© MAR 2026 | IRE Journals | Volume 9 Issue 9 | ISSN: 2456-8880
DOI: https://doi.org/10.64388/IREV9I9-1715562

Stakeholder Perspectives in Value for Money Assessment for Public-Private Partnership Infrastructure Projects

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Abstract- ***This study investigates stakeholder alignment dynamics in Value for Money (VfM) assessment for Public-Private Partnership (PPP) infrastructure projects, addressing how diverse stakeholder perspectives converge or diverge during project evaluation. Employing a mixed-methods research design, this study analysed quantitative survey data from 307 stakeholders (public sector representatives, private developers, financiers, and community leaders) and qualitative insights from 15 semi-structured interviews. Data analysis utilized Relative Importance Index (RII) analysis complemented by thematic analysis of interview transcripts. Results reveal significant stakeholder priority variations: public sector entities emphasize strategic alignment and socioeconomic benefits (RII = 0.908 and 0.852 respectively), private partners prioritize profitability and risk mitigation (RII = 0.898 and 0.856), community stakeholders focus on service quality and affordability (RII = 0.920 and 0.900), while financiers emphasize project bankability (RII = 0.910). Despite these differences, strong overall alignment exists suggesting fundamental agreement on VfM principles. This research contributes actionable frameworks for enhancing stakeholder alignment through early engagement protocols, transparent procurement processes, and multi-dimensional assessment frameworks that balance financial, social, environmental, and governance dimensions.***

Keywords: Value for Money, Public-Private Partnership, Stakeholder Engagement, Infrastructure Projects, Stakeholder Alignment, Multi-dimensional

I. INTRODUCTION

Public-Private Partnerships (PPPs) have emerged as a predominant procurement mechanism for infrastructure development globally, enabling governments to address infrastructure deficits while managing fiscal constraints (Hodge and Greve, 2017; Cui et al., 2018). The World Bank estimates that developing countries alone require approximately $1 trillion annually in infrastructure investment, with PPPs playing an increasingly vital role in bridging this financing gap (Kuttu et al., 2020). Central to PPP project evaluation is the concept of Value for Money (VfM), which ensures optimal utilization of public resources while delivering comprehensive benefits across financial, social, environmental, and governance dimensions (Zhao et al., 2023).

VfM assessment serves as the analytical cornerstone for determining whether a PPP arrangement delivers superior outcomes compared to traditional public procurement methods (Zhao, 2022). However, the complexity of VfM evaluation is amplified by the involvement of multiple stakeholders with diverse interests, expectations, and definitions of value (Osei-Kyei and Chan, 2015). These stakeholders include public sector entities focused on policy objectives and public welfare, private sector partners seeking profitability and risk mitigation, financiers prioritizing bankability and returns on investment, and community stakeholders concerned with service quality and social impacts (Anderson & Ratiu, 2019).
Despite extensive research on PPP project success factors and risk management, the alignment dynamics of stakeholder perspectives in VfM assessment remains underexplored (Hueskes et al., 2017). Misalignment among stakeholders can lead to project conflicts, cost overruns, delays, and ultimately, project failure (Busco et al., 2024). Consequently, millions of people in developing nations face severe disadvantages due to inadequate or absent infrastructure. Without reliable access to electricity, clean water, healthcare facilities, educational institutions, and transportation networks, these populations remain locked in persistent poverty cycles (United Nations Development Programme 2024). The OECD (2017) emphasizes that achieving stakeholder consensus is crucial for PPP success, yet

provides limited guidance on how to systematically evaluate and enhance alignment.

This study addresses this research gap by investigating how stakeholder priorities in VfM assessment differ across stakeholder groups and what strategies can enhance stakeholder alignment to improve project outcomes. By providing empirical evidence on stakeholder alignment dynamics, this research contributes to the development of more inclusive and effective VfM assessment frameworks that accommodate diverse stakeholder perspectives while maintaining project viability.

II. LITERATURE REVIEW

2.1 Value for Money in PPP Infrastructure Projects

The concept of VfM in PPP projects has evolved significantly from its initial focus on cost reduction to encompass a more holistic evaluation framework (Zhao et al., 2023; Grimsey and Lewis, 2004). Traditional VfM assessments primarily emphasized quantitative financial analysis, including cost-benefit analysis, net present value calculations, and public sector comparator methodologies (Kiama and Kavishe, 2025; Morallos and Amekudzi, 2008; Liu et al., 2015). However, these conventional approaches have been criticized for their narrow scope and inability to capture the full spectrum of value generated by PPP projects (Budayan et al., 2025; Hodge and Greve, 2007).

Contemporary VfM frameworks recognize the multidimensional nature of value in infrastructure projects, incorporating financial efficiency, service quality, innovation, risk transfer effectiveness, and sustainability considerations (Almarri, 2023; Cui et al., 2018). The UK Treasury (2018) defines VfM as "the optimum combination of whole-life costs and quality to meet the user's requirement," emphasizing both economic efficiency and qualitative outcomes. Similarly, the European PPP Expertise Centre (EPEC, 2015) advocates for VfM assessments that integrate financial viability with social and environmental sustainability.

Research by Liu et al. (2018) identifies five key dimensions of VfM in PPP projects: economic efficiency, service effectiveness, risk management, innovation capacity, and sustainability. Song et al. (2018) further emphasize the importance of lifecycle costing and long-term value creation over short-term cost savings. Despite these advances, significant challenges remain in operationalizing comprehensive VfM assessments, particularly in quantifying intangible benefits such as community well-being, environmental preservation, and social equity (Sansiviero et al., 2025; Hueskes et al., 2017).

2.2 Stakeholder Theory and PPP Projects

Stakeholder theory, originally developed by Freeman (1984), posits that organizations must consider the interests of all parties affected by their decisions, not merely shareholders. In the PPP context, stakeholder theory provides a valuable lens for understanding the complex interplay among diverse actors with varying degrees of power, legitimacy, and urgency (Best et al., 2017). PPP projects inherently involve multiple stakeholders, including government agencies, private developers, financiers, construction contractors, service users, community groups, and regulatory bodies (Akintoye et al., 2003).

Osei-Kyei and Chan (2015) identify stakeholder management as a critical success factor for PPP projects, with effective engagement strategies significantly influencing project outcomes. Their research demonstrates that stakeholder identification, analysis, and engagement must occur throughout the project lifecycle to ensure alignment of interests and mitigation of conflicts. Similarly, Yang et al. (2016) find that stakeholder relationships characterized by trust, communication, and collaborative problem-solving contribute to improved project performance and reduced disputes.

However, stakeholder engagement in PPP projects faces several challenges. Power imbalances often result in the dominance of private sector interests and financiers in decision-making processes, marginalizing community voices and public welfare considerations (Busco et al., 2024; Koppenjan and Enserink, 2009). El-Gohary et al. (2006) and Yesudas et al., 2020 note that divergent stakeholder expectations and objectives create inherent tensions that, if unaddressed, can lead to project dysfunction. Furthermore, Jefferies et al. (2002) and Oliva et al., (2025) highlight that different stakeholders operate

under different time horizons and risk appetites, complicating consensus-building efforts.

2.3 Alignment Dynamics in VfM Assessment

Alignment dynamics refer to the degree of convergence or divergence among stakeholder priorities during the VfM assessment process (Ke et al., 2010). Research suggests that stakeholder alignment is crucial for reducing conflicts, improving decision-making quality, and enhancing project outcomes (Javed et al., 2013). However, achieving alignment is challenging due to the heterogeneous nature of stakeholder interests and the complexity of PPP arrangements (Carbonara and Pellegrino, 2018).

Several studies have examined specific aspects of stakeholder alignment in PPP projects. Ke et al. (2010) investigate the alignment of government and private sector objectives, finding that clear contractual mechanisms and risk-sharing arrangements facilitate convergence. Osei-Kyei and Chan (2017) explore alignment between project outcomes and stakeholder expectations, emphasizing the importance of transparent communication and participatory decision-making. Yuan et al. (2018) examine alignment dynamics noting that stakeholder priorities shift as projects transition from planning to construction to operation phases.

Despite these contributions, existing research provides limited empirical evidence on how multiple stakeholder perspectives interact. Most studies focus on dyadic relationships (e.g., public-private alignment) rather than examining the complex multi-stakeholder dynamics that characterize real-world PPP projects (Hueskes et al., 2017). Additionally, few studies systematically investigate how alignment challenges manifest across different stakeholder groups and what specific strategies can enhance convergence (Aben et al., 2021).

2.4 Research Gaps and Study Objectives

The literature review reveals significant research gaps. First, while VfM assessment frameworks increasingly recognize the importance of multiple value dimensions, empirical evidence on how different stakeholders prioritize these dimensions remains limited. Second, although stakeholder theory emphasizes the need for engagement and alignment. systematic investigation of alignment dynamics across multiple stakeholder groups is lacking. Third, practical strategies for enhancing stakeholder alignment in VfM assessment are underexplored, with limited guidance available for policymakers and practitioners.

This study addresses these gaps by: (1) empirically investigating stakeholder perspectives on VfM assessment criteria, (2) analyzing alignment dynamics across multiple stakeholder groups, and (3) identifying evidence-based strategies for enhancing stakeholder convergence. By providing comprehensive insights into stakeholder alignment dynamics, this research contributes to the development of more inclusive and effective VfM assessment frameworks for PPP infrastructure projects.

III. RESEARCH METHODOLOGY

3.1 Research Design and Philosophical Underpinning

This study employs a pragmatic mixed-methods research design, integrating quantitative and qualitative approaches to provide comprehensive insights into stakeholder alignment dynamics (Creswell and Plano Clark, 2017). The pragmatic paradigm is particularly appropriate for this research as it prioritizes practical problem-solving and acknowledges that complex social phenomena, such as stakeholder interactions in PPP projects, require multiple perspectives and methodological approaches (Ayegba, 2025).

The quantitative component provides statistical evidence on stakeholder priorities and alignment patterns, while the qualitative component offers contextual depth and nuanced understanding of underlying mechanisms (Noyes et al., 2019). This convergent parallel design allows for triangulation of findings, enhancing the validity and reliability of research conclusions (Mubanga et al 2025).

3:2 Data Collection

3.2.1 Quantitative Data Collection

A structured questionnaire was developed based on extensive literature review and preliminary interviews with five PPP experts. The questionnaire comprised three main sections: (1) respondent demographic information and PPP project

experience, (2) stakeholder perspectives on VfM assessment criteria, and (3) priority rankings. Respondents rated each criterion using a five- point Likert scale (1= not important, 5 = extremely important).

The target population included stakeholders involved in PPP infrastructure projects across Nigeria, with particular focus on regions with mature PPP markets. A stratified purposive sampling approach was employed to ensure representation across stakeholder groups (Etikan et al., 2016) The sample comprised:

- Public sector representatives (n = 89, 29.0%): government officials from infrastructure ministries, PPP units, and regulatory agencies
- Private sector partners (n = 102, 33.2%): executives and project managers from construction firms, developers, and operators
- Financiers and investors (n = 68, 22.1%): representatives from commercial banks, development finance institutions, and investment funds
- Community stakeholders (n = 48, 15.6%): civil society representatives, user associations, and local government officials

A total of 450 questionnaires were distributed through online platforms, email invitations, and at PPP conferences and workshops between January 2025 and August 2025. After excluding incomplete responses, 307 valid questionnaires were obtained, representing a response male of 68.2%, which is considered excellent for academic research (Menachemi, 2011).

3.2.2 Qualitative Data Collection

Semi-structured interviews were conducted with 15 key informants selected through purposive sampling based on their extensive experience (minimum 10 years) in PPP project development and implementation. The interview sample included four public sector officials, four private sector executives, three financiers, and four civil society representatives. Interviews lasted between 25 and 35 minutes, were audio-recorded with consent, and subsequently transcribed verbatim.

The interview protocol explored: (1) stakeholder experiences with VfM assessment in PPP projects, (2) perceptions of alignment and divergence among stakeholder groups, (3) challenges encountered in achieving stakeholder consensus, and (4) strategies for enhancing alignment. The semi-structured format allowed for probing and elaboration while maintaining consistency across interviews (Kallio et al., 2016).

3.3 Data Analysis

3.3.1 Quantitative Analysis

Relative Importance Index (RII): RII was calculated to rank VfM assessment criteria and stakeholder priorities using the formula:

$RII = \Sigma w / (A \times N)$

where w is the weight assigned by respondents (1-5), A is the highest weight (5), and N is the total number of respondents (Aibinu and Al-Lawati, 2010). RII values range from 0 to 1, with higher values indicating greater importance. The analysis was conducted using SPSS Version 26.0.

3.3.2 Qualitative Analysis

Interview transcripts were analyzed using thematic analysis following Braun and Clarke's (2006) six-phase framework: familiarization with data, generating initial codes, searching for themes reviewing themes, defining and naming themes, and producing the report. NVivo 12 software facilitated coding and theme development. Inter-coder reliability was established through independent coding by two researchers, with Cohen's kappa coefficient of 0.82 indicating substantial agreement (McHugh, 2012).

3.4 Ethical Considerations

Ethical approval was obtained from the institutional review board prior to data collection. All participants provided informed consent, were assured of confidentiality and anonymity, and had the right to withdraw at any time without consequences. Data were stored securely and accessed only by the research team.

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IV. RESULTS AND DISCUSSION

4.1 Stakeholder Perspectives on VfM Assessment

Analysis of survey data reveals distinct priorities among stakeholder groups in VfM assessment, reflecting their diverse interests and organizational mandates. Table 1 presents the ranking of VfM assessment criteria by stakeholder group.

Table: 1 Stakeholder Perspectives on VfM Assessment in PPP Infrastructure Projects

Stakeholder Group	VfM Assessment Criteria (priorities)	RII Rank
Public Sector Perspective	Alignment with policy objects	0.9081
	Long-term socioeconomic benefits	0.8522
	Cost savings compared to traditional procurement	0.8443
	Risk transfer to private sector	0.8344
Private Sector Perspective	Profitability and return on investment	0.8981
	Clear risk allocation and mitigation strategies	0.8562
	Long-term contractual stability	0.8363
	Opportunities for innovation	0.8164
End-user and community perspective	Quality of service delivery	0.9201
	Affordability and accessibility of services	0.9002
	Environmental and social impact	0.8223
	Job creation and local economic benefits	0.8184
Financier and Investor perspective	Project bankability and financial viability	0.9101
	Risk-adjusted returns	0.8482
	Clear regulatory framework and government support	0.8223
	Exit options and asset liquidity	0.8004

4.1.1 Public Sector Priorities

Public sector stakeholders prioritize strategic alignment with policy objectives (RII = 0.908) as the paramount VfM criterion. This finding corroborates Liu et al. (2018), who emphasize that PPP projects must serve broader public policy goals beyond financial considerations. One public sector interviewee stated: “For us, VfM is not just about saving money. It’s about achieving policy outcomes whether that’s reducing carbon emissions, creating jobs, or improving regional connectivity.”

The high importance assigned to long-term socioeconomic benefits (RII = 0.852) reflects the public sector’s mandate to maximize social welfare and sustainable development (Hueskes et al., 2017). This perspective aligns with contemporary PPP literature emphasizing the need for holistic value creation that extends beyond project boundaries to benefit broader society (Hodge and Greve, 2017).

Interestingly, cost savings compared to traditional procurement ranks third (RII = 0.844), suggesting that while financial efficiency remains important, it is not the sole determinant of VfM for public sector entities. This important view contrasts with early PPP models that emphasized cost reduction as the primary justification for private sector involvement (Grimsey and Lewis, 2004).

4.1.2 Private Sector Priorities

Private sector partners unsurprisingly prioritize profitability and return on investment (RII = 0.898), reflecting their commercial orientation and fiduciary responsibilities to shareholders (Ke et al., 2010). However, the high ranking of clear risk allocation and mitigation strategies (RII = 0.856) indicates sophisticated understanding that sustainable returns depend on well-structured contracts with balanced risk-sharing arrangements (Carbonara and Pellegrino, 2018).

Long-term contractual stability (RII = 0.836) emerges as a critical concern for private partners, particularly given the extended duration of PPP contracts, often spanning 20-30 years. A private sector interviewee explained: “Political risk is our biggest concern. We

need confidence that governments will honour commitments across electoral cycles and changing administrations."

The relatively lower ranking of innovation opportunities (RII = 0.816) may reflect the tension between innovation incentives and the risk-averse nature of long-term infrastructure contracts. This finding suggests potential misalignment with public sector expectations, as innovation is often cited as a key benefit of PPP arrangements (Yuan et al., 2018).

4.1.3 Community Stakeholder Priorities

Community stakeholders exhibit the highest concern for service quality (RII = 0.920), followed closely by affordability and accessibility (RII = 0.900). These priorities underscore the fundamental purpose of infrastructure projects: serving end-users effectively and equitably (Osei-Kyei and Chan, 2017). A civil society representative emphasized: "Communities don't care about complex financial models. They care about whether services are reliable, affordable, and meet their needs."

The Importance assigned to environmental and social impacts (RII = 0.822) reflects growing awareness of sustainability issues and the potential for infrastructure projects to generate negative externalities if not properly managed (Song et al., 2018). This perspective aligns with global trends toward sustainable development and the integration of environmental, social, and governance (ESG) criteria in infrastructure assessment (OECD, 2017).

Job creation and local economic benefits (RII = 0.818) rank fourth, indicating community stakeholders' interest in tangible economic opportunities arising from infrastructure development. This finding supports the argument for more inclusive VfM frameworks that explicitly consider distributional effects and local economic impacts (Hueskes et al., 2017).

4.1.4 Financier Priorities

Financiers prioritize project bankability and financial viability (RII = 0.910), reflecting their role as capital providers requiring assurance of debt serviceability and investment security (Zhang, 2005). This technical focus on financial metrics is expected given financiers' fiduciary duties and regulatory capital requirements.

Risk-adjusted returns (RII = 0.848) rank second, demonstrating sophisticated financial analysis that considers both potential returns and associated risks. This perspective aligns with modern portfolio theory and project finance principles emphasizing risk-return optimization (Akintoye et al., 2003).

The Importance of clear regulatory frameworks and government support (RII = 0.822) highlights financiers' sensitivity to institutional quality and sovereign risk. Stable regulatory environments reduce policy uncertainty and enhance project bankability (Cui et al., 2018). Finally, exit options and asset liquidity (RII = 0.800) reflect financiers' need for flexibility in portfolio management, particularly for institutional investors with evolving investment mandates.

V. FINDINGS

Significant priority variations exist across stakeholder groups. Public sector entities emphasize strategic alignment with policy objectives (RII = 0.908) and long-term socioeconomic benefits (RII = 0.852), reflecting their mandate for public welfare maximization. Private partners prioritize profitability and return on investment (RII = 0.898) alongside clear risk allocation (RII = 0.856), demonstrating commercial orientation tempered by sophisticated risk management. Community stakeholders focus overwhelmingly on service quality (RII = 0.920) and affordability (RII = 0.900), underscoring their role as end-users concerned with tangible benefits. Financiers emphasize project bankability (RII = 0.910) and risk-adjusted returns (RII = 0.848), reflecting their function as capital providers requiring financial security.

These divergent priorities are not inherently problematic but reflect legitimate differences in stakeholder roles and responsibilities. The challenge lies in creating VfM assessment frameworks that accommodate multiple value dimensions while maintaining analytical rigor and practical applicability.

VI. CONCLUSION

This research demonstrates that Value for Money assessment in Public-Private Partnership infrastructure projects requires balancing diverse stakeholder perspectives. The study reveals that stakeholder groups bring legitimately different priorities: public entities emphasize policy alignment, private partners focus on profitability, communities prioritize service quality, and financiers concentrate on bankability. Despite these differences, strong overall alignment, suggesting fundamental agreement on VfM principles. Four evidence-based strategies can enhance alignment: early engagement, transparent procurement, multi-dimensional assessment frameworks, and capacity building. Success therefore requires collaborative stakeholder management and broader value conceptions beyond narrow financial metrics.

This research advances PPP literature by empirically validating multi-dimensional VfM frameworks and extending stakeholder theory application through systematic examination of alignment dynamics. Practically, it provides diagnostic frameworks for identifying alignment challenges, evidence-based enhancement strategies, and foundations for developing comprehensive assessment tools incorporating diverse stakeholder perspectives while maintaining analytical rigor.

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