Stakeholder Power Dynamics in Mega-Projects

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Abstract

Mega-projects—large infrastructure and energy projects—create situations which require multiple stakeholder groups to work together despite their different power levels and distinct project priorities and competing interests. The stakeholder theory needs all stakeholders to participate in projects because this requirement establishes project legitimacy. The research examines how stakeholder power dynamics and inclusion and exclusion practices together with procedural justice perception, impact both mega-project legitimacy and sustainability.

The study followed a quantitative cross-sectional design which used stakeholder theory (Freeman 1984) and stakeholder salience theory (Mitchell et al. 1997) and procedural justice theory (Colquitt 2001 Tyler 2006). The researchers collected data through a 50-item structured questionnaire which they distributed electronically to professionals who worked on large-scale infrastructure and PPP projects. The researchers analyzed 51 valid responses through SPSS and Python which included descriptive statistics and Cronbach's alpha and correlation matrices and multiple regression and mediation analysis through Hayes' PROCESS macro.

The results show that when stakeholders are included in projects their perception of procedural justice increases which then leads to higher project legitimacy. The study identified power distribution within the organization as a small elite group who controlled all decision-making power while most stakeholders only participated symbolically or lacked access to decision-making. The organization experienced legitimacy challenges because top-down governance systems together with senior management pressure and nonexistent feedback mechanisms created an environment which lacked transparency. The public assessed projects which followed procedural fairness standards as both sustainable and socially acceptable.

The research demonstrates how procedural justice functions in mega-project governance while it establishes a connection between salience theory and fairness perceptions. The research presents

practical solutions which create fair engagement practices and inclusive decision-making processes and governance models that protect legitimacy. The study shows that organizations view fairness as strategically important for their business operations. The decision-making process needs to include all stakeholders while maintaining transparency because these factors determine both project legitimacy and sustainability and project success over time.

Keywords:

Projects; Stakeholder groups; Participation; Power; Justice; Legitimacy; Sustainable development.

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1.Introduction

The modern development agenda relies on mega-projects which require substantial resources and extended time periods to implement their projects. Mega-projects create transnational transportation corridors and energy infrastructure and large-scale urban redevelopment and digital connectivity initiatives to drive major progress. The projects face multiple controversies which include social disruption and environmental damage and political resistance and financial difficulties. The distribution and execution of power among the involved parties represents the fundamental problem which causes these difficulties to emerges.

Political forces shape mega-project implementation through their influence on project development according to different user stakeholders. Different user stakeholders which include government agencies and private developers and financiers and contractors and affected communities and civil society organizations determine project outcomes by establishing their own interests which they create through their governmental operations. Project success assessment normally uses cost and time and scope metrics but recent research shows that stakeholder legitimacy and procedural justice and perceived fairness matter for project sustainability. The majority of mega-projects operate to benefit elite stakeholders who hold formal authority or legal power or financial leverage while they disadvantage less powerful or marginalized groups.

Traditional stakeholder management approaches which follow instrumental logic reduce stakeholder engagement to two main purposes which include compliance work and risk reduction activities. The models do not provide proper solutions to handle the fundamental problems that exist with respect to inclusion and representation and voice. According to stakeholder theory (Freeman, 1984) organizations must consider all individuals who can influence or get affected by their organizational decisions which expands their ethical and executive duty to make choices. The stakeholder salience theory (Mitchell et al., 1997) established that a stakeholder's influence stems from their power and legitimacy and urgency which explains why certain voices get amplified while others remain unheard. The organizational justice discipline has uncovered valuable insights into how people perceive fairness which involves procedural justice to determine their levels of acceptance and compliance and dedication to their responsibilities. Colquitt (2001) and Tyler (2006) found that stakeholders will accept unfavorable results when the processes leading to those results maintain fairness and consistency and transparently present information. The “ladder of participation” developed by Arnstein (1969) provides an effective way to identify between symbolic participation and real power-sharing arrangements. The frameworks combine to establish a powerful method which organizations use to study stakeholder relations in mega-project environments.

The study examines how stakeholder power imbalances and practices of including and excluding people and perceptions of procedural justice affect how people view mega-projects. The study employs a quantitative research approach which uses a structured 50-item questionnaire to collect data from professionals working in infrastructure and public-private partnership (PPP) projects. The research uses statistical analysis tools which include descriptive analysis and reliability checks and correlation matrices and regression modeling and mediation testing to examine whether procedural justice functions as a mediator between stakeholder inclusion and project legitimacy.

The findings offer compelling insights. The findings show that stakeholder inclusion needs procedural fairness to produce legitimacy because it does not succeed through stakeholder inclusion alone. Power concentration by senior management through top-down decision-making creates fairness problems while increasing distrust among people. People perceive procedural justice better through participatory practices that involve diverse voices and distribute information transparently while creating chances for people to affect decisions. The results of the study create theoretical frameworks which present practical solutions. Theoretical framework shows that multiple frameworks exist to explain governance outcomes in mega-projects which interact with each other. The practical result shows that stakeholder engagement processes need more inclusive and fair and strong procedural mechanisms. The research shows that mega-project governance needs to change from focusing on managerial efficiency to achieve legitimacy and accountability and ethical engagement. The successful governance of large projects requires fair procedures which stakeholders closely watch because social contestation and climate imperatives and institutional mistrust have become major global challenges. The thesis introduces measurable constructs of power and legitimacy and justice which enable detailed study of project management literature. The study shows that mega-projects function as political institutions which require understanding beyond their technical systems and economic systems. The outcomes result from engineered processes which stakeholders through their interactions create and negotiate and contest and legitimize. The development of functional infrastructure needs a deep understanding of these processes together with designing them effectively to achieve built infrastructure systems which are both functional and just.

1.1 Introduction to Mega-Projects

The visible manifestations of contemporary development take the form of mega-projects which combine advanced technical elements with political objectives and extensive funding from both public and private sectors. Flyvbjerg (2014) describes large-scale projects which require more than US 1 billion to execute and involve numerous stakeholders as projects which include transport corridors and energy plants and urban regeneration schemes and public-private partnerships PPPs.

Beyond constructing physical structures, mega-projects create economic transformations for regions by transforming environmental resources and governmental management systems. The engineering difficulties that arise from their extensive size and intricate design become political and social battlefields which involve different competing parties.

The researchers Flyvbjerg, Bruzelius, and Rothengatter (2003) describe mega-projects through their discovery of an unbreakable pattern which leads projects to exceed their financial limits and project timelines on multiple occasions. Strategic misrepresentation and political bargaining among powerful actors create the main reasons behind project failures because they stem from personal optimism bias and technical miscalculation. The statement describes mega-projects as "political projects par excellence" (Flyvbjerg, 2014, p. 9) because their efficiency discourse serves to hide power relations and personal or institutional benefit seeking. The mega-project functions as a dual entity which receives public acclaim for enabling progress yet exists as a facility for creating danger and fighting and leaving people out (Sovacool & Cooper, 2013).

1.2 Governance challenges

The management of mega-projects requires different approaches than conventional project management methods. The system creates complicated accountability structures which link across several organizations and diverse jurisdictions and different cultural systems according to (Miller & Lessard, 2001). The governance system establishes decision-making systems which control project creation and project delivery systems. The public-sector mandates and private-sector execution through PPPs or concession arrangements create hybrid systems which combine both public and private elements. The efficiency goals of these arrangements become disrupted through their creation of confusing responsibility areas which create obstacles for stakeholder involvement.
The research by Aaltonen and Kujala (2010) shows that the effectiveness of governance in mega-projects depends on the capability of project managers to interpret and respond to stakeholder influence throughout the entire project duration. The actual outcomes of projects emerge from informal networks and political negotiations which formal governance frameworks fail to capture according to (Sovacool, 2014). Political sponsors and funders and regulatory bodies create power structures which enable them to bypass the rules that restrict public involvement. The mega-projects which emerge from these processes show the interests of powerful groups which include state elites and financiers and transnational corporations rather than the needs of local communities who will experience their impacts.

1.3 Stakeholder diversity and conflict (what is stakeholder diversity)

The extensive nature of mega-projects requires engagement with multiple stakeholders who include central and local governments and contractors and consultants and lenders and users and civil-society organizations. Each party has their own set of goals and project timelines and methods for assessing risk. The parties involved in the project face conflicts which arise from their disagreements about land acquisition and environmental effects and expense distributions and social displacement (Olander & Landin, 2008). Technical coordination stands as a fundamental requirement for effective governance which needs to establish alignment between stakeholders because different participants possess different levels of power and knowledge.

Stakeholders view the projects as socio-technical systems because their outcomes depend on the process of negotiation and compromise (Aaltonen & Kujala, 2016). Inclusive settings allow participatory processes to improve learning and legitimacy; exclusive settings lead to small elite groups making decisions which result in project opposition that damages sustainability (Kirchherr et al., 2016). The problem exists because political and financial pressures create intense demands for organizations to achieve both efficiency and inclusiveness.

1.4 Linking governance to legitimacy

The legitimacy of a mega-project refers to its acceptance as appropriate and justified within a given social context (Suchman, 1995). Stakeholders grant legitimacy to a process when they observe it maintains fairness through open communication and active listening of its decision-making process. The majority of mega-projects experience what Flyvbjerg (2014) describes as a "democratic deficit" because decision-making occurs in remote locations which exclude those who will experience the most direct impact. Trust breakdowns occur when people face trust obstacles because organizations implement weak participation methods and poor communication practices and haphazardly share project advantages (Hidalgo-Bastidas, 2023).

The study of governance deficiencies needs to focus on how stakeholders exercise their control over organizational decisions. The decision-making process needs to explain who holds authority and who gets to speak and who gets left out of the conversation. The remainder of this review therefore explores theoretical and empirical perspectives on stakeholder engagement and power.

2. Literature Review

2.1 Stakeholder Theory and Salience

Stakeholder theory provides the foundational framework for understanding how actors interact and exert influence in large, complex projects. Freeman's (1984) seminal work defines stakeholders as "any group or individual who can affect or is affected by the achievement of an organization's objectives." The theory challenges the narrow shareholder view of management by emphasizing that organizations exist within a network of interdependent relationships. In the context of mega-projects, this perspective is particularly relevant because projects typically involve government agencies, financiers, contractors, consultants, and local communities—all of whom have distinct interests and expectations (Aaltonen & Kujala, 2010). Stakeholder theory thus serves both a normative and an instrumental purpose: normatively, it calls for fairness and inclusion in decision-making; instrumentally, it recognizes that managing diverse expectations is vital for achieving project success (Donaldson & Preston, 1995; Freeman, 1984).This dual normative and instrumental logic was further clarified by Donaldson and Preston (1995), who distinguished descriptive, instrumental, and normative dimensions of stakeholder theory.

2.2 Stakeholder Salience Model

While early formulations of stakeholder theory emphasized inclusion and balance, they provided limited guidance on which stakeholders deserve managerial attention when resources or attention are scarce. Mitchell, Agle, and Wood (1997) addressed this gap through their influential "stakeholder salience model," which argues that stakeholder importance depends on the possession of three attributes—power, legitimacy, and urgency. Power refers to the ability of a stakeholder to influence the firm or project; legitimacy relates to the perceived appropriateness of their involvement; and urgency reflects the time-sensitivity or criticality of their claims. The model suggests that stakeholders possessing all three attributes are "definitive" and are most likely to shape managerial decisions. This conceptualization has since become one of the most widely applied tools for mapping power relations in project environments (Eskerod & Jepsen, 2013).

In mega-projects, the salience framework helps explain why decision-making is often dominated by a few powerful actors—typically project owners, political sponsors, and major contractors—while weaker groups, such as local communities or small subcontractors, struggle to be heard (Aaltonen & Kujala, 2016). Aaltonen and Sivonen (2009) found that in global construction projects, managers prioritize engagement with actors who possess high power or urgency, even when those actors lack legitimacy from a societal standpoint. Conversely, stakeholders with moral or social legitimacy but little coercive power often experience symbolic inclusion rather than genuine influence. This

imbalance reflects what Flyvbjerg (2014) calls the politics of megaprojects, where decisions are negotiated within coalitions of elites rather than through transparent, participatory governance.

2.3 Dynamic Nature of Stakeholder Salience

However, the salience model has also faced criticism for treating stakeholder attributes as static rather than dynamic. In practice, power, legitimacy, and urgency evolve across the project lifecycle. Aaltonen and Kujala (2010) demonstrated that stakeholders often mobilize to change their salience, for example by forming alliances, leveraging media attention, or reframing their legitimacy claims. Communities excluded in early planning stages may later gain urgency by organizing protests or engaging in legal challenges. Conversely, once-powerful actors such as contractors may lose influence once the construction phase ends. This dynamic perspective reinforces that stakeholder relationships are continuously negotiated rather than fixed at project inception (Aaltonen, 2010).

2.4 Political Economy and Structural Power

Another critique concerns the model's underlying managerial bias. Scholars in the political-economy tradition argue that the salience approach centers managerial perceptions rather than actual power structures (Frooman, 1999; Reed et al., 2009). In mega-projects financed through public–private partnerships, decision authority often lies with state institutions or international financiers, not project managers themselves. Therefore, analyzing stakeholder salience from the perspective of "who management perceives as important" may obscure deeper structural inequalities and institutional power asymmetries. Integrating political-economy insights allows researchers to view salience not merely as a perceptual construct but as an outcome of broader governance and financial arrangements.

2.5 Integrating Participation and Salience

Despite these critiques, stakeholder salience remains a useful analytical tool when combined with other perspectives such as procedural justice and legitimacy theory. It provides a framework to identify which actors hold leverage and how this leverage changes over time. When linked to concepts of inclusion and fairness, it becomes possible to assess whether stakeholder engagement processes are equitable or dominated by elite actors. For instance, combining Mitchell et al.'s (1997) attributes with Arnstein's (1969) Ladder of Participation enables researchers to map not only who has power but also the quality of their participation—ranging from manipulation to genuine partnership.

In summary, stakeholder theory underscores the importance of recognizing and engaging a broad array of actors, while the salience model explains how power and legitimacy shape managerial attention. Yet, mega-project evidence shows that these principles are often undermined by entrenched power asymmetries and political interests. Contemporary research extends these ideas by highlighting the dynamic and contested nature of stakeholder influence, where inclusion and exclusion are continuously renegotiated. This understanding directly informs the present study's focus on how stakeholder power, inclusion, and exclusion affect perceived procedural justice and project legitimacy.

2.6 Power, Inclusion & Exclusion Mechanisms

The authority which exists in mega-project situations enables a party to direct project outcomes while establishing project regulations and resource allocation and project scheduling. The study results show that decision-making power in mega-projects moves to important stakeholders like governments and major developers and investors and lead contractors while local communities and small businesses and non-governmental organisations face systematic disadvantages. The technical choices of mega-projects depend on political factors which create power alliances that control participant selection and risk evaluation according to Bent Flyvbjerg (2014). Stakeholders who have lower visibility rights to authority distribution among their group members lead to reduced power which they need to make important transformations necessary for their organization.

2.7 Power Asymmetries in Mega-Projects

The administration of mega-projects suffers from power distribution problems which emerge through three main distribution systems. The first channel empowers strong actors to decide which subjects will undergo discussion or resolution through their authority over agenda control. The second channel establishes that those who possess financial resources and land ownership and regulatory approvals will achieve operational superiority. The third channel establishes that primary participants will establish both the formal and informal procedures which lead to vulnerable stakeholders being unable to interact as equals. The research of Del Cerro Santamaria (2019) demonstrates that neoliberal growth policies allow mega-projects to avoid standard participatory processes which result in elite control over decision-making. The stakeholder environment becomes unbalanced because selective inclusion practices lead to complete exclusion of less powerful individuals who lack ability to participate although they receive formal invitations.

2.8 Inclusion practices in stakeholder management

The process of stakeholder inclusion requires organizations to grant stakeholders essential rights to voice their opinions and access information and participate in decision-making processes. The inclusion process establishes a normative value system which requires all affected parties to participate in decision-making processes while their particular issues must be addressed. Sherry R. Arnstein (1969) developed a useful heuristic tool which shows different levels of participation from the lowest level of manipulation to the highest level of citizen control. Most mega-projects only provide minimal access to stakeholders who can only participate through token roles instead of having opportunities for partnership and leadership.

Inclusion practices demonstrate different operational patterns which apply to all project stages and various institutional environments. The study conducted by Aaltonen & Kujala (2010) discovered that developers start projects by engaging with many stakeholders but they transition into procurement and construction phases by blocking stakeholder access to project resources. The research shows that stakeholder cooperation becomes essential for victory in PPP mega-infrastructure projects yet this coordination improvement remains difficult to attain. The research demonstrated through evolutionary game theory model that fair benefit distribution and punitive measures against uncooperative members served as critical elements which led to better stakeholder collaboration. The process of inclusion requires more than sending out invitations since it functions through power binding methods which establish the control of access to specific locations.

2.9 Exclusion mechanisms & marginalisation

The existence of formal inclusion commitments becomes ineffective when exclusion processes continue to operate through direct actor exclusion from decision-making and through indirect methods which limit actor access to information and create procedural complexity and force actors to engage only through symbolic methods. Di Maddaloni & Davis (2017) state that community members from construction mega-projects become crucial for project execution yet they face structural obstacles which prevent them from having any influence on project operations. The research conducted on Asian dam projects demonstrated that opposition occurs when projects create major impacts but require an active role from stakeholders which was not available during the process (Kirchherr et al., 2016).

Exclusion creates multiple effects which impact the decision-making process. The process decreases governance diversity because it blocks access to alternative viewpoints which forces decision-makers to choose from a smaller range of options. The process leads to decision-making problems when stakeholders who feel disrespected or ignored see their opinions disregarded. The process creates

conflicts which lead to delays and renegotiation of contracts which commonly occur during major projects. Exclusion exists in political economy systems as a method for dominant groups to maintain their market position through their power to control consultation processes. The power to establish agendas enables selective inclusion which creates a system that permanently restricts access to power for people from marginalized communities.

2.10 Decision making & governance implications

The combination of power dynamics and social inclusion together with social exclusion, leads to direct effects on how major enterprises operate their governance systems. When there is genuine inclusion, all actors receive full access to information and they can participate in all activities which lets them affect results. The system creates fair procedures which establish credibility for the system. The decision-making process becomes rigid because power remains with the elite while the system excludes others which creates two hazards: one of violent opposition and one of operational breakdown.

The mapping process helps us understand stakeholder power relations, which identifies the decision-making results because it shows who obtains power and who loses power in the governance process. The system requires governance systems to go beyond stakeholder identification because they need to establish methods that handle power differences while creating inclusion methods which stop the elimination of specific groups. The governance environment can achieve better balance through dedicated community liaison and rotational decision-making committees and transparency platforms and independent oversight.

The research requires knowledge about power differences which lead to exclusionary practices and inclusion methods to evaluate how mega-project governance functions in reality instead of its intended operation. The study establishes an empirical base which helps researchers understand how stakeholder perceptions about inclusion and exclusion impact their decision-making powers and their experiences with procedural justice and project legitimacy.

2.11 Procedural justice in organizational and project settings

The concept of procedural justice describes how people perceive process fairness for making decisions instead of assessing the fairness of resulting decisions according to (Colquitt, 2001). The evaluation establishes decision-making procedure transparency together with its predictable application and its capacity to let affected parties present their stance. The assessment of procedural justice in mega-projects depends on stakeholders' views about the fairness and accessibility of their participation opportunities and consultation platforms and dispute resolution mechanisms. The

distribution of benefits to people and the assignment of costs to them creates a foundation for distributive justice while procedural justice examines the methods used to make these determinations according to (Thibaut & Walker, 1975).

The research conducted in organizational psychology demonstrates that fair procedures generate trust plus commitment and voluntary compliance according to (Tyler & Blader, 2003). The four-factor model of Colquitt (2001) which includes procedural justice and distributive justice and interpersonal justice and informational justice has been successfully used in governance and public administration beyond its initial application in workplace settings. Procedural justice operates as a fundamental factor that determines social acceptance in infrastructure and environmental management since communities permit harmful results when they trust the fairness of decision-making processes according to (Gross, 2007). The impacted stakeholders from mega-projects determine legitimacy through their assessment of how organized decision-making treated them with respect and their opportunity to affect results.

2.12 Procedural fairness and legitimacy theory

The relationship between procedural justice and legitimacy has established historical connections with social psychology and political science studies. The research of Tyler (2006) demonstrated that people will accept legal and policy decisions which they perceive as fair even when those decisions lead to unfavorable outcomes. Legitimacy constitutes the psychological territory of voluntary acceptance which exists outside of forced adherence to rules. Within institutional theory legitimacy exists as a general view that evaluates how an entity conducts itself according to established societal standards which determine socially acceptable behavior and correct conduct (Suchman, 1995).

The three types of legitimacy consist of three distinct categories which include pragmatic legitimacy that arises from self-interest and moral legitimacy which depends on public endorsement and cognitive legitimacy that emerges from established societal beliefs. The basic foundation of procedural justice establishes moral legitimacy together with practical legitimacy in the context of mega-projects. The rights holders of the project view their treatment as fair which leads them to believe that the project authorities follow the standards of societal fairness and respect which results in project legitimacy according to (Tyler & Huo, 2002). The presence of exclusive operational methods causes people to lose confidence in their organization which creates an image of organizational illegitimacy that leads to resistance according to (Aaltonen & Kujala, 2016). The project lifecycle custodianship process sustains stakeholder cooperation through legitimacy which emerges from fairness perception.

2.13 Legitimacy deficits in mega-projects

The decision-making practices of mega-projects face legitimacy challenges because their decision-making processes are seen as following a technical bureaucratic hierarchy. Flyvbjerg (2014) describes those projects which follow the "iron law" because they consistently exceed their scheduled timeframe and budget limits due to political interests and optimism bias which produce distortion against accountabilities. The "democratic deficit" emerges from three main factors which include restricted access to information and biased public engagement and insufficient enforcement of accountability standards according to (Sovacool & Cooper, 2013). The research of (Hidalgo-Bastidas, 2023; Kirchherr et al., 2016) demonstrates that when communities in Asia and Latin America do not get involved in the early planning of hydropower projects they will create opposition movements which lead to construction delays or complete project stoppages. Decision-making conflicts arise from perceptions of unfair treatment which prevent people from reaching a compromise about technical design requirements.

Aaltonen and Kujala (2010) state that project legitimacy operates as a dynamic element which shows different degrees of legitimacy throughout its various stages of execution. The fluidity between different time periods demonstrates that legitimacy exists as an ever-changing result of various social relationships. Mega-projects need to establish fair procedural systems which include transparent communication and consistent rules and meaningful avenues for redress to sustain their legitimacy throughout their complete operational period.

2.14 Procedural justice as a pathway to sustainable outcomes

Procedural justice acts as a mechanism which leads to enduring results through its implementation. The sustainable development of mega-projects depends on procedural justice which extends to its impacts on project acceptance. The integration of equitable participatory governance into projects results in better social and environmental outcome integration.Inclusive decision-making enables the community to share their knowledge and long-term environmental issues which technocratic planning usually overlooks. The lack of procedural fairness in projects leads to social resistance through litigation and reputational damage which negatively affects both economic stability and environmental processes according to (Baba et al., 2024).

The evidence from research studies confirms this connection between the two variables. Tyler and Blader (2003) showed that people treated fairly developed better group identification which led them to work with others during uncertain times. The study found that when stakeholders perceive decision processes as fair project stakeholders will comply with environmental mitigation measures

and social agreements (Colquitt et al., 2001). Procedural justice functions as a governing tool which directs stakeholder actions toward sustainable development targets.

2.15 Integrating justice and legitimacy into the research model

The research framework incorporates justice and legitimacy through its twin rights of existence study model. The thesis presents procedural justice as the process through which inclusive practices create legitimate status for all stakeholders who participate in the project. Inclusive practices provide people with chances to join in activities while procedural justice decides if those chances are seen as fair and stakeholders believe the process needs to be handled through trustworthy methods. The conceptual framework establishes a connection between stakeholder theory and institutional theory while the implementation shows how these theories function within the real-life political landscape of major project execution.

The measurement of stakeholders' fairness perception through transparency and consistency and voice and responsiveness methods provides a practical approach to legitimate quantitative evaluation. The study demonstrates how power imbalances get reduced through governance practices which establish legitimacy and sustainability-oriented goals by connecting procedural justice with outcomes (perceived legitimacy and sustainability orientation) that show governance practices' operational mechanisms.

2.16 Conclusion

The literature review explored how stakeholder power and inclusion and exclusion and procedural justice and legitimacy interact with each other in governing mega-projects. The study showed through stakeholder theory and political economy and project governance literature that infrastructure project decision-making processes function as non-neutral systems which require technical expertise for operations. The process occurs through power asymmetry which gives different actors control based on their resource access and institutional authority and their legitimacy claims (Flyvbjerg, 2014; Freeman, 1984).

The stakeholder theory and the stakeholder-salience model (Mitchell et al., 1997) enable organizations to locate and rank their key actors while revealing how managerial preferences create blind spots that prevent understanding of power relationships. The research shows that governments and financiers and major contractors control project processes while side-lining smaller stakeholders to hold less power (Aaltonen & Kujala, 2016). The study requires exploration of different methods that organizations use to manage their inclusion and exclusion processes. The concept of inclusion represents a continuous spectrum which ranges from symbolic consultation to genuine partnership according to Arnstein's (1969) Ladder of Participation.

Institutional legitimacy and organizational justice theories (Colquitt, 2001; Suchman, 1995; Tyler, 2006) served as the foundation for procedural justice because it creates the connection between participatory methods and their resulting legitimate perceived status. People grant legitimacy to project governance systems when they believe in transparency and consistent operations and respectful treatment (Tyler & Blader, 2003). The combination of exclusion and hidden processes creates loss of moral authority which leads to resistance from stakeholders (Kirchherr et al., 2016; Sovacool & Cooper, 2013).

The literature review shows a clear sequence through which power asymmetry plus exclusion results in higher inclusion which leads to better procedural justice mechanisms which create higher legitimacy levels that result in greater dedication to sustainable practices.

The review discovered important research gaps which need to be addressed particularly because there is no quantitative research showing weaker stakeholder perceptions and how inclusion and fairness perceptions evolve throughout the different project stages.

The study plans to collect empirical survey data from various stakeholders so it can investigate how inclusion and exclusion impact procedural justice perceptions and decision-making power and legitimacy within mega-projects. The study results will advance theoretical knowledge by connecting stakeholder theory with justice frameworks while providing practical guidelines for creating fair governance structures to enhance project legitimacy and sustainability in major projects.

3. Research Gap Analysis

The research field of mega-project governance studies has produced extensive work which encompasses multiple academic disciplines. Researchers have studied power concentration together with stakeholder salience and political complexity as well as legitimacy and sustainability through multiple research frameworks. The existing body of knowledge contains important research gaps which hinder the complete integration of all existing theories and their testing through empirical research. The section presents critical research gaps which support the need for the current study through its main research findings.

3.1 Theoretical Fragmentation in Governance Research

The literature contains a significant gap because different theoretical streams exist as separate entities. Research on mega-projects has strongly emphasized political power and elite dominance. Many studies show that decision-making authority is often concentrated among governments, financiers, and senior executives. The studies establish a connection between power structures and

project results. The studies demonstrate how power structures influence project outcomes and access to fair treatment by stakeholders. The research on procedural justice examines how people perceive fairness which affects their trust and willingness to cooperate and their perception of legitimacy. Justice theory shows that people accept decisions more readily when procedures are transparent, consistent, and respectful. The theory has found most of its applications in organizational contexts and legal environments. Its application in mega-project governance remains limited. The situation creates a theoretical void. The discussion about power asymmetry occurs as a distinct topic from fairness perception. The analysis of political dominance occurs as a separate process from the examination of justice mechanisms. The relationship between these dimensions needs exploration through a unified framework which establishes all of their connections. The thesis addresses this research gap through the creation of a governance model which unifies stakeholder power theory with procedural justice theory.

3.2 Limited Empirical Testing of Mediation Mechanisms

The existing research shows a major gap in the methodology section. Much of the literature assumes that stakeholder inclusion directly increases legitimacy. The system requires participation from all members therefore it establishes a positive governance principle. The mechanism through which inclusion produces legitimacy needs testing but researchers have not conducted such tests. Researchers have not investigated how procedural fairness leads to legitimacy in their studies. The process of inclusion researchers use to study legitimacy needs further investigation because current methods fail to reveal which aspects of inclusion lead to which legitimation outcomes. Researchers usually conduct mega-project studies by using qualitative case studies. The studies provide in-depth information about their subjects yet they fail to establish statistical links between different research elements. Infrastructure governance studies do not commonly employ quantitative mediation analysis methods. The field lacks suitable research methods Therefore researchers have not yet examined the relationship between inclusion and legitimacy through procedural justice using regression methods. The study investigates the limitation by testing procedural justice as a mediating factor through quantitative research methods.

3.3 Under-Operationalization of Legitimacy

Legitimacy is widely discussed in institutional theory and project governance research. The authority of a project receives social acceptance and moral approval from its surrounding community. Researchers use legitimacy as an abstract concept which they cannot measure in actual situations. Researchers deduce legitimacy through public opinions and political results in their studies. The

method requires direct measurement through special stakeholder perception scales. Theoretical concepts and their actual measurements create a gap which needs to be filled. Researchers cannot compare project results or validate legitimacy predictors because they lack operational legitimacy definitions. The study uses survey-based indicators to measure legitimacy because these indicators show stakeholder views about fairness and transparency and sustainability practices.

3.4 Limited Attention to Everyday Stakeholder

Experiences Mega-project research often focuses on powerful actors such as sponsors, government agencies, and financiers. The strategic decisions of organizations depend on these actors who possess formal authority. The research has not examined how mid-level managers and engineers and consultants and community professionals perceive their work. The stakeholders work within the governance system yet they lack the power to control it. The researchers have not studied how people experience inclusion and exclusion and fairness through quantitative research. The situation creates a gap between two different perspectives. Understanding how governance operates at various organizational levels helps researchers track legitimacy development. The thesis collects perception data from professionals throughout different roles in mega-project environments.

3.5 Weak Integration Between Legitimacy and Sustainability

The two concepts of legitimacy and sustainability show weak connection to each other. The discourse about infrastructure and energy now centers on sustainability as its main theme. Environmental compliance and technical performance become the main focus of sustainability discussions according to common practice. The connection between governance fairness and sustainability perception exists but requires further investigation. The existence of this relationship between project sustainability perception and governance fairness discovery remains unexplored. The research shows two separate fields which need more work to establish their connection between sustainability research and procedural justice studies. The study investigates how legitimacy perceptions affect sustainability orientation within the same analytical framework to study this existing research gap.

3.6 Lack of Integrated Governance Models

The integrated governance models show a wider gap because they do not exist in the current situation. Existing studies tend to analyze:

- Power concentration

- Stakeholder salience
- Inclusion mechanisms
- Justice perceptions
- Legitimacy

as separate dimensions. The existing research base includes only a limited number of studies which examine multiple constructs within a single research framework. The variables need to be integrated because their separate existence hinders comprehension of their interdependent and mutual strengthening relationships. The thesis develops a multi-construct model which establishes statistical testing of its link between:

Power → Inclusion/Exclusion → Procedural Justice → Legitimacy → Sustainability. The integrated approach provides better understanding of mega-project governance through its comprehensive viewpoint.

3.7 Contribution of the Present Study

The research on mega-project governance has remaining gaps which need to be addressed through scientific inquiry. Theoretical separation between power analysis and justice theory The research studies between these two fields have not yet been tested through quantitative methods. The research studies between these two fields have not yet been tested through quantitative methods. The study identified three areas which require further research to enhance our understanding of stakeholder legitimacy within governance systems. The study identified three areas which require further research to enhance our understanding of stakeholder legitimacy within governance systems. The study identified three areas which require further research to enhance our understanding of stakeholder legitimacy within governance systems. The existing research frameworks between legitimacy and sustainability fail to establish their relationship in a comprehensive manner. The existing research frameworks between legitimacy and sustainability fail to establish their relationship in a comprehensive manner. The existing research frameworks between legitimacy and sustainability fail to establish their relationship in a comprehensive manner. The existing research frameworks between legitimacy and sustainability fail to establish their relationship in a comprehensive manner. The study addresses existing research gaps through its use of quantitative analysis which combines three theories to study stakeholder salience and procedural justice. The study tests how power relationships between people lead to legitimacy and sustainability outcomes through its examination of power relationships between people. The study tests how power relationships between people lead to legitimacy and sustainability outcomes through its examination of power relationships

between people. The research establishes a theoretical framework which shows how governance practices produce legitimacy outcomes through its empirical testing. The research establishes a theoretical framework which shows how governance practices produce legitimacy outcomes through its empirical testing.

4. Presentation of Research Questions and Objectives

The operational environment of mega-projects consists of three main factors which include political complexity and multiple stakeholder interests and uneven power distribution among stakeholders. The literature shows that governance failures emerge from technical miscalculations and power asymmetries and exclusionary practices and perceived unfairness in decision-making processes. The existing research has not yet validated which governance factors contribute to project legitimacy through an integrated empirical model which contains all studied variables.

The present study addresses this problem by examining how stakeholder power dynamics and participation practices shape perceptions of procedural fairness and legitimacy in mega-project contexts. The central research question guiding this study is: How do stakeholder power dynamics and inclusion–exclusion practices influence perceptions of procedural justice and project legitimacy in mega-project governance? The question needs to be answered because project credibility in mega-projects requires more than just financial success and technical achievements. Stakeholders develop legitimacy when they observe governance systems which operate with fair practices and transparent operations and inclusive decision-making processes. The literature often treats power and participation and legitimacy as three independent research topics instead of showing their relationships between each other.

The study investigates how governance structures affect stakeholder acceptance and sustainability orientation through its examination of three interconnected research elements. The study investigates how governance structures affect stakeholder acceptance and sustainability orientation through its examination of three interconnected research elements.

4.1 Sub-Questions

The study investigates its main research question through an analysis of multiple sub-questions which serve as operational research elements. The first research question investigates decision-making power distribution in mega-projects by asking who controls decision-making power. The second research question investigates how people perceive procedural fairness through their experience of inclusion and exclusion practices. The third research question investigates whether

procedural justice functions as a mediator between stakeholder inclusion and perceived legitimacy. The fourth research question investigates how top-down decision-making pressure affects people viewing fairness and legitimacy. The fifth research question investigates whether perceived legitimacy connects with sustainability orientation in project governance. All sub-questions show gaps which the literature review has established.

4.2 Why These Questions Are Important

The research on mega-projects demonstrates that power concentration and elite dominance exist as common patterns. The structural conditions present in the project environment create obstacles which prevent stakeholders from making unbiased assessments about fairness. The governance models require this link because it functions as their core element. Governance systems require public participation because it serves as their essential component. The process of participation operates as a vital system element which people utilize to prove their participation. The study needs to assess inclusion's power to create legitimacy against its capacity to produce fair outcomes which people can perceive. People need to perceive fairness in the process because procedural justice theory states that it enables them to accept decisions. Researchers can examine whether fairness functions as a link which connects participation with legitimacy in the context of mega-project governance. Sustainability has become the main topic which people discuss in relation to infrastructure projects. The success of sustainable practices depends on how governance structures establish their legitimacy. The research investigates how legitimacy relates to sustainability to determine whether fair governance leads to long-term project acceptance.

4.3 Research Objectives

The study intends to achieve its research goals through these specific objectives. The first objective consists of two evaluation tasks which need to determine how much power concentration exists and who has control over mega-project decision processes. The legislation examines the methods through which people obtain power by identifying their three main power sources which include their financial capacity and political position and their informal relationships with others. The system captures all power imbalances which exist within governance structures. The second objective evaluates how stakeholders participate in decision-making process while determining their level of involvement and exclusion. The research objective investigates whether stakeholders get to participate in the first project phase through access to project information while their participation level remains between active and passive. The study assesses how people view fairness in the governance processes of major projects. The research objective assesses whether rules are applied consistently and stakeholders receive respectful treatment and all decisions remain open to public

view. The study operationalizes procedural justice by creating an assessment tool which measures the concept. The research objective examines the process which enables procedural justice to control the connection between inclusion and legitimacy. The research objective tests two hypotheses which describe how people perceive fairness through their inclusion experience to develop legitimacy. The study investigates how people perceive legitimacy of projects which implement sustainable operations to maintain their environmental and social responsibility.

4.4 Link to the Conceptual Model

The research questions together with the research objectives create direct links to the study's developed conceptual framework. The model proposes the following structure: Power Concentration leads to Inclusion Exclusion which creates Procedural Justice that establishes Legitimacy which ensures Sustainability. In this model:

- Power concentration shapes the governance environment
- Inclusion and exclusion represent participation practices
- Procedural justice acts as the mediating mechanism
- Legitimacy reflects stakeholder acceptance
- Sustainability represents long-term governance evaluation

The study uses empirical testing to examine relationships between stakeholder theory salience theory and procedural justice theory by establishing a unified analytical framework.

4.5 Conclusion

The research questions show how governance structures affect stakeholder perceptions in large construction projects. The objectives translate theoretical concepts into measurable constructs. The two aspects work together to create a framework which researchers can use to investigate the political and procedural factors that establish project legitimacy. The study establishes analytical coherence through its structured relationship between theory and research questions and empirical testing which helps researchers understand governance in large-scale infrastructure projects.

5. Research Methodology

5.1 Introduction

The chapter establishes a system of research methods which will study how stakeholder power dynamics and inclusion and exclusion methods and decision-making processes impact the evaluation of procedural justice and legitimacy in mega-project environments. The study presents research

philosophy and approach and research design and sampling method and data collection instrument and data collection method and data analysis method and ethical research practices and study reliability and validity and study limitations through its research design.

5.2 Research Philosophy and Approach

The research study follows a positivist research philosophy which states that researchers can measure and analyze social phenomena like power distribution and participation and procedural justice through quantitative research methods (Saunders, Lewis, & Thornhill, 2019). The research study uses positivism because it lets researchers check theoretical relationships through real-world data verification.

The research study used a deductive framework to explore relationships between established theories and stakeholders through stakeholder theory (Freeman, 1984), stakeholder salience theory (Mitchell, Agle, & Wood, 1997), and procedural justice theory (Colquitt, 2001; Tyler, 2006). The research study examined how different people view power and inclusion and exclusion practices which produces different results for procedural justice and legitimacy.

5.3 Research Design

The research study used a cross-sectional survey method which collected data from participants at one specific time point (Creswell & Creswell, 2018). The research design enables examination of relationships between different constructs while gathering information about how different stakeholder groups perceive mega-projects.

The researcher used a structured questionnaire to collect standardized responses which enabled the statistical analysis of power concentration and power sources and inclusion and exclusion practices and procedural justice and decision influence and legitimacy and sustainability orientation and top-down decision-making pressure. The measurement of substantive items required five-point Likert scales which enabled the comparison of results between different respondents.

5.4 Population and Sampling

The target population included stakeholders who worked on large infrastructure projects and energy projects and public-private partnership projects which included project managers and engineers and consultants and senior managers and middle managers and government officials and financiers and community or non-governmental organization representatives.

The researchers used purposive sampling to select respondents who had the necessary expertise and experience required for decision-making in large projects. The researchers distributed survey

invitations through electronic method which included email contact and LinkedIn. The research team sent out invitations to achieve their goal of 50 usable responses which meets the requirements for conducting regression-based quantitative analysis.

5.5 Data Collection Instrument

5.5.1 Questionnaire Structure

Data were collected using a self-administered online questionnaire developed and hosted on Google Forms. The final questionnaire comprised 50 closed-ended items, organized into the following sections:

- Section A: Power concentration and dominance
- Section B: Sources of stakeholder power
- Section C: Inclusion and participation
- Section D: Exclusion and marginalisation
- Section E: Procedural justice and decision influence
- Section F: Legitimacy and sustainability
- Section G: Top-down decision-making and compliance pressure (experience-informed)

All items were measured using a five-point Likert scale ranging from

1 = *Strongly disagree* to 5 = *Strongly agree*.

Two items were reverse-coded to reduce response bias.

5.5.2 Instrument Development

Questionnaire items were adapted from established constructs in the literature to ensure conceptual rigor and content validity. Specifically:

- Power concentration and salience were informed by Flyvbjerg (2014) and Mitchell et al. (1997)
- Inclusion, exclusion, and participation were informed by Arnstein (1969) and Aaltonen and Kujala (2016)
- Procedural justice items were adapted from Colquitt (2001) and Tyler (2006)
- Legitimacy was informed by Suchman (1995) and Tyler (2006)
- Sustainability-related items drew on Sovacool (2014) and Baba et al. (2024)

5.5.3 Pilot Testing

The questionnaire was pilot tested with five professionals experienced in large project environments to assess clarity, wording, and completion time. Based on their feedback, minor wording adjustments

were made. The pilot confirmed that the questionnaire could be completed within approximately 5–7 minutes.

5.6 Data Collection Procedure

The finalized questionnaire was distributed via Google Forms. The survey link was shared with potential respondents through professional email communication and online professional networks. Participation was voluntary, and respondents were informed that their responses would remain anonymous and used solely for academic research purposes.

Data collection remained open for four weeks. A reminder was issued at the midpoint to improve response rates. After the collection period ended, responses were exported from Google Forms to Microsoft Excel and then imported for analysis.

5.7 Data Analysis Techniques

Data analysis was conducted using SPSS. The following procedures were applied:

1. Data screening and cleaning, including removal of incomplete responses
2. Reverse coding of negatively worded items
3. Descriptive statistics to summarize respondent perceptions
4. Reliability analysis using Cronbach's alpha ($\alpha \geq 0.70$ considered acceptable)
5. Correlation analysis to examine relationships among constructs
6. Multiple regression analysis to test hypothesized relationships
7. Mediation analysis using the PROCESS macro (Hayes, 2018) to examine whether procedural justice mediates the relationship between inclusion/exclusion and legitimacy

Statistical significance was evaluated at $p < .05$.

5.8 Ethical Considerations

Ethical standards were strictly observed throughout the research process. Participants received clear information about the study's purpose and provided informed consent before participation. No personally identifiable information was collected. All data were stored securely and accessed only by the researcher. The study complied with the ethical guidelines of the University of Vaasa and was conducted solely for academic purposes.

5.9 Reliability and Validity

Content validity was ensured through alignment with established theories and prior empirical studies. Expert review and pilot testing further supported the adequacy of the instrument.

Construct validity was assessed through examination of internal consistency and scale structure. Reliability was evaluated using Cronbach's alpha coefficients for each construct.
To strengthen interpretive robustness, findings were contextualized using relevant secondary literature on mega-project governance.

5.10 Limitations of the Methodology

This study is subject to several limitations. The reliance on self-reported perceptions may introduce response bias. The cross-sectional design limits causal inference, and the purposive sampling strategy constrains generalizability beyond similar project contexts. These limitations were mitigated through the use of validated constructs, transparent reporting, and cautious interpretation of findings.

5.11 Chapter Summary

This chapter presented the methodological framework used to investigate stakeholder power dynamics, inclusion and exclusion practices, procedural justice, and legitimacy in mega-projects. A quantitative, cross-sectional survey design was justified and implemented through a rigorously developed questionnaire administered via Google Forms. The next chapter presents the empirical results of the data analysis.

6. Data Analysis and Results

6.1 Introduction

The chapter demonstrates statistical evaluation of primary data which researchers gathered through a 50-item structured questionnaire. The analysis serves to assess the theoretical models which Chapter 2 proposed about stakeholder power dynamics and inclusion-exclusion practices and procedural justice and top-down pressures and their effects on infrastructure projects and public-private partnership projects. The research acquired 51 responses from professionals representing different stakeholder categories.
The researchers conducted multiple quantitative analyses through Python libraries pandas and numpy and seaborn and statsmodels to achieve methodological accuracy. The researchers conducted statistical testing through descriptive statistics and normality testing using Kolmogorov-Smirnov and reliability analysis with Cronbach's alpha and Pearson correlation and multiple regression analysis and mediation analysis through Hayes' PROCESS macro Model 4. The results are organized according to thematic elements which display the fundamental conceptual framework of the study.

6.2 Data Preparation and Coding

The original data was extracted from Google Forms and formatted for analysis. The survey required participants to evaluate each item using a 5-point Likert scale which ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). The researchers reverse-coded two items to minimize the effect of response bias. The researchers modified these items before they started the statistical analysis process.

The researchers categorized each validated response into one of seven thematic constructs according to the conceptual framework which had been established.

- Power Concentration (Q1–Q7): Measures perceived dominance in decision-making processes.
- Sources of Power (Q8–Q14): Assesses the basis of influence (e.g., expertise, status, access).
- Inclusion & Participation (Q15–Q21): Evaluates how actively stakeholders are involved.
- Exclusion & Marginalisation (Q22–Q28): Identifies signs of systematic stakeholder exclusion.
- Procedural Justice (Q29–Q35): Measures perceived fairness of decision-making procedures.
- Legitimacy & Sustainability (Q36–Q42): Captures stakeholder perceptions of project acceptability.
- Top-Down Pressure (Q43–Q50): Reflects how strongly hierarchical control influences stakeholder behavior.

The data processing resulted in SPSS export which enabled statistical analysis through variable label assignment for each data item and calculation of thematic index scores through average item values for each construct.

6.3 Normality Test

Researchers employed the Kolmogorov–Smirnov (K–S) test to determine whether the study variables exhibited normal distribution patterns. The study results showed that participants exhibited two different patterns of normality. Power Concentration ($p < .001$) and Legitimacy & Sustainability ($p = .005$) exhibited statistically significant normality violations. The Inclusion & Participation ($p = .200$) and Exclusion & Marginalisation ($p = .200$) variables displayed normal distribution patterns according to statistical analysis.

The two constructs exhibited non-normal distributions yet the sample size ($n = 51$) meets Central Limit Theorem requirements which enables researchers to apply Pearson correlation and regression

and mediation analysis through parametric statistical methods. The researchers assessed normality through visual examination of histograms and Q–Q plots which showed adequate normal distribution approximation while allowing the analyses to proceed with assurance.

Table 6.1: Kolmogorov–Smirnov Normality Test

Variable	K–S Statistic	Df	Sig. (p-value)
Power Concentration	0.202	51	<.001
Inclusion & Participation	0.099	51	0.200*
Procedural Justice	0.092	51	0.200*
Legitimacy & Sustainability	0.151	51	0.005

6.4 Descriptive Statistics

Descriptive statistics were used to create an overview of the primary data patterns. The researchers calculated mean scores and standard deviations and variances for every construct studied.

Table 6.2 shows that Sources of Power had the highest average score which was 3.696 with a standard deviation of 0.753 and Top-Down Decision Pressure followed with an average score of 3.610 and a standard deviation of 0.862. The rating for Legitimacy & Sustainability showed high results with an average score of 3.591 and a standard deviation of 0.872. Inclusion & Participation and Exclusion & Marginalisation both achieved average scores lower than the results for other areas of study.

The standard deviation values range from .734 to .895 which shows that responses spread out from the central value at a moderate level. People share similar overall views but they have different personal experiences of the situation. The differences observed might occur because stakeholders hold different positions within the organizational structure and they have different levels of authority and decision-making responsibilities.

Table 6.2: Descriptive Statistics

Construct	Mean	Std. Dev	Variance
Power Concentration	3.471	.734	.539
Sources of Power	3.696	.753	.567

Inclusion & Participation	3.353	.823	.677
Exclusion & Marginalisation	3.349	.860	.739
Procedural Justice	3.474	.895	.800
Legitimacy & Sustainability	3.591	.872	.761
Top-Down Decision Pressure	3.610	.862	.744

6.5 Item-Level Dispersion

The researchers used standard deviation values to determine which survey questions showed the highest and lowest levels of agreement among stakeholders. The five questions with the lowest standard deviation values demonstrated strong consensus among respondents:

- "Stakeholder input was acknowledged and considered."
- "Technical expertise increased decision influence."
- "Information needed to contribute was shared openly."
- "Long-term sustainability guided key decisions."
- "Access to key information increased decision power."

These items align with inclusion, knowledge-based power, and sustainability, suggesting that respondents view technical input and transparency as key elements of effective mega-project governance. In contrast, high variance items related to fairness in appeals and the influence of lower management indicate differences in lived experiences among stakeholder groups.

6.6 Reliability Analysis

Cronbach's alpha method is used to measure how consistently each construct functioned as a research tool. Testing showed that alpha values above 0.70 meet acceptable standards while values above 0.80 demonstrate exceptional testing reliability.

Table 6.3 displays all constructs which achieve results beyond the established minimum requirement of 0.70. Top-Down Decision Pressure demonstrates the highest reliability (α = 0.920), followed by Procedural Justice (α = 0.872) and Legitimacy & Sustainability (α = 0.865). Inclusion & Participation (α = 0.856) and Sources of Stakeholder Power (α = 0.825) also show strong internal consistency. Power Concentration (α = 0.763) and Exclusion & Marginalisation (α = 0.824) demonstrate testing results which fall inside established acceptable ranges. The overall instrument reliability is high (α = 0.907), indicating strong consistency across the questionnaire.

The measurement scales maintain their stability while showing complete internal accuracy according to the research results. The constructs demonstrate reliable measurements which researchers can use for correlation and regression and mediation studies.

Table 6.3: Cronbach's Alpha by Construct

Construct	Cronbach's Alpha
Power Concentration	0.763
Sources of Stakeholder Power	0.825
Inclusion & Participation	0.856
Exclusion & Marginalisation	0.824
Procedural Justice	0.872
Legitimacy & Sustainability	0.865
Top-Down Decision Pressure	0.920
Overall Instrument	0.907

6.7 Correlation Analysis

Multiple linear regression analysis is used to determine whether Procedural Justice and Inclusion and Exclusion serve as predictors of Legitimacy. The dependent variable in this study was Legitimacy & Sustainability.

The statistical test showed that the complete model achieved significance while effectively explaining the observed data. The model explained approximately 79.9% of the variance in legitimacy (R^2 = .799), with an adjusted R^2 of .786. The results revealed that the predictors established a major link between different levels of legitimacy perception.

The study found that Procedural Justice directly contributed to legitimacy at a positive level which reached B = .473 with p < .001. The study found that Inclusion directly contributed to legitimacy at a positive level which reached B = .478 with p < .001. Fairness in procedures and active participation both serve as essential elements that establish legitimacy perceptions according to these results.

Exclusion had no effect on legitimacy because it failed to reach statistical significance (B = .045, p = .514). The results show that exclusion does not explain legitimacy differences when both inclusion and procedural justice undergo evaluation together.

The study results show that participatory governance and fair decision-making processes create stakeholder perceptions of legitimacy according to the research findings.

Table 6.4: Pearson Correlation Matrix

	Power	Sources	Inclusion	Exclusion	Justice	Legitimacy	Pressure
Power Concentration	1						
Sources of Power	.730**	1					
Inclusion & Participation	.330*	.302*	1				
Exclusion	.618**	.419*	.223	1			
Procedural Justice	.286*	.321*	.789*	.102	1		
Legitimacy	.395**	.441*	.843**	.195	.845***	1	
Pressure	.706**	.498*	.421**	.673	.326**	.358**	1

6.8 Regression Analysis

A multiple linear regression model is used to identify factors that affect how people view project legitimacy. This research used Procedural Justice, Inclusion, and Exclusion as independent variables, while they used Legitimacy as the dependent variable. Diagnostic tests showed that the linearity, homoscedasticity, independence of errors, and multicollinearity testing requirements had been met.

The model showed excellent ability to explain study results. The study results showed that the model explained 79.9% of legitimacy variability ($R^2 = 0.799$) while the adjusted R^2 value reached 0.786.

Legitimacy received positive prediction from Procedural Justice which had a B value of 0.473 and a p value of less than .001. Inclusion also showed a significant positive effect (B = 0.478, p < .001). The two variables produce important effects on how people view project legitimacy.

Exclusion showed no statistical significance with a B value of 0.045 and a p value of 0.514. The results show that exclusion does not predict legitimacy when researchers analyze inclusion and procedural justice together.

The research results show that fair processes and stakeholder involvement create legitimacy perceptions. The research results offer strong empirical evidence that supports participatory governance methods.

Table 6.5: Multiple Regression Results

Predictor	Coefficient (B)	Std. Error	t-value	p-value
Procedural Justice	0.473	0.105	4.520	<.001
Inclusion	0.478	0.116	4.110	<.001
Exclusion	0.045	0.069	0.658	0.514

Model Statistics:

$R^2 = 0.799$

Adjusted $R^2 = 0.786$

6.9 Mediation Analysis: Hayes PROCESS Macro

Hayes' PROCESS macro (Model 4) was used to examine whether Procedural Justice mediates the relationship between Inclusion and Legitimacy. Bootstrapping with 5,000 samples was applied to estimate confidence intervals for the indirect effect.

Table 6.6: Mediation Effect of Procedural Justice

Effect Type	Coefficient	SE	LLCI	ULCI
Total Effect	0.8941	-	-	-
Direct Effect	0.4954	0.11	0.26	0.72
Indirect Effect*	0.3987	0.10	0.19	0.60

The 95% bootstrap confidence interval demonstrates that the indirect effect remains significant because it does not contain the value of zero.

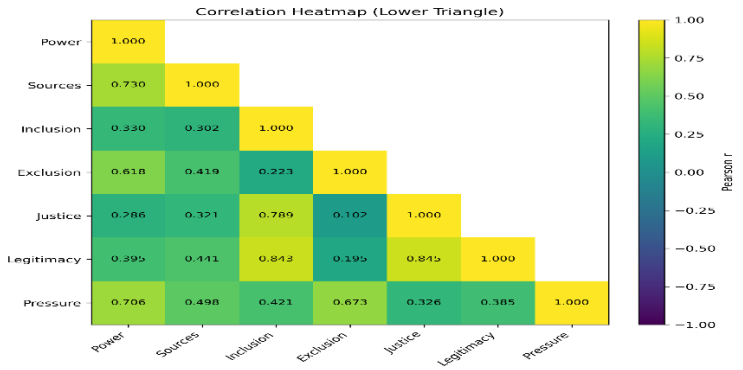
The results show that Inclusion has a direct impact on Legitimacy which shows a statistical significance with a value of (B = 0.4954, p < .001). The indirect effect through Procedural Justice shows statistical significance with a value of (B = 0.3987) since the confidence interval remains above zero. The research results show evidence for partial mediation. Inclusion affects legitimacy through direct connections and indirect pathways which depend on people's views about procedural fairness. Stakeholder participation helps build legitimacy through representation and by enhancing the integrity of decision-making methods which requires fair treatment of all individuals involved.

6.10 Visualization and Pattern Interpretation

The researchers created a correlation heatmap to visualize item-level relationships across different constructs. The statistical results showed that items clustered around procedural justice and legitimacy, producing strong visual evidence of cross-loading patterns.

The visualization helped identify clusters among questions related to fairness, transparency, and sustainability. The survey design achieved internal validity because Power Concentration and Top-Down Decision-Making items showed high positive intra-construct cohesion.

Figure 6.1: Heatmap of Correlations



6.11 Additional Observations

The analysis revealed the existence of two new patterns. The research found that Procedural Justice and Inclusion created the strongest ties to Legitimacy which showed that fairness and participation serve as the main factors that shape public views of governance. The research showed that Pressure

created a moderate positive association with Power Concentration and Exclusion because the two elements shared structural connections with authority-based dimensions.

The study found that Exclusion showed weaker connections to Legitimacy than both Inclusion and Procedural Justice. The study found that legitimacy perceptions depend more on participatory and fairness-based mechanisms than on exclusionary dynamics.

The research results indicate that people accept governance systems based on their assessment of procedural fairness and stakeholder participation. The system operates through structural elements which include power and pressure, yet these elements play a minor role in establishing legitimacy compared to decision-making processes that involve all stakeholders through open and transparent methods.

6.12 Summary of Hypotheses

The testing of all primary hypotheses from Chapter 2 showed the following results, summarized below:

All primary hypotheses developed in Chapter 2 were tested and the outcomes are summarized below:

Hypothesis	Result
H1: Inclusion is positively associated with legitimacy	Supported
H2: Procedural justice is positively associated with legitimacy	Supported
H3: Procedural justice mediates the effect of inclusion on legitimacy	Supported
H4: Exclusion is negatively associated with legitimacy	Not Supported
H5: Top-down decision-making pressure weakens perceptions of fairness	Not supported

6.13 Chapter Summary

The research tested statistical methods to assess the proposed framework which connects power dynamics with procedural justice and legitimacy in mega-project governance. The analysis showed strong internal consistency among the constructs because the study achieved Cronbach's alpha values. The correlation results showed especially strong connections between inclusion and procedural justice and legitimacy. Regression analysis showed that inclusion and procedural justice predicted legitimacy but exclusion had no independent impact. The study found that procedural justice operates as a partial mediator in the relationship between inclusion and legitimacy.

The research results demonstrate that participatory practices and fair decision-making processes serve as key factors which shape stakeholders' legitimacy perceptions. The next chapter interprets these results in relation to the theoretical framework and outlines practical implications for governance practice.

7. Discussions

7.1 Introduction

The chapter delivers a comprehensive study of Chapter empirical results through a detailed explanation that connects these results to the theoretical and practical frameworks established in earlier chapters. The chapter applies stakeholder theory (Freeman, 1984), stakeholder salience theory (Mitchell, Agle, & Wood, 1997) and procedural justice theory (Colquitt, 2001; Tyler, 2006) to demonstrate how power relations and inclusion-exclusion methods and fairness perceptions determine legitimacy and sustainable development in major construction projects. The results show how the governance systems interact with stakeholders to produce specific results which exceed their basic descriptive functions. The ongoing debates about infrastructure project decision-making methods between technocratic and participatory approaches have reached their first empirical point according to the findings. The chapter examines how institutional power structures influence people view justice and legitimacy which helps identify governance deficiencies that put project sustainability at risk. The chapter presents theoretical validation because it generates new knowledge through its analysis of recent studies which investigate research evidence from empirical data and governance testing in real world scenarios.

The chapter presents its content through thematic domains which arise from the research model that includes stakeholder power and inclusion and participation and exclusion and marginalization and procedural fairness and legitimacy and sustainability orientation. The researchers discovered

links between discovered relationships and prior research studies thus giving essential interpretations and presenting essential project governance improvements. The researchers want to present their findings from research in both academic environments and ongoing project work to establish effective practices and future research areas.

7.2 Stakeholder Power and Its Distribution

The quantitative study results demonstrate that decision-making power in major projects gets controlled by a small group of powerful stakeholders which includes top management and financial backers and government bodies. The results demonstrate Flyvbjerg (2014) findings which showed that major infrastructure projects get controlled by dominant stakeholders who suppress opposing viewpoints from marginalized groups. The connections between perceived power concentration and exclusion show that information control and resource control together with formal authority establish who can participate in activities and who must remain excluded from them.

The majority of responses indicated that top-level decision-making was associated with perceptions of lower transparency in decreased transparency and reduced project governance transparency. The stakeholder salience model developed by Mitchell, Agle, and Wood (1997) establishes that power and legitimacy and urgency determine who gets recognized by stakeholders. People without organizational or political power could not use legitimacy as their source of influence over project outcomes because they lacked organizational or political power. The situation creates systemic imbalances because it gives unequal influence which distorts project priorities and decreases stakeholder confidence in institutions.

The situation produces two distinct consequences. Power asymmetries create barriers that hinder organizations from adapting because teams will make decisions which do not reflect their actual operational needs and unexpected threats. Power asymmetries lead to marginalized stakeholders developing resentment and disengagement because they require proper participation for projects to proceed smoothly. The research results together with those from Aaltonen and Kujala (2016) show that global projects face delays and disputes and resistance problems when community members and junior stakeholders are excluded from decision-making processes.

7.3 Inclusion, Exclusion, and Procedural Justice

The research demonstrated that inclusion had a strong positive relationship with procedural justice through its correlation coefficient of 0.789. Stakeholders who believe they have higher participation rights in decision-making processes will perceive fairness to a higher degree. The findings support procedural justice theory according to which fair processes create trust and acceptance.

The results demonstrate that inclusion establishes a strong relationship with legitimacy through its correlation coefficient of 0.843 and procedural justice establishes a similar relationship with legitimacy through its correlation coefficient of 0.845. The pattern of results provides support for the mediation results which show that procedural justice acts as a partial mediator between inclusion and legitimacy.

The regression model showed that exclusion did not have any direct relationship with legitimacy according to statistical analysis. People develop legitimacy perceptions through two main ways which include their participatory engagement and the way fairness mechanisms operate while exclusionary views have less direct impact.

The research results show that organizations need to involve their stakeholders in a meaningful way. The perception of participation as authentic rather than a mere symbol leads to higher fairness perceptions which subsequently enhance legitimacy.

7.4 Procedural Justice as a Mediator

Mediation analysis confirmed that procedural justice mediates the relationship between inclusion and legitimacy. This validates theoretical propositions by Suchman (1995) and Colquitt (2001), which suggest that legitimacy emerges not simply from stakeholder participation but from the fairness of rules, transparency of implementation, and responsiveness to concerns. In essence, participation must be supported by credible and consistent procedures in order to be effective.

The function of procedural justice serves as both a mechanism and an evaluative standard. The strength of legitimacy perceptions increases in situations where stakeholders observe transparent processes and consistent procedures and receive respectful treatment. The legitimacy of a system decreases when people cannot understand its procedures or they perceive those procedures as being applied in an inconsistent manner.

The regression model showed that exclusion did not directly affect legitimacy yet the strong mediation results demonstrated that fairness mechanisms function as essential elements which determine whether people accept governance. The research demonstrates that institutional design which emphasizes transparent and consistent procedures enables organizations to build legitimacy in environments with complicated power dynamics.

7.5 Legitimacy and Sustainability

The research shows a fundamental connection between procedural justice and legitimacy because the correlation coefficient measures forgiveness at a value of 0.845. Inclusion demonstrates a strong correlation with legitimacy according to its correlation coefficient which measures 0.843. The study results show that legitimacy depends on people viewing fairness and active involvement as essential elements of legitimacy.

Sustainability assessment in major infrastructure projects occurs through the evaluation of complete legitimacy requirements. The stakeholders view long-term viability and environmental responsibility and governance transparency as three interconnected dimensions. The results demonstrate that procedural fairness serves as the essential foundation for achieving sustainable governance results. In long-term infrastructure initiatives, sustainability extends beyond environmental objectives and becomes a governance necessity. Projects that disregard social inclusion or minimize environmental trade-offs often encounter public opposition, reputational harm, and sometimes political withdrawal of support. Sovacool (2014) argues that sustainability crises frequently stem from governance failures rather than technical shortcomings. The present findings reinforce that position: legitimacy, grounded in procedural fairness, is essential for achieving sustainable outcomes. Energy transition governance literature also highlights the political economy dimension of large infrastructure investments (Bergquist & Lindmark, 2023).

Additionally, indexation mechanisms such as CPI-linked payments were perceived as indicators of fair treatment when implemented transparently. Respondents noted that neglecting inflation adjustments or cost escalation reduced trust, particularly when decisions appeared to favor

corporate actors over communities. Therefore, institutional arrangements must ensure that financial structuring aligns with socio-environmental responsiveness.

7.6 Top-Down Decision-Making and Stakeholder Pressure

Centralized control systems simplify decision processes yet the study demonstrates that legitimacy results from institutionalized decision-making procedures and stakeholder involvement more than from hierarchical authority. Power distribution creates pressure, which results in systems that operate according to their authoritative power structure. The mechanisms of fairness and participation, not pressure, serve as the primary factors that shape legitimacy perceptions. Although centralized control can accelerate decisions, it often undermines legitimacy and long-term cooperation. Participants reported feelings of disempowerment, noting that questioning senior management was discouraged and dissent viewed negatively. This observation reflects Sovacool and Cooper's (2013) critique that hierarchical governance constrains adaptive learning and increases the risk of governance failure.

The findings highlight the importance of what Frooman (1999) describes as "stakeholder influence strategies." Empowering middle-tier managers and institutionalizing structured feedback channels can reduce hierarchical rigidity. Organizational cultures that promote learning and accountability, rather than unquestioned compliance, are more likely to generate equitable and sustainable project outcomes.

7.7 Recommendations

Based on the empirical evidence and theoretical insights, several policy and management recommendations are proposed:

1. Institutionalize Shared Governance: Establish formal advisory panels that include internal and external stakeholders throughout project phases.
2. Enhance Participatory Design: Utilize collaborative platforms during planning stages to ensure early engagement of marginalized stakeholders.
3. Formalize Feedback Systems: Implement digital dashboards or grievance mechanisms to enable ongoing review and corrective action.
4. Capacity Building: Train mid-level managers in facilitation, negotiation, and stakeholder analysis to distribute influence more evenly.
5. Transparent Indexation Policies: Clearly communicate how inflation adjustments, environmental offsets, and social compensation mechanisms are calculated and applied.
6. Integrate Social Impact Assessment: Combine technical feasibility studies with community-based assessments to identify hidden risks.

7. Benchmark Procedural Justice: Develop measurable fairness indicators to support continuous monitoring and legitimacy evaluation.

These recommendations aim not only to address governance shortcomings identified in the study but also to embed stakeholder fairness within institutional structures.

7.8 Contributions and Alignment with Literature

This study contributes to stakeholder and project governance literature by empirically validating underexplored relationships among inclusion, procedural justice, and legitimacy. Although previous research has acknowledged the importance of participation, few studies have quantified its indirect effects through procedural justice. The present findings address this gap and confirm the robustness of established theoretical models.

Furthermore, the study extends the stakeholder salience framework (Mitchell et al., 1997) by demonstrating that salience without procedural inclusion is less strongly associated with legitimacy. Even stakeholders possessing substantial power may lose influence when fairness perceptions deteriorate. The findings also reinforce Arnstein's (1969) distinction between symbolic and authentic participation by offering measurable indicators that differentiate the two.

By integrating empirical survey data with established theoretical frameworks, this thesis bridges theory and practice and provides a replicable approach for future stakeholder assessments.

7.9 Limitations and Considerations

Like all research, this study has limitations. The reliance on self-reported perceptions may introduce social desirability bias. Although purposive sampling ensured expertise, it limits generalizability beyond similar project environments. Additionally, the cross-sectional design restricts causal interpretation.

Cultural and institutional contexts also shape stakeholder expectations. Practices perceived as participatory or legitimate in one setting may not be interpreted similarly elsewhere. Future research could adopt comparative designs across sectors or governance systems to address contextual variation.

Moreover, while the mediation model demonstrated strong effects, qualitative follow-up studies could explore the lived experiences underlying these patterns. Case-based or ethnographic approaches may offer deeper insight into how stakeholders experience power, fairness, and legitimacy in real time.

7.10 Chapter Summary

The chapter used stakeholder theory and procedural justice and legitimacy frameworks to evaluate the research results. The analysis showed that when organizations implement fair procedures to achieve inclusion their legitimacy assessment results improve. This relationship depends on procedural justice which functions as the main mediating factor. Mega-project environments still maintain their dominance through power concentration and top-down governance systems but the legitimacy perceptions of stakeholders rely more on their ability to experience fairness and active participation. The chapter developed governance practices which the research results showed to support two main theoretical points. The research results show that organizations need to establish fair and transparent governance systems to maintain stakeholder trust in complex infrastructure projects.

8. Conclusion and Future Research

8.1 Overview of the Study

The research shows how stakeholder power differences combined with practices that either include or exclude people and procedures that ensure fairness determine the legitimacy and environmental viability of large-scale projects. The political complexity and financial magnitude of mega-projects in public–private partnerships (PPPs) and infrastructure projects leads to their implementation of specific social embeddedness requirements which increase project difficulty. The absence of appropriate governance systems results in mega-projects facing stakeholder opposition and legitimacy problems and delays in project execution despite having sophisticated technical and contractual systems. The research team approached governance as a socio-political system because it includes power distribution processes and negotiation activities instead of treating governance as an administrative function.

Guided by stakeholder theory (Freeman, 1984), stakeholder salience theory (Mitchell, Agle, & Wood, 1997), and procedural justice theory (Colquitt, 2001; Tyler, 2006), the research developed a hypothesis which showed that stakeholder inclusion improves legitimacy perception because it operates through the process of developing fair treatment. Theoretical foundations established a 50-item structured questionnaire which researchers used to assess 51 stakeholders involved in mega-projects who included engineers consultants and managers and government officials. The study identified seven thematic dimensions which encompassed power concentration and sources of stakeholder power and inclusion and participation and exclusion and marginalization and procedural justice and legitimacy and sustainability and top-down decision pressure.

The thesis provided measurable proof through its empirical methods which included descriptive statistics plus correlation matrices plus regression modeling plus mediation analysis using Hayes'

PROCESS macro to show that stakeholder perceptions develop into recognizable patterns which depend on particular governance practices. The findings demonstrate that project managers and policy-makers need to build connections with stakeholders to learn how fairness and trust and influence function rather than depending on stakeholder lists and consultation documents.

8.2 Summary of Key Findings

The empirical findings present a coherent and theoretically aligned picture:

• Power Concentration: Stakeholders broadly perceived that decision-making authority was concentrated among senior actors. The study demonstrated that power distribution among leaders resulted in both increased top-down governance pressure and higher organizational compliance with authoritarian governance patterns.

• Inclusion and Procedural Justice: The study found a strong positive relationship between inclusive practices and procedural justice standards (r = 0.789). The stakeholders who experienced real inclusion in processes reported both higher fairness perceptions and greater transparency understanding.

• Procedural Justice as Mediator: The mediation analysis established that inclusion directly affects legitimacy and through procedural justice it establishes its indirect effect. The finding supports the research of Suchman (1995) because it proves that fairness mechanisms serve as fundamental elements for establishing legitimacy.

• Top-Down Decision Pressure: Decision-making through hierarchical structures continues to exist, but legitimacy perceptions connected more with fairness and inclusion than with pressure-related factors. The data shows that participatory mechanisms serve as the main element which determines how people accept governance systems.

• Legitimacy and Sustainability Orientation: The study found that legitimacy scores showed a strong connection with procedural justice (r = 0.845) and inclusion (r = 0.843). The results show that stakeholders assess project sustainability and long-term viability through the framework of fairness and significant stakeholder involvement.

8.3 Theoretical Contributions

This thesis advances several theoretical research fields through its contributions.

• Extension of Stakeholder Theory: Stakeholders perceive legitimacy based on their participation in procedural operations which involve fair treatment of all parties instead of their economic results or formal organizational role. Freeman's (1984) foundational call for stakeholder-centered management receives reinforcement from this theory.

• Operationalizing Salience Beyond Attributes: The research demonstrates that procedural justice serves as an essential factor which determines how stakeholders gain legitimacy from their salience status. The study shows that governance systems use fairness mechanisms to define power and legitimacy and urgency as the core attributes which Mitchell et al. (1997) established.

• Empirical Integration of Arnstein's Ladder: The study transforms Arnstein's (1969) typology into a measurable instrument through its approved Likert-scale questions which show eight participation levels between manipulation and control. The researchers provide a method that connects theoretical concepts with survey design.

• Contextualizing Justice in Mega-Projects: Tyler (2006) presented justice research for law enforcement and organizational settings in previous studies. The thesis defines justice theory principles for infrastructure projects because fairness acts as an external public standard which determines both legitimacy and sustainability and compliance.

8.4 Practical Implications

The research results provide a basis for proposing several practical strategies that can be implemented to improve governance outcomes in mega-projects:

• Institutionalize Participatory Frameworks: Governments and private sponsors should establish stakeholder boards or community forums with binding consultation rights, especially during early planning phases, to enhance participatory legitimacy.

• Distribute Power Vertically and Horizontally: Organizations should distribute authority across upper management, middle management, project teams, and local community representatives to promote a more open governance system. This approach improves transparency and responsiveness to stakeholder concerns.

• Design Procedural Safeguards: Contracts and concession agreements should clearly define grievance procedures, consultation schedules, and feedback mechanisms. These safeguards help build trust among stakeholders and reduce the likelihood of disputes.

• Training in Fair Leadership: Project managers should receive training in negotiation, empathy, and procedural neutrality. Procedural justice is not merely a legal requirement but a relational practice that shapes long-term cooperation.
• Index Legitimacy and Inclusion in Project KPIs: Organizations should incorporate legitimacy and justice perception scores as key performance indicators alongside traditional metrics such as cost, time, and safety.

8.5 Limitations of the Study

Like all research, this study is subject to certain limitations that should be acknowledged:
• Sample Size and Representativeness: Although respondents represented diverse stakeholder roles, the sample size (n = 51) limits statistical power. Larger and more sectorally diverse samples would enhance external validity.
• Cross-Sectional Design: The study provides a snapshot of stakeholder perceptions but does not establish causality or track changes over time. Longitudinal designs would allow for dynamic modeling of legitimacy formation.
• Reliance on Self-Reported Data: Respondents may have provided socially desirable responses or misunderstood certain questions despite pilot testing. Future studies using mixed-method designs—such as interviews or focus groups—could strengthen interpretation.
• Sectoral Context: While grounded in infrastructure and energy projects, the findings may require adaptation before being applied to social-sector or technology-driven projects.

8.6 Directions for Future Research

This study opens several promising avenues for future academic exploration:
• Longitudinal Impact Studies: Future research should examine how stakeholder perceptions evolve throughout project phases, from planning to decommissioning.
• Cross-National Comparisons: Comparative studies across different political and cultural systems—such as authoritarian and democratic contexts—could provide deeper insight into how procedural justice shapes legitimacy in varying institutional environments.
• Digital Participation Platforms: Further research should explore how digital tools, such as citizen dashboards and virtual consultations, influence stakeholder perceptions of inclusion, particularly in the post-pandemic era.
• Stakeholder Resistance: Researchers should investigate stakeholders who choose not to participate, examining how dissent, protest, and exclusion affect project outcomes.

• Power Symmetries in Climate Projects: As mega-projects increasingly intersect with climate mitigation initiatives—such as hydropower and wind energy—future research should explore how procedural justice interacts with environmental justice in these contexts.

8.7 Final Reflections

Present-day society depends on major projects to advance from their existing technological methods toward a new model which requires citizen input and transparent communication with the public. The thesis demonstrates that stakeholder engagement goes beyond communication because it includes co-creation and procedural equity and the acknowledgment of distributed expertise.

The research uses procedural justice as its main concept because it shows legitimacy must be established through transparent and inclusive and respectful governance. The practitioners must develop legitimacy through their work just like they build concrete. The study encourages scholars to conduct more comprehensive research about justice and voice and power which impact development on a large scale.

Governance systems function as neutral entities. The decision-making methods that organizations use create the actual decisions which result from those methods. Organizations can achieve their goals through fair process development which provides ethical advantages while their strategic benefits enable them to establish mega-projects which balance operational efficiency with community acceptance and environmental sustainability and social equality.

9.1 Thesis Summary

The thesis examines how stakeholder power dynamics and inclusion and exclusion practices and perceptions of procedural justice affect the legitimacy and sustainability of mega-projects. The study investigates infrastructure projects which involve public-private partnerships to reveal how stakeholder theory which advocates for inclusive engagement gets abandoned because decision-making power ends up with a select few who neglect weaker and non-institutional stakeholders. The research uses stakeholder theory (Freeman, 1984) and salience theory (Mitchell et al., 1997) and procedural justice frameworks (Colquitt, 2001; Tyler, 2006) to execute its quantitative research via cross-sectional survey design. The research team distributed a structured 50-item questionnaire to 100 professionals who worked across multiple project sectors and received 51 complete responses. The researchers conducted statistical analysis using SPSS and Python which included descriptive

statistics and reliability checks and correlation analysis and multiple regression and mediation testing via Hayes' PROCESS macro (Hayes, 2018).

The research shows that when stakeholders participate in a process they perceive procedural justice at higher levels and procedural justice functions as the main element which establishes legitimacy. The analysis found structural patterns which showed power concentration and top-down decision-making processes while legitimacy perceptions depended on the presence of inclusion and fairness mechanisms. The projects which required transparency and stakeholder participation and established consistent operational methods received better legitimacy and sustainability ratings.

The thesis delivers an academic contribution through its research which combines different governance systems into one practical research framework while offering new insights about how legitimacy develops in major development projects. The study provides organizational guidance which enables organizations to develop participatory governance systems that assign power to different stakeholders through their transparent processes which help build equitable decision-making systems.

Technical proficiency and contract adherence do not create instant legitimacy. The process of building legitimacy requires organizations to achieve inclusion and fairness through transparent stakeholder engagement which stands as vital for contemporary governments and developers and communities who confront modern mega-project challenges.

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APPENDICES

Appendix A

Survey Questionnaire Instrument

Title: Stakeholder Perceptions of Power, Inclusion, Procedural Justice, and Legitimacy in Mega-Projects

Response Scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Section 1 of 7

Stakeholder Power Dynamics in Mega-Projects

Form description

SECTION A – Power Concentration & Dominance

1. A small number of actors dominated key decisions.

2. Decision-making authority was too much concentrated at the top of the organization.

3. Senior management had more influence than other stakeholders.

4. External actors (e.g., government, financiers, owners) had strongly personal influenced decisions.

5. Power differences are clearly visible in top management behaviour.

6. Influence over decisions depended largely on formal hierarchical position.

7. Influence was fairly distributed among stakeholders.

SECTION B – Sources of Power

8. Control over financial resources increased stakeholder influence.

9. Technical expertise increased decision influence.

10. Access to key information increased power over decisions.

11. Legal or regulatory authority shaped decision outcomes.

12. Political connections increased stakeholder influence.

13. Reputation or status increased stakeholder credibility.

14. Informal networks played an important role in decision-making influence.

SECTION C – Inclusion & Participation

15. Relevant stakeholders were actively invited to participate.
16.All of them Stakeholders were involved early in decision-making.
17. Information needed to contribute was shared openly.
18. Stakeholder input was acknowledged and considered.
19. Participation opportunities were equal across stakeholder groups.
20. My participation influenced discussions.
21. My participation was mostly symbolic.

SECTION D – Exclusion & Marginalisation

22. Some stakeholders were intentionally excluded from key forums.
23. Certain stakeholder voices were systematically ignored.
24. Information was selectively withheld from some stakeholders.
25. Decisions were made before consultation occurred.
26. Consultation occurred only after decisions were finalized.
27. Exclusion increased frustration among stakeholders.

SECTION E – Procedural Fairness & Decision Influence

29. Contract rules were applied consistently with all stakeholders.
30. Decision criteria were clearly explained before the decision.
31. There were fair ways to challenge or appeal decisions.
32. Stakeholders were treated with respect during decision-making.
33. My input had a meaningful effect on final decisions.
34. I had genuine opportunities to shape project outcomes.

SECTION F – Legitimacy & Sustainability

35. The project's governance approach was appropriate for its context.
36. The project enjoys justified acceptance among stakeholders.
37. I consider the project's decision-making legitimate.
38. Fair decision processes increased my acceptance of outcomes.
39. Social impacts were seriously considered.
40. Environmental impacts were seriously considered.

41. Long-term sustainability guided key decisions.

SECTION G – Top-Down Decision-Making & Pressure

42. Key decisions were made primarily by top management.

43. Lower management was rarely involved in strategic decisions.

44. Decisions were finalized before lower management was consulted.

45. I felt pressure to comply with decisions from senior management.

46. Questioning decisions from upper management was discouraged.

47. Disagreement with senior decisions was viewed negatively.

48. Compliance with decisions was expected regardless of concerns.

49. Lower-level feedback had little impact on final outcomes.

50. Top-down decision-making reduced perceptions of fairness.

Appendix B

Correlation Matrix (Pearson's r)

Table 6.4: Pearson Correlation Matrix

	Power	Sources	Inclusion	Exclusion	Justice	Legitimacy	Pressure
Power Concentration	1						
Sources of Power	.730**	1					
Inclusion & Participation	.330*	.302*	1				
Exclusion	.618**	.419*	.223	1			
Procedural Justice	.286*	.321*	.789*	.102	1		
Legitimacy	.395**	.441*	.843**	.195	.845***	1	
Pressure	.706**	.498*	.421**	.673	.326**	.358**	1

Appendix C

Regression Output – Predicting Legitimacy

Table 6.5: Multiple Regression Results

Predictor	Coefficient (B)	Std. Error	t-value	p-value
Procedural Justice	0.473	0.105	4.520	<.001

Inclusion	0.478	0.116	4.110	<.001
Exclusion	0.045	0.069	0.658	0.514

Appendix D

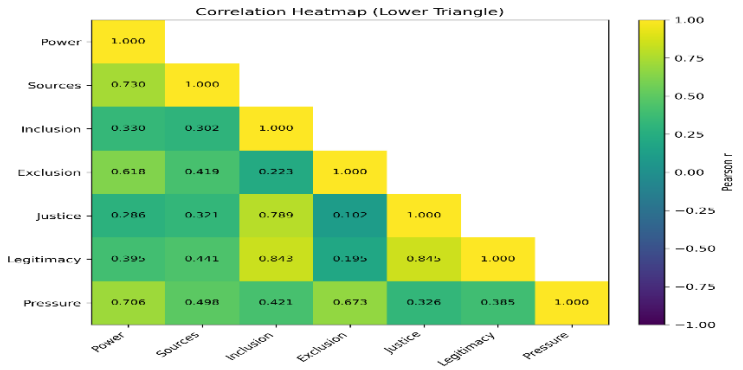
Table 6.6: Mediation Effect of Procedural Justice

Effect Type	Coefficient	SE	LLCI	ULCI
Total Effect	0.8941	-	-	-
Direct Effect	0.4954	0.11	0.26	0.72
Indirect Effect*	0.3987	0.10	0.19	0.60

Appendix E

Correlation Heatmap

Figure A1: Heatmap of Construct Correlations



Appendix F

Reliability Analysis (Cronbach's Alpha)

Table 6.3: Cronbach's Alpha by Construct

Construct	Cronbach's Alpha
Power Concentration	0.763
Sources of Stakeholder Power	0.825
Inclusion & Participation	0.856
Exclusion & Marginalisation	0.824

Procedural Justice	0.872
Legitimacy & Sustainability	0.865
Top-Down Decision Pressure	0.920
Overall Instrument	0.907