Eduvest – Journal of Universal Studies
Volume 6 Number 6, June, 2026
p- ISSN 2775-3735- e-ISSN 2775-3727

Analysis of Actor Dynamics Within the Institutional Framework of Public Private Partnership in Street Lighting in Denpasar City

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Keywords:
Public–Private Partnership; actor dynamics; institutional economics; MICMAC; MACTOR; governance

ABSTRACT

Delays in Public-Private Partnership (PPP) projects are often attributed to financial constraints or technical challenges, while institutional dynamics and actor interactions remain underexplored, particularly at the local government level. This study aims to analyze actor dynamics within the institutional framework of the Street Lighting PPP project in Denpasar City, Indonesia. A case study approach was employed by integrating MICMAC structural analysis and MACTOR actor analysis to identify key variables, map influence structures, and examine actors' strategic positions toward project objectives. The findings reveal that regulatory change functions as an external structural shock that restructures inter-actor relationships and increases coordination complexity. The actor structure demonstrates a pattern of mutual interdependence, where highly influential actors simultaneously exhibit high dependence. This configuration produces a collective yet defensive decision-making mechanism, as actors tend to minimize institutional risk and individual accountability. Consequently, project delays cannot be understood solely as technical or financial issues, but rather as outcomes of relational configurations requiring collective legitimacy before strategic decisions are made. This study highlights the importance of incorporating actor dynamics analysis as a diagnostic tool in PPP preparation stages to strengthen coordination, align regulatory interpretation, and enhance implementation certainty.

INTRODUCTION

The provision of infrastructure is the main foundation in encouraging economic growth, increasing productivity, and improving the quality of life of the community. However, the government's limited fiscal capacity remains a structural obstacle in meeting increasing infrastructure needs, especially in developing countries such as Indonesia (Djajawinata et al., 2023; Kim, 2023; Salim & Negara, 2018). To respond to these challenges, the government has adopted the Government Cooperation with Business Entities (PPP) scheme as a policy instrument that allows the involvement of the private sector in the financing, development, and management of public infrastructure (Presidential Regulation Number 38 of 2015 concerning Government Cooperation with Business Entities in the Provision of Infrastructure, 2015).

The PPP scheme is not only positioned as an alternative to financing, but also as a public governance mechanism that is expected to generate value for money through improved efficiency, technology transfer, and better quality of public services (Haryadi et al., 2022; Hodge & Greve, 2007; Marques & Geddes, 2018). The PPP approach emphasizes proportional risk sharing, outcome-based service, and optimization of the role of the private sector in

technological and managerial innovation (Osborne, 2000). In this context, the success of PPP is largely determined not only by the financial aspect, but also by institutional effectiveness and coordination between the actors involved (Kim, 2023; Mansawan & Saiba, 2025; Panayides et al., 2015).

The PPP regulatory framework in Indonesia continues to be refined, one of which is through the amendment of the Regulation of the Minister of National Development Planning/Head of Bappenas from Minister of PPN Regulation Number 2 of 2020 to Minister of PPN Regulation Number 7 of 2023. This latest regulation clarifies the stages, the roles of actors, and the government's support and supervision mechanisms in the implementation of PPP. However, the regulatory changes also increase institutional complexity and coordination demands across actors, especially at the regional level (Garrick & De Stefano, 2016; Gómez-Mera, 2015; Heims, 2016; Mathieu et al., 2021).

In the context of subsectors, the provision of Street Lighting Equipment (Alat Penerangan Jalan, APJ) is one of the sectors with potential for development through the PPP scheme, as it is directly related to traffic safety, security, city aesthetics, and nighttime economic activities. A number of studies show that adequate street lighting contributes significantly to a reduction in traffic accidents and crime risk (Fotios & Goodman, 2012; Johansson et al., 2009). In addition, technological transformation towards energy-efficient lighting systems, such as Light Emitting Diodes (LEDs), opens up opportunities for fiscal efficiency and significant reduction in energy emissions (International Energy Agency [IEA], 2022).

The province of Bali, with an economic structure that relies heavily on the tourism sector, faces the challenge of a high energy burden. Bali Provincial Regulation Number 9 of 2020 concerning the Bali Provincial Regional Energy General Plan for 2020–2050 (2020) emphasizes the importance of energy efficiency and independence as part of the vision of sustainable development. In this context, the APJ PPP initiative in Denpasar City is a strategic response to the high operational costs of street lighting, as well as an effort to support the transformation towards green tourism.

However, the implementation of APJ in Bali is inseparable from the complexity of intergovernmental authority. Some roads are under the authority of the central and provincial governments, while the authority to collect the Certain Goods and Services Tax (Pajak Barang dan Jasa Tertentu, PBJT) on electricity — which includes APJ electricity consumption — lies at the district/city level following the enactment of Law of the Republic of Indonesia Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments (2022). This creates a tension between asset authority and fiscal responsibility, while providing incentives for local governments to manage street lighting systems more efficiently and sustainably.

The city of Denpasar holds a particularly strategic position in this context. As the provincial capital and center of economic activity, Denpasar has a high level of electricity consumption and a significant PBJT contribution to Regional Original Income (Pendapatan Asli Daerah, PAD). On the other hand, the high operational burden of APJ makes the sector sensitive to governance inefficiencies. Data shows that around 26.25% of the Denpasar City area is still classified as a dark zone, with thousands of additional APJ units ceasing to function each year (Ministry of Finance, 2022). This condition prompted the Denpasar City Government

to initiate the APJ PPP project, which includes the installation and modernization of more than 16,000 light points with LED technology (PT Wahana Multitron, 2024).

Despite having significant potential fiscal, social, and environmental benefits, the Denpasar City APJ PPP project has experienced considerable delays. Based on the PPP Book (2023, 2024), the project stages originally targeted for completion in 2024 have shifted, particularly in the preparation and pre-qualification phases. These delays occurred in line with regulatory changes, the entry of new supervisory actors such as the Government Internal Supervisory Apparatus (Aparat Pengawasan Intern Pemerintah, APIP), and an increasing coordination burden across actors. This condition demonstrates that PPP challenges are not solely technical or financial, but are also related to institutional dynamics and inter-stakeholder interaction.

A number of previous studies confirm that PPP obstacles generally stem from weak coordination, differences in risk perceptions, regulatory uncertainty, and low trust between actors (Bashar et al., 2021; Variamen & Rohman, 2021; Xiong et al., 2020). However, most of these studies still treat actors in aggregate and have not specifically mapped power relations, potential conflicts, and alliance patterns between actors in the context of regulatory changes at the regional level.

The novelty of this research lies in five aspects. First, this study is the first to apply MICMAC structural analysis and MACTOR actor analysis specifically to a street lighting PPP project at the Indonesian local government level. Second, this study identifies regulatory change (the amendment of Minister of PPN Regulation) as an external structural shock that restructures inter-actor relationships and increases coordination complexity — a finding not previously quantified in the PPP literature. Third, this study reveals that the actor structure demonstrates mutual interdependence, where highly influential actors (PJPK, APIP, PBJ) simultaneously exhibit high dependence, creating a collective yet defensive decision-making mechanism. Fourth, this study demonstrates that project delays cannot be understood solely as technical or financial issues, but as outcomes of relational configurations requiring collective legitimacy before strategic decisions are made. Fifth, this study integrates an institutional economics perspective (North, 1991; Scott, 2014) with policy network analysis to explain how formal rule changes restructure actor relationships and decision-making patterns.

Based on these conditions, there is a research gap between macro PPP studies and the need for micro-level analysis capable of explaining how dynamics between actors and institutional structures contribute to PPP project delays at the regional level. Therefore, this study aims to analyze actor dynamics within the institutional framework of the Denpasar City APJ PPP project by combining MICMAC structural analysis and MACTOR actor analysis. This approach is used to identify key institutional factors, map the strategic objectives of actors, and uncover potential conflicts and alliances that affect the project preparation process.

With this approach, this research is expected to make an empirical contribution to understanding PPP dynamics at the regional level and to offer policy implications related to institutional conflict management and the strengthening of inter-actor coordination to accelerate project realization and ensure its sustainability.

METHOD

This research is a case study on the Government Cooperation with Business Entities (PPP) project for Street Lighting Equipment (APJ) in Denpasar City, Bali which at the time of the research was still in the transaction preparation stage. The research uses a quantitative approach based on structural analysis and multi-actor analysis, where field information is collected qualitatively and then quantified through scoring to form a model of intervariable and inter-actor relationships in the form of a matrix (Arcade, 2009; Godet, 2000; RK Yin, 2018).

The data used consists of primary data and secondary data. Primary data were obtained through (1) actor screening questionnaires to determine key actors, (2) semi-structured in-depth interviews to explore perceptions, interests, and provide an assessment of influence and position scores, and (3) focus group discussions (FGD) to validate and consolidate scores. Secondary data includes project documents (e.g. feasibility studies), PPP regulations/guidelines, PPP Books, and scientific literature related to PPP governance and actor analysis. The research population included all project stakeholders (22 stakeholders were identified), while the key actors were determined by purposive sampling based on the criteria of decision-making authority, direct involvement in the preparation, and influence on the project run.

The analysis was carried out in two stages. First, MICMAC is used to map institutional structures through the preparation of a Matrix of Direct Influence (MDI) between variables with a scale of 0–3 (ineffectual to strong). The variables analyzed amounted to 10, including regulatory changes, APIP supervision, procedural compliance, regulatory interpretation, business entity risk perception, repetition of stages, PJPK discretion, the role of PPP Nodes, information asymmetry, and indicative schedule inconsistencies as system outputs. The results of MICMAC generate an influence–dependence map to identify driver, linkage/relay, dependent, and autonomous variables, which are then derived into strategic objectives for actor analysis.

Second, MACTOR is used to map the power structure, the position of actors towards goals, as well as the potential for alliances (convergence) and conflicts (divergence). The matrix of influence between actors is arranged on a scale of 0–4, while the matrix of the position of actors towards the goal (2MAO) uses a range of -4 to +4. Validity is maintained through triangulation of sources (document–interview–FGD) and consolidation of scores so that the assessment is more consistent.

Strategic objectives (O1–O5) are formulated by reducing the findings of MICMAC into the strategic issues that most determine the dynamics of project preparation, namely:

Table 1 Strategic objectives (O1–O5)

MICMAC variable (origin)	MICMAC Position	MACTOR Destination Code	MACTOR's Strategic Objectives
V4 – Procedural compliance level V3 – APIP monitoring intensity	Relay (V4) Driver (V3)	O1	Strengthening PPP procedural compliance and accountability
V5 – Interpretation of PPP regulations V2 – Changes to the VAT Candy	Driver (V5) Driver (V2)	O2	Alignment of the interpretation of PPP regulations after the Minister of VAT Regulation 7/2023

V9 – The Role of PPP Nodes	Relay	O3	Strengthening cross-actor coordination through the role of PPP Nodes
V7 – Repeat of the setup stage	Relay	O4	Handling the repetition of the stages of completion and determination of the business entity
V6 – Risk perception & credibility of business entities *(mediated by V8 – discretion of PJPK)*	Relay (V6) Relay (V8)	O5	Acceleration of process completion and certainty through strengthening the credibility of business entities & risk mitigation

The actors analyzed were determined from the results of screening and direct involvement in the preparation of APJ PPP, including central and regional actors: Bappenas, PT PII, PJPK/Denpasar City Government, PPP Node (Bappeda), Technical Service (Dishub), DPRD, APIP/Inspectorate, Legal Section, Development Administration Section, and Procurement Section. The final actor list was used as an input of MDI between actors and 2MAO in MACTOR to map the influence map and convergence-divergence patterns of O1–O5.

RESULT AND DISCUSSION

1. Results of Institutional Variable Analysis (MICMAC)

The MICMAC analysis was used to map the influence and dependency structure between institutional variables in the preparation of the Denpasar City APJ PPP project. The main input is in the form of a Matrix of Direct Influence (MDI) which is built from the assessment of key respondents on the cause-and-effect relationship between variables (scale 0–3). The input matrix is not interpreted on its own, but is processed to produce a structural map of the system, direct–indirect influences, as well as the classification of key variables.

Table 2. Intervariable Direct Influence Matrix (MDI-MICMAC)

CODE	From/ To	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
V1	Inconsistency of indicative schedule	0	0	0	0	0	0	0	0	0	0
V2	Changes to the VAT Ministerial Regulation	3	0	3	3	3	3	3	1	3	3
V3	APIP supervision intensity	3	0	0	3	3	3	3	3	2	1
V4	Procedural compliance level	3	0	1	0	1	3	3	2	1	0
V5	Interpretation of PPP regulations	3	0	1	3	0	1	3	1	3	0
V6	Risk perception and credibility of Business Entities in PPP preparation	3	0	3	3	2	0	3	3	2	2
V7	Repeat the setup steps	3	0	3	3	0	3	0	1	3	0
V8	The effectiveness of discretion and the courage to make decisions of the PJPK	3	0	1	1	3	0	3	0	3	0
V9	The Role of PPP Nodes	3	0	1	3	3	3	2	1	0	0
V10	Asymmetry of PPP information and understanding	3	0	1	1	3	3	3	3	2	0

The results of the influence-dependency mapping show that the Changes in the VAT Ministerial Regulation (V2) occupy a very high position of influence with very low dependency, so it can be classified as the main driving variable. This position emphasizes that regulatory changes function as an exogenous factor (institutional shock) that triggers adjustments to other variables—ranging from compliance, rule interpretation, supervision, to risk perception—but are not meaningfully influenced by the project's internal dynamics.

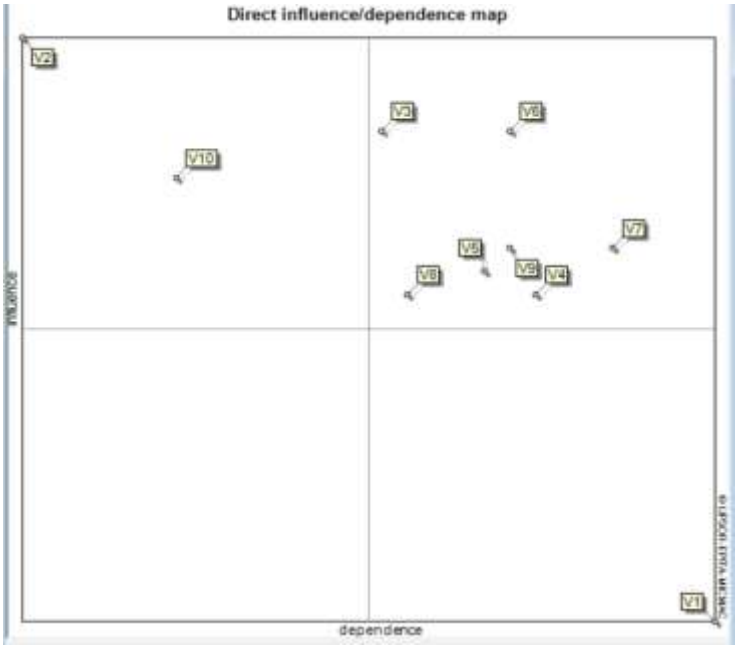

Figure 1. Direct Influence Map

In the institutional context of PPP, these findings are consistent with the perspective of Institutional Theory which emphasizes that changes in formal rules change the structure of incentives, discretionary boundaries, and the behavior of actors (North, 1991; Scott, 2014). In the case of Denpasar, the change in the VAT Ministerial Regulation is not only an update to procedures, but as a trigger for restructuring relationships and expectations between actors in the preparation phase.

The variables APIP supervision intensity (V3) and Risk perception and business entity credibility (V6) are in the area of high influence as well as high dependency, which indicates their role as relay variables. Relay characters mean two things: (1) these variables are highly sensitive to changes in other variables, but (2) at the same time are able to pass their impact on many subsequent variables. Substantively, these two variables act as key institutional mechanisms that mediate the impact of "regulatory changes" (V2) into operational consequences such as procedural prudence, repetition of stages, and decision slowdowns.

This relay position also explains why the setup process has become more defensive: strengthening oversight and increased risk perception encourage actors to prioritize administrative-legal risk mitigation, so the option that is considered "safe" is often to slow down, revisit, or repeat stages.

The variables of regulatory interpretation (V5), Procedural compliance (V4), and the role of PPP nodes (V9) are in the medium-high influence and medium dependency areas. This shows that all three are important components of system stabilization, but are still influenced

by V2 as well as relay variables. Institutionally, V5 and V4 represent the regulative-cognitive dimension (how rules are understood and then applied), while V9 represents a coordinating mechanism that should bridge differences in perceptions and synchronize actors across regional apparatus.

However, because the position is still dependent, the coordination role is not completely autonomous: the effectiveness of the PPP Node tends to depend on the consistency of PJPK support, APIP response, and certainty of regulatory interpretation.

The variable Indicative schedule nonconformity (V1) is in a very low position of influence with very high dependency, so it is a dependent variable. These findings confirm delay as a cumulative output of systemic interactions between driving and connecting variables.

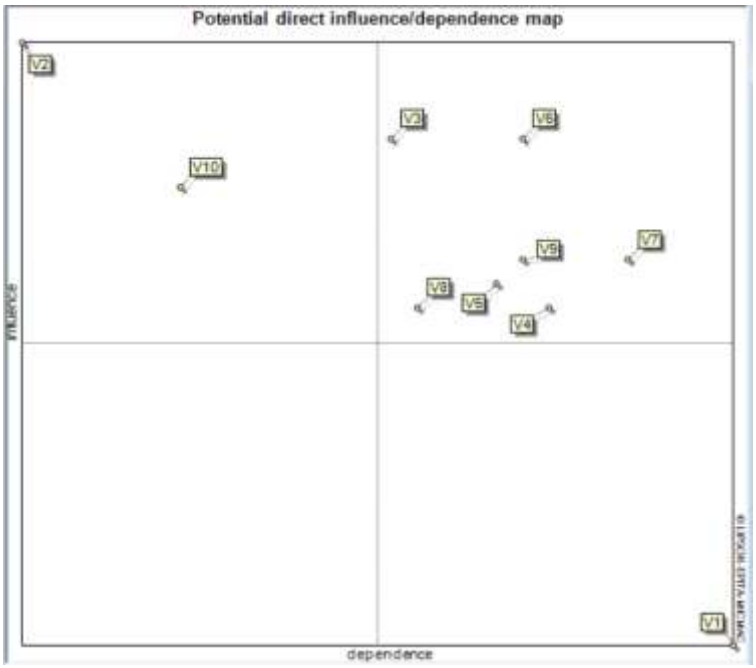

Figure 2. Indirect/Potential Map

On the direct influence graph, the network appears dense and is led by strong relationships of V2, V3, and V6. This pattern shows that regulatory changes affect the process through supervision and risk perception, then increase the tendency to repeat stages.

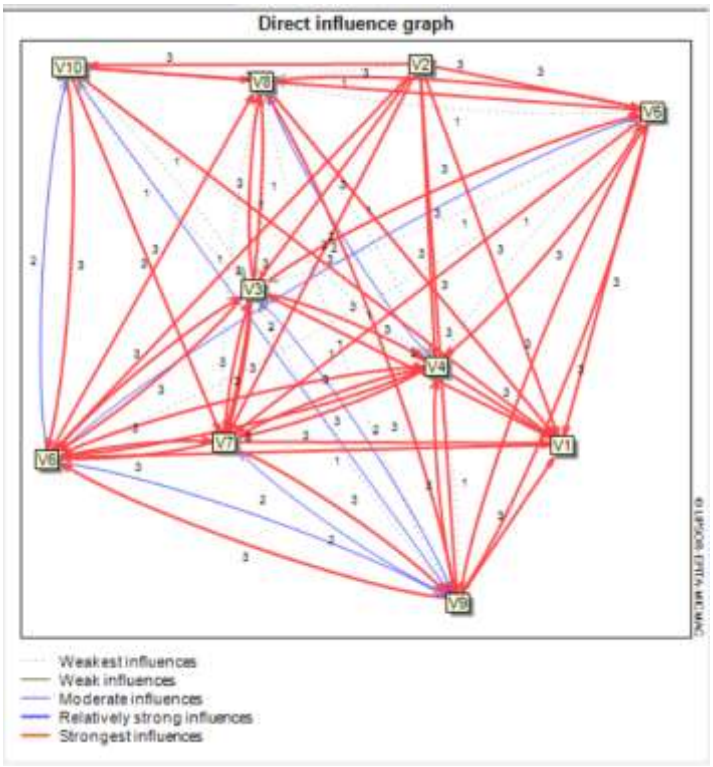

Figure 3. Direct Influence Graph MICMAC

In the indirect influence graph, the indirect influence reinforces the finding that the delay (V1) is the result of a multi-level influence path: V2 → (V3/V6/V4) → V7 → V1. The Repeating variable of the setup stage (V7) appears as a "reinforcement" (feedback mechanism) that explains why the process does not move linearly but rather repeats and lengthens.

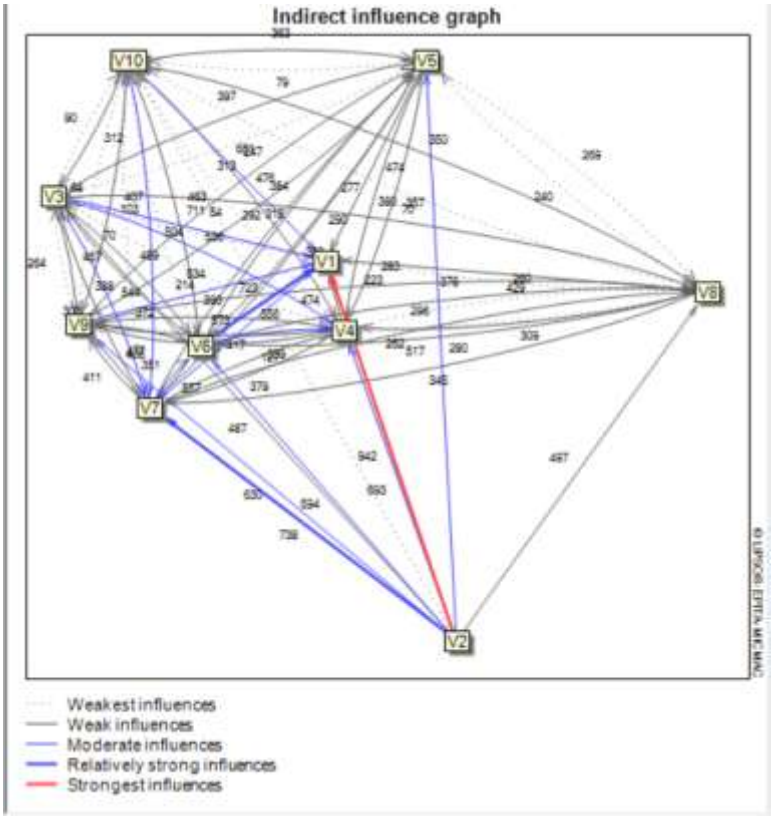

Figure 4. Indirect Influence Graph MICMAC

APJ Denpasar's PPP preparation system tends to move in a compliance-risk aversion logic, where regulations (V2) trigger strengthening of supervision (V3) and risk perception (V6), which then increases procedural compliance (V4) but at the same time increases the repetition of stages (V7) and ultimately results in schedule deviations (V1).

2. Actor Analysis Results (MACTOR)

The MACTOR analysis was used to identify the power structure, level of dependency, and strategic position between actors in the process of preparing the Denpasar City Street Lighting Equipment (APJ) PPP project. This approach allows for a deeper understanding of how institutional relationships shape interaction patterns, influence the direction of decision-making, and determine the dynamics of project implementation.

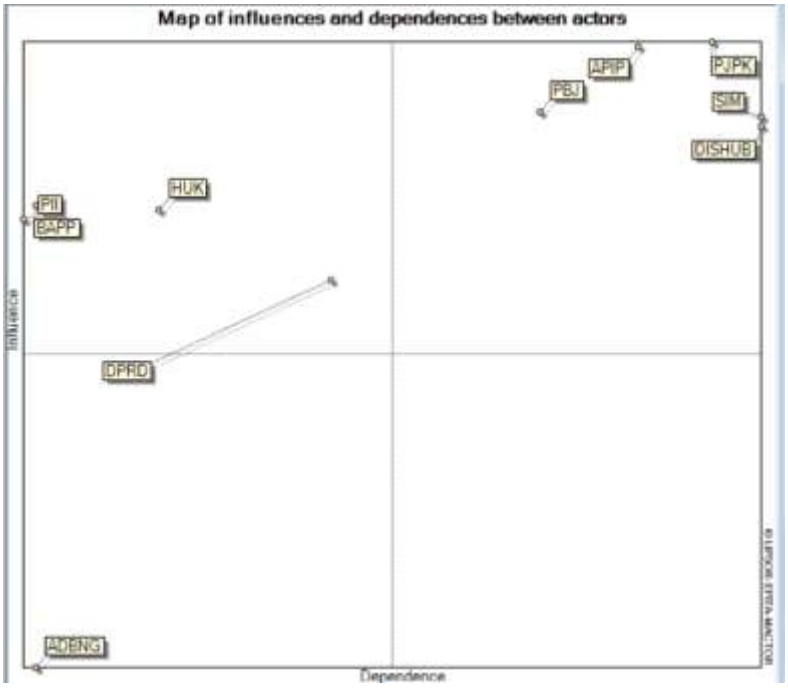

Figure 5. Influence–Interactor Dependency Map (MACTOR Map)

As shown in Figure 5 (Map of Influence-Inter-Stakeholder Dependencies), the structure of actors in the preparation of APJ PPP is not a single hierarchical, but rather forms an interdependent network. Actors with high influence in general also have a high degree of dependency, which indicates that the decision-making process takes place through a coordinated and collective mechanism, rather than the dominance of one institution.

The mapping results show that the Person in Charge of the Cooperation Project (PJPK) of the Denpasar City Government occupies the most strategic position in the actor structure. PJPK has the highest level of influence as well as a very high dependency. This condition reflects an institutional paradox, in which formal authority is not fully proportional to decision-making autonomy. In practice, PJPK decisions are greatly influenced by APIP supervision, procurement procedures controlled by the Goods/Services Procurement Section (PBJ), and regulatory interpretation by the Legal Section. Therefore, the role of PJPK is more of a risk bearer and a source of administrative legitimacy than as a fully independent decision-maker.

	BAPP	PII	PJPK	SIM	DISHUB	DPRD	APIP	HUK	ADBNG	PBJ	li
BAPP	8	8	13	13	13	11	13	9	8	11	99
PII	9	9	13	13	13	10	13	8	6	11	96
PJPK	9	9	26	22	22	14	20	11	9	18	134
SIM	9	9	15	18	18	12	17	10	8	16	118
DISHUB	9	9	17	18	17	11	17	11	9	15	116
DPRD	7	7	11	11	11	8	10	9	6	11	83
APIP	9	9	21	21	21	14	20	11	9	18	133
HUK	9	9	13	13	13	10	13	8	7	11	96
ADBNG	0	0	0	0	0	0	0	0	0	0	0
PBJ	9	9	18	18	18	12	16	11	8	16	119
Di	70	69	125	129	125	94	119	80	70	111	896

Figure 6. Total Influence Value and Actor Dependency (li–Di)

These findings are strengthened by the results of the total influence matrix, which shows that PJPK has an influence value of 134 and a dependency value of 125, confirming its position as a formally central yet operationally highly dependent actor in the project preparation process.

The next strategic role is shown by APIP (Inspectorate), which is positioned in the surveillance cluster with a high level of influence (li = 120) and significant dependency (Di = 119). Although it lacks formal authority in strategic decision-making, APIP's influence is evident in shaping the orientation of procedural prudence, encouraging document review, and triggering the repetition of project preparation stages. Thus, the supervisory function in the context of the APJ PPP is not only corrective, but also plays a role in determining the direction and tempo of decision-making of other actors.

The Procurement of Goods/Services (PBJ) unit also emerged as a strategic procedural actor with relatively high influence (li = 119) and high dependency (Di = 111). This position shows that PBJ functions as a gatekeeper of the process, particularly in determining whether the PPP stage can proceed or must be repeated. The high dependence of PBJ indicates that the smoothness of the process is greatly influenced by regulatory clarity, PJPK directives, and supervisory outcomes.

In the position of liaison actors (relay actors), the Transportation Service (Dinas Perhubungan, Dishub) and the PPP Node demonstrate a relatively high level of influence as well as considerable dependency. This indicates that although both play an important role in technical aspects and cross-sector coordination, their decision-making capacity is still influenced by other actors, especially in terms of procedural and regulatory legitimacy. This relay position underscores the importance of coordination as a prerequisite for successful project preparation.

On the other hand, external actors such as Bappenas and PT PII are positioned at a medium level of influence. The role of both is more normative and structural, through the provision of policy guidelines and institutional support, so that they are not directly involved in operational decision-making at the regional level, although they still hold strategic preferences regarding project feasibility.

The Denpasar City Regional People's Representative Council (Dewan Perwakilan Rakyat Daerah, DPRD) showed a relatively lower influence (li = 83) with a fairly high dependency (Di = 94). The function of the DPRD is more oriented towards political and fiscal legitimacy, particularly in the approval of the Availability Payment scheme, without direct involvement in the technical dynamics of project preparation.

Meanwhile, the Development Administration Section occupies a peripheral position with very low influence (li = 8) and relatively high dependency (Di = 70). These findings suggest

that its role is more administrative and supportive, without significant contributions to the formation of strategic directions or inter-stakeholder dynamics.

These values are visualized in Figure 6 (Total Influence Value and Actor Dependency), which confirms that the institutional structure of the Denpasar City APJ PPP is not dominated by a single fully autonomous actor. Rather, actors with high influence simultaneously exhibit a high level of dependence, thus forming a pattern of mutual interdependence in decision-making.

This configuration shows that the dynamics of the preparation of the Denpasar City APJ PPP project are not only shaped by the distribution of formal authority, but also by the inter-actor dependency structure that encourages a prudence-based interaction pattern. In situations where no actor is fully autonomous, strategic decisions tend to be generated through a multi-layered process of collective legitimacy. This condition demands an analytical framework capable of explaining not only which actors are influential, but also what strategic issues constitute the arena of their interaction. Therefore, so that the actor analysis is not merely normative and is more firmly grounded in the institutional structures identified earlier, this study derives the strategic objectives from the key variables of MICMAC as a representation of the critical issues shaping actors' preferences and action orientations. The strategic objectives are: O1 compliance and procedural accountability; O2 alignment of regulatory interpretation; O3 strengthening coordination through PPP Nodes; O4 stage repetition control; and O5 acceleration and certainty of the process through the credibility of the business entity and risk mitigation.

The results of 2MAO show that the actors' support for the goal is not uniform. In general, O1 received the highest and most equal support, indicating the dominant orientation of the system that placed compliance and accountability as prerequisites.

However, O4 and O5 gave rise to the biggest contestation. The objectives related to "reducing repetition" and "accelerating" actually break actors into two large clusters:

a. Supervision-procedural clusters (APIP, PBJ, Legal Section, and tend to be the Technical Office) that have a strong convergence on compliance and risk control. For this cluster, acceleration is not a priority if it has the potential to increase audit/legal risks.
b. Technocratic policy clusters (Bappenas, PT PII, and PPP Nodes) that emphasize implementation effectiveness, project sustainability, and efficiency outcomes.

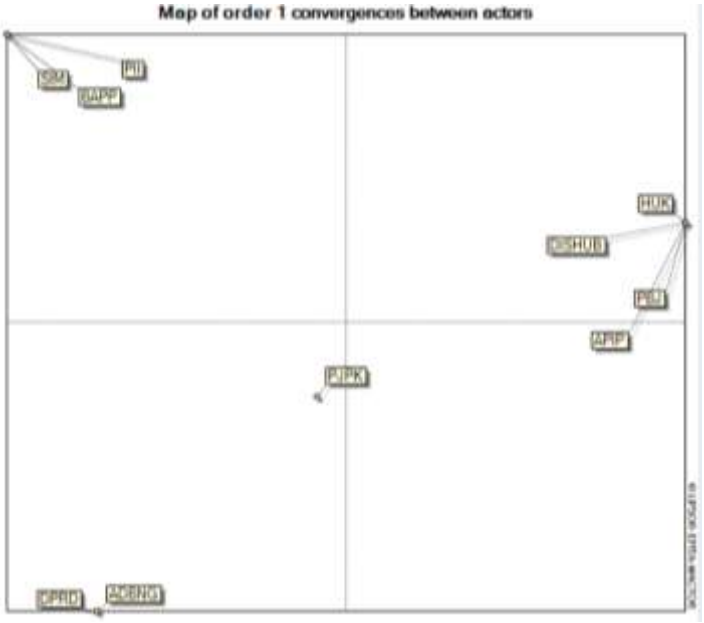

Figure 7. Map of Interactor Convergence

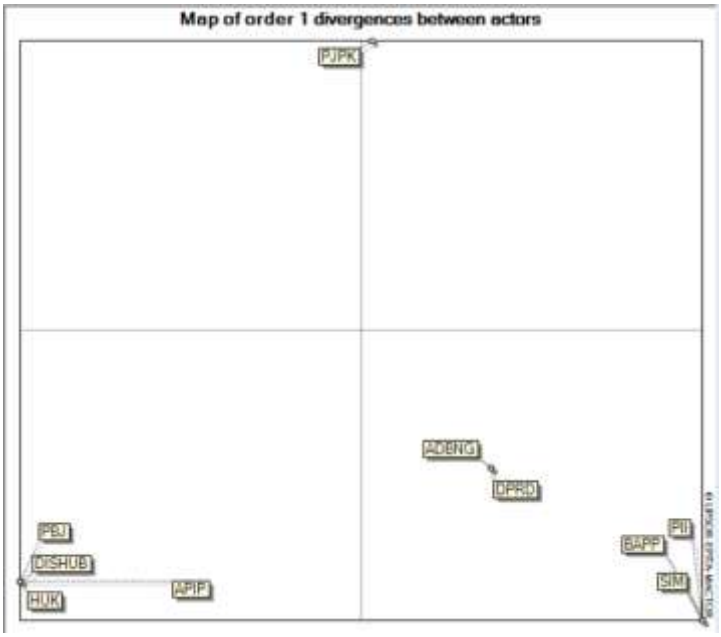

Figure 8. Map of Divergence Between Actors

In this structure, PJPK tends to be in an adaptive/compromising position: it must balance the outcome drive of the technocratic cluster and the compliance demands of the supervisory cluster. This position explains why PJP's decision-making tends to be defensive, layered, and requires "collective legitimacy" before moving forward.

CONCLUSION

This study shows that the dynamics of the preparation of the Denpasar City Street Lighting Equipment PPP project are shaped by complex and interdependent institutional structures. The results of the MACTOR analysis indicate that there are no fully autonomous actors in the decision-making process. Actors with a high level of influence, such as PJPK, APIP, and the Procurement Section, simultaneously exhibit a high degree of dependence on other actors, thus forming a pattern of mutual interdependence in project governance. This

configuration results in a decision-making mechanism that is collective yet tends to be defensive, as each actor seeks to minimize institutional risk and individual accountability. The findings also reveal an institutional paradox, where formal authority is not always directly proportional to operational autonomy. PJPK as a formally central actor functions more as a risk bearer and a source of administrative legitimacy than as an independent decision driver. At the same time, the strengthening of the supervisory function encourages increased procedural prudence, which impacts the tendency to review documents and repeat project preparation stages. Furthermore, an analysis of strategic objectives shows that differences in actor orientation do not primarily stem from sectoral conflicts of interest, but rather from the way each actor responds to regulatory uncertainties, administrative risks, and accountability demands. In this context, the delay in the Denpasar City APJ PPP project is not solely a technical or financial problem, but a consequence of the relational configuration between actors that demands collective legitimacy before strategic decisions are made. Theoretically, this study emphasizes the importance of institutional economic perspectives and policy network analysis in understanding the implementation of PPP at the regional level. The success of a project is determined not only by financial feasibility or regulatory readiness, but also by the capacity of institutions to manage dependencies, harmonize policy interpretations, and build effective coordination between actors.

Based on these findings, several strategic implications can be formulated. First, it is necessary to strengthen coordination mechanisms across actors, particularly through optimizing the role of the PPP Node as a strategic liaison capable of bridging differences in regulatory interpretation and reducing decision fragmentation. More structured coordination has the potential to reduce the repetition of stages and increase certainty in the project preparation process. Second, harmonization of regulatory interpretation is crucial to reducing institutional uncertainty. Clarity of operational guidelines and defined limits on actors' discretion can help reduce the tendency toward over-compliance without compromising the principle of accountability. Third, the supervisory approach needs to be directed not only at the control function, but also at a facilitative role that supports the acceleration of the project. Adaptive oversight models have the potential to maintain a balance between accountability and implementation effectiveness. Fourth, local governments need to encourage the strengthening of institutional capacity in PPP risk management, including building trust in the credibility of business entities. A well-managed risk perception will reduce institutional resistance and accelerate the decision-making process. Academically, this research opens space for further studies to examine actor dynamics in PPP projects across other sectors and regions, in order to obtain broader generalizations about the governance of public-private partnerships at the regional level.

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