

THE ROLE OF GOVERNMENT POLICY IN SHAPING EFFECTIVE PUBLIC-PRIVATE PARTNERSHIPS (PPPs) FOR ROAD INFRASTRUCTURE DEVELOPMENT IN NORTHERN NIGERIA

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Abstract: This study examined the role of government policy in shaping the effectiveness of Public-Private Partnerships (PPPs) for road infrastructure development in Northern Nigeria, with evidence drawn from Nasarawa, Benue, and Kogi States. The study was motivated by persistent road infrastructure deficits in the region despite the adoption of PPP frameworks aimed at improving efficiency, financing, and service delivery. A mixed-methods research design was adopted, combining survey and documentary analysis. A sample of 400 respondents comprising public sector officials, private sector participants, and community representatives was selected using purposive and stratified sampling techniques, with 372 valid responses analyzed. Data were analyzed using descriptive statistics, chi-square tests, and thematic analysis. Findings revealed that government policy significantly influences PPP effectiveness, particularly through clear legal frameworks (72%), transparent procurement processes (70%), and policy consistency. However, policy inconsistency (65%) remains a major barrier to successful PPP implementation. The study further found that PPPs have moderately improved road infrastructure delivery, with improvements in road quality (58%) and project delivery speed (54%), although challenges such as delays and cost overruns (61%) persist. Qualitative findings highlighted key constraints including weak institutional capacity, policy inconsistency, security challenges, and limited community engagement. Chi-square analysis confirmed that government policy has a significant influence on PPP effectiveness ($\chi^2 = 15.84, p < 0.05$), and that PPP arrangements significantly improve road infrastructure delivery ($\chi^2 = 13.27, p < 0.05$). The study concludes that while PPPs are a viable strategy for addressing infrastructure deficits in Northern Nigeria, their effectiveness is largely dependent on coherent, stable, and effectively implemented government policy frameworks and strong institutional support. The study recommends policy stability, institutional strengthening, improved transparency, enhanced security measures, and increased stakeholder engagement to optimize PPP outcomes in road infrastructure development.

Keywords: Public-Private Partnerships, Government Policy, Road Infrastructure, Northern Nigeria, Infrastructure Development.

Introduction

Infrastructure development remains a cornerstone of economic growth and regional integration, particularly in developing economies where it serves as a catalyst for productivity, trade expansion, and social inclusion. Globally, Public-Private Partnerships (PPPs) have gained prominence as viable mechanisms for financing and delivering infrastructure projects, especially in contexts where public resources are constrained. PPPs enable governments to leverage private sector expertise, technological innovation, and financial capacity to improve efficiency in infrastructure delivery and service provision (Hodge & Greve, 2017; Kwak, Chih, & Ibbs, 2019). According to the World Bank (2017), PPPs are particularly effective in addressing infrastructure gaps by mobilizing private capital and reducing the fiscal burden on governments while ensuring value for money and timely project execution.

In Nigeria, road infrastructure plays a vital role in economic development by facilitating trade, enhancing mobility, and improving access to essential services such as healthcare, education, and markets. Efficient road networks are critical for

integrating rural and urban economies, supporting agricultural value chains, and promoting national cohesion (Fayomi & Ayodele, 2017). However, Northern Nigeria continues to experience significant deficits in road infrastructure, characterized by poor road conditions, inadequate connectivity, and limited maintenance culture. These deficiencies constrain agricultural productivity, increase transportation and logistics costs, and limit regional and cross-border trade (Nwachukwu & Nwachukwu, 2018; National Bureau of Statistics, 2018). The situation is particularly concerning given the region's strategic importance as a major agricultural hub and a gateway for trans-Saharan trade. Recognizing these challenges, the Nigerian government has increasingly adopted PPPs as a strategic approach to bridge infrastructure gaps, improve efficiency, and accelerate road development (Ibrahim et al., 2020).

Government policy is widely acknowledged as a critical determinant of the success or failure of PPPs. Effective PPP implementation depends on clear legal frameworks, transparent procurement processes, appropriate risk-sharing mechanisms, and strong institutional capacity (Akintoye, Beck, & Hardcastle, 2013). In Nigeria, policy frameworks such as the National Policy on Public-Private Partnerships and the establishment of regulatory

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institutions like the Infrastructure Concession Regulatory Commission (ICRC) are designed to create an enabling environment for private sector participation in infrastructure development (ICRC, 2017). These frameworks aim to promote transparency, accountability, and investor confidence while ensuring that PPP projects deliver value for money and sustainable outcomes (World Bank, 2020).

Despite these efforts, the implementation of PPP road projects in Northern Nigeria remains uneven and fraught with challenges. Issues such as policy inconsistency, weak institutional capacity, inadequate regulatory enforcement, and security concerns continue to undermine the effectiveness of PPP arrangements (Osei-Kyei & Chan, 2017; Fayomi & Ayodele, 2017). Additionally, political interference and limited stakeholder engagement often affect project continuity and performance, leading to delays, cost overruns, and suboptimal outcomes. These challenges highlight the gap between policy formulation and implementation, raising critical questions about the extent to which government policies effectively support PPP success in practice.

This study therefore investigates how government policy influences the effectiveness of PPPs in road infrastructure development in Northern Nigeria, with a view to identifying policy gaps and proposing strategies for enhancing PPP performance and sustainable infrastructure delivery in the region.

Statement of the Problem

Road infrastructure in Northern Nigeria remains inadequate despite its critical role in economic growth, trade, and regional integration. The region's poor road networks continue to limit agricultural productivity, increase transportation costs, and worsen poverty levels, even though it serves as a major agricultural and cross-border trade hub (Fayomi & Ayodele, 2017). In response, the government has adopted Public-Private Partnerships (PPPs) to address infrastructure deficits by leveraging private sector resources and expertise. However, evidence from both global and local contexts shows that the success of PPPs depends largely on strong and consistent government policies, including clear legal frameworks, effective regulation, and transparent implementation processes (Hodge & Greve, 2007; World Bank, 2020). Despite existing policy frameworks in Nigeria, PPP road projects especially in Northern Nigeria have recorded mixed outcomes due to weak institutional capacity, policy inconsistencies, poor risk-sharing arrangements, and political interference (Fayomi & Ayodele, 2017).

Additionally, challenges such as insecurity, funding constraints, unclear contractual arrangements, and weak monitoring mechanisms have led to delays, cost overruns, and reduced investor confidence in many projects (Infrastructure Concession Regulatory Commission [ICRC], 2023). These issues highlight a gap between policy design and effective implementation. Therefore, the core problem addressed by this study is that although PPPs are widely recognized as a viable solution to road infrastructure deficits, their effectiveness in Northern Nigeria is significantly constrained by weaknesses in government policy frameworks and their implementation. Understanding how government policy shapes PPP performance is essential for improving infrastructure delivery and achieving sustainable regional development.

Research Questions

1. How do government policies influence the effectiveness of Public-Private Partnerships in road infrastructure development in Northern Nigeria?
2. To what extent have PPP arrangements contributed to the timely delivery and quality of road infrastructure in Northern Nigeria?

Objectives of the Study

The aim of this study is to examine the role of government policy in shaping effective PPPs for road infrastructure development in Northern Nigeria. Specifically, the study aims to:

1. Examine the influence of government policy frameworks on PPP effectiveness in road infrastructure development.
2. Assess the effectiveness of PPP arrangements in ensuring timely delivery and quality of road infrastructure in Northern Nigeria.

Hypotheses

1. Government policy frameworks have no significant influence on the effectiveness of PPPs in road infrastructure development in Northern Nigeria.
2. PPP arrangements have not significantly improved the timely delivery and quality of road infrastructure in Northern Nigeria.

Theoretical Framework

This study is anchored on the Public-Private Partnership (PPP) Theory, Institutional Theory, and Principal-Agent Theory, which collectively explain how government policy shapes the effectiveness of PPPs in road infrastructure development. Public-Private Partnership (PPP) Theory The Public-Private Partnerships theory provides the foundational basis for this study. It posits that collaboration between the public and private sectors enhances efficiency in infrastructure delivery by combining the strengths of both sectors. The public sector provides regulatory oversight and policy direction, while the private sector contributes capital, innovation, and managerial efficiency (Hodge & Greve, 2007). PPP theory emphasizes value for money, optimal risk allocation, and lifecycle efficiency in infrastructure projects. In the context of road infrastructure in Northern Nigeria, PPPs are expected to address funding gaps and improve service delivery. However, the effectiveness of PPPs largely depends on the quality of government policies that guide contract design, risk-sharing arrangements, and performance monitoring. Weak or inconsistent policies can undermine these partnerships, leading to project delays and inefficiencies.

Methodology

The study adopts a mixed-methods approach, integrating survey and documentary research designs. The survey design enables the collection of quantitative and qualitative data from stakeholders, while documentary analysis provides insights from policy documents, project reports, and regulatory frameworks. This approach ensures data triangulation and enhances validity. The population comprises stakeholders involved in PPP road projects in Nasarawa, Benue, and Kogi States. These include: Public sector officials (ministries, regulatory agencies, local governments),

Private sector participants (construction firms, financial institutions) Community representatives. A sample size of 400 respondents was selected using purposive and stratified sampling techniques: 80 public sector officials, 110 private sector representatives 210 community members.

Primary data were collected through structured questionnaires and semi-structured interviews. Secondary data were obtained from government reports, policy documents, and academic literature. This combination ensures comprehensive analysis. Quantitative data were analyzed using descriptive statistics (frequencies, percentages, mean) and inferential statistics (chi-square). Qualitative data were analyzed using thematic analysis to identify key patterns and insights.

Results

Response Rate and Demographic Distribution

Table 1: Response Rate

Item	Frequency	Percentage (%)
Questionnaires Administered	400	100
Questionnaires Returned	372	93
Not Returned	28	7

Table one revealed that out of the 400 questionnaires administered, 372 were successfully completed and returned, representing a response rate of 93%.

Table 2: Distribution of Respondents by Category

Respondent Category	Frequency	Percentage (%)
Public Sector Officials	75	20.2
Private Sector Participants	102	27.4
Community Representatives	195	52.4
Total	372	100

The distribution shows that all relevant stakeholder groups involved in Public-Private Partnerships (PPPs) were adequately represented. The respondents comprised 75 public sector officials (20.2%), 102 private sector participants (27.4%), and 195 community representatives (52.4%). This distribution ensured adequate representation of key stakeholder groups involved in Public-Private Partnerships (PPPs) for road infrastructure development in Nasarawa, Benue, and Kogi States.

Influence of Government Policy on PPP Effectiveness

Table 3: Perception of Government Policy Influence on PPP Effectiveness

Policy Variable	Agree (%)	Disagree (%)
Clear legal/regulatory frameworks improve performance	72	28
Policy inconsistency is a major barrier	65	35
Transparent procurement enhances PPP success	70	30

The results in Table 4.3 and Table 4.4 indicate that respondents perceive government policy as a critical determinant of the effectiveness of Public-Private Partnerships in road infrastructure development. Specifically, the high level of agreement (72%) that clear legal and regulatory frameworks improve project performance suggests that stakeholders recognize the importance of well-defined rules and institutional clarity in ensuring successful PPP outcomes. This implies that when policies are precise, stable, and enforceable, they create a conducive environment for private sector participation and efficient project execution.

Furthermore, 65% of respondents identified policy inconsistency as a major barrier, indicating that frequent changes or lack of continuity in government policies negatively affect PPP implementation. This inconsistency can lead to uncertainty, discourage investors, and result in project delays or failures. It highlights the need for policy stability and long-term commitment from government authorities.

In addition, 70% of respondents agreed that transparent procurement processes enhance PPP success. This reflects the importance of openness, accountability, and fairness in the selection and management of PPP projects, which helps to build trust among stakeholders and reduce corruption risks. The overall mean score of 3.62 further reinforces these findings, indicating a high level of agreement that government policy significantly influences PPP effectiveness. This suggests that stakeholders generally view policy frameworks not just as supportive tools but as central drivers of PPP success. The results imply that effective PPP implementation in Northern Nigeria depends largely on the presence of clear, consistent, and transparent government policies. Weaknesses in these areas can undermine the potential benefits of PPPs, while strong policy frameworks can significantly enhance their performance and sustainability.

Effectiveness of PPPs in Road Infrastructure Delivery

Table 4: Effectiveness of PPPs in Road Delivery

Performance Indicator	Agree (%)	Disagree (%)
Improvement in road quality	58	42
Faster project delivery	54	46
Experience of delays and cost overruns	61	39

The results in Table 4 provide insight into the practical performance of Public-Private Partnerships (PPPs) in road infrastructure delivery in Northern Nigeria. The finding that 58% of respondents agreed that PPPs have improved road quality suggests that these partnerships have made a positive contribution to infrastructure standards. This indicates that the involvement of private sector expertise and technology has helped enhance construction quality and maintenance practices compared to traditional public sector approaches. Similarly, 54% of respondents agreed that PPPs have led to faster project delivery. While this reflects some level of efficiency gain, the relatively moderate percentage indicates that improvements in timeliness are not strongly pronounced. This suggests that although PPPs are designed to accelerate project execution, their impact in this regard has been somewhat limited.

However, the fact that 61% of respondents reported experiencing delays and cost overruns highlights a significant challenge affecting PPP projects. This suggests that despite the intended efficiency of PPP arrangements, practical issues such as poor project management, weak contract enforcement, funding constraints, and external risks continue to hinder optimal performance. The overall mean score of 3.21 further confirms that PPP effectiveness in road delivery is moderate. This implies that while PPPs have achieved some level of success, they have not

fully realized their potential in delivering high-quality roads within expected timelines and budgets.

The results indicate that PPPs in Northern Nigeria have yielded noticeable improvements in road infrastructure, particularly in quality, but their overall effectiveness is constrained by persistent challenges such as delays and cost overruns. This underscores the need for stronger policy implementation, better project monitoring, and improved risk management to enhance the performance of PPP road projects.

Stakeholder Perspectives (Qualitative Findings)

Table 5: Summary of Thematic Findings

Theme	Description
Policy Inconsistency	Frequent policy changes disrupt project continuity
Weak Institutional Capacity	Regulatory bodies lack enforcement strength
Security Challenges	Insecurity increases project risk and cost
Limited Community Engagement	Communities excluded from decision-making

The findings in Table 5 reveal that key structural and contextual challenges significantly affect the performance of Public-Private Partnerships in road development. Policy inconsistency disrupts project continuity and creates uncertainty for investors, while weak institutional capacity limits effective regulation and enforcement. Security challenges further increase

project risks and costs, discouraging private sector participation. Additionally, limited community engagement reduces local support and may affect project sustainability. Overall, these factors highlight that beyond policy design, effective implementation, strong institutions, security stability, and stakeholder inclusion are essential for successful PPP outcomes.

Hypotheses Testing

Table 6: Summary of Hypotheses Testing (Chi-Square Analysis)

Hypothesis	χ^2 Cal	χ^2 Critical	p-value	Decision	Interpretation
H0₁	15.84	9.49	<0.05	Rejected	Policy significantly influences PPP effectiveness
H0₂	13.27	9.49	<0.05	Rejected	PPPs significantly improve delivery and quality

The results in Table 6 show that both null hypotheses were rejected because the calculated chi-square values (15.84 and 13.27) are greater than the critical value (9.49) and the p-values are less than 0.05. This indicates statistically significant results. Specifically, the rejection of H0₁ implies that government policy has a significant influence on the effectiveness of Public-Private Partnerships. Similarly, the rejection of H0₂ indicates that PPPs have significantly improved the delivery and quality of road infrastructure. Overall, the findings confirm that both government policy and PPP arrangements play important roles in enhancing road infrastructure outcomes.

success globally depends on stable governance structures, transparent procurement systems, and enforceable contracts (Hodge & Greve, 2007; World Bank, 2020).

Discussion of Findings

The findings of this study provide important empirical insights into the role of government policy in shaping the effectiveness of Public-Private Partnerships for road infrastructure development in Northern Nigeria. The results confirm that while PPPs have contributed positively to infrastructure delivery, their effectiveness is strongly dependent on the quality, consistency, and implementation of government policy frameworks. The study revealed that a majority of respondents strongly agree that clear legal and regulatory frameworks enhance PPP performance (72%), while policy inconsistency remains a major barrier (65%). This finding aligns with earlier observations in the introduction that PPP

The implication is that in Northern Nigeria, PPP outcomes are closely tied to policy stability. Where policies are well-defined and consistently applied, private investors are more confident to participate. However, frequent policy changes create uncertainty, discourage long-term investment, and delay project execution. This supports the position raised in the statement of the problem that weak and inconsistent policy environments undermine infrastructure development efforts despite the adoption of PPPs. Transparent procurement processes (70% agreement) were also found to significantly enhance PPP success. This reinforces the argument that corruption risks and lack of accountability in procurement systems can weaken PPP outcomes if not properly addressed. It further supports the need for strong institutional oversight mechanisms in line with Infrastructure Concession Regulatory Commission frameworks.

The findings indicate that PPPs have moderately improved road infrastructure delivery, with 58% of respondents reporting improvements in road quality and 54% acknowledging faster project delivery. This suggests that PPPs have had some positive impact on infrastructure outcomes, particularly in enhancing

construction quality through private sector involvement. However, the high percentage of respondents (61%) reporting delays and cost overruns reflects persistent inefficiencies in implementation. This supports earlier concerns raised in the statement of the problem that PPP projects in Nigeria often suffer from financing constraints, weak regulation, and contractual disputes. It also aligns with Fayomi and Ayodele (2017), who noted that governance weaknesses significantly limit infrastructure delivery performance in Nigeria. The moderate mean score (3.21) confirms that PPP effectiveness is neither poor nor optimal but remains constrained. This indicates that PPPs in Northern Nigeria are still evolving and have not yet fully achieved their intended efficiency gains.

The qualitative findings further strengthen the quantitative results by identifying structural barriers affecting PPP performance. Policy inconsistency was highlighted as a major challenge, confirming that frequent changes in government direction disrupt project continuity. This reinforces Institutional Theory, which emphasizes that stable institutional environments are essential for sustained development outcomes. Weak institutional capacity was also identified as a key limitation. Regulatory bodies often lack the technical and enforcement capacity required to ensure compliance, which weakens accountability and project monitoring. This finding directly reflects concerns in the statement of the problem regarding poor regulatory enforcement in PPP implementation. Security challenges were another critical factor affecting PPP performance in Northern Nigeria. Insecurity increases project costs, delays implementation, and discourages private sector investment. This is particularly significant given the region's socio-political context, where infrastructure projects are often exposed to higher operational risks. Finally, limited community engagement was found to reduce project acceptance and sustainability. This suggests that PPP projects are often designed and implemented without adequate grassroots involvement, which can affect long-term maintenance and social ownership of infrastructure.

The statistical analysis confirms the importance of government policy and PPP arrangements in infrastructure development. The rejection of H_{01} indicates that government policy significantly influences PPP effectiveness, supporting the argument that policy frameworks are not merely administrative tools but critical determinants of infrastructure success. Similarly, the rejection of H_{02} confirms that PPPs have significantly improved road infrastructure delivery and quality, although the improvement is moderate rather than optimal. This suggests that while PPPs are effective in principle, their full potential is constrained by policy, institutional, and contextual challenges. The findings demonstrate a clear relationship between government policy and PPP performance in road infrastructure development. PPPs in Northern Nigeria have contributed to infrastructure improvements, particularly in road quality, but their effectiveness is limited by policy inconsistency, weak institutions, insecurity, and inadequate stakeholder engagement. These results reinforce the central argument of the study that the success of PPPs is not automatic but depends heavily on coherent, stable, and effectively implemented government policies supported by strong institutional frameworks and inclusive governance practices.

Conclusion

This study examined the role of government policy in shaping the effectiveness of Public-Private Partnerships for road

infrastructure development in Northern Nigeria, with evidence drawn from Nasarawa, Benue, and Kogi States. The findings revealed that government policy is a critical determinant of PPP performance, particularly in terms of legal clarity, regulatory consistency, procurement transparency, and institutional enforcement. The study established that while PPPs have contributed to improvements in road quality and moderately enhanced project delivery, their overall effectiveness remains constrained. Persistent challenges such as policy inconsistency, weak institutional capacity, security concerns, and limited community participation continue to hinder optimal outcomes. The rejection of both hypotheses further confirms that government policy significantly influences PPP effectiveness, and that PPP arrangements have indeed contributed to infrastructure improvement, although not at the desired level. The study concludes that PPPs are a viable strategy for addressing road infrastructure deficits in Northern Nigeria, but their success is highly dependent on the strength, stability, and effective implementation of government policy frameworks and supporting institutions.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Government should ensure that PPP-related policies are stable, consistent, and not frequently altered across political administrations. Long-term policy continuity will improve investor confidence and enhance project sustainability.
2. Institutions such as the Infrastructure Concession Regulatory Commission (ICRC) and relevant state agencies should be strengthened through adequate funding, technical training, and enforcement authority to effectively monitor and regulate PPP projects.
3. Government should adopt fully transparent and competitive procurement systems to reduce corruption risks and ensure fair selection of private partners. This will enhance trust and accountability in PPP arrangements.
4. Given the security challenges in Northern Nigeria, government should integrate security risk assessments into PPP project planning and collaborate with security agencies to safeguard infrastructure projects and personnel.
5. Community participation should be integrated into all stages of PPP project development, including planning, implementation, and monitoring. This will enhance local ownership, reduce resistance, and improve project sustainability.
6. PPP contracts should clearly define roles, responsibilities, risk-sharing mechanisms, and performance indicators. Strong enforcement mechanisms should be put in place to ensure compliance and reduce disputes.
7. Government should provide incentives such as tax reliefs, guarantees, and favorable financing conditions to attract more private sector participation in road infrastructure development.