. The case of rejection in Gergunung Village and resistance to rest area design serve as concrete examples of how participatory exclusion can trigger social resistance that delays project implementation. Therefore, this study underscores the importance of institutionalizing channels for community representation in future collaborative schemes, whether through community representative forums, structured dialogues, or revised public consultation mechanisms that prioritize inclusivity and spatial justice.

The contribution of this study lies in its empirical mapping of the dynamics of the CGR within the context of a national strategic project involving customary lands and non-state local authority structures. By employing the CGR, this study has unpacked institutional adaptation capacities, deliberative dynamics, and structural barriers that hinder the realization of collaborative governance. These findings enrich the Indonesian collaborative governance literature, which has thus far focused primarily on public service and environmental sectors.

However, this study has certain limitations. First, the data used are largely derived from internal documents of the BUJT and board meetings, meaning that civil society perspectives have not been explored ethnographically or participatorily. Second, the study has not compared this project with other strategic projects that may involve different actor dynamics or conflict patterns. Therefore, future research should employ multi-sited ethnography or participatory action research to explore the role of communities more holistically within collaborative infrastructure frameworks.

In conclusion, this study recommends the implementation of a collaborative approach rooted in principles of trust, transparency, and policy co-production. In the context of strategic projects that intersect with local living spaces, collaboration must create authentic deliberative arenas, allowing communities to become active partners in defining problems and designing shared solutions. Only through such practices can collaborative governance realize sustainable and equitable public values in the implementation of infrastructure development.

References

1. Rahmadana MF, Putra IM. Community dynamics towards the existence of toll roads in Indonesia: a literature and spatial study. *Front Built Environ* [Internet]. 2025 May 1 [cited 2025 Nov 8];11
2. Prastiyo DA. Collaborative Governance and Infrastructure Development in Indonesia: A Review. *JPAS (Journal of Public Administration Studies)*. 2019 Nov 7;4(1):30–2.
3. Oetari PS, Isworo S. Community Perceptions on Environmental Impact Assessments in the Construction of the Toll Road between Solo and New Yogyakarta International Airport, in Indonesia. *Asian Journal of Environment & Ecology*. 2024 May 23;23(7):79–94.
4. Rahayu YS, Rifai AI, Taufik M. Analysis of Road Geometrics with ASSHTO Method (Solo–Yogyakarta–NYIA Kulon Progo Toll Road Section 1 Package 1.1 Solo – Klaten (STA 0+000 – 22+300). *Citizen : Jurnal Ilmiah Multidisiplin Indonesia*. 2022 Dec 13;2:944–54.
5. Nurpita A, Kumorotomo W, Susanto N. Evaluating land policies for suitable toll road development in Yogyakarta. *ijirss*. 2025 July 8;8(4):2284–94.
6. Astuti SD, Isnaeni D. Public Consultation Regulations on Land Acquisition for Toll Roads for Public Interests in the Perspective of Law Number 2 of 2012. *Journal of Law, Politic and Humanities*. 2024;5(2):1249–56.
7. Susanto N. Public (Dis)Engagement in Toll Road Project: A Case Study from Indonesia. *JKAP (Jurnal Kebijakan dan Administrasi Publik)*. 2019 May 31;23(1):77–91.
8. Nugroho D, Mashdurohatun A. The governance of sultan ground land position and Pakualaman ground in the framework of national law and the special law of Yogyakarta special region in achieving justice. *International Journal of Business, Economics, and Law*. 2021;24(2):101–8.
9. Iqbal M, Nurhadiyanti N, Elianda Y, Akbar A. Land management in Yogyakarta special region. *Journal of Public Administration and Local Governance*. 2020;4(2):81–95.
10. Ansell C, Gash A. Collaborative governance in theory and practice. *Journal of public administration research and theory*. 2008;18(4):543–71.
11. Emerson K, Nabatchi T, Balogh S. An Integrative Framework for Collaborative Governance. *J Public Adm Res Theory*. 2012 Jan 1;22(1):1–29.

12. Thomson AM, Perry JL, Miller TK. Conceptualizing and measuring collaboration. *Journal of public administration research and theory*. 2009;19(1):23–56.
13. Bryson JM, Crosby BC, Stone MM. The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature. *Public Administration Review*. 2006 Dec;66(s1):44–55.
14. Purdy JM. A Framework for Assessing Power in Collaborative Governance Processes. *Public Administration Review*. 2012 May;72(3):409–17.
15. Sorensen E, Torfing J. The Democratic Anchorage of Governance Networks. *Scand Pol Stud*. 2005 Sept;28(3):195–218.
16. Provan KG, Kenis P. Modes of Network Governance: Structure, Management, and Effectiveness. *J Public Adm Res Theory*. 2008 Apr 1;18(2):229–52.
17. Klijn EH, Koppenjan J. Governance network theory: past, present and future. *Policy & Politics*. 2012;40(4):587–606.
18. Feiock RC. The Institutional Collective Action Framework. *Policy Studies Journal*. 2013 Aug;41(3):397–425.
19. Andrew SA. Regional Integration Through Contracting Networks: An Empirical Analysis of Institutional Collection Action Framework. *Urban Affairs Review*. 2009 Jan;44(3):378–402.
20. Pattria L, Ismail N, Wibowo RA. National Strategic Projects and Compensation Issues in Land Acquisition in Indonesia: A Justice Theory Perspective. *Jurnal Hukum dan Peradilan*. 2025;14(1):1–28.
21. Rohman MS. A Study of Governance and Public Participation in Indonesian Megaprojects: A Comparative Analysis with International Practices. *Jurnal Planologi* E-ISSN. 2615:5257.
22. Yasim S, Pratiwi AD, Nuraliah D, Mausili DR. Land Acquisition for Public Interest Development: Legal and Regulatory Perspectives in Indonesia. *Journal of Scientific Research, Education, and Technology (JSRET)*. 2025;4(1):434–45.
23. Marhendira RA, Aminah S, Burhanuddin B, Rahman A. Collaborative Policy Innovation for Accelerating Land Acquisition in the Economic Hub of Indonesia. *Journal of Contemporary Governance and Public Policy*. 2025;6(2):189–216.
24. Setiawan A, Tjiptoherijanto P, Mahi BR, Khoirunurrofik K. The impact of local government capacity on public service delivery: Lessons learned from decentralized Indonesia. *Economics*. 2022;10(12):323.
25. Arnstein S. A ladder of citizen participation. In: *The city reader* [Internet]. Routledge; 2015 [cited 2025 Nov 8]. p. 323–36.
26. Fung A. Varieties of Participation in Complex Governance. *Public Administration Review*. 2006 Dec;66(s1):66–75.
27. Ansell C, Torfing J. *Handbook on theories of governance* [Internet]. Edward Elgar Publishing; 2022 [cited 2025 Nov 8].
28. Irvin RA, Stansbury J. Citizen Participation in Decision Making: Is It Worth the Effort? *Public Administration Review*. 2004 Feb;64(1):55–65.
29. Marizal M, Indrianingrum AP, Nugroho HR. Dynamics of Customary Land Rights for Public Interest in Indonesia. *Widya Pranata Hukum: Jurnal Kajian dan Penelitian Hukum*. 2022;4(2):155–66.
30. Aina DS, Pertiwi P, Minasta MF, Rahmawati B, Sari ACF. Adoption of Customary Land Tenure as a Model in Agrarian Reform: A Study of the Tenurial System in Tenganan Pegriingsingan Village. *BHUMI: Jurnal Agraria dan Pertanahan*. 2024;10(2):155–80.
31. Luthfi AN. Typology of Land Conflicts in Special Region of Yogyakarta. *BHUMI: Jurnal Agraria dan Pertanahan*. 2023;9(1):98–125.

32. Adikara GJ. Framing of local media in the management issues of Sultan Ground and Pakualaman Ground in Yogyakarta. *Journal of Social Studies*. 2022;18(1):81–100. |

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

