Effectiveness and Implementation Challenges of Nigeria's Road Infrastructure Tax Credit Scheme: The Quantity Surveyors' Perspective

Wasiu Adeniran BELLO[1]; Saheed Olanrewaju AREMU[1]; Sesan Adeniyi ADEYEMI[2]; Oluwafunmibi Seun IDOWU[1]; Kazeem Bolayemi AKINBOLA[3] and Luqman Olalekan Toriola-Coker[4]

[1] Department of Quantity Surveying, Faculty of Environmental Sciences, University of Lagos, Nigeria.
[2] Department of Urban and Regional Planning, Faculty of Environmental Sciences, University of Lagos, Nigeria.
[3] Department of Estate Management, Olabisi Onabanjo University, Ago-Iwoye, Nigeria
[4]School of Engineering, Yaba College of Technology, Yaba Lagos, Nigeria

Corresponding author: wbello@unilag.edu.ng

Abstract

Nigeria's substantial infrastructure deficit creates a gap that requires significant investment to close. In response, the government implemented Executive Order 007 of 2019, promising tax incentives for the refurbishment of selected roads across the federation. However, the scheme has attracted criticism that calls its effectiveness into question. To assess its effectiveness, this study employs a mixed-methods approach. The study combined qualitative data from thematic analysis of key stakeholder interviews with quantitative data from a structured questionnaire administered to 104 registered quantity surveyors, selected through a stratified random sampling technique from a pool of over 400 in Nigeria. The results were analysed using descriptive statistics, the Kruskal-Wallis H test, and Spearman's rank-order correlation. Findings reveal that the scheme has been moderately effective, with mean effectiveness scores ranging from 3.63 to 3.89. Major implementation challenges highlighted included macroeconomic instability in the country and weak government monitoring and supervision. While most respondents supported the scheme's continuation, concerns about inclusiveness for smaller firms and transparency were evident. The study concludes that the RITC scheme has significant potential to help bridge Nigeria's infrastructure gap but requires enhanced transparency, broader inclusiveness, and the institutionalisation of the involvement of cost experts in the built environment to ensure long-term sustainability.

Keywords: Road Infrastructure Tax Credit Scheme, Infrastructure Financing, Public-Private Partnership, Executive Order 007, Nigeria.

Introduction

In Nigeria, the construction industry remains a key pillar of the national economy, valued at approximately US$27–40 billion, contributing around 9–16% of GDP and employing up to 25% of Nigeria's workforce. This underscores its central role in infrastructure development and capital accumulation (PR Newswire, 2023). As of 2022, the sector contributed ₦18.7 trillion (≈US$44.5 billion), or roughly 9.4% of GDP, though growth remains sensitive to currency volatility and inflationary pressures (Oxford Business Group, 2024). Despite its economic importance, the Nigerian construction industry has faced numerous challenges. The industry is slow to adopt digital technologies, with up to 75% of firms lagging in deploying tools such as BIM, drones, and 3D printing, largely due to high costs, skills shortages, limited infrastructure, and a lack of standardisation (The Guardian Nigeria, 2023). It also faces a massive infrastructure deficit that, if left unaddressed, hampers economic growth by hindering job creation and increasing poverty (Punch, 2025).

Nigeria's infrastructure deficit is the result of numerous challenges that have bedevilled the country since its independence to the present administration. Okpalaokpa (2021) categorised the challenges facing the development of infrastructure in Nigeria under four main headings: corruption, method of acquisition, PESTLE (Political, Economic, Social, Technological, Legal, and Environmental factors), and supply and demand. Over the years, these challenges have slowed infrastructural growth, exacerbated by an extremely high population growth rate that further strains the already scarce infrastructure.

Corruption, often cited as the most significant barrier, inflates project costs and extends completion timelines, with instances of contract mismanagement and misappropriation further hindering progress (Shehu, 2018; Falaye, 2024). Additionally, poor procurement practices, such as concession-based contracts that fail to prioritise project delivery, have slowed infrastructure development. For example, the

105-km Lagos-Ibadan Expressway, initially awarded to Bi-Courtney Consortium in 2009, is a case in point. After years of neglect, the Federal Government was forced to accept that it alone could not transform the country's infrastructure challenges and instead sought help from the private sector.

Public-private partnerships (PPPs) have contributed to key infrastructure projects, including the Lagos-Ibadan Expressway expansion, Murtala Mohammed International Airport (MMIA) Road rehabilitation, and port terminal operations (PwC, 2014; Dahiru & Muhammad, 2015). By leveraging private-sector efficiency and capital, PPPs have the potential to accelerate project delivery, create jobs, and stimulate economic growth (Udora, 2024). One of the financing mechanisms adopted by the country is the Road Infrastructure Development and Refurbishment Investment Tax Credit Scheme (RITC) which Quantity surveyors in Nigeria commended the federal government on the new Executive Order 007 (Ogwu, 2019). This scheme allows private companies to recover costs incurred in constructing or refurbishing eligible roads as tax credits against their Companies Income Tax (CIT) liabilities, thereby facilitating public-private partnerships in addressing Nigeria's infrastructure needs (Eneh et al., 2023).
However, despite the RITC's potential, it has been the subject of several criticisms regarding its effectiveness, transparency, and legal framework. One major concern is that the scheme diverts funds from government tax revenues, potentially reducing public sector investment in other critical areas (Punch, 2024). Critics argue that the Federal Inland Revenue Service (FIRS) should focus on tax collection rather than administering road construction funding, which traditionally falls under the Ministry of Works (FIRS, 2024). Additionally, there are questions about the scheme's long-term sustainability and oversight.

Although the RITC allows private entities to finance road projects, publicly available data on its actual impact is limited, raising concerns about accountability and project execution (The Cable, 2024). Some stakeholders also fear that only large corporations with significant tax liabilities benefit from the scheme, leaving out smaller construction firms and reducing widespread participation in infrastructure development (Adu et al., 2024). Furthermore, past infrastructure tax incentives, such as the 2017 Road Trust Fund (RTF), suffered from poor implementation and a lack of transparency, making it unclear whether the RITC will yield better results (Proshare, 2017). These issues highlight the need for stronger oversight, clear reporting mechanisms, and a more inclusive framework to ensure that the scheme delivers its intended benefits. The successful implementation of the Road Infrastructure Tax Credit Scheme (RITC) depends not only on financing but also on proper cost management, transparency, and accountability. This highlights the crucial role of construction professionals, particularly quantity surveyors (QS), in ensuring the financial viability and efficiency of projects under the scheme (Mbachu, 2015).
As cost experts, quantity surveyors are responsible for estimating construction costs, advising on material and resource requirements, supporting project budgeting, and helping to control construction costs throughout the project lifecycle (Royal Institution of Chartered Surveyors [RICS], n.d.). Their involvement is essential for preventing cost overruns, minimising financial mismanagement, and ensuring that tax credits granted align with actual project costs (NIQS, 2024). Additionally, Executive Order No. 007 governing the RITC requires participating companies to submit detailed project cost estimates and financial documentation to qualify for tax credits (AÉLEX, 2019). Without QS professionals overseeing these financial aspects, there is a risk of inflated costs, resource misallocation, and reduced transparency in project execution (National Planning Commission, 2024). Recognising this, the Nigerian Institute of Quantity Surveyors (NIQS) has called for greater involvement of QS professionals in tax credit-funded projects to enhance cost efficiency, improve financial accountability, and optimise project outcomes (The Guardian, 2024).

Study Context

In 2019, the Federal Government of Nigeria, under President Muhammadu Buhari, issued a set of executive orders to facilitate national growth and development. Among these orders was Executive Order 007 on Road Infrastructure. Formerly known as Presidential Executive Order No. 007 of 2019, the decree focused on road infrastructure development and a tax credit scheme for refurbishment.

According to Presidential Executive Order No. 007 of 2019, the Scheme shall be a Public-Private Partnership intervention that shall:

1. enable the Federal Government of Nigeria to leverage private sector funding for the construction or refurbishment of Eligible Road infrastructure projects in Nigeria;
2. Focus on the efficient and effective development of eligible road infrastructure projects that create value for money through private sector discipline; and

3. Guarantee Participants in the Scheme a timely and full recovery of funds provided for the construction or refurbishment of Eligible Road infrastructure projects in the manner prescribed in this Executive Order.

The Scheme shall be in force for a period of ten (10) years from the date of commencement of this Executive Order (Presidential Executive Order 007 of 2019).

The main objective of the Scheme is to accelerate road infrastructure development for balanced economic growth in Nigeria by authorising private-sector entities to construct and refurbish eligible roads across the country in exchange for tax credits, which can then be applied against company income tax payable (Alliance Law Firm, 2019). The motivation behind the Scheme is to leverage private-sector funding and efficiency to improve road infrastructure development in the country. The Scheme is designed to span ten years, starting with the implementation of EO7 in 2019. In practical terms, large companies may refurbish roads that support their supply and distribution networks while benefiting from tax credits.

The Scheme grants RITC to eligible participants or beneficiaries (the "Participants") involved in the construction or refurbishment of "Eligible Roads," which the President and the committee specifically designate as dilapidated highways eligible for tax credits upon refurbishment. The RITC entitles the Participants to

1. utilise the Project Cost as a tax credit against the Company's Income Tax (CIT) ordinarily payable by such Participant, and
2. a single uplift equivalent to the Central Bank of Nigeria Monetary Policy Rate (MPR) plus two (2) % of the Project Cost. At the time cited in the study, the Central Bank of Nigeria's MPR was 18%; thus, the uplift will allow a participant to claim an additional total tax credit of 20% to be utilised against the CIT (Presidential Executive Order 007 of 2019).

Firstly, the company receives a tax credit against its income tax equal to the full cost of constructing, renovating, or refurbishing the eligible road. Secondly, the company receives an additional tax credit in addition to the project cost. If a company spends money on constructing or refurbishing an "Eligible Road," the amount spent (Project Cost) can be used as a tax credit. This means the company can reduce its Corporate Income Tax (CIT) by the same amount. The company also receives an additional tax credit equal to the Central Bank of Nigeria's Monetary Policy Rate (MPR) plus 2% of the project cost. The MPR is 18%, so the uplift is 18% + 2% = 20% of the Project Cost. For example, suppose a company spends ₦1 billion on an Eligible Road project. It can use ₦1 billion to offset its CIT. Additionally, it receives an extra 20% tax credit on ₦1 billion, amounting to ₦200 million. Total Tax Credit = ₦1.2 billion (₦1 billion + ₦200 million). This means the company can reduce its CIT liability by ₦1.2 billion in total.

Under the Scheme, each participant will be issued a Road Infrastructure Tax Credit Certificate (the "Certificate") by the Federal Inland Revenue Service ("FIRS") upon approval by the Committee established pursuant to the Executive Order, headed by the Minister of Finance, with the Minister of Works as the Secretary. While the Scheme enables the FGN to leverage private-sector funding for the construction and refurbishment of Eligible Roads efficiently and effectively, it also ensures that private-sector participants are guaranteed the timely and full recovery of funds used for such construction and refurbishment (Eneh et al., 2023).

Executive Order 007 primarily addresses Nigeria's massive infrastructure deficit by sharing costs between the government and private companies. It is a form of Public-Private partnership that provides the dual benefits of continuous cash flow for the road project and a shorter completion time. A key advantage of having the private sector provide public services is that it allows public administrators to concentrate on planning, policy and regulation. The private sector, in turn, is empowered to do what it does best, particularly by improving the efficiency and quality of service (PPIAF, 2009). Chukwuma et al. (2020) also found a positive relationship between tax incentive policy and gross domestic product (GDP). The better the structure of a tax policy in an economy, the more likely it is to foster economic development.

The Conceptual Framework of Tax Credit Schemes

A tax credit is a tax incentive that allows eligible taxpayers to subtract the value of the credit from the total tax payable (Piper & Mike, 2014). According to Bassey (2013), tax incentives are special exclusions, exemptions, or deductions from income or tax liability that the government offers to taxpayers to encourage specified activities. These incentives can arise from various circumstances or conditions and are typically agreed between the body providing the incentive, usually the government, and the recipient, often a private company or organisation. As a fiscal policy instrument, the value of incentives typically depends on their nature. For instance, infrastructure

or construction tax credit schemes tend to be highly valuable due to the high cost of construction projects and their long-term nature. However, at their core, tax credits are used to encourage specific economic behaviours that support public policy objectives (Bassey, 2013).

Road infrastructure contributes significantly to economic development by facilitating the transportation of goods and people. Large-scale public infrastructure projects, such as highway construction, affect society, the environment, the economy, politics, and citizens' safety and security (Wang et al., 2016). Efficient and effective road infrastructure ensures that people, who are the major drivers of economic development, are productive by getting to their places of work and that they have the resources to work, via goods transported from possibly a different location across the world. However, good and functional roads are expensive to build. Substantial capital is required to execute highway construction projects; hence, meticulous planning demands considerable time and resources to achieve the project's goals (Aligamhe et al., 2024).

Criticisms and Implementation Concerns

The RITC scheme follows earlier fiscal instruments with documented implementation difficulties, underscoring the need for a proper assessment and study. In 2017, the Federal Government introduced the Infrastructure Tax Credit Scheme via the Road Trust Fund (RTF), itself a revision of the Infrastructure Tax Relief (ITR) incentive under the Companies Income Tax (Exemption of Profits) Order, 2012. Under the ITR, companies that incurred expenditure on public infrastructure, including road construction, received 30% tax relief on such costs, deducted from company income tax (Proshare, 2017). Despite its establishment, no public reports have documented the number of roads renovated or funds utilised under the RTF, pointing to a fundamental challenge of transparency and accountability that preceded the RITC. Since the RITC is a direct successor to this initiative with a comparable operational structure, the absence of documented outcomes from predecessor schemes raises legitimate questions about institutional memory and monitoring continuity.

At the institutional level, the RITC has attracted significant constitutional and administrative criticism. Critics, most notably the FIRS Chairman, Zacchaeus Adedeji, have questioned whether using executive orders to redirect tax revenue for road construction bypasses legislative appropriation processes, arguing that the FIRS's core mandate is to assess, collect, and remit taxes into the federation account rather than to administer infrastructure contracts (Punch, 2024). This critique centres on a broader concern about institutional role clarity: when tax collection agencies become involved in infrastructure delivery, institutional responsibilities may become (Udora, 2024). The government's response, via a press statement by the Minister of Works, Senator Dave Umahi, affirmed the current administration's commitment to continuing the scheme and clarified that reports of its discontinuation were misrepresentations (Federal Ministry of Works, 2024). Nonetheless, the controversy highlights a structural implementation challenge: the scheme's design straddles multiple institutional mandates without a clear delineation of responsibility. This follows a pattern of weakness consistent with broader PPP governance concerns identified in the Nigerian context (Edogbanya & Adekeye, 2024). The President of the Nigerian Institute of Quantity Surveyors (NIQS); Obafemi Onashile while pledging to ensure that the model succeeds had cautioned the federal government on factors capable of frustrating the new fiscal policy and noted that it could fail if not well managed (Ogwu, 2019). However, the Presidential Executive Order No. 007 of 2019 clearly outlines its legal backing, framework, and structure. The President utilised the power conferred upon him by the Constitution of Nigeria and Section 23(2) of the Companies Income Tax, which is obtainable directly from the FIRS' website, to formalise the order. According to Section 23(2) of the Companies Income Tax Act,

"The President may, by order, exempt any company or class of companies from all or any of the provisions of this Act; or from tax all or any profits of any company or class of companies from any source, on any ground which appears to it sufficient. The President may by order amend, add to or repeal any exemption made by notice or order under the provisions of section 9 (2) or (4) of the Personal Income Tax Act in so far as it affects a company, and, subject to the foregoing, the following notices and order shall continue in force for all purposes of this Act" "Companies Income Tax Act," Section 23, subsection 2.

Following the FIRS Chairman's statement, Mr Zacheaus Adedeji, the current Minister of Works, and Senator Dave Umahi, the current Minister of Works, held a closed-door meeting, which was followed by a press release. The release clarified the current administration's stance on the scheme, with the minister stating that the FIRS Chairman's assertion that the scheme would be stopped was misinterpreted by some media outlets (Federal Ministry of Works, 2024). In a statement published on the official Ministry of Works' website, the Minister of Works reiterated the current administration's commitment to

continuing the scheme and reviewing the projects under it due to inflation (Federal Ministry of Works, 2024). Beyond the constitutional and institutional debates, the RITC's implementation has also been shaped by broader structural challenges consistent with PPP frameworks in developing economies. These include macroeconomic instability driven by exchange rate volatility and high inflation, which erodes the real value of tax credit incentives; weak regulatory oversight and monitoring frameworks that reduce accountability; and the structural exclusion of small and medium enterprises (SMEs) from meaningful participation, due to the scheme's design favouring large corporations with significant tax liabilities (Udora, 2024; Edogbanya & Adekeye, 2024). These challenges formed the empirical focus of this study, which seeks to assess their severity and prevalence from the perspective of professional quantity surveyors.

Research Methodology

The study focuses on Lagos State, Nigeria, with a specific focus on selected federal road infrastructure projects executed under the Road Infrastructure Tax Credit (RITC) Scheme. Lagos State was chosen for its economic significance, infrastructural density, and the presence of multiple RITC-funded road projects within its jurisdiction. This study employed a mixed-methods approach combining qualitative and quantitative components. The quantitative component involved a structured survey administered to registered quantity surveyors (QS) in Lagos State, selected through stratified random sampling, to provide insight into the scheme's effectiveness based on respondents' professional understanding of and interaction with Eligible Roads (federal roads designated under Executive Order 007 for tax credit-funded construction or refurbishment) in Lagos. The qualitative component comprised semi-structured interviews with purposively selected key stakeholders, including Quantity Surveyors and public officials from the Federal Ministry of Works and the Federal Inland Revenue Service (FIRS). This provided nuanced perspectives on the scheme's objectives and the extent to which they have been met. This study examines two major road projects: the Apapa–Oworonshoki–Ojota Expressway, handled by the Dangote Group, and the Lagos–Badagry Expressway (Agbara Junction to Nigeria–Benin Republic Border), executed by the Nigerian National Petroleum Company Limited (NNPCL).

Quantitative Analysis

The study population for the quantitative component consists of registered quantity surveyors (QSs) in Lagos State, totalling 418 as of October 2023 (Nigerian Institute of Quantity Surveyors, 2023). This group was chosen for its central role in cost management, infrastructure delivery, and policy compliance in the construction sector.

To determine the appropriate sample size for the quantitative survey of registered QSs, Cochran's (1977) formula for proportions was applied:

$$n_0 = (Z^2 \times p(1 - p)) / e^2$$

Where:

Z = Z-score at 95% confidence = 1.96, p = 0.5 (assumed proportion, maximizing sample size), e = margin of error = 0.10, and Finite population correction:

$$n = n_0 / (1 + (n_0 - 1) / N)$$

Thus:

$$n_0 = (1.96^2 \times 0.5(1 - 0.5)) / 0.10^2$$
$$n_0 = (3.8416 \times 0.25) / 0.01$$
$$n_0 = 0.9604 / 0.01$$
$$n_0 = 96.04$$

Since the total population is finite (N=418), the finite population correction was applied:

$$n = 96.04 / (1 + (96.04 - 1) / 418)$$
$$n = 96.04 / (1 + 95.04 / 418)$$
$$n = 96.04 / (1 + 0.2273)$$
$$n = 96.04 / 1.2273$$
$$n \approx 78$$

Thus, the minimum required sample size is 78 completed responses.

To account for potential non-responses and unusable data, 106 Quantity Surveyors were invited to participate in the survey via a combination of online Google Forms and physical questionnaires. Of these, 104 respondents provided valid, fully completed responses, exceeding the minimum required sample size of 78, as determined by Cochran's formula. Because the achieved sample size exceeded the calculated minimum, the margin of error was correspondingly reduced from 10% to approximately 8.33%, consistent with Cochran's (1977) principle that sampling precision improves as sample size increases relative to a fixed population. Responses collected via Google Forms were first exported to Google Sheets, and then manually imported into SPSS; physical questionnaires were sorted and coded manually into the same dataset. Each variable was assigned a numerical value for analysis. For instance, "Gender" was coded as a categorical variable with "Male" and "Female" assigned values of 1 and 2, respectively, while Likert-scale items were coded from 1 ("Strongly Disagree") to 5 ("Strongly Agree") as standard practice. Mean scores were subsequently computed for each item and used to indicate the strength and direction of respondents' agreement,

with values above 3.0 reflecting overall agreement and values below 3.0 reflecting disagreement.

Before selecting appropriate statistical techniques, the Shapiro–Wilk test was used to assess the normality of all Likert-scale variables. Results indicated that the most effective items deviated from a normal distribution. Internal consistency of the measurement scales was evaluated using Cronbach's Alpha coefficients. Descriptive statistics, including frequency distributions, were computed for categorical variables such as years of experience, professional role, and organisation type, to characterise the sample. Mean scores and standard deviations were then computed for the Likert-scale items to assess central tendencies and variability in responses. Composite scores, representing the mean of Likert-scale items within each construct, were computed to support inferential testing while preserving the variables' multidimensional nature. Respondents were further classified into three professional cadres based on years of experience, reflecting typical career progression in quantity surveying practice: Assistant Quantity Surveyors (≤5 years, n = 51), Senior Quantity Surveyors (5–15 years, n = 30), and Principal/Chief Quantity Surveyors (15+ years, n = 23). This classification enabled examination of how professional maturity influences perceptions of the scheme.

To draw meaningful inferential conclusions rooted in observation and data, Spearman's rank-order correlations (rs), a nonparametric measure of the strength and direction of association between ranked variables (Pallant, 2020), were computed. This enabled the study to examine the relationships among years of professional experience, perceived effectiveness, and implementation challenges. Using Kruskal-Wallis H tests, effectiveness, challenges, and performance perceptions across the three professional cadres could be compared. This non-parametric test was appropriate for comparing three independent groups on ordinal data without assuming normal distribution.

Qualitative Analysis

For the qualitative component, five participants were purposively selected for their participation in and understanding of the Road Infrastructure Tax Credit Scheme to provide contextual insights into its design and implementation. Semi-structured interviews were conducted with the participants, and their responses were transcribed and analysed thematically using the Taguette tool, following Braun and Clarke's (2006) six-phase framework. The process is outlined below:

1. Data Familiarisation: Policy resources, including Presidential Executive Order No. 007 of 2019, statements from the Ministry of Works and the Federal Inland Revenue Service, and media interviews, were reviewed multiple times to gain a comprehensive understanding of the scheme's provisions.
2. Generation of initial codes: Videos were first transcribed, and relevant text excerpts from the documents were coded using Taguette's highlighting and tagging feature.
3. Themes search: Related codes were grouped within Taguette using its tag management system.
4. Themes review: Potential themes were reviewed against the coded data extracts to ensure internal coherence.
5. Theme definition: Final themes were clearly defined with a specific scope.
6. Report production: Themes were integrated into the research findings by weaving together quantitative survey results with qualitative insights from policy documents.

Results and Discussions

This section presents the results of this study. It integrates quantitative survey data and qualitative insights to examine the perceived effectiveness of the RITC scheme, the challenges affecting its implementation, and the performance of selected RITC-funded projects.

Respondents' Profile

The data collected showed that most respondents had less than 10 years of professional practice, and only about 7.7% had extensive experience of 16+ years. Most respondents were employed in private companies rather than government agencies, with an overwhelming 80.8% working in private firms compared to 11.5% in government jobs. QSs also take entrepreneurial initiatives, with about 4.8% setting up their own independent practice.

Table 1: Summary of Respondents' Profiles

Characteristic	Category	Frequency	Percent
Years of Experience	1-4 years	51	49%
	5-9 years	24	23.1
	10-15 years	6	5.8
	16-24 years	21	20.2
	25+ years	2	1.9
	Total	**104**	**100**
Organisation Type	Private firm	84	80.8
	Government agency	12	11.5
	Multinational company	3	2.9

Independent practice	5	4.8
Total	**104**	**100**

Reliability and Normality Assessment

Table 2 presents a summary of normality tests conducted on the three main variable categories using the Shapiro-Wilk test. Results reveal mixed patterns across the scales. For the Perceived Effectiveness scale, only one item, assessing whether the RITC scheme has improved the quality of road infrastructure ($W = 0.99$, $p = 0.628$), satisfied the normality assumption, while the remaining nine items showed significant deviations from normality ($p < 0.05$). In contrast, all 10 items in both the Implementation Challenges scale and the QS Role and Involvement scale met the normality assumption ($p > 0.05$).

Despite the mixed-normality results, non-parametric statistical techniques were used for all subsequent group comparisons. This conservative approach was chosen for three reasons: First, the Perceived Effectiveness scale violated normality assumptions in 90% of its items. Second, Likert-scale data are inherently ordinal rather than interval, making non-parametric methods more theoretically appropriate (Jamieson, 2004). Third, non-parametric tests do not assume normal distribution and are robust to violations of parametric assumptions, ensuring the validity of findings across all scales (Pallant, 2020).

Table 2: Reliability and Normality of Collected Data

Variable Category	Number of Items	Items Meeting Normality ($p > 0.05$)	Items Violating Normality ($p < 0.05$)
Perceived Effectiveness	10	1 (10%)	9 (90%)
Implementation Challenges	10	10 (100%)	0 (0%)
QS Role and Involvement	10	10 (100%)	0 (0%)

Table 3 presents the consistency of the measurement scales, as indicated by Cronbach's alpha. The Perceived Effectiveness scale demonstrated strong reliability (0.958) across its 10 items.

Table 3: Cronbach's Alpha Coefficient for the Perceived Effectiveness Scale

Cronbach's Alpha	Number of Items
0.958	10

Perceived Effectiveness of the RITC Scheme

Table 4 presents descriptive statistics for perceived effectiveness indicators. All items had means above the scale midpoint (3.0), indicating generally positive perceptions of the scheme's effectiveness. The ratings ranged from 3.63 to 3.89, indicating moderate to moderately high perceived effectiveness across all dimensions.

The most highly rated effectiveness indicator was "improved collaboration between public and private sectors" ($M = 3.89$, $SD = 0.900$), suggesting respondents view the scheme as successful in fostering partnerships. This collaborative success reflects the scheme's innovative design, in which, as Minister of Works, Mr Fashola explained, companies "spend that tax in advance" on infrastructure rather than simply transferring funds to the government. This structure transforms companies from passive taxpayers into active partners in infrastructure development, naturally enhancing public-private collaboration.

"Reduced project abandonment" also received strong ratings ($M = 3.80$, $SD = 0.901$), indicating perceived improvements in project completion rates. This perception is supported by concrete evidence from scheme implementation. Former FIRS Chairman, Muhammad Mamman Nami, described a striking performance comparison on a road project: "Initially, when the contractors came, they started at the very bad section [of the road] that was funded by the Ministry and Sukuk, which is about 19 kilometres long. We did it before the NNPC intervention came in since the intervention came; they have been able to do much more in one year... They were able to cover about 42 kilometres, compared to the 19 kilometreswe did in three years." This represents a dramatic improvement from 6.3 kilometres per year under traditional funding to 42 kilometres per year under the RITC mechanism - over six times faster delivery.

Several indicators clustered around a mean of 3.6, including improved road infrastructure quality, increased private-sector participation, a reduced government financial burden, increased corporate investment, and improved public perception of infrastructure financing. This consistency suggests the scheme is perceived as delivering on multiple fronts.

"Improved transparency in project implementation" received the lowest rating ($M = 3.40$, $SD = 1.117$), though still above the neutral midpoint. The relatively high standard deviation (1.071) indicates considerable variation in opinions about transparency improvements, suggesting this remains a concern for some respondents.

Table 4: Perceived Effectiveness of the RITC Scheme

Statement	Mean	Standard Deviation
The RITC scheme has improved the quality of road infrastructure in Nigeria.	3.63	0.808
The scheme has increased private sector participation in infrastructure development.	3.69	0.900
The scheme has accelerated project completion timelines.	3.60	0.976
The scheme has improved transparency in infrastructure delivery.	3.40	1.117
The scheme has reduced government's financial burden on road projects.	3.74	0.980
The scheme has encouraged investment from large corporations.	3.69	1.078
The scheme has improved public perception of infrastructure financing in Nigeria.	3.71	1.017
The scheme has significantly contributed to reducing Nigeria's infrastructure deficit.	3.71	0.987
The scheme has helped reduce project abandonment.	3.80	0.901
The scheme has improved collaboration between public and private stakeholders.	3.89	0.900

Implementation Challenges

As shown in Table 4, all challenge items recorded means above the scale midpoint (3.0), indicating that respondents view them as genuine concerns affecting scheme implementation. The ratings ranged from 3.40 to 3.80, indicating moderate to high levels of concern across all identified challenges.

The most severe challenge identified was "Lack of reliable monitoring and evaluation weakens accountability" (M = 3.80, SD = 0.901), indicating concerns about the effectiveness of the framework for measuring the scheme's performance. Two challenges tied for the second-highest concern: "Inflation and naira depreciation undermine the real value of tax credits" and "Weak regulatory oversight leads to misuse of funds" (both M = 3.82), highlighting systemic economic and oversight issues.

"Weak regulatory oversight and enforcement" also emerged as a significant concern (M = 3.74, SD = 0.886), suggesting that inadequate governance mechanisms may be undermining the scheme's effectiveness. Several challenges received similar ratings around the 3.54-3.74 range. "Bureaucratic delays discouraging private investors" and "scheme favours large corporations over SMEs" both recorded very close means of 3.69 and 3.71, indicating concerns about both procedural efficiency and equity. "Regional bias undermining national inclusiveness" (M = 3.54) and "overlapping jurisdictions creating confusion" (M = 3.40) suggest coordination and fairness issues.

"Lack of transparency in cost verification processes" received the lowest rating (M = 3.40, SD = 0.946), though the high standard deviation indicates that opinions varied. "SMEs being excluded from meaningful participation" (M = 3.51) also showed lower concern levels, though still above the neutral midpoint.

Table 5: Implementation Challenges Affecting the RITC Scheme

Statement	Mean	Standard Deviation
Lack of reliable monitoring and evaluation weakens accountability.	3.80	0.901
Macroeconomic instability (e.g. high inflation, exchange rate volatility) threatens the scheme's sustainability.	3.77	1.031
Inflation and naira depreciation undermine the real value of tax credits.	3.74	0.852
Weak regulatory oversight leads to misuse of funds.	3.74	0.886
The scheme favours only large corporations with high tax liabilities.	3.71	0.750
Bureaucratic delays in issuing RITC certificates discourage private investors.	3.69	0.796
Regional bias in project allocation undermines inclusiveness.	3.54	1.067
Small and medium construction firms are excluded from participating.	3.51	0.951
The scheme lacks transparency in cost verification processes.	3.40	0.946
Overlapping jurisdictions between federal and state agencies create bottlenecks.	3.40	0.847

Performance Assessment of RITC Projects

Table 4.4 presents descriptive statistics on respondents' assessments of the performance of the RITC tax credit scheme on the Apapa–Oworonshoki–Ojota Expressway and the Lagos–Badagry Expressway. The results indicate that the mean score for the timeliness of project delivery was 3.80 (SD = 1.132), suggesting that respondents generally rated delivery timeliness well above average. The quality of completed infrastructure had the highest mean, at 3.91 (SD = 1.147), indicating that respondents perceived the completed works as relatively very good quality. Similarly, the cost of the completed infrastructure was rated positively, with a mean of 3.86 (SD = 1.146), reflecting a fair level of satisfaction with cost efficiency.

Table 6: Assessment of the Performance of Selected RITC-Funded Projects

Statement	Mean	Std. Deviation
Quality of completed infrastructure	3.91	1.147
Cost of the completed infrastructure	3.86	1.167
Timeliness of project delivery	3.80	1.132

Correlational Analysis

Table 7 presents Spearman rank-order correlations among years of professional experience, overall scheme effectiveness, and perceived implementation challenges. The analysis found no statistically

significant relationship between professional experience and overall effectiveness rating (r = .052, n=104, p = 0.598), indicating that junior and senior quantity surveyors held similar views on the scheme's effectiveness. This reflects the scheme's outcome, which is observable and tangible, which can be more readily defined by construction professionals. Road construction progress, private sector participation, and project completion rates are concrete phenomena that professionals at all career stages can directly observe, evaluate, and agree constitute the knowledge they have spent years acquiring. However, a weak but significant positive correlation was observed between experience and perceptions of challenge (r= .212, n=104, p=0.030), implying that more experienced professionals perceived more barriers to implementation. This trend could reflect increased understanding of the complexity of infrastructure financing and systemic barriers among senior practitioners. By contrast, overall effectiveness ratings showed no significant correlation with perceptions of challenge (r = 0.151, n=104, p = 0.125). These results suggest that respondents could distinguish between recognising implementation challenges and analysing the scheme's overall success. As a result, practitioners would be able to identify valid issues and judge the scheme as moderately helpful, thereby providing a more nuanced view that fits realistic policy evaluation, rather than a polarised judgement.

Table 7: Spearman Correlation of Key Variables

		Years of Professional Experience	Effectiveness Overall	Challenges Overall
Years of Professional Experience	Correlation Coefficient	1.000	.052	.212*
	Sig. (2-tailed)		.598	.030
Effectiveness Overall	Correlation Coefficient	.052	1.000	.151
	Sig. (2-tailed)	.598		.125
Challenges Overall	Correlation Coefficient	.212*	.151	1.000
	Sig. (2-tailed)	.030	.125	

N = 104, *p < .05

Kruskal-Wallis H Tests

Table 8 shows the outcomes of Kruskal-Wallis H tests examining the possibility of differences in perceptions of scheme effectiveness and implementation challenges among professional cadres: Assistant Quantity Surveyors (≤5 years, n = 51), Senior Quantity Surveyors (5-15 years, n = 30), and Principal/Chief Quantity Surveyors (15+ years, n = 23). Respondents were classified based on typical career progression in quantity surveying practice to reflect professional maturation and accumulated expertise. The three professional cadres showed no notable differences in effectiveness ratings. Their mean ranks, Assistant QS (Mean Rank = 52.06), Senior QS (Mean Rank = 50.87), and Principal QS (Mean Rank = 55.61), showed a professional consensus, which means that they all agreed on the scheme's moderate effectiveness. However, a different pattern was observed for challenge perceptions across the three cadres. Principal/Chief QS demonstrated a substantially higher mean rank (66.52) than both Senior QS (49.67) and Assistant QS (47.84), indicating that the most experienced professionals identified significantly more implementation barriers. This suggests that quantity surveyors across all professional career stages can identify and agree on the scheme's concrete achievements. However, recognising structural vulnerabilities, macroeconomic instability, monitoring deficiencies, equity concerns, and sustainability risks may require greater professional experience.

Therefore, the involvement of highly experienced quantity surveyors would help tame barriers. This also underscores the misalignment between awareness of the scheme and actual knowledge of its implementation.

Table 8: Kruskal-Wallis H Tests for Effectiveness and Challenge Perceptions

Variable	Assistant QS (n = 51)	Senior QS (n = 30)	Principal QS (n = 23)	H	df	p
Overall Effectiveness	52.06	50.87	55.61	0.343	2	.842
Overall Challenges	47.84	49.67	66.52	6.449	2	.040*

Note. Values represent mean ranks. Assistant QS = ≤5 years' experience; Senior QS = 5-15 years; Principal QS = 15+ years. * p< .05.

Conclusions and Recommendations

This study evaluated the effectiveness and major implementation challenges of Nigeria's Road Infrastructure Tax Credit Scheme from the perspective of Quantity Surveyors in Lagos State. According to the findings, the scheme has been moderately effective, as indicated by perceived effectiveness ratings ranging from 3.40 to 3.89 across all indicators. This reflects positive outcomes in public-private collaboration, reduced project abandonment, and accelerated delivery timelines, and indicates that the scheme should be continued and possibly expanded to cover state and local roads. Based on these results, the RITC appears to be

making progress towards its stated objectives and may achieve greater success if implemented consistently over its 10-year duration. However, it also faces significant implementation challenges, including macroeconomic instability, weak regulatory oversight, and limited inclusivity for smaller firms. That more experienced professionals perceive greater implementation barriers also suggests that the scheme's structural weaknesses are more visible to those with deeper sectoral knowledge. While the scheme demonstrates clear potential to bridge Nigeria's infrastructure deficit, its long-term sustainability depends on enhanced transparency and stronger monitoring frameworks. This sustainability also depends on broader stakeholder inclusion, particularly the involvement of quantity surveyors, whose professional expertise has the potential to transform the scheme's effectiveness and fully address concerns.

References

Bassey, O. E. (2013). *Tax incentives and economic development in Nigeria.*University of Calabar Press.

Braun, V., & Clarke, V. (2006).Using thematic analysis in psychology.*Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). John Wiley & Sons.

Dahiru, A., & Muhammad, R. (2015). Critical success factors of public-private partnership projects in Nigeria. *Abubakar Tafawa Balewa University Journal of Environmental Sciences*,*8*(2).52-63.

Edogbanya, V. O., &Adekeye, J. A. (2024).Impact of public-private partnership on the development of critical infrastructure in Nigeria during the Fourth Republic.*Journal of Applied and Theoretical Social Sciences,* 6(3), 233–246. https://www.iccsor.com/index.php/jatss/article/view/284

Eneh, J., Biobele-Georgewill, L., Salis, A., & Onu, E. (2023).*The road infrastructure tax credit scheme: The journey so far*. *GELIAS*.https://www.gelias.com/images/Newsletter/Road_Infrastructure_Tax_Credit_Scheme_-_The_Journey_So_Far.pdf

Falaye, T. E. (2024). *Project management challenges in developing economies: A case study of infrastructure projects in Nigeria* [Unpublished master's thesis]. University of Nigeria, Nsukka.

Federal Ministry of Works.(2024). *Press statement on the Road Infrastructure Tax Credit Scheme*.https://fmw.gov.ng/read/3135

Jamieson, S. (2004). Likert scales: How to (ab)use them. *Medical Education, 38*(12), 1217–1218. https://doi.org/10.1111/j.1365-2929.2004.02012.x

Nigerian Institute of Quantity Surveyors. (2023). *Membership directory: Lagos State chapter*. NIQS.

Ogwu, S. M. (2019, February 1). Quantity Surveyors laud, caution FG on Order No 007. *Daily Trust*

Pallant, J. (2020). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS* (7th ed.). Routledge.

Piper, M. (2014).*Taxes made simple: Income taxes explained in 100 pages or less*. Simple Subjects, LLC.

Proshare. (2017, October 31). *FG introduces infrastructure tax credit scheme through Road Trust Fund*. https://www.proshare.co/articles/fg-introduces-infrastructure-tax-credit-scheme-through-road-trust fund?category=Taxes+%26+Tariffs&classification=Read&menu=Economy

Punch. (2024, May 8). FIRS faults Buhari's N2.59trn tax credit scheme on road infrastructure. *Punch Nigeria*. https://punchng.com/road-construction-firs-faults-n2-59tn-tax-credit-scheme/

Punch. (2025, March 28). Stakeholders worry as weak infrastructure slows economic growth. *Punch Nigeria*. https://punchng.com/nigerias-economic-growth-stifled-by-infrastructure-deficit/

Royal Institution of Chartered Surveyors.(n.d.).*What is a quantity surveyor?*https://www.rics.org/surveyor-careers/surveying/what-surveyors-do/what-is-a-quantity-surveyor

Shehu, A. T. (2018). Infrastructure development in Nigeria: Challenges and prospects. *African Journal of Economic Review, 6*(2), 23–35.

The Guardian. (2024). NIQS seeks role in government's infrastructure tax credit scheme. *The Guardian Nigeria News*. Retrieved January 2, 2025, from https://guardian.ng/about-guardian-news/niqs-seeks-role-in-governments-infrastructure-tax-credit-scheme/

Udora, C. (2024, August 23). The effectiveness of public-private partnerships (PPPs) in Nigeria's infrastructural development.*Veriv Africa*.https://www.verivafrica.com/insights/th

e-effectiveness-of-public-private-partnerships-ppps-in-nigerias-infrastructural-development

Wang, T., Wang, S., Zhang, L., Huang, Z., & Li, Y. (2016). A major infrastructure risk-assessment framework: Application to a cross-sea route project in China. *International Journal of Project Management, 34*(7), 1403–