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SPECIAL PURPOSE VEHICLES AS CATALYSTS FOR TELECOMMUNICATION AND DIGITAL INFRASTRUCTURE DEVELOPMENT IN NIGERIA: RETHINKING REGULATORY FRAMEWORKS

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Abstract
The rapid growth of Nigeria's telecommunications sector is critical to its economic diversification, digital transformation, and global competitiveness. However, infrastructural deficits, regulatory inefficiencies, and limited financing hinder the sector's potential. Special Purpose Vehicles (SPVs), structured within Public-Private Partnership (PPP) frameworks, offer a strategic legal and financial solution for mobilizing investments, mitigating risks, and driving sustainable telecom and digital infrastructure development. This paper examines the deployment of SPVs in Nigeria's digital infrastructure development and telecommunications sector, highlighting key models such as InfraCos for broadband deployment, TowerCos for passive infrastructure, PPP-SPVs for rural connectivity, and hybrid models involving government ownership and private concessions. It explores their roles in facilitating fiber optic expansion, network sharing, and 5G rollout. The study using doctrinal research methodology also analyses Nigeria's evolving legislative and regulatory framework governing SPVs, drawing from the Nigerian Communications Act 2003, the Infrastructure Concession Regulatory Commission (ICRC) Act 2005, the Companies and Allied Matters Act 2020, and sector-specific guidelines on co-location, infrastructure sharing, and universal service. Policy frameworks such as the National Broadband Plan (2020–2025), the Strategic Blueprint for the Digital Economy (2023–2027), and the National PPP Policy are examined for their alignment with SPV-driven models. Findings indicate that while SPVs have facilitated infrastructure expansion and investment, significant legal and institutional reforms are required to strengthen transparency, streamline regulatory processes, and bolster investor confidence. The paper recommends the development of a new and comprehensive SPV regulatory framework devoid of the bottlenecks in the current frameworks, harmonization of the extant laws, and the introduction of legal safeguards to protect consumers and stakeholders. Ultimately, leveraging SPVs is not merely a financing strategy but a legal and economic imperative for bridging Nigeria's digital divide and achieving inclusive digital transformation.

Keywords: Special purpose vehicle, digital infrastructure, telecommunication, regulatory frameworks

1. Introduction

The rapid expansion of Nigeria's telecommunications sector and deployment of digital infrastructure are critical to the nation's economic growth, digital transformation, and global competitiveness. However, significant infrastructural deficits, regulatory bottlenecks, and funding constraints hinder the sector's full potential, hence the recent challenges facing telecom operators, deployment of, and epileptic internet services. To address these challenges, the deployment of

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Special Purpose Vehicles (SPVs) presents a strategic and legally viable approach to mobilizing capital, mitigating risks, and ensuring sustainable infrastructure development.[1] An SPV is a subsidiary of a company formed with the purpose of acquiring and holding certain assets for the sole benefit of noteholders in the asset backed security, such that the noteholders have acquired nothing but undivided interests in the asset pool.[2]SPVs, as distinct legal entities, facilitate public-private partnerships (PPPs), enabling collaboration between the government, private investors, and multilateral institutions. These entities provide an effective mechanism for financing large-scale projects, isolating financial risks, and ensuring regulatory compliance while promoting transparency and efficiency in project execution. In the context of Nigerian telecommunications and the development of digital infrastructure, SPVs can drive investment in broadband expansion, deployment of fibre optics infrastructure, rural connectivity, and 5G deployment, all of which are crucial for economic inclusion and technological advancement. Given the evolving legal landscape especially the regulatory bottlenecks in deployment of infrastructure in the Nigerian telecommunication sector, the adoption of SPVs necessitates a robust regulatory framework that ensures accountability, consumer protection, and alignment with Nigeria's digital economy objectives. A well-structured SPV model, backed by clear legal and regulatory provisions, will not only attract local and foreign investment but also enhance the resilience and scalability of the country's telecommunications and digital infrastructure.

To ensure the flow of this research, the paper is divided into five sections, the section after this introduction is an overview of SPV models used in the deployment of infrastructure in the telecoms sector and for digital transformation, and section 3 examines the legal and policy framework on the use of SPV for the deployment of digital and telecom infrastructure in Nigeria, section 4 will discuss the Regulatory Bottlenecks on the use of the extant legal and policy frameworks for deployment of digital and telecom infrastructure in Nigeria , conclusion and recommendations will be proffered in section 5.

2. Overview of SPV Models Practiced in Nigeria for Deployment of Digital and Telecommunication Infrastructure

The deployment of telecommunications and digital infrastructure in Nigeria requires substantial investment, technical expertise, and regulatory oversight. Given the capital-intensive nature of this sector, Special Purpose Vehicles (SPVs) operating within Public-Private Partnership (PPP) frameworks have emerged as an effective legal and financial mechanism to enhance telecom infrastructure, bridge connectivity gaps, and drive digital transformation. SPV-PPP models in Nigeria's telecommunications sector are structured to ensure risk-sharing between public and private entities, leverage external financing, and promote sustainable development while maintaining regulatory compliance under the Nigerian Communications Act (2003) and the Infrastructure Concession Regulatory Commission (ICRC) Act (2005). Below are the key models:

2.1 The InfraCo SPV Model

The InfraCo (Infrastructure Company) model is a licensed public-private SPV arrangement designed to facilitate the deployment of fiber-optic broadband infrastructure across Nigeria. Under this model, private sector entities are granted regional licenses by the Nigerian Communications Commission (NCC) to serve as InfraCos, responsible for rolling out open-access metropolitan fiber-optic networks. The Model was established under the NCC's National Broadband Plan (2020–2025), governed by the Nigerian Communications Act (2003**)** and subject to PPP oversight under the ICRC Act (2005). However, the Licensing framework requires InfraCos to meet stipulated Quality of Service (QoS) and Universal Access Obligations. The benefits are to encourage regional

[1] Vaughan O'grady, 'Nigeria Promised Fibre Boost by Government' <https://developingtelecoms.com> accessed 7 March 2025

[2] 'NSE Mulls new regulatory Framework for Special Purpose vehicles' <https://thenationonlineng.net/> accessed 7 March 2025

broadband expansion, reduce the cost of internet access, Leveraging private sector expertise while maintaining public interest oversight and ensure infrastructure sharing and non-discriminatory access to telecom operators. Examples are; MainOne Cable Company Limited (Lagos InfraCo Licensee) tasked with developing fiber-optic infrastructure to enhance broadband connectivity in Lagos.[3] MainOne in collaboration with Tolaram Group also launched a multimillion-dollar connectivity project at the Lagos Free Zone.[4]The project is aimed at boosting internet connectivity in the Lagos Free Zone, enabling businesses and individuals to power their operations and provide services to customers with high-speed internet. The project requires the deployment of over 50km of fibre optic network infrastructure from MainOne's data centre located at Ogombo to LFZ. The partnership with Lagos Free Zone is to provide strategic value to forward-thinking businesses who seek to enjoy the ease of doing business. Organizations at the Zone will experience increased speed, security, and connectivity in The New Frontier with MainOne. Customers will also enjoy access to local data centers and other local and global service providers through the MainOne data center with connections directly from the Zone.[5]

Also, IHS Towers got its licence to cover the North Central geopolitical zone including Abuja. The Infraco licences are based on the NCC's Open Access Model (OAM) in line with the National Broadband Plan (NBP) of (2013 – 2018).[6]Zinox Technologies & Broad-based Communications licensed as InfraCos for various regions across Nigeria including the Southeast. Zinox was one of the infrastructure companies (InfraCos) licensed by the federal government to roll out metropolitan fibre-optic infrastructure across Nigeria. The InfraCos were expected to fill critical infrastructure gaps and enable high-speed broadband service in the various geopolitical zones, with Zinox licensed to deploy the services in the Southeast region.[7]

2. 2 Open Access Model for Rural Telephony

This SPV model is tailored to extend telecommunications infrastructure to underserved and rural areas where commercial viability is low. The Nigerian government, through the Universal Service Provision Fund (USPF) under the NCC, partners with private telecom companies to deploy rural broadband and mobile connectivity infrastructure. Anchored under Sections 112-120 of the Nigerian Communications Act (2003**)**, which establishes the USPF as a funding mechanism.[8] The model also operates under PPP financing arrangements where the government provides grants, subsidies, or co-financing through an SPV arrangement. It reduces the rural-urban digital divide while lowering the cost of network expansion for private telecom operators through government-backed incentives. It promotes telecom infrastructure sharing through co-location and wholesale broadband services, examples are; the USPF's Rural Broadband Initiative (RUBI): A PPP-SPV model aimed at deploying base stations, fiber-optic connectivity, and mobile access points in underserved communities in Nigeria.[9] Through the RUBI project, the USPF provides subsidies to operators for the deployment of networks to support the establishment of core delivery mechanisms for broadband services in the rural/semi-urban areas of Nigeria.[10]The Base Transceiver Station (BTS) Co-location Project, where private entities develop shared telecom towers in rural areas. The BTS Co-location Project in Nigeria, spearheaded by the Universal Service Provision Fund (USPF)

[3] Nigerian Investment Promotion Council, Mainone to Invest N2bn in Lagos Fibre Infratructure < <https://www.nipc.gov.ng/ 2019/05/22/> accessed 5 March 2025

[4] MainOne kicks off multimillion-dollar connectivity at Lagos Free Zone < https://lagosfreezone.com> accessed 7 March 2025

[5] Ibid

[6] NCC, Press Release: NCC Board Approves Two New Infraco Licenses for South East and North East < https://ncc.gov.ng > accessed 7 March 2025

[7] Extensia , Nigeria: ZInox to deploy Fibre Optic Cable Infrastructure in South East <https://extensia.tech/> accessed 7 March 2025/

[8] The Nigerian Communication Commissions Act 2003, S.114

[9] RUBI, Rural Broadband Initiatives <https://www.uspf.gov.ng> accessed 8 March 2025

[10] Ibid

and the Nigerian Communication Commission (NCC), aims to improve telecommunications infrastructure by encouraging shared infrastructure (like towers and masts) among different operators, reducing costs and potentially improving service quality.[11]

2.3. TowerCo SPV Model

This model involves the creation of independent Tower Companies (TowerCos**)** as SPVs, responsible for deploying, owning, and managing telecommunications towers, fiber backhaul, and passive infrastructure. These SPVs lease infrastructure to telecom operators, thereby promoting cost efficiency, infrastructure sharing, and environmental sustainability.[12]Operates under the Co-location and Infrastructure Sharing Guidelines (2021) issued by the NCC[13] and also complies with PPP principles under the Reviewed National Integrated Infrastructure Master Plan (NIIMP).[14] The good thing about this model is that it lowers capital expenditure (CAPEX) burdens on telecom operators and reduces network duplication and fosters a greener telecom ecosystem. It also enhances service quality and network resilience. Examples are; IHS Towers and American Towers Corporation (ATC Nigeria) operate as SPVs leasing telecom towers to MTN, Airtel, and 9mobile with IHS Towers being a major player in Nigeria and other African markets.[15] Also, the **r**ising partnerships with public entities such as NITDA and state government**s** to promote smart city telecom infrastructure is a good example.[16] The collaboration will involve eight cities nationwide in the first phase, including Abuja, Lagos and one city selected from each of the six geopolitical zones.

2.4. Government-Owned SPVs with Private Sector Concession

In some cases, the Nigerian government establishes SPVs to own telecom infrastructure while granting long-term concessions to private sector operators for management, maintenance, and service provision. This ensures public ownership of critical infrastructure while leveraging private efficiency. The ICRC Act (2005) and the Concession Guidelines under the National Broadband Plan guide such hybrid models. The National Information Technology Development Agency (NITDA) and the Ministry of Communications and Digital Economy often act as the government stakeholders in such SPVs.[17] The benefits include balancing public control with private efficiency, ensuring long-term infrastructure sustainability through government-backed funding and encouraging cross-sectoral telecom integration (e.g., e-government services, smart grids). Examples are; Galaxy Backbone Limited which is an SPV owned by the Federal Government of Nigeria, providing ICT and broadband services to government institutions while engaging private telecom operators for infrastructure expansion. Galaxy Backbone (GBB) has over time deployed state-of-the-art fibre optic networks in cities such as Lagos, Ibadan and Ilorin. [18]

The deployment of Special Purpose Vehicles (SPVs) within PPP frameworks has significantly enhanced the expansion of Nigeria's telecommunications infrastructure. Each model, whether

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[11] 'BTS-Base Transceiver Stations' <https://www.uspf.gov.ng> accessed 8 March 2025

[12] Christopher Greaves, 'Pan African Towers embarks on its next strategic phase' < https://www.towerxchange.com> accessed 8 March 2025

[13] 'NCC, Guidelines on Co-;location and Infrastructure Sharing 2021 <https// ncc.gov.ng> accessed 8 March 2025

[14] 'Reviewed National Infrastructure Plan 2020',< https://nationalplanning.gov.ng> accessed 7 March 2025

[15] Joseph Olaoluwa, 'MTN Nigeria Renegotiates Tower Lease with HIS and ATC Quashes Conflict Rumours '<https://techcabal.com> accessed 6 March 2025

[16] Itedgenews, 'NITDA Collaborates with States on Smart City Initiatives' < https://www.itedgenews.africa/> accessed 7 March 2025

[17] Federal Ministry of Communications, Innovation and Digital Economy, Ministry Receives Presidential Approval Towards Increasing Nigeria's Connectivity backbone by 90,000km <https://fmcide.gov.ng> accessed 8 March 2025

[18] NCC, 'NCC Strengthens ties with Galaxy Backbone on Digital Connectivity'<https://www.ncc.gov.ng/> accessed 6 March 2025; Galaxy Backbone's Fibre Optic Network Now Live in Lagos, Ibadan and Ilorin < https://galaxybackbone.com.ng> accessed 6 March 2025

InfraCo licensing, rural broadband PPP-SPVs, TowerCo leasing arrangements, or government-owned hybrid SPVs plays a critical role in fostering financial sustainability, network expansion, and regulatory compliance. However, to maximize the effectiveness of SPV-PPP models in the telecommunications sector, Nigeria needs to enhance legal frameworks to ensure transparency and accountability in PPP arrangements, streamline regulatory approvals to reduce bureaucratic delays in SPV licensing and infrastructure deployment and strengthen investor confidence through legal safeguards, enforceable contracts, and dispute resolution mechanisms. By refining these models, Nigeria can accelerate its broadband penetration, bridge digital divides, and position itself as a leading ICT hub in Africa.

3. Legal and Policy Framework on the Use of SPV for the Deployment of Digital and Telecom Infrastructure in Nigeria

The deployment of digital and telecommunications infrastructure in Nigeria is heavily regulated due to its strategic importance in economic development, national security, and public service delivery. Special Purpose Vehicles (SPVs) play a significant role in financing and managing telecom infrastructure, particularly in network expansion, fiber optics, and tower sharing. The regulatory landscape governing SPVs in this sector is anchored in legislation, regulatory guidelines, and policy directives issued by key government agencies. This section examines the legal framework, regulatory environment, and policy directions influencing the role of SPVs in the deployment of digital and telecommunication infrastructure in Nigeria, drawing upon relevant statutes, agency regulations, and the industry's best practices.

3.1. Legal Framework

This section will examine the provisions of the key legal framework guiding the digital and telecommunication sector to ascertain how to eliminate the bottlenecks that are likely to impede the use of SPV for the deployment of digital and telecommunication infrastructure in Nigeria.

The Nigerian Communications Act 2003: The Nigerian Communications Act 2003 is the primary legislation governing the telecom industry. It establishes the Nigerian Communications Commission (NCC) as the independent regulatory authority overseeing the sector.[19] The Act is central to the licensing, regulation, and competition management of entities involved in telecommunications, including SPVs.[20] Key provisions of the Act relevant to SPVs in Telecom Infrastructure include; Section 4 which empowers the NCC to regulate, license, and monitor service providers and infrastructure owners, Section 70 which grants NCC the authority to issue regulations concerning permits, licenses, and infrastructure sharing, Sections 135-137 which provides for competition regulation and fair access to telecom infrastructure and Section 104-106 addresses dispute resolution, which is crucial for SPVs engaging in co-location and tower sharing.

The Infrastructure Concession Regulatory Commission (Establishment Etc.) (ICRC) Act of 2005: This is the principal legislation for the regulation of PPP contracts involving Federal Government infrastructure. The Act in sections 1 and 2 provides for the participation of the private sector in financing the construction, development, operation or maintenance of infrastructure or development of Federal Government projects through concessions or other contractual arrangements.[21]

Companies and Allied Matters Act (CAMA), 2020: The Act from sections 18-26 governs the registration and operation of SPVs, which are often used in PPP projects to manage risks and financing.[22] The Act is a comprehensive update to Nigeria's corporate law, and aims to streamline business operations and attract investment by modernizing the regulatory framework for companies.

The Public Procurement Act (PCA), 2007: The Act in sections 3-5 established the Bureau of Public Procurement (BPP) as the regulatory body responsible for monitoring and overseeing public

[19] Nigerian Communications Act 2003, S.3
[20] Nigerian Communications Act 2003, S. 1 (d)
[21] The Infrastructure Concession Regulatory Commission (Establishment Etc.) (ICRC) Act of 2005, S. 1 and 2
[22] Company and Allied Matters Act 2020, S. 18-26

procurement activities, harmonizing existing government policies and practices by regulating, setting standards and developing a legal framework and professional capacity for public procurement in Nigeria.[23]

The Fiscal Responsibility Act 2007: The Act in sections 1 to 3 provides for rules to ensure the accountability, transparency and prudence of government in the preparation of budgets and expenditure frameworks.[24] The Act is applicable to SPVs and PPPs in Nigeria.

The Debt Management Office Act 2003: This legislation governs all Federal Government loans, borrowings, guarantees and other long-term contingent liabilities.[25]

Investment and Securities Act 2007: The Act by the provisions of section 13 regulates financing mechanisms, including public-private partnerships (PPPs) and foreign investments in telecom infrastructure.[26]

Telecommunications Networks Interconnection Regulations 2007: The regulation, especially in sections 1 and 14 governs the interconnection of networks, ensuring that infrastructure sharing between private and public entities operates smoothly.[27] Though there is an updated 2024 version of this regulation but it is yet to be published as it is still a draft.

Guidelines on Co-location and Infrastructure Sharing 2021: The guidelines in sections 4 and 8 promote resource sharing between telecom operators and public entities to reduce costs and encourage efficiency.[28]

Universal Access and Universal Service Regulations 2007: The regulations in sections 1 and 2 support investment in rural telecom projects through subsidies and incentives for private investors.[29]

3.2 Policy Framework

The National Policy on Public-Private Partnership 2009: The Policy aims to leverage private sector investment for infrastructure and public service delivery, ensuring transparency and accountability through open competition and best international practices. This policy was approved by the Federal Executive Council (FEC) in 2009 and the policy aims to provide a conducive environment for private sector's involvement in the delivery of infrastructure development services in Nigeria.[30]

National Broadband Plan 2020-2025: This policy promotes PPPs for broadband expansion, including the use of SPVs to finance and manage projects. The NBP addresses 3 of the 8 priorities that the Federal Government assigned to the Federal Ministry of Communications and Digital Economy, and the parastatals under its purview, for implementation. These priorities are the implementation of broadband connectivity and the execution of a plan to deploy 4G across the country, as well as the development and implementation of a digital economy policy and strategy. Broadband supports the development of the digital economy and a focus on growing the National Digital Economy will also improve and diversify the nation's traditional economy.[31]

National Broadband Alliance for Nigeria (NBAN): The NBAN is a policy initiative to expand internet access nationwide.32 The initiative targets key sectors, including schools, healthcare facilities, religious centers, and markets, in a bid to create a sustainable model for widespread broadband adoption. NBAN aligns with Nigeria's National Broadband Plan (2020-2025) and the Strategic Blueprint from the Ministry of Communications, Innovation, and Digital Economy. The initiative adopts bringing together state governments, schools, hospitals, telecom operators, and

[23] The Public Procurement Act (PCA), 2007:, Sections 3-5
[24] The Fiscal Responsibility Act 2007, S 1 to 3
[25] The Debt Management Office Act 2003, S. 4 and 6
[26] Investment and Securities Act 2007, S.13
[27] Telecommunications Networks Interconnection Regulations 2007
[28] Guidelines on Co-location and Infrastructure Sharing 2021, Sections 4 and 8
[29] Universal Access and Universal Service Regulations 2007, Sections 1 and 2
[30] The National Policy on Public Private Partnership 2009, Sections 1 and 2
[31] National Broadband Plan 2020-2025, Items 2.1 and 5.1
[32] Frank Eleanya, 'Nigeria targets 70% internet penetration in 2025 with National Broadband Alliance' <https://techcabal.com> accessed 12 March 2025

infrastructure companies to drive broadband expansion across the country. Its goals include increasing broadband penetration from 44% in December 2024 to 70% by 2025, providing minimum data speeds of 25 Mbps in urban areas and 10 Mbps in rural areas, and boosting broadband investments by 300–500% by 2027. The initiative starts with a pilot program in eight states: Edo, Ogun, Kwara, Katsina, Imo, Abia, Borno, and Nasarawa.[33]

The Strategic Blueprint for the Nigerian Ministry of Communications, Innovation & Digital Economy (2023–2027): The Strategic Blueprint titled *"Accelerating Our Collective Prosperity Through Technical Efficiency,"* is a detailed and progressive framework that encompasses five key pillars: Knowledge, Policy, Infrastructure, Innovation, Entrepreneurship & Capital (IEC) and Trade.[34] The blueprint aligns with President Bola Ahmed Tinubu's *Renewed Hope Agenda* and seeks to create a more digitally inclusive and economically viable Nigeria.[35] It emphasizes collaboration with government agencies, private sector stakeholders, and international partners to achieve these goals. The 3rd Pillar of the strategic blueprint which is our focus showcases the commitment to build critical infrastructure including the 90,000km fibre optic cables across Nigeria and it is required to power a strong digital economy. The emphasis on building stronger digital infrastructure extends beyond connecting people but also focuses on economic empowerment and creating opportunities for inclusion. With improved access to quality broadband, and upgraded critical services, the pillar will catalyse a digital transformation that impacts the entire population. The blueprint intends to achieve the following; broadband penetration, efficient spectrum management, digital public infrastructure, reimagining the postal service, optimising communication satellites and augmenting investment in existing community spaces, community computer labs, school-based computer labs and innovation hubs across Nigeria. [36]

National Information and Communication Technology Policy 2012: This policy supports government-private collaboration in ICT development. It aims to promote digital literacy, infrastructure development, e-governance, local content development, and the growth of the ICT industry.[37]

Federal Government Roadmap on Digital Economy: The Nigerian Federal Government's roadmap for a digital economy, outlined in the National Digital Economy Policy and Strategy (NDEPS 2020-2030), aims to leverage digital technologies for economic growth and development through eight key pillars. This initiative aligns PPP projects with Nigeria's digital transformation goals.[38] Nigeria's legal and regulatory framework provides a solid foundation for telecom infrastructure deployment through PPPs and SPVs. However, challenges such as regulatory compliance, financing, and bureaucratic bottlenecks still hinder full implementation. Though the extant laws need reform, however, strengthening enforcement and streamlining approval processes will further enhance telecom investments in Nigeria.

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[33] Ibid

[34] Federal Ministry of Communications, Innovation & Digital Economy, ' Accelerating our Collective Prosperity through Technical Efficiency A Strategic Plan for the Federal Ministry of Communications, Innovation & Digital Economy' < https://fmcide.gov.ng> accessed 12 March 2025.

[35] Charting Nigeria's Digital Future: Unveiling the Transformative Strategic Blueprint" < https://faikendawngroup.com> accessed 13 March 2025

[36] Federal Ministry of Communications, Innovation & Digital Economy, 'Accelerating our Collective Prosperity through Technical Efficiency A Strategic Plan for the Federal Ministry of Communications, Innovation & Digital Economy' <https://fmcide.gov.ng> accessed 12 March 2025

[37]National Information and Communication Technology Policy 2012 < https://nitda.gov.ng> accessed 10 March 2025

[38] Federal Government Roadmap on Digital Economy <https://nitda.gov.ng> accessed 10 March 2025

4. Regulatory Bottlenecks on the Use of the Extant Legal and Policy Frameworks for Deployment of Digital and Telecom Infrastructure in Nigeria

The deployment of telecom infrastructure in Nigeria through Special Purpose Vehicles (SPVs) and Public-Private Partnerships (PPPs) faces several regulatory bottlenecks, primarily in the areas of licensing, approvals, competition, and pricing. Below is a detailed analysis:[39]

4.1 The Extant Regulatory Bottlenecks

Licensing Bottlenecks

The Nigerian Communications Commission (NCC) regulates telecom licensing under the Nigerian Communications Act (NCA) 2003. However, the under-listed challenges persist:

Multiplicity of Licensing Requirements: Telecom infrastructure developers often require multiple licenses from federal and state governments including those for infrastructure sharing, spectrum usage, and right-of-way (RoW), which can lead to bureaucratic delays.[40]

Slow License Processing: The approval process for new telecom projects, especially under the PPP model, can take months due to compliance checks and inter-agency coordination.[41]

Fragmented Regulatory Jurisdiction: Apart from the NCC, other agencies such as the National Environmental Standards and Regulations Enforcement Agency (NESREA) and state governments impose additional licensing hurdles.[42]

Approval Bottlenecks

Right-of-Way (RoW) Issues: Obtaining RoW permits from federal, state, and local governments is often slow and costly. Different states impose varying charges, which discourages investment. However, the telecom industry in Nigeria has been urged to address critical barriers that hinder its growth, including right-of-way bottlenecks and multiple taxation, which have continued to slow down infrastructure development and digital transformation.[43]

Environmental Impact Assessments (EIA): Projects require multiple approvals related to environmental compliance, further delaying deployment.

Infrastructure Co-location Challenges: While infrastructure sharing is encouraged, approvals for co-location (e.g., multiple operators using the same towers) are sometimes delayed due to anti-competitive concerns from dominant market players.[44]

Competition Barriers

Market Dominance by a Few Operators: The Nigerian telecom market is largely controlled by a few big players like MTN, Airtel,Glo and 9mobile. This makes it difficult for smaller SPVs or PPP-based operators to compete effectively.[45]

Interconnection Challenges: New entrants face difficulties in obtaining fair interconnection terms from incumbent operators, leading to unfair competition.[46]

Limited Incentives for Small Players: The regulatory framework favours established operators over smaller PPP initiatives, limiting market penetration for new players.

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[39] NESG Research, Making Public-Private Partnerships Work in Nigeria <https://www.ajol.info> accessed 9 March 2025

[40] Maxwell Ukpeborang Oluwole and another, Federal High Court Upholds Powers of States to Regulate siting of Telecom Infrastructures https://www.mondaq.com> accessed 10 March 2025

[41] Ibid

[42] Ibid

[43] Justice Okamgba, Telcos Urged to Overcome ROW Bottlenecks and Multiple Taxation < https://punchng.com> accessed 10 March 2025

[44] Seun Ibiyemi, Telecom sector risks stifled growth, underinvestment amidst grappling challenges <https://nigeriannewsdirect.com> accessed 11 March 2025.

[45] Olayinka Adigun, Dominance dilemma: Market consolidation and averting potential monopoly in Nigerian telecoms sector <ttps://businessday.ng> accessed 10 March 2025

[46] Ibid

Pricing Issues

High Cost of Infrastructure Deployment: The cost of laying fiber optics and building towers is high due to RoW fees, security challenges, and foreign exchange volatility affecting equipment importation.[47]

Tariff Regulations: The NCC regulates telecom tariffs, limiting the flexibility of operators to set competitive pricing models.

Broadband and Spectrum Pricing: The Frequency Pricing Regulations set high costs for spectrum acquisition, discouraging new entrants from investing in broadband expansion.[48]

Other Challenges

Multiple Taxation and Regulatory Bottlenecks: SPVs often face multiple levies from local, state**,** and federal authorities, increasing project costs. The government is working on a "one-stop-shop" regulatory approach to streamline compliance requirements.[49]

Infrastructure Security and Vandalism, telecom infrastructure is vulnerable to vandalism, theft, and sabotage, particularly in remote areas. The NCC and security agencies are working on measures to enhance infrastructure protection.[50]

Emerging Technologies, SPVs must adapt to 5G deployment, satellite-based networks, and edge computing, requiring continuous regulatory updates to accommodate new technologies.[51] Addressing these regulatory challenges requires harmonization of licensing procedures at all levels of government using a multistakeholder approach, streamlining approval processes, reducing RoW fees, and creating a more competitive pricing model. A clear regulatory framework for PPP and SPV in telecom infrastructure deployment is essential to ensure sustainable sector growth.

4.2 Regulatory Bottlenecks to Avoid

Delays in Licensing and Approvals

Multiple Agency/ State and Local Government Approvals: The Nigerian Communications Commission (NCC), National Environmental Standards and Regulations Enforcement Agency (NESREA), State governments,[52] and Local government councils all impose different regulations, leading to bureaucratic delays.

Right-of-Way (RoW) Challenges: The high cost and inconsistency of RoW charges across states have historically slowed fiber deployment. Despite NCC interventions, some states still impose exorbitant fees, delaying infrastructure rollout. This must be avoided for the initiative to succeed.

Slow Environmental and Technical Approvals: Long approval times for environmental impact assessments and technical permits have hampered past broadband projects.

Inconsistencies in Regulatory Frameworks

The **InfraCo model** introduced by the NCC has faced repeated reviews due to funding and implementation challenges. [53]The new SPV initiative must ensure regulatory stability to prevent constant adjustments that could delay execution. Lack of inter-agency coordination/collaboration

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[47] Seun Ibiyemi, Telecom sector risks stifled growth, underinvestment amidst grappling challenges <https://nigeriannewsdirect.com> accessed 11 March 2025

[48] Ibid

[49] Deji Elumoye, Tinubu: We'll Review Our Telecom Sector's Regulatory Framework and Operations <https://www.thisdaylive.com> 11 March 2025

[50] NCC, NCC and NSCDC sign MOU on Critical Telecommunication Infrastructure Protection < https://www.ncc.gov.ng> accessed 10 March 2025.

[51] See the National Policy on Fifth Generation (5G) Networks for Nigeria Digital Economy < https://fmcide.gov.ng> accessed 11 March 2025

[52] Juliet Umeh, 'States threaten FG's ambitious 90,000km fibre project' <h ttps://www.vanguardngr.com> accessed 12 March 2025

[53] Ibid (n.2)

often results in conflicting regulations, increasing the cost and complexity of compliance for investors.

Risk of Market Monopoly and Anti-Competitive Practices: If a single entity dominates the SPV initiative, it could lead to monopolistic control of broadband infrastructure, limiting competition. This should be avoided for the initiative to succeed. To avoid this, an open-access model should be enforced, ensuring that all licensed operators have equal and non-discriminatory access to the fiber network.

Challenges in Infrastructure Sharing: Major telecom operators sometimes resist infrastructure sharing, preferring to control their own networks. If dominant players discourage smaller ISPs from accessing fiber infrastructure, broadband expansion goals will not be met and the aim of the initiative to lay 90,000Km fibre optic cables will be defeated. Regulatory oversight is needed to enforce fair infrastructure-sharing rules and prevent anti-competitive behaviour.[54]

High Cost of Infrastructure Deployment: Excessive RoW charges, forex fluctuations affecting fiber equipment importation, and multiple taxations increase the overall cost of fiber optic deployment. The government should standardize RoW fees nationwide and provide tax incentives to SPV investors to reduce costs.

Unfair Pricing Models for Broadband Access: If the SPV controlling the fiber network imposes high leasing costs, smaller ISPs and telecom operators may struggle to afford access, limiting broadband affordability for consumers. Pricing regulations must ensure that fiber access costs are reasonable and transparent, with NCC oversight preventing price gouging.

4.3 Rethinking a new Regulatory Framework for deployment of digital and telecommunication Infrastructure in Nigeria

SPV is undoubtedly the best tool to explore for the deployment of digital and telecommunication infrastructure in Nigeria, outside being a laudable initiative it will expand broadband penetration in Nigeria and where possible end the issue of dominant position once a single entity does not dominate the SPV initiatives. However, the open access model is encouraged when deploying SPV in the telecom sector. Also, the deployment of the SPV for digital and telecom infrastructure in Nigeria should be devoid of the existing regulatory challenges currently experienced.[55] In the sector, hence the need to rethink a new regulatory framework for the deployment of digital and telecommunication Infrastructure in Nigeria. The introduction of a new regulatory framework for Special Purpose Vehicles (SPVs) in Nigeria's telecom sector presents an opportunity to address existing challenges and reshape market dynamics. While SPVs have the potential to enhance infrastructure development and attract investment, it is crucial to ensure that dominant players such as MTN, Airtel,9mobile and Glo do not exploit these entities to reinforce their market power.[56] A well-structured regulatory framework for the Nigerian Telecom sector must be designed to promote competition, ensure fair infrastructure access, and prevent anti-competitive behaviour.

The current regulatory framework in the Nigerian digital and telecom sector faces several challenges as discussed earlier in this paper and these challenges hinder the effective utilization of SPVs. One major issue is the limited infrastructure-sharing policies, which allow dominant players to control essential telecom assets and restrict access to smaller operators.[57] Additionally, there are regulatory gaps in the governance and oversight of SPVs, [58]creating loopholes that could be

[54] Osasómé C.O, Telecom Stakeholders Warn of Challenges to Nigeria's 90,000KM Fiber Optic Project <https://www.itedgenews.africa> accessed 11 March 2025

[55] Chinenye Anuforo, 'Challenges Cloud Nigeria's Ambitious 90,000km Fibre Optic Project' <https://thesun.ng/ > accessed 11 March 2025.

[56] Olayinka Adigun , 'Dominance Dilemma: Market Consolidation and Averting Potential Monopoly in Nigerian Telecoms Sector' < https://businessday.ng> accessed 13 March 2025.

[57] 'The World Bank, The Infrastructure Sharing Imperative' < https://digitalregulation.org/> accessed 17 March 2025

[58] Joseph Yusuf ONNI, 'Demystifying Special Purpose Vehicles (SPVs) in Investment: Understanding Limitations and Strengths' < https://medium.com> accessed 12 March 2025

exploited by major telecom firms to entrench their market dominance. The complex licensing and compliance procedures further discourage new entrants from investing in infrastructure, reinforcing the stronghold of existing market leaders.

A well-designed SPV regulatory framework can significantly alter the structure of the telecom industry by ensuring that infrastructure-sharing is fair and inclusive. One of the most critical aspects of this framework should be the prevention of dominance abuse. If left unchecked, MTN, Airtel, 9mobile and Glo could create SPVs that limit competition by controlling access to telecom infrastructure. To mitigate this risk, the new regulatory framework should mandate open-access policies, ensuring that infrastructure financed and developed through SPVs is available to all operators under transparent and fair conditions. This would help foster a competitive environment where smaller players can participate without being unfairly excluded.[59]

The financial and investment climate in the digital and telecom sectors would also benefit from a reformed SPV framework. By providing clear guidelines on SPV ownership, taxation, and governance, the regulatory framework can enhance investor confidence and attract foreign direct investment. Institutional investors, both domestic and international, would be more willing to invest in Nigerian telecom infrastructure if there were assurances of transparency, fair competition, and regulatory stability. Additionally, a well-structured SPV system can help telecom operators mitigate financial risks, enabling them to undertake large-scale projects without directly exposing their core businesses to significant liabilities. However, regulations must prevent dominant players from exploiting SPVs to engage in regulatory arbitrage, such as tax evasion or circumventing market rules.

Regulatory oversight will play a crucial role in ensuring that SPVs do not become tools for anti-competitive behaviour. The Nigerian Communications Commission (NCC), in collaboration with the Federal Competition and Consumer Protection Commission (FCCPC), must establish clear anti-trust regulations to prevent collusion among dominant players. Stronger monitoring mechanisms should be put in place to oversee SPV activities, ensuring that they do not serve as disguised extensions of major telecom firms seeking to monopolize infrastructure access. Additionally, independent licensing for SPVs should be introduced, with strict conditions to prevent exclusive control by dominant telecom operators.

To ensure the effectiveness of the new SPV regulatory framework, several policy measures should be implemented. First, anti-competitive safeguards must be enforced, preventing SPVs from being monopolized by major operators. Infrastructure-sharing should be mandated, requiring SPV-funded networks to be accessible to all telecom service providers on a fair and non-discriminatory basis. Furthermore, an independent regulatory body should be established to oversee SPVs separately from traditional telecom operators, reducing the risk of biased decision-making. Lastly, regulatory authorities should collaborate with anti-trust bodies to ensure that the framework aligns with competition laws and consumer protection policies.[60]

To ensure the effective use of SPVs for the deployment of digital and telecommunication infrastructure in Nigeria, the government and regulators must: Streamline licensing and approvals through a single-window clearance system, Standardize Right-of-Way (RoW) fees across all states. Enforce open-access infrastructure to prevent monopoly abuse, provide incentives such as tax breaks for private investors in SPVs, provide adequate security for the infrastructure to prevent vandalism**,** and ensure cost-based pricing to promote broadband affordability.

Finally, the introduction of a new SPV regulatory framework in Nigeria's telecom sector has the potential to drive competition, attract investment, and improve infrastructure development in the digital

[59] Ibid.
[60] The World Bank, The Infrastructure Sharing Imperative https://digitalregulation.org/ accessed 17 March 2025

and telecommunication sector. [61]However, the new regulatory framework must be carefully structured to prevent market abuse by dominant players such as MTN, Airtel, 9Mobile and Glo. Through strict regulatory oversight, open-access policies, and robust anti-trust measures, SPVs can serve as a tool for industry-wide progress rather than a mechanism for reinforcing existing monopolies. If properly implemented, this new regulatory reform could create a more competitive and inclusive telecom market, ultimately benefiting consumers, investors, and smaller industry players alike.

5. Conclusion and Recommendations.

5.1 Conclusion

While the NCA 2003, NCC regulation and other laws examined in this study provide a solid foundation, law and policy reforms are needed to address ongoing challenges, especially with emerging technologies, the extant laws and regulatory frameworks are becoming outdated and unable to tackle the challenges mentioned above. There is a need to rethink a new regulatory framework that will be devoid of the bottlenecks in the extant regulatory frameworks. To achieve this new regulatory framework that will ensure the use of SPV in the deployment of digital and telecommunication infrastructure in Nigeria, a multistakeholder approach through engagements has become important.

5.2 Recommendations

i. **Streamlining Regulatory Processes**: Multiple agencies impose conflicting regulations. For example, setbacks for Base Transceiver Stations (BTS) differ between the National Environmental Standards and Regulations Enforcement Agency (NESREA) and the Nigerian Communications Commission (NCC), creating compliance difficulties for operators. The NCC should simplify licensing for SPVs to promote investment.
ii. **Overlapping Licensing and Approvals**: Operators often need approvals from multiple entities, including the NCC, Federal Ministry of Environment, NESREA, and state governments, causing delays and additional costs.
iii. **Adoption of Digital Permitting Systems**: Implementing an electronic platform for telecom approvals and permits will help automate processes, reduce human interference, and minimize corruption-related delays in project execution.
iv. **Enhancing Infrastructure Security**: Strengthening enforcement mechanisms to protect telecom assets.
v. **Adapting to Technological Changes**: Regulatory frameworks should evolve to support 5G, edge computing, and AI-driven telecom solutions.
vi. **Harmonizing Right of Way (RoW) Fees**: A federal-state collaboration is needed to ensure affordable and uniform RoW charges.
vii. **Faster PPP Implementation**: The Infrastructure Concession Regulatory Commission (ICRC) should work with the NCC to accelerate PPP approvals by establishing clear timelines and accountability measures for public-sector agencies involved in telecom infrastructure projects.
viii. **Encouraging Local Investment** – Strengthening local content policies to empower Nigerian firms in SPV-led telecom projects.
ix. **Improvement in Competition and Pricing Regulation**: The NCC guidelines on infrastructure sharing and cost structures should be more detailed to ensure fair competition and protect consumers from arbitrary pricing. Stronger enforcement of collocation and infrastructure-sharing agreements will promote fair access and reduce duplication of resources.

Implementing these recommendations requires inter-agency cooperation and there is no doubt that the new regulatory framework will improve the efficiency of SPV models for the deployment of digital and telecom infrastructure, foster a more investment-friendly environment and accelerate digital connectivity and improve service delivery in Nigeria.

[61] Samson Akintaro, FG to provide 50 per cent funding for 90,000 KM fibre project through loans -Bosun Tijani < https://nairametrics.com/> accessed 11 March 2025.