LEVERAGING PUBLIC-PRIVATE PARTNERSHIPS TO TRANSFORM TVET IN NIGERIA: BRIDGING SKILLS GAPS FOR SUSTAINABLE ECONOMIC DEVELOPMENT

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Keywords

TVET, PPPs, Policy Focus, Governance Structure

Abstract

Research Problem
Despite increasing policy attention, budgetary allocations, and public-private partnerships (PPP), Nigeria's Technical and Vocational Education and Training (TVET) system has continued to underperform in delivering labor-market-relevant skills and employment outcomes. Existing scholarships have extensively documented other challenges of public-private partnership but rarely interrogates the institutional and governance dimensions. They also conceptualize PPPs as technical or financial arrangements, offering limited insight into how weak governance structures and fragmented institutional coordination undermine their effectiveness. This study sets out to fill this gap through an in-depth interrogation and analysis of the governance, institutional structure, and challenges of public-private partnership in Nigeria`s Technical and Vocational Education and Training (TVET).

Research Methods and Theory
This study adopts a qualitative research design based on relevant documentary analysis and comparative case review. The analysis is anchored in Institutional Theory and stretched to examine how governance structures, coordination, and accountability mechanisms shape PPP performance in TVET.

Results
Findings indicate that Nigeria`s TVET has experienced quantitative growth without institutional consolidation, and TVET underperformance is driven less by resource scarcity and more by systematic weakness.

Conclusion
The study concludes that Public-Private Partnerships can strengthen TVET only when repositioned as governance and coordination instruments rather than auxiliary funding mechanisms.

Key Contribution and Recommendation
The paper recommends embedding PPP in policy and regulatory

frameworks, repositioning PPP as an active agent in enhancing the performance and delivery of TVET, designing public-private partnerships around clearly identified industry skills gaps and labor market needs, and shifting policy focus to industry-relevant needs

Introduction

Amidst swift technological progress, evolving labour market requirements, and an increasing global deficit of skilled workers, Technical and Vocational Education and Training (TVET) has surfaced as an effective tool for economic transformation and equitable development. In both established and developing economies, Technical and Vocational Education and Training (TVET) is widely acknowledged for its capacity to provide individuals with market-relevant skills, promote innovation and entrepreneurship, mitigate unemployment, and facilitate sustainable economic growth (Eshun, 2022; Remington, 2018). Research indicates that nations that have strategically invested in Technical and Vocational Education and Training (TVET) systems have enhanced economic performance, increased production, and reduced unemployment rates. They also achieve elevated standings in Gross Domestic Product (GDP) per capita, Human Development Index (HDI), and global competitiveness indexes, as demonstrated by Germany, Switzerland, and Singapore, among others (OECD, 2023).

Germany's dual system of vocational education, which combines classroom instruction with practical workplace training, is frequently referenced as a paradigm for aligning education with labour market demands and maintaining one of the lowest unemployment rates worldwide. Comparable results have been noted in Switzerland and Austria, where robust institutional cooperation between the government and commercial sector enhances effective TVET implementation (FRED, 2024; Statista, 2025). In addition to employment outcomes, current research associates effective TVET programs with elevated living standards, increased literacy, and broader societal advancement (ADB, 2025; Holsen, n/d).

A fundamental characteristic of TVET systems in industrialised nations and in countries where vocational education has produced quantifiable developmental results is the existence of robust and institutionalised public–private partnerships (PPPs). Current literature highlights that these partnerships generally function via a dual training model, wherein public institutions and private enterprises collaboratively develop curricula, share financial obligations, offer workplace-based learning experiences, and synchronise skills training with labour market requirements (Remington, 2018). This allows trainees to acquire practical experience in actual industry environments and access sophisticated equipment and technology typically absent in public training schools (Aman, 2024). Although this model has been extensively documented and employed in advanced economies, Nigeria and numerous developing nations have not successfully leveraged its significant potential, despite confronting severe issues such as elevated unemployment, pervasive poverty, economic stagnation, skills misalignment, and swift urbanisation (NBS, 2024; World Bank; REAN, 2024). An empirical literature review reveals that the subpar performance of TVET in Nigeria is attributable to ineffective governance structures, disjointed and poorly executed policy frameworks, insufficient funding mechanisms, inadequate focus on apprenticeship-based learning, and weak

connections between training institutions and productive economic sectors (ILO & ADB, 2023). Subsequent inquiry indicates that public-private collaborations in TVET are significantly underutilised. Public-Private Partnerships (PPPs) are regarded as technical or structural solutions, primarily emphasising their advantages in theory or deriving insights from developed economies, while inadequately addressing the institutional, governance, and political economy factors that influence their efficacy. As a result, there is insufficient academic clarity regarding the operationalisation of PPPs given Nigeria's restrictive legislative landscape, disjointed governance structures, and inadequate regulatory frameworks.

This study aims to address this gap by examining how Public-Private Partnerships (PPPs) might be integrated into policy frameworks, matched with national development efforts, and established as a proactive tool for Nigeria's economic progress. It analyses public–private partnerships in TVET not merely as a finance or delivery vehicle, but as a governance and coordinating tool capable of rectifying structural deficiencies in Nigeria's TVET ecosystem. The study examines how public-private partnerships (PPPs) might be utilised to enhance curriculum relevance, fortify apprenticeship systems, augment institutional responsibility, and establish sustainable connections between training institutions and labour market participants.

Research Problem

Nigeria's Technical and Vocational Education and Training (TVET) system has inadequately converted policy pledges and investments into skills pertinent to the labour market and employment results, mostly due to deficient governance frameworks and underexploited public-private partnerships. Notwithstanding global data showcasing the efficacy of PPP-driven TVET models in mitigating skills mismatch, unemployment, and economic stagnation, Nigeria persists in facing elevated young unemployment, skills deficiencies, and inadequate industry alignment. Current research on TVET in Nigeria has thoroughly recorded issues such as insufficient funding, outdated curricula, societal stigma, and inadequate infrastructure.

Nonetheless, these studies frequently analyse these difficulties in isolation and seldom scrutinise the institutional and governance aspects of public–private partnerships as instruments for systemic reform. Specifically, there exists a deficiency in the literature about the operationalisation of PPPs within Nigeria's disjointed policy framework to enhance cooperation among training institutions, industry stakeholders, and regulatory agencies. This has impeded the efficacy of TVET as an instrument for inclusive development and economic transformation. Addressing this issue necessitates beyond mere descriptive analyses of TVET shortcomings to undertake a governance-focused investigation into how organised public-private partnerships might enhance curricular relevance, apprenticeship frameworks, accountability, and labour market connections. The primary aim of this study is to investigate how public–private partnerships might enhance the efficacy of TVET in Nigeria. The study specifically examines the governance and institutional challenges that hinder the efficacy of public–private partnerships in Nigeria's TVET sector and explores how PPPs can be strategically designed to enhance curriculum relevance, apprenticeship systems, and alignment between TVET institutions and labour market requirements.

Research Methodology

This study employs a qualitative research design, utilising documentary analysis and comparative case review. Data were obtained

from secondary sources, including policy documents, government reports, academic literature, publications from international development agencies, and comparative case studies from nations with established PPP-driven TVET systems, such as Germany, Switzerland, Morocco, and Zambia. A deliberate selection of documents and instances was employed to critically analyse current frameworks and tailor international best practices to the Nigerian setting. Documents were selected based on their pertinence to TVET governance, public-private partnerships, and skills development results. The analysis utilised thematic synthesis to discover recurring trends, institutional deficiencies, and policy implications to guide TVET reforms in Nigeria.

Conceptual Clarification

The notion of public–private collaboration in TVET is understood as extending beyond its conventional function as a finance mechanism. It serves as a governance and coordinating system that unites state agencies, private sector entities, and training providers in a collective responsibility for skills development. This study proposes a comprehensive definition of PPPs as institutional frameworks that can transform curriculum design, apprenticeship systems, accountability mechanisms, and labour market integration, in contrast to restrictive definitions focused solely on cost-sharing or infrastructure provision. The effectiveness of TVET extends beyond enrolment and certification outcomes to encompass employability, alignment of skills with industry requirements, seamless transitions from education to employment, and contributions to economic productivity and growth.

Theoretical Framework

This study is grounded in Institutional Theory, which highlights the significance of formal regulations, governance frameworks, and organisational affiliations in influencing institutional performance. This study expands the application of the theory, previously utilised to elucidate policy failures or organisational inefficiencies, to the operational dynamics of public-private partnerships in Technical and Vocational Education and Training (TVET). It challenges the typical focus on formal structures by emphasising how inadequate institutional alignment and fragmented coordination diminish the efficiency of PPPs in Nigeria's TVET sector. The application of the theory illustrates that mere institutional collaboration is inadequate; rather, the quality of coordination, alignment of incentives, and accountability mechanisms inherent in PPP arrangements are essential to optimise the potential of TVET.

Technical and Vocational Education and Training in Nigeria: A Critical Interrogation

The history of Technical and Vocational Education and Training (TVET) in Nigeria originates from the colonial period and is intricately linked to traditional apprenticeship systems, enabling youth to acquire skills from artisans over a designated timeframe. Pre-colonial frameworks, shown by the Imu Ahia or Igba Boi system within the Igbo community of eastern Nigeria, involve a young individual being mentored by a prosperous trader or craftsman to acquire a trade or skill through an informal agreement. The system was esteemed as the mentor imparts direction, assistance, and instruction, while the apprentice reciprocates with labour and loyalty (Chinonso, 2024). Although these systems exemplify a commendable community-oriented strategy for skills acquisition, entrepreneurship, and economic advancement, they are restrictive as they frequently function outside established regulatory and certification frameworks, which hinder their scalability, integration into national development

planning, and contemporary policy architecture.

The emergence of colonialism transformed this course, as literacy and formal schooling became the favoured means of instruction. Researchers like Oladejo (2019) and Njenga (2020) contend that the colonial education framework favoured academic instruction over vocational training, establishing a hierarchy that deemed TVET as subordinate. According to Veriv Africa (2024), colonial technical institutes were primarily established to serve colonial economic interests rather than to promote local industrial growth. This interpretation accurately recognises colonial bias as a fundamental issue, yet it minimises the enduring institutional ramifications of this prioritisation, which encompass societal stigma and the establishment of a structurally deficient TVET system that emphasises labour extraction rather than functioning as a catalyst for innovation or economic development. In the post-colonial age, Technical and Vocational Education and Training (TVET) has systemic hurdles, including a governance framework that favours white-collar employment and academic qualifications, hence sustaining the notion of TVET's inferiority. Researchers (Lawani & Lawani, 2018; Cyril, 2018) report chronic underfunding, outdated equipment, and declining infrastructure in TVET institutions, attributing this to minimal attention and financial support for their advancement. They asserted that insufficient funding has led to subpar educational and training outcomes, rendering TVET scholars uncompetitive in the global market. While their stance accurately represents the condition of TVET institutions nationwide, it fails to acknowledge the intricacies of the challenges, as merely augmenting funding may be inadequate to rectify profound systemic deficiencies, including governmental neglect, insufficient labour market acknowledgement of vocational qualifications, and societal stigma. Furthermore, an examination of institutional capability reveals deficiencies in teacher quality, obsolete curricula, inadequate ICT integration, feeble private sector collaboration, and inefficient policy execution (Cyril, 2018; Onwusa, 2021). An in-depth examination of these difficulties reveals that the obstacles are interrelated and indicative of shortcomings in coordination and governance, especially poor public-private partnerships that fail to align training and curriculum design with pertinent industry requirements and market demands.

Recent literature suggests a progressive transformation in societal attitudes towards TVET. Eniekenemi (2021) and Aladekoye (2025) credit the alterations to policy reforms, economic pressures, technical advancements, and advocacy initiatives. This assertion is arguably valid, as both the public and private sectors are undertaking coordinated initiatives to advance Technical and Vocational Education and Training (TVET) through frameworks such as the National Skills Qualification Framework (NSQF), the Technical Teachers Training Programme (TTTP) aimed at enhancing the skills of public secondary school educators in technical and vocational disciplines throughout Nigeria, and the Skill-Up Artisans (SUPA) program, which is intended to equip Nigerian artisans with superior technical and vocational training. This study contends that a significant contributing aspect to the transformation in TVET is the rise of PPP-driven interventions. The reforms have transformed TVET into an outcome-focused skills development framework, improving employability results and facilitating avenues for revenue production. Notwithstanding these enhancements, systemic and structural impediments, including inadequate financial provisions, marginalisation, political intervention, and societal stigma, continue to exist in national planning (UNESCO, 2023; Dada, Ogunlana, & Anako, 2024).

Evolution of TVET in Nigeria

S/N	2010-2019	**2020 - 2025**	**Comparative Analysis**	**Source**
Funding	N249.09 billion for the education sector. (TVET received a small fraction)	N440 billion budgeted for TVET in Kaduna state alone in 2025& the federal Govt allocated 40 billion for TVET	Major increase due to larger national budgets and targeted initiatives	Ministry of Education
Student enrolment	TVET makes up approximately 2–5% of total secondary school enrollment between 2010 – 2019. Between 2014-2015, there were 410,725 students enrolled in TVET centers	1,200,000 were enrolled between 2023-2024. There was a 287.76% surge in enrollment figures reported in July 2025, and a 300% increase in candidates sitting for the TVET entrance	The increase in applications and enrolment is driven by awareness campaigns, economic pressure, and better learning conditions in TVET centers, Govt incentives, etc	World Bank, Federal Ministry of Education
Number of Accredited TVET Institutions	The country had a total of 534 TVET-approved institutions in 2014 -2015	TVET institutions grew to 1,305, comprising 194 Polytechnics, 153 Technical Colleges, and 181 Innovation Enterprise Institutions (IEIs) in 2025	The increase is driven by initiatives like the TVET 2025 allows training centers to receive government funding to train candidates, policy reforms to enhance TVET, and use it as a driver to attain the SDGs`s	World Bank National Board for Technical Education Federal Ministry of Education
Infrastructure	Inadequate facilities, obsolete equipment, and poor maintenance due to funding shortages	Upgrades ongoing, e.g., N120 billion budgeted for digital transformations in technical colleges	More state budgetary allocation, private partnerships, policy reforms, and international partnerships	NBTE
Employability	High potential but limited by skill mismatches; ~50-60% employment rates for graduates.	Over 60 per cent of (TVET) graduates secure employment or start a business compared	Better alignment with industry needs, TVET's focus on hands-on, industry-relevant training	Federal Ministry of Education

The development of Nigeria's TVET system from 2010 to 2025 demonstrates a trend of quantitative growth lacking enough institutional reinforcement. Despite significant increases in funding allocations, student enrolment, and the number of recognised TVET institutions from 2020 to 2025, the advancements are inconsistent and inadequately integrated within cohesive governance frameworks. Inadequate budgetary allocations indicate disjointed authority and mismatched incentives. The significant

increase in enrolment and the expansion of institutions indicate greater demand and policy aspirations, although do not inherently imply systemic efficacy. The expansion of enrolment and enhancements in infrastructure have not consistently aligned with curricular relevance or labour market integration, leading to disparate employability outcomes. The primary limits of TVET are systemic, contrary to the prevailing story of inadequate funding.

Public-Private Partnership and Technical and Vocational Education and Training (TVET)

The ongoing issues facing TVET in Nigeria, including inadequate funding, skills misalignment, industry disconnect, and outdated technology, underscore the shortcomings of government-led initiatives in fostering technical skills development. In emerging economies like Nigeria, where the state's financial and institutional capacities are limited, dependence solely on public funding has been inadequate to maintain a responsive and high-quality TVET system. Current research has recognised public–private partnerships (PPPs) as an effective means of addressing difficulties (Fornyuy, 2025). Over time, Public-Private Partnerships (PPP) in Technical and Vocational Education and Training (TVET) have demonstrated efficacy in resource mobilisation, skill alignment, governance frameworks, and system coordination. Empirical evidence from sophisticated TVET systems, particularly Germany's dual education model of public-private partnership, demonstrates how PPPs can serve as institutionalised coordination mechanisms to improve the quality of TVET and supply industries with pertinent and skilled labour (Remington, 2018). Consequently, scholarships for such Public-Private Partnerships (PPP) are frequently focused on their capacity to tackle issues typically linked to publicly funded Technical and Vocational Education and Training (TVET), without a thorough evaluation of the reasons for their effectiveness. Notable achievements of Public-Private Partnerships in Technical and Vocational Education and Training include an improved and pertinent curriculum, the supply of contemporary technology, increased employability, and less unemployment (European Training Foundation, 2020; Edda, 2008). These outcomes are not inherent; they arise from explicitly defined roles, legally established obligations, and ongoing accountability for training results among the participating parties, all of which are deficient in the Nigerian environment.

Notwithstanding their potential, Public-Private Partnerships in Technical and Vocational Education and Training are not devoid of limitations. Bello, Ogoh, and Shaibu (2023) assert that the primary obstacles confronting public-private partnerships in technical and vocational education and training in Nigeria are political involvement, corruption, and insufficient finance. Additional challenges encompass the reluctance of public institutions to engage in power-sharing, stemming from apprehensions regarding commercialisation or the dilution of social objectives, operational difficulties primarily resulting from bureaucratic impediments within the public sector, as well as mistrust and conflicts of interest between the public and private sectors (Fornyuy, 2025). Failure to solve these difficulties will diminish the promise of TVET and PPP.

Insights from Successful Public-Private Partnerships in TVET

Experiences from nations that have effectively institutionalised public–private partnerships (PPPs) in technical and vocational education and training (TVET) provide valuable insights for Nigeria. The lessons must be localised to ensure relevance. The Public-Private Partnership (PPP) Technical and Vocational Education and Training (TVET) system in Germany, wherein public institutions offer theoretical instruction and private entities facilitate practical apprenticeships, is often referenced as a paradigm of successful PPP in skills development (Cedefop, 2020; GOVET, 2023). A thorough analysis of the esteemed system reveals that its efficacy is rooted on governmental policies that integrate and institutionalise Public-Private Partnerships (PPP) inside the development and training results of Technical and Vocational Education and Training (TVET). The private sector is considered a co-owner of TVET, necessitating collaboration with the public sector to establish occupational standards, finance a substantial share of training expenses, and retain apprentices as skilled labour, thus internalising the associated costs and benefits of training. The configuration mitigates skill misalignment, improves labour market integration, decreases unemployment, and fosters economic growth. Findings from Malaysia, Singapore, and China corroborate this institutional rationale, highlighting the proactive engagement of both parties in all phases of TVET (LaRocque, 2013; Dakchyata, 2018). Both nations have achieved a commendable accomplishment in Technical and Vocational Education and Training (TVET) through the collaborative efforts of public and private sectors in curriculum design, funding, provision of contemporary technologies, and practical job experience via apprenticeships or internships. In this context, it is customary for the public sector to provide incentives, like tax concessions and low-interest loans, to private firms who collaborate with it in advancing TVET. While the reasoning has certainly improved the efficacy of PPP in TVET, it is important to acknowledge the significance of robust state coordination and enforcement under which the system functions. In these circumstances, government agencies maintain strategic oversight while permitting freedom for private sector innovation and involvement. Certain African instances illustrate that effectively structured public-private partnerships can provide significant results even in resource-limited settings. The Hitachi–UNIDO initiative, initiated to meet the increasing demand for proficient construction equipment operators in Zambia's construction and mining sectors, highlights the significance of utilising private sector expertise beyond mere financial support. Aman (2024) asserts that Hitachi's participation in curriculum creation, equipment supply, and instructor training guaranteed that skills acquisition was directly matched with industry standards. The H2O Maghreb initiative aimed at tackling Morocco's water management issues exemplifies how focused public-private partnerships can overcome sector-specific skill deficiencies. The project attained significant employability results by combining theoretical education with industry-driven practical training, resulting in numerous trainees obtaining jobs prior to the program's conclusion (Arthur, 2023). The importance of these examples resides in their sector-specific emphasis and employer-oriented curriculum, which stands in stark contrast to Nigeria's frequently generalised and antiquated TVET programs. They provide explicit insights on the enhanced efficacy of PPPs when partnerships are structured around distinctly articulated industry requirements rather than vague policy ambitions, and emphasise that successful partnerships must be synergistic in regulation, coordination, and end attainment.

Discussion of Finding

The governance and institutional constraints hindering the efficacy of public-private partnerships in Nigeria's TVET sector are inadequate institutional coordination and a disjointed governance framework. Previous research (Chinonso, 2024; Onwusa, 2021) has thoroughly recorded challenges including insufficient infrastructure, outdated curricula, and restricted funding; however, the findings of this study indicate that these problems are primarily indicative of more profound structural deficiencies and overarching institutional disarray within Nigeria's skills development framework.
The study concludes that the effectiveness of PPPs in addressing market and industry demands is contingent more upon their institutional architecture than their mere existence. The implementation of PPPs in TVET does not inherently guarantee enhancements in training results and structures. Comparative research from Germany, Malaysia, Singapore, Morocco, and Zambia substantiates that effective PPP-driven TVET systems must possess distinctly delineated governance responsibilities, collective ownership of training results, and robust regulatory monitoring. This signifies that for Public-Private Partnerships (PPP) to succeed, private sector participants must be proactive co-governors, actively engaging in curriculum development, apprenticeship implementation, evaluation, and certification. This is consistent with recent literature (Remington, 2018; Cedefop, 2020) that underscores the necessity of comprehensive participation and accountability of commercial partners in all aspects of TVET, rather than solely in financial contributions, as observed in numerous contexts.

This research theoretically expands Institutional Theory by illustrating that institutional alignment and coordinating capabilities are more essential than the implementation of formal policies. Previous applications of Institutional Theory in education policy emphasise organisational conformity or legitimacy. The application of the theory indicates that the constraints of PPP in Nigeria's TVET arise from misaligned incentives, ambiguous role definitions, and inadequate accountability mechanisms among state institutions, training providers, and private sector participants. This perspective diverges from prevailing policy narratives that depict TVET reform mainly as a resource issue, although it corresponds with critiques from ADB (2025) and ILO (2024), which assert that the quality of governance is the critical determinant influencing PPP performance in TVET. It elucidates why Nigeria's recent growth in enrolment and infrastructure has not resulted in proportional enhancements in employability outcomes.

Conclusion

The research aimed to investigate how public–private partnerships can enhance the efficacy of Technical and Vocational Education and Training (TVET) in Nigeria. The study analysed the governance and institutional obstacles hindering the efficacy of public–private partnerships in Nigeria's TVET sector and investigated how PPPs can be strategically organised to enhance curriculum relevance, apprenticeship frameworks, and the alignment between TVET institutions and labour market requirements. The data indicate that the inadequate performance of TVET in Nigeria results from institutional fragmentation, ineffective government coordination, and poorly organised PPP arrangements, rather than being only a resource issue.

The research enhances the comprehension of PPPs in TVET by analysing them as governance and coordination tools instead of supplementary support mechanisms. The efficacy of PPP is dependent on the institutional embedding of authority,

responsibility, and incentives. This research expands Institutional Theory by redirecting focus from formal policy frameworks and organisational legitimacy to institutional alignment and coordination capacity, illustrating that inadequate incentive alignment, ambiguous role definitions, and fragmented governance diminish PPP effectiveness, despite the existence of formal institutional capacity. The study enhances scholarship by providing a context-specific, theoretically informed analysis of PPP performance in TVET, illustrating that sustainable skills development in Nigeria necessitates institutional coherence rather than solely policy aspirations or financial contributions from private partnerships.

Recommendation

Based on the findings of this study, the following recommendations are proposed:

Public-private partnerships should be formally embedded in the national Technical Vocational Education Training policy and regulatory structures, with clearly defined roles, performance obligations, and accountability mechanisms that bind public institutions and private sector actors to shared training outcomes.

The Private sector and actors should be repositioned as active agentsin enhancing the performance and delivery of TVET. Private partners should participate directly in all stages of TVET, from curriculum development, assessment and certification process, apprenticeship provision, and also be responsible for skills development outcomes.

Public-private-partnership should be designed around clearly identified industry skills gaps and labor market needs. It should prioritize sector-focused programs over generalized training models to improve employability and productivity outcomes.

Policy focus should move beyond enrollment growth and infrastructure expansion toward curriculum relevance, instructor capacity, apprenticeship quality, and labor market integration.

There is a need to strengthen oversight mechanisms, limit political interference, reduce bureaucratic constraints, and sustain private sector confidence in long-term TVET partnership

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