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REGIONAL INEQUALITIES IN ACCESS TO VOCATIONAL EDUCATION AND THEIR IMPLICATIONS FOR YOUTH ECONOMIC INCLUSION IN NIGERIA

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Abstract:
Equality of access to vocational education in Nigeria is an unspelled out and important but not clearly understood aspect of youth economic exclusion. This paper focuses on the differential geographical access to TVET, and its interaction with poverty, educational disadvantage, labour-market structure and institutional capacity, and its effects on the opportunities for young people to develop marketable skills and be productive citizens. A qualitative research approach was used while only secondary data from official Nigerian statistics, education policy documents, National Board for Technical Education records, evidence from the World Bank and recent empirical studies were utilized. Recurring patterns regarding spatial access, pre-TVET educational disadvantage, transitions from training to work and conditions for inclusive economic participation were identified through content and thematic analysis. The analysis was guided by three propositions: 1) inequitable regional access to vocational education will lead to inequitable opportunities for youth economic inclusion, 2) poor quality and labour-market alignment of TVET will reduce the economic inclusion benefit of the education system, even in countries where TVET is available, and 3) decentralised, responsive and financially accessible TVET systems can help ameliorate regional inequalities. The results suggest that there are reinforcing relationships between institutional availability and educational preparation and economic opportunity. The paper, therefore, calls for a TVET strategy that is place-sensitive, but also emphasizes quality assurance, linkages with industry, flexibility in delivery and financial support targeting specific groups, alongside enhanced transition from training to work and entrepreneurship.

Keywords: Vocational education, TVET, regional inequalities, youth economic inclusion, skills development, NEET.

1. INTRODUCTION

Nigeria has a large youth population, which has a significant economic impact, but is not equally equipped to access education and employment. Rather than whether young people are enrolled in some part of the education system, it is important to see if they can get the relevant skills, access training institutions, finish training programmes of a reasonable quality, and put those skills into practice to improve their livelihoods. The Federal Ministry of Education has recently put a lot of emphasis on skills development, which is reflected on a national policy framework, and the National Board for Technical Education continues to supervise technical colleges, polytechnics, innovation enterprise institutions and other vocational providers (Federal Ministry of Education [FME], 2024; National Board for Technical Education [NBTE], 2025). However, there is significant spatial variation that is not captured by the national picture. The existing opportunity structure for TVET is also highly uneven across geopolitical zones as identified in previous World Bank evidence, and recent data on education and poverty in Nigeria also shows high geopolitical variation (National Bureau of Statistics [NBS], 2022; World Bank, 2015).

This is because the spatial dimension is important for vocational education which is especially tied to physical closeness, equipment, teachers, industry ties and local economic demand. Many vocational courses involve workshops or laboratories, tools, supervised practicals and access to firms that provides learners with experience of workplace practice, rather than a purely theoretical educational programme. Therefore, the situation in which a young person lives

with low technical institutions, poor transport facilities, lower household income and less labour-market connections could have a compound disadvantage. The World Bank's previous report on Nigeria's skills system identified low access, poor quality, weak governance and regional disparities, along with significant variation in the skills needed in different sectors and places (World Bank, 2015). Federal Ministry of Education's institutional listings also reveals that there is not even distribution of federal science and technical colleges across the Nigeria's six geopolitical zones, which makes spatial access a significant factor of the access question, more recent evidence (FME, 2024).

The impacts are not limited to education, and include economic inclusion for youth. According to the annual labour-force estimates from NBS, 15.6% of Nigerians aged between 15 and 24 were not in education, employment or training (NEETs) in 2023, with young women more likely to be out of education, employment or training compared to young men (NBS, 2024a, 2024b). The difference was huge at the State level with NEET recorded in Abia (38.1%) and Rivers (36.0%) while NEET was recorded at 4.5% in Zamfara and 5.0% in Kebbi in 2023 (all estimates are annual; NBS, 2024b). These statistics remind us that we can't assume that youth are equally excluded across the country. They also highlight the limitations of using a simple lens on unemployment. Informal work, discouragement, underemployment or none of employment and education are all possible statuses of a young person which can stem from different barriers to skill acquisition and economic participation (NBS, 2024a).

There's also regional variation in the general educational context that leads to vocational entry. The multidimensional poverty rate for children in the North-East and North-West were very high at 91.2% and 90.7% respectively, while that of the South-East and South-West were 74.0% and 65.1% respectively (NBS, 2022). Secondary education access also showed significant regional differences, with the out-of-school rate and completion being significantly higher in the North than the South, and the North-West and North-East regions being most impacted by the situation (World Bank, 2023). These disparities have a bearing on who makes it to the stage where a vocational education is even an option. Vocational schools are faced with an already unequal cohort of prospective learners when their entrance and exit is affected by household poverty, which limits access to fees and transportation; and when insecurity disrupts the learning process in foundational schools. Consequently, it is important to view the differences in access to TVET at the regional level as a continuous series of disadvantageous institutional-count problems.

The issue raised in this paper is thus one of a spatially differentiated skills opportunity structure, where the prospects of vocational education entry, completion and the resulting gains of young people is determined by where they live and what resources those places have. There are three reasons the research is important: First, vocational education is often portrayed as a tool for combating youth unemployment and poverty but its inclusionary potential is dependent on equitable access and accessible quality. Second, the structure of federalism in Nigeria puts multiple layers of responsibility on the federal level which makes coordination between federal institutions, state providers, private actors and labour-market institutions crucial. Third, the current policy focus on skills development and digital transformation provides an opportunity to shift the focus of provision from an expanding institutional to a more spatially intelligent provision (FME, 2024; NBTE, 2025). The paper then asks the question of how regional disparities in the access to vocational education influence youth economic inclusion, the mechanisms by which the observed patterns are achieved, and the policy directions that can be taken to help to minimise youth exclusion without implying that identical interventions are necessarily suitable in each region of Nigeria.

2. LITERATURE REVIEW

2.1 Education

Education is a social right and an economic ability as it impacts on literacy skills, problem solving, occupational choice, productivity and labour market navigation. However, the concept of education needs to be understood in this environment with a consideration towards differences in quality, continuity, household resources and geography in the context of Nigeria. The World Bank's skills development in Nigeria highlighted that pre-vocational and cognitive skills developed prior to specialisation impacts future employment and productivity (World Bank, 2015). The NBS Multidimensional Poverty Index also includes school attendance and years of schooling as components of poverty, demonstrating that children's education deprivation is connected to other material deprivation measures (NBS, 2022). Education thus provides a base for taking part in the work. Vocational programmes can also contribute to educational inequality, as they are less available, less appealing, or harder to finish, when access to preceding education is low.Vocational programmes can also reinforce educational inequalities, as they are less likely to be available, less attractive, or less likely to be successfully completed, when accessing the previous education is challenging. Therefore, the education pathway should not be considered a policy area but a component of vocational policy.

2.2 Vocational Education

Vocational education is structured learning which aims to acquire skills and competencies in the occupational, technical, practical and entrepreneurship areas that are relevant for employment, self-employment or further learning. The TVET system in Nigeria comprises technical colleges, polytechnics, vocational enterprise institutions, innovation enterprise institutions, specialised institutions, and informal/apprenticeship pathways (World Bank, 2015; NBTE, 2025). There are opportunities for integrating employment skills and knowledge with opportunities to enter local economies, but the potential effectiveness of using it depends on the relevance of curricula, the quality of equipment, the qualifications of the instructors, certification and employer connections. The continuity of skill mismatch and inadequate matching of training provisions and labour-market needs of Nigeria was reported in recent studies (Obi & Ojo, 2025; Olasunkanmi & Ogunniran, 2023). Vocational education should therefore be seen as more than just a means to learning technical

skills, but also as an institutional transition between education and economic activity whose effectiveness is reliant on the quality and connection of the institutions. The analytical implication is that vocational education should be analyzed as a system of learning, certification, work-based learning and economic opportunity.

2.3 Regional Inequalities

Regional inequality describes systematic differences between geographically defined areas in the distribution of opportunities, resources and outcomes. The population structure, levels of education, poverty, security situation, infrastructure, level of industrialization and institutional availability varies significantly between geopolitical zones in Nigeria. Previous World Bank proof showed that there was a disparity in access to TVET and that enrollment in polytechnics was unevenly distributed, with certain zones overrepresented (World Bank, 2015). More recent data also show that there are spatial patterns in education and in poverty disadvantages. The NBS Child MPI had the highest number of multidimensional poor in the North-East and North-West; and school attendance was singled out as a deprivation that was particularly relevant in the northern zones (NBS, 2022). Regional inequality is therefore multidimensional: it is not only related to the quantity of institutions, it also refers to the accessibility, quality, security, connections and economic benefit of offered training. Regional inequality is therefore manifested in two ways: as inequality in provision and as inequality in ability to turn supply into substantive participation.

2.4 Youth Economic Inclusion

Youth economic inclusion can be defined as the capacity of youth to be meaningfully involved in the economy in decent work, productive self-employment, or entrepreneurship, as well as skills development and access to institutions that ease the transition from learning to work. The idea is not just of having any job, since many jobs in Nigeria are informal which may not offer sufficient security, job career or opportunities for skill utilization. The 2023 annual labour market survey (NBS, 2024b) indicates the level of labour-market informality, with 92.2% of all employed being self-employed, highlighting the need for meaningful labour-market inclusion. In the case of vocational education, the inclusion question is: Does vocational education create skills that young people can apply in actual economic contexts, and do they have access to assets, information, money and relationships to put those skills into practice?

The idea of human-capital relates to education and training as a way to enhance productivity, which, in turn, may boost the potential for employment and income, with returns to education and training being contingent upon the relevance of skills and the functioning of labour markets. Becker's arguments are even more relevant in cases where the public sector can address barriers that are too great for individuals to overcome. The World Bank (2015) has identified a number of challenges that contribute to the impact of coordination failures, information constraints, weak certification, limited financing and poor alignment between education and labour-market demand in Nigeria. The constraints suggest that vocational education may not lead to inclusion if courses are not embedded in the productive fabric of the local economy. A technically-skilled young person can still face difficulties entering employment in an area featuring a lack of employers, weak linkages between employment and formal qualifications, and lack of financial support for start-ups. Economic inclusion can only be achieved, therefore, with the combination of human capability and enabling institutions.

The women's dimension adds to the complexity of economic inclusion. Previous Nigerian TVET evidence revealed that enrolment disparities between the numbers of males and females in technical courses was high, and the latest labour-force statistics revealed that the enrolment of females in the labour force was higher than that of males (World Bank, 2015; NBS, 2024a). Access may be further limited to transport, care, and social norms that prevent women from accessing institutions where they live. The same problem occurs with rural youth, with persons who have been forced to relocate and with young people who reside in insecure environments, for which the travel cost to training centres may be higher. Inclusion is thus not an absolute, but a relational – it can be accessible to one group and virtually inaccessible to another group in the same institution. The nominal presence of a programme must be considered alongside its affordability, location, safety, flexibility and support services provided for it and the policy must take these aspects into account.

Vocational learning and entrepreneurship are also related. Technical and Vocational Education and Training (TVET) have been advocated to promote self-reliance and employment creation in Nigeria (Nigerian scholarship), and recent studies have shown that it is essential for the incorporation of entrepreneurship and digital skills in TVET (Kareem et al., 2024; Yisa et al., 2026). But entrepreneurship is not an alternative to labour market demand. If there is no information on the market, and no finance or productive infrastructure, and no networks, then training might just transfer the burden of employment from the employer to vulnerable youth. Vocational education is best integrated into a clear pathway of occupations, employer partnerships, work-based learning and local enterprise ecosystems to ensure economic inclusion. This further reinforces the notion that access to training, at least in part, is not equitably distributed across space, suggesting that access to the larger networks of where training is made economically useful is not equitably distributed either.

2.5 Empirical Review

The findings from empirical research on vocational education in Nigeria are not unique but are common. Technical education should develop problem solving, communication and adaptability skills, which are twenty first century skills as Olasunkanmi and Ogunniran (2023) have noted in the context of studying the twenty first century skills competencies of technical and vocational education students in Lagos. Obi and Ojo (2025) also looked at barriers to vocational and technical education, presenting constraints in the success of existing programmes as well as on access to training. The results indicate that simply registering for a vocational education program is not enough to guarantee vocational

success. The quality and transferability of what is learned is important: as employers increasingly demand that young people have a combination of technical knowledge and interpersonal and digital skills.

There's an extra dimension to institutional quality. The study by Enwere et al. (2024) on TVET in South-East Nigeria highlighted several concerns, including financial constraints, partnerships with the private sector, and lecturers' capacity development, which can impact the ability of programmes to produce competence for industry. Similarly, Obidile (2024) notes that TVE has continued to face issues that hinder its job creation potential. The studies taken together suggest that there can be supply-side constraints even in areas with established vocational institutions. That is, inequality in a region should not be confined to a north-south list of institutions. A zone could be relatively dense in providers and still produce low levels of inclusion because training may lack sophistication, employer linkages, or be less responsive to technological change.

The World Bank (2015) Nigeria skills assessment is particularly powerful at macro level, as it explicitly noted disparities in access to TVET and related disparities in enrolment at regional level, as well as noted weaknesses in financing, certification, planning and coordination. It revealed that there is a high concentration of enrolment in the polytechnic institutions of the South-West and the North-West, but low enrolment in some other zones. The conceptual diagnosis is still valid, although the data to which the diagnosis refers are from an earlier time period, the same institutional challenges reappear in later literature and policy. These themes are persistent, indicating that the issue is structural and not temporary. The research challenge is therefore to link the spatial distribution of training opportunity to existing metrics of youth exclusion instead of analysing the two separately.

This is supported by recent official statistics. There is a high level of variation across the states, with the national youth NEET rate of 15.6% in the 2023 annual estimates ranging from 4.5% in Zamfara to 38.1% in Abia (NBS, 2024b), reflecting the heterogenous nature of youth attachment to education and work across the country. The Q1 2024 quarterly survey also found a national NEET rate 14.4%, and for young women, a 15.9%, while young men had a rate of 13.0% (NBS, 2024a). These differences, however, do not prove that unequal access to TVET leads to NEET, but indicates the need for the location sensitivity analysis. If a lack of training opportunities or weak linkages between training and the economy, TVET's role as a bridge to the labour market is likely to be limited.

Another empirical insight relates to the importance of the broader disadvantage. Compared to 65.1% in the South-West and 74.0% in the South-East, over 90% of children were living in multidimensional poverty in the North-East and North-West, respectively, in 2022 (NBS, 2022). Evidence from the World Bank's education sector shows that significant regional differences exist in the number of years spent in school when one reaches the post-basic level, with young people in some regions having fewer years of accumulated education when they follow through to higher levels than others. The findings are consonant with a cumulative disadvantage theory, which suggests that inequalities in vocational access are superimposed upon inequalities in basic education, poverty, and mobility and security. Empirical evidence thus suggests that it is not a single constraint that is responsible, but an interacting system of constraints.

2.6 Theoretical Framework

The paper is based on the Capability Approach of Sen which distinguishes between resources, capabilities and achieved functionings. The idea, when applied to vocational education, is that having a training institution is not synonymous of being able to gain from it. A young person must have access to institutions with the necessary infrastructure, quality pre-training learning, affordability, security, information, and social conditions and jobs to transform the training resources into economically productive skills. This view is useful for addressing regional inequality because it considers the role of "conversion factors" that inflect what the education system can actually achieve for young people. The framework thus moves away from counting institutions to whether young people are likely to be able to learn, apply and leverage vocational skills into income-generating opportunities, business and/or a decent livelihood. It also presents a way of understanding inequality as a lack of capacity which can be addressed not only by expanding in a uniform way, but also by public policy that is place-based. The framework thus reinforces the following propositions: that access is part of opportunity, as is quality, and that economic context is part of opportunity.

3. RESEARCH GAP AND PROPOSITIONS

3.1 Research Gap

The literature reviewed identifies three key strands, but the synthesis of these strands is not adequately developed. Firstly, Nigeria's literature on vocational education rarely examines the interaction between spatial accessibility and its related factors from the perspective of the six geopolitical zones; rather, it often deals with the curriculum of the VET, employability outcome skills, or institutional problems in a particular state (Olasunkanmi & Ogunniran, 2023; Enwere et al., 2024). Second, although the World Bank's core analysis of the disparities in TVET remains very relevant, its key institutional indicators have been developed prior to the recent reforms and current changes in the labour market (World Bank, 2015). There is limited evidence from recent studies on NEET youth and multidimensional poverty in a regional overview of vocational inclusion (NBS, 2022, 2024b). Third, a number of studies talk about vocational education as a tool to lower unemployment, but without focussing on whether vocational education itself is geographically inequitable. This paper tackles these gaps by linking the existing official data on youth exclusion with evidence of the spatial structure of vocational provision and by using an 'exclusion through capability' lens. This study thus emphasizes regional inequality as a key mechanism between the job market and youth economic inclusion.

3.2 Propositions

Proposition 1: Youth economic inclusion opportunities are related to regional inequality in access to vocational education.

Proposition 3: There is greater potential for reducing regional inequality in youth economic inclusion by implementing demand-responsive, place-sensitive and financially inclusive TVET strategies as opposed to simply expanding TVET institutions.

4. RESEARCH METHODOLOGY

5.1 Research Design

The research design chosen was qualitative, since the goal was to explain the patterns, relationships and mechanisms found in the various secondary sources, and not to calculate the causal effect of a primary survey. The design adopted for the study was a documentary and thematic approach to published evidence on vocational education, economic inclusion of youths and regional inequality in Nigeria. The method enabled the analysis to put institutional records, data on the labour force, poverty indicators, policy documents and empirical studies into a similar analytical lens. It also allowed for discussion of the differences between geopolitical zones while not stifling multifaceted social processes with a single number. The unit of analysis was evidence relating to access, participation, quality and transition to work and inclusion. This work did not focus on quantitative statistics as a basis for testing the statistical hypothesis, but rather as a basis for qualitative interpretation in the context of the study.

5.2 Sources of Data

Only secondary materials were used as data sources. The National Bureau of Statistics (NBS), Federal Ministry of Education (FME), and National Board for Technical Education (NBTE) were ranked primary as they offer administrative or survey information in a Nigeria specific manner. The following supplementary evidence was sourced from World Bank reports or peer reviewed or scholarly journal articles on TVET, employability, skills development and youth employment. Relevance to research questions, recency (where available), institutional credibility, and the possibility of differentiating at the regional or youth-level were used to select the documents. Evidence consisted of indicators at national and state levels, comparisons across geopolitical zones, policy statements, institutional listings and empirical studies. No interviews, questionnaires, focus groups or observations were conducted. The study is therefore a secondary or as it's being described here a documentary investigation as opposed to a field investigation.

5.3 Pictorial Evidence

The pictorial evidence is employed as an analysis support system and not as a body of evidence. The following figures were created from the cited secondary datasets and reports to create spatial patterns visible for the institutional coverage, youth NEET rates and multidimensional poverty of children. The figures are integrated into the Results and Discussions section at exact moments where they are related to the respective thematic evidence. This allows each visual to be interpreted along with the related Proposition and prevents descriptive statistics from becoming illustrations unrelated to the meaning of the Proposition.

5.4 Analytical Procedure

Content and thematic analysis was used. Documents were first read to establish recurring evidence on access, distribution and affordability, institutional capacity, quality, relevance to skills, gender, rurality, exclusion of youth from the labour market. The statements and statistics then were segmented into preliminary codes relevant to the topic. Codes were contrasted among the regions and source types to detect convergence, contradiction, and persistent codes. Three themes of second order were then built on the ideas of spatial access, the process of transforming skills into economic opportunities, and policy tools for inequity reduction. The propositions were not the starting point and were not considered as a statement of assumptions that needed to be validated. Support and/or evidence that could strengthen or weaken each proposition was preserved. To support the descriptive claims, quantitative sources were used to support these claims and qualitative sources were used to provide an explanation for the different inclusion outcomes that may arise within comparable institutional conditions in different places.

5.5 Trustworthiness

Source triangulation methods were used to enhance the trustworthiness of the evidence, and evidence was categorised and compared across independent sources in an open way. For the numerical claims, official statistics were both the primary focus and the source of data, whereas mechanisms and institutional issues were interpreted from academic studies and policy reports. Data collected on different but related constructs (e.g. unemployment, NEET or multidimensional poverty) were not considered to be interchangeable. Stated source values were used to calculate the figures and the figures were labelled as descriptive summaries. Special attention was paid to separation of evidence of association from evidence of causation. The analysis also included negative or negative results such as, for example, that some areas with lower rates of NEET could have high informal employment, but not high economic inclusion. This strategy helped minimize the danger of delivering a one-sided message that equated education with a north-south story and fostered a more tempered notion of the relationship between education, labour markets and geography.

In addition to the above, the method employed has certain limitations. One of the drawbacks is that secondary data are not as rich in the lived experience of the young people who have access barriers to vocational education. Institutional and/or year to year differences in the administrative data may also exist in terms of coverage, definitions, and the quality of reporting. Directly comparing the vocational evidence and the most recent labour-force statistics are not completely valid because of the age of the vocational evidence. The study also uses geopolitical zones, which may mask

significant variations among and between urban and rural areas as well as states. The NEET figures used in the figure are unweighted zonal averages which are descriptive summaries only and are not to be treated as official zonal rates. Moreover, the differences in NEET and poverty across regions cannot be attributed to access to TVET, as other factors such as economic structure, conflict, migration, and gender norms and public investment also play a role. The limitations prohibit any kind of statistical testing of the propositions, which are therefore only supported analytically.

6. RESULTS AND DISCUSSIONS

6.1 Proposition 1: Regional inequality in access to vocational education is associated with unequal opportunities for youth economic inclusion

The first thematic finding is that there are unequal starting points for the economic inclusion of youth due to the unequal provision in space. When the six geopolitical zones are compared, the Federal Ministry of Education (FME) listed Federal Science and Technical Colleges are not evenly distributed as illustrated in figure 1. Each of the North Central, North East, North West and South West areas has approximately six distinct listed states and there is an intermediate number in the South South and less in the South East. This simple count does not necessarily mean that a zone that has less institutions will have less access, as the size of the institution, private or public provision, polytechnic provision and apprenticeship availability as well as distance to the institution can vary significantly. But institutional presence is a simple prerequisite for opportunity. The World Bank (2015) earlier revealed regional inequalities in access to TVET, and that the enrolment in polytechnics was skewed towards specific regions. It is therefore in this sense of spatially differentiated institutional provision that the persistence of place (and institutional provision) can provide a plausible structural mechanism through which place shapes opportunity.

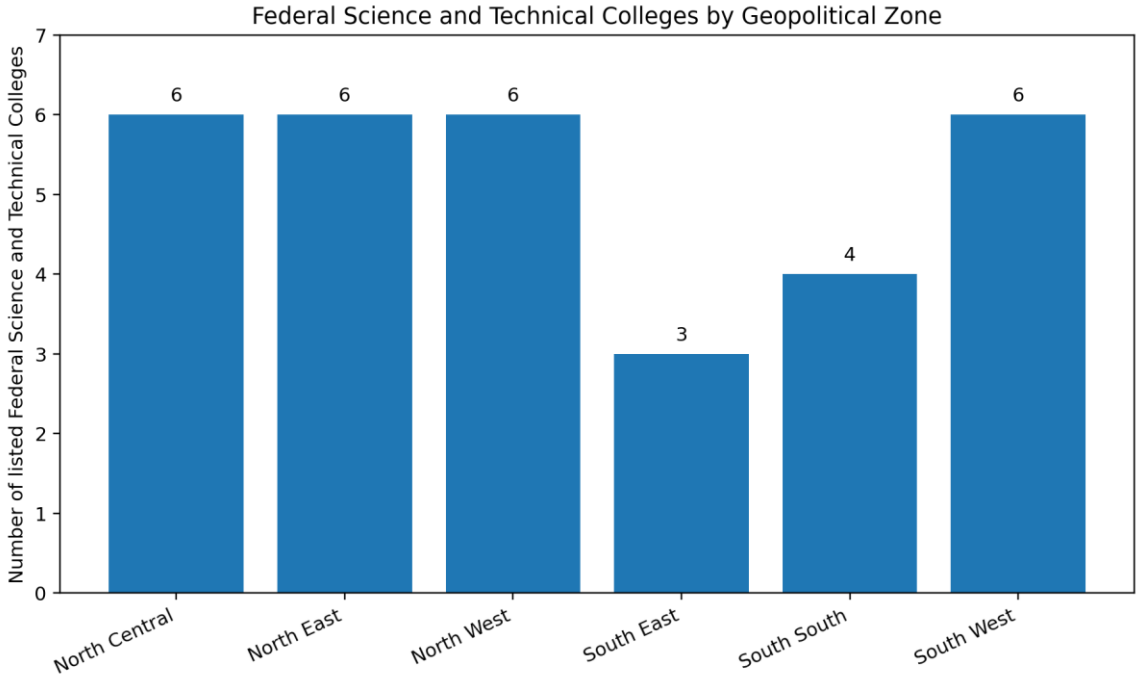


Figure 1. Distribution of unique Federal Science and Technical College state locations by geopolitical zone

Source: Author's calculation from the Federal Ministry of Education list of Federal Science and Technical Colleges (Federal Ministry of Education [FME], 2024). The count reflects unique state locations and is used as a descriptive indicator of institutional spatial coverage.

The statement of Proposition 1 is supported by the visual data in Figure 1, which shows a geographical unevenness of the institutional footprint of federal science and technical colleges. The distribution of listed college locations by geopolitical zone shows that not all geopolitical zones have a clear distribution of proximity to formal vocational provision, with some geopolitical zones having higher numbers of listed college locations and others having fewer. This is important because for training to occur, learning must be based on workshops, laboratories, tools, practical demonstrations and repeated attendance, and these are all dependent on physical access to the learning environment. The figure does not reflect a straightforward comparison of the quality of education, but rather a starting point for young people that is unequal across territories when interacting with the vocational education system. From a capability perspective, the disparate institutional presence implies different conversion environments: two young people with similar motivation may have very different practical and implemented opportunities, depending on the institutional distance where one lives close to a technical institution versus greater distance, transport costs or limited number of choices at a specific programme (FME, 2024; World Bank, 2015).

When access to vocational education is understood in the context of educational outcomes prior to access, the spatial argument is strengthened. According to NBS (2022), the percentages of children living in multidimensional poverty in the North-East and North-West were 91.2% and 90.7% respectively, while in the South-East and South-West were

74.0% and 65.1% respectively. Child poverty itself is not an indicator of TVET access, but it shows that there are proportions of children in some areas who were deprived of several things at once, including the continuity of their education, mobility to get to training, the ability of the family to send their child to training and the availability of information. School attendance and years in school are also noted as important factors in deprivation, and the World Bank (2023) also reports significant variations in school attainment and secondary school completion rates across regions. As a result, regional disparities in vocational access start prior to a young person reaching a technical college. They grow out of a sort of sequential process whereby unequal education in the basics further constricts options later on.

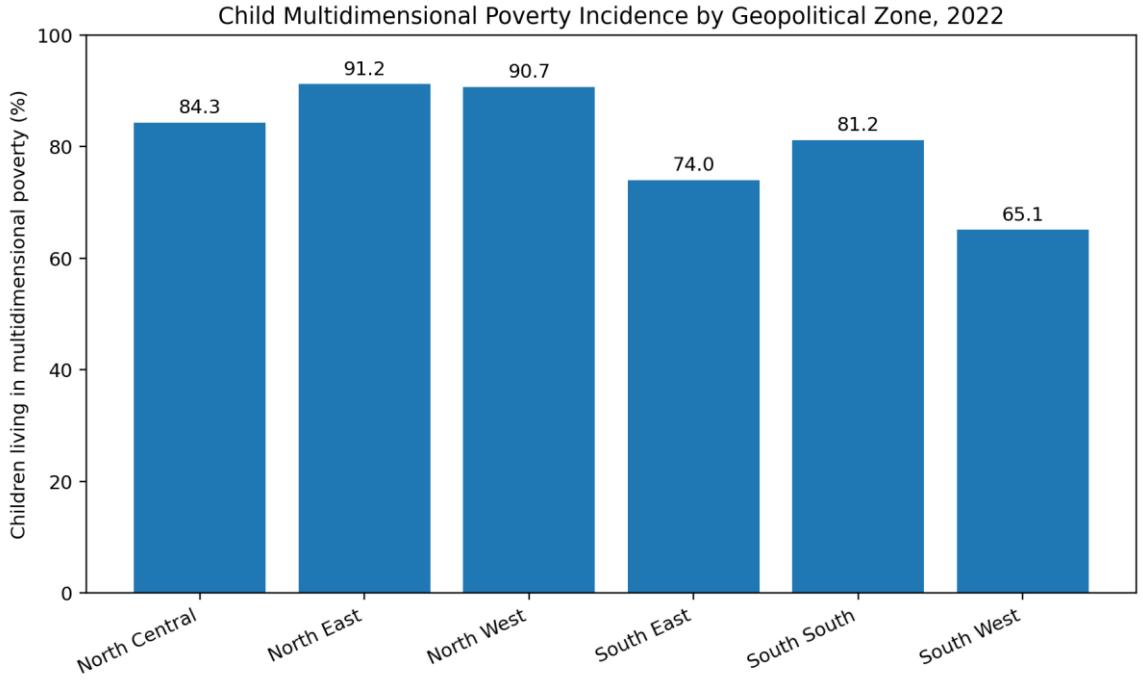


Figure 2. Child multidimensional poverty incidence by geopolitical zone, 2022

Source: Nigeria Multidimensional Poverty Index 2022 (National Bureau of Statistics [NBS], 2022). The figure provides contextual evidence on the unequal socioeconomic conditions surrounding progression into post-basic and vocational education.

Proposition 1 is further illustrated in Figure 2, which shows that regional inequality in access to vocational education is related to broader patterns of socio-economic disadvantage. The North-East and North-West regions both have very high child multidimensional poverty which suggests that there are a high number of young people entering the education pipeline with a range of disadvantages that have an impact on living standards, school conditions, and access to basic services. These factors can cause loss of absorptive capacity by households when they take up a vocational activity, such as transport, learning materials, equipment, and time away from livelihood. The picture thus appears to be of a process of compounding, not just an institutional shortfall – in areas where poverty is concentrated, it is likely that the ability of young people to access, stay in and benefit from training will be limited too (NBS 2022; Nwoke 2024).

This is a cumulative process, which is especially essential in vocational systems, which rely on previous educational ability. Technical and vocational programmes involve learners being required to read technical texts, to carry out calculations, to know their way around when it comes to safety, and, more and more, to access information in digital form. When the foundation education is discontinued, the youth may be less prepared to undertake specialised training and may not be able to finish the training programmes. The World Bank (2015) made the case for the importance of foundational cognitive and non-cognitive skills on future labour-market outcomes, as well as how low capacity in post-basic education can exacerbate disadvantage. There is evidence of the importance of general skills in addition to technical skills in Nigeria through the empirical works. For instance, Olasunkanmi and Ogunniran (2023) revealed that twenty first century skills are relevant to employability of technical and vocational students. Hence, if regional disparities prevent access to basic education and access to vocational schools, youth are deprived twice: firstly, they have less chance to reach a training institution, and secondly, they might not be prepared to gain the full benefit of a training institution.

The labour-market evidence offers another sign of the importance of these differences for inclusion. According to the NBS annual estimates 2023, the national NEET rate for the youth is 15.6%, while the rates across the States are highly varied, ranging from 38.1% for Abia State, 36.0% for Rivers, 4.5% for Zamfara, and 5.0% for Kebbi (NBS, 2024b). The Q1 2024 report also reports 14.4% NEET rate for the country as well as higher NEET rate for female youth than male (NBS, 2024a). Figure 2 shows that the unweighted mean of state NEET rates is significantly higher in the South-East, South-South and South-West compared to the North-West. Although this seemingly counterintuitive result is analytically important. Nevertheless, a reduction in NEET rates does not necessarily reflect increased economic participation, as youths might be moving into informal jobs, low productivity self-employment or engaging in farm work. In 2023, 92.2%

of people who were employed were informally employed, as mentioned by NBS, which reflects the fact that employment does not mean inclusion.

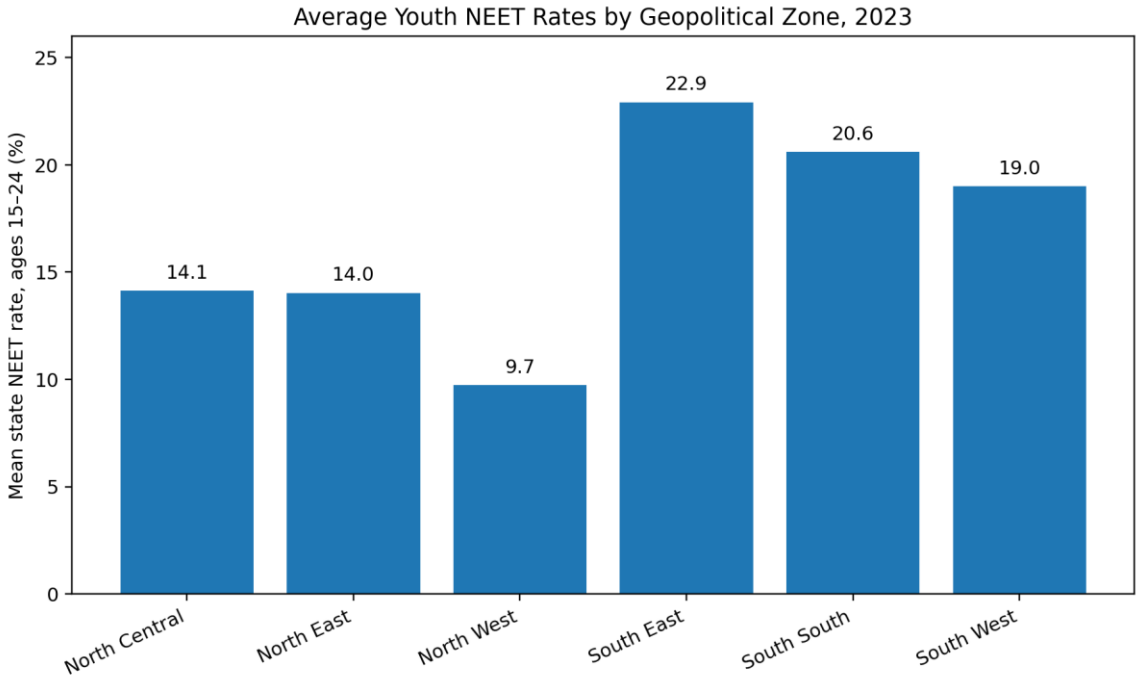


Figure 3. Mean state youth NEET rates by geopolitical zone, 2023

Source: Author's calculation from NBS annual 2023 state NEET estimates (NBS, 2024b). Zonal values are unweighted means of state rates and are descriptive rather than official population-weighted zonal estimates.

Figure 3 makes the connection between the inequitable vocational opportunity structure and a tangible marker of youth economic exclusion. The mean state NEET rates vary by geopolitical zone, indicating that NEET is not evenly distributed geographically. There is also a warning not to view the regional disadvantage as a binary north-south split: some of the southern regions have high rates of youth NEET, showing that a high burden of weak youth economic inclusion can be a result of various combinations of factors such as labour-market mismatch, disruption in the education system, lack of skills, and limited transitions opportunities. The figure thus supports the earlier stated Proposition 1 and also underlines the relevance of Proposition 2 since geographical proximity to training does not automatically translate into the youth's eventual participation in productive economic activities (NBS, 2024b; World Bank, 2015).

The North-South and the South-South patterns have also shown that the North-South dichotomy of disadvantage, versus advantage, is oversimplified. Although the southern zones have better formal educational facilities and child multidimensional poverty rates than the North-East and North-West, the rates of NEET are quite high in Abia and Rivers. This means that some combinations of factors can lead to youth exclusion while others do not. For the South, the issue could be a weak school to work transition, a mismatch between qualifications, underemployment, volatility in the labor market or a lack of good job creation. Exclusion may more frequently be linked to low levels of education, insecurity, poverty and restricted access to institutions in the North. The World Bank (2015) indicated that the Nigeria skills market is plagued by various deficiencies, such as insufficient information, poor coordination, inadequate funding, and training and labour market mismatches. Hence, regional policy has to be sensitive to the unique local configurations and not provide a single answer.

The evidence as a whole suggests that Proposition 1 is supported as it shows a spatial gradient in the opportunity structure around vocational education. It is not as if the number of technical colleges mechanically decides on the NEET rate. Instead, geographic access is shaped by previous schooling, poverty, migration, information and economic dynamics and thus affects a young person's ability to obtain and apply skills. A capability interpretation helps to explain the difference. A formal training centre may be available at a state, but a young person who cannot afford transportation, lacks prior education, is limited by security or does not have a realistic career path after training is not as capable as a similarly aged individual in a more favourable state of affairs. Regional disparities therefore are relevant since they influence the translation of schooling into real-life chances for economic engagement. The first proposition is therefore best understood as saying that there are unequal sets of capabilities, and not as a claim that institutions are in short supply.

It is a policy implication that access can be measured more widely than the providers themselves. Geographic coverage should be monitored in conjunction with travel time and programme capacity, participation of disadvantaged groups and completion rates and transition to work. Vocational provision should be also integrated into federal and state planning, as well as foundational education, transport, digital connectivity and local economic development. The coordination is aligned with the FME 2024 vision to develop skills and NBTE's ongoing quest to standardise and scale-up accredited TVET provision (FME, 2024; NBTE, 2025). A main point of this theme is that regional inequality is reproduced by policy measures that only measure and respond to the supply of institutions, but fail to consider the enabling conditions needed to access and make use of them. Geographically intelligent understanding of where training is, who can access it, who can finish training and what will follow, is therefore key to youth economic inclusion.

6.2 Proposition 2: The inclusionary effect of vocational education is weakened where programme quality, labour-market alignment and institutional connectivity are poor

The second thematic finding is that the presence of vocational institutions does not necessarily translate into inclusion, as the quality of the training and the alignment of the training with the labour market will influence the extent to which skills acquired in training can be transformed into economic value. The distinction is important in Nigeria where the TVET has public and private providers with varying resource bases and many of the youths eventually end up working in informal environments. Low institutional capacity, weak certification, fragmented governance, and poor coordination and mismatches between skills demand and supply were cited as structural issues by the World Bank (2015). The findings of recent Nigerian studies are comparable. The challenges include sustainable financing, collaboration and capacity building of lecturers in South-East TVET institutions (Enwere et al., 2024) and persistent problems with effective development of vocational and technical skills (Obi and Ojo, 2025). The findings suggest that inclusion in regions is dependent on the quality of the local training system, rather than just the number of seats available.

Quality is more geographically oriented since it is reliant on high-cost inputs for practical learning. Workshops are required to have working equipment, supplies, safety materials, electrical power and instructors who can relate the theory to the practical aspects of the workshop. The distribution of such inputs may be disproportionate in the urban centres and peripheral sites. The World Bank (2015) pointed out that there was low capacity and poor employer linkages in many TVET providers in Nigeria. When training equipment becomes outdated, training becomes more and more theoretical, and students might get certificates which show that they have finished training, but do not necessarily mean they are productive. This may be particularly detrimental for the young of the lower socioeconomic groups as they are less able to make up for the poor institutional quality through the acquisition of private training, the visit to better-equipped centres or the acquisition of further workplace training. Thus, disparities in quality can exacerbate the impact of disparities in access, even when access looks good.

Labour-market alignment is also crucial. Economically useful training is training that is consistent with the occupational demand, new technologies and the productive structure of the region's economy. The labour market is very heterogeneous in Nigeria with agriculture, trade, manufacturing, services, construction and ICT and informal enterprise existing in very different proportions and scales in various states. According to NBS (2024b), the majority of the jobs were informal, and World Bank (2015) identified of a challenge related to the understanding and signalling of the skills demand in the labour market. If a vocational course is developed without regard to the requirements of the area, it could result in a student being educated in a field where he or she cannot obtain employment. On the other hand, schemes affiliated with companies, contractors, co-operatives, technology companies and local enterprise networks can offer students on-the-job exposure, occupational information and opportunities to enter the workplace. Thus, the success of the inclusion effect will be based on the strength of the connection between the training institution and the economic environment.

One mechanism to strengthen that bridge is through work-based learning. TVET scholarship evidence shows that structured workplace experience provides an opportunity to build both technical and generic employability skills such as working in teams, communicating, problem-solving and occupational judgement. Furthermore, recent Nigerian studies on 21st century skills reveal that employability is now linked to integration of technical and non-technical skills (Olasunkanmi & Ogunniran, 2023) and international TVET evidence reveals that work-based learning enhances the transfer of learning to productive practice (Thapa, 2024). However, in Nigeria access to high quality workplace learning is likely to further be unevenly spread across the regions due to the uneven spread of industrial concentration across the states. A youth apprentice in an area where there are a number of manufacturers, construction companies or digital enterprises might have greater opportunities than a youth apprentice in a place where there are few formal enterprises. The economic worth of TVET is therefore a regional phenomenon as mediated by the structure of the local labour-market.

The process of vocational learning to opportunity is also influenced by certification and information. There is a need for credible information for employers on the capabilities of graduates and for reliable information for learners on the nature of the job and quality of training and anticipated benefits. The World Bank (2015) found Nigeria's certification system incomplete and not responsive enough to employers and that there are information asymmetries that are sources of skills-market failure. This issue can escalate in poorer areas where youth are not as well connected with employers and where opportunities for career guidance are more limited. A certificate from an unconnected provider may not be as valuable as a similar certificate with a good industry connection and recognised assessment and work experience. Therefore, the concept of quality must not only be interpreted as something related to infrastructure, but also to curriculum, equipment, evaluation and employer recognition and transition support.

We also see a gender and social inequality as regards the realised quality of vocational inclusion. Previous evidence in Nigeria also showed significant gender disparities in technical enrolment especially for engineering related and mechanical disciplines (World Bank, 2015). The findings from NBS's Q1 2024 data reveal a persistent gap between the education-to-work transition rates for young women and young men, with young women being more likely to be NEET. In real terms, a vocational system can be open to all, while women can still be underrepresented due to social norms, safety concerns, mobility barriers or over-concentrated on lower return occupations. This concept also holds true for rural youth and young people with disabilities and those living in insecure environments. Flexibility and inclusiveness of delivery therefore are part of the quality and relevance. A programme that does not allow a practice of the learned relevant skill does not carry out its inclusion function.

There are thus converging pieces of evidence that support this proposition: policy reports, institutional studies, and labour-force statistics. The problem is not just that Nigeria is in need of more vocational spaces for training, but those that offer sustainable and relevant and marketable skills. This aligns with recent policy directions which focus on more robust skills development and more emphasis on industry relevance and new skills (FME, 2024). The accreditation approved-institution framework of the NBTE is also significant as it can serve as a foundation for consistency among providers (NBTE, 2025). However, accreditation is not enough to generate local jobs. Even if the institutions in a region are compliant, the region can have weak inclusion because graduates may not be able to get access to firms, finance, digital networks or markets. So the second proposition focuses on the relationship between the quality of the institutions and the surrounding economic ecosystem.

The practical implication is that TVET planning for a region should be outcome oriented. Indicators might be: completion, acquisition of competency, employer satisfaction, work placement, employment in trained occupation and enterprise survival and progress to further learning. These would show whether or not a technically capable institution is really operating as a vehicle for economic participation. There should also be formal relationships between state governments and providers with the local employers/business organisations in particular areas with growth potential. In areas where agriculture is the main industry, agribusiness, mechanisation, food processing and renewable-energy skills may be more extensive, in industrial and urban areas, construction, manufacturing, ICT, logistics, maintenance and service occupations may be more extensive. The key finding is that economic inclusion is dependent on the usability of the skills. Regional policy, however, needs to pay the same attention to the quality and connectivity of TVET systems as it does to TVET systems' reach.

6.3 Proposition 3: Place-sensitive, demand-responsive and financially inclusive TVET strategies are more likely to reduce regional inequality than uniform expansion alone

The third thematic finding is that TVET strategies that are based on place sensitivity, demand responsiveness and financial inclusivity are needed to reduce regional inequality and not uniform expansion of institutions. There is evidence that different regions of Nigeria have varying mixes of educational deprivation and poverty as well as varying labour-market structure and institutional capacity. Multidimensional poverty is significantly higher in the North-East and the North-West than the South-West and South-East (sixth and tenth positions according to Figure 3) and the NEET patterns of young people (Figure 2) do not run in a straightforward north-south divide. This suggests that certain interventions will not be equally effective across all settings. A good TVET strategy might have to integrate basic education with transport, with security-sensitive provision and also include subsidised participation in a severely disadvantaged region. In a more economically diverse area, the emphasis could be on developing existing institutions, industry linkages and ways to transition into gainful employment.

Financial inclusion is a key element as behind the low cost of attending vocational training there may be hidden indirect costs. Young people might require to pay for means of transport, security tools, materials, data, shelter or to be out of income-producing activities for a certain period of time. This may make training an unaffordable opportunity cost for poor households, even though training fees are low. NBS evidence on multidimensional poverty shows that poverty in education is interwoven with standards of living and work and household resources (NBS, 2022). The World Bank (2015) also listed credit constraints and household decision making failures as reasons for skills investment. This indicates that in addition to building institutions, scholarships, transport subsidies, stipends and flexible payment mechanisms may be of equal importance. Indirect costs should be geographically targeted in terms of financial support, and mechanisms of eligibility should not discriminate against young people in informal or precarious situations.

Programmes should be offered in each place based on demand responsiveness. A regional skills strategy that merely copies the national programme catalogues is not likely to be effective if it does not consider the local productive possibilities. Rather, governments and providers should leverage labour-market data to find existing and new jobs, as well as seek advice from businesses and business owners, and continually evaluate programs. However, the World Bank (2015) pointed out that weak labour-market information and coordination of planning are key drivers of skills mismatch in Nigeria. In addition, current studies reveal that TVET needs to be enhanced with respect to the development of entrepreneurship and digital competence as the technical skills individuals acquire might not be sufficient to deal with the evolving labour market (Yisa et al., 2026). Responsiveness to demand, should therefore, be coupled with technical specialisation and transferable competencies, enterprise skills and digital literacy. The outcome would be a more flexible system that was responsive to regional economic variations yet uphold common quality standards.

Another way of including is flexible delivery. Traditional full-time institutional models may be excluding youth who are already employed, providing care for family members, and/or living outside of the reach of training centres, or having experienced gaps in their education. Institutions in Nigeria have already been making efforts to develop other modes of education delivery through the framework of open and distance learning (ODL) approved by the National Board for Technical Education (NBTE, 2025). These can be further developed with blended learning, mobile training units, community-based practical centres and modular certification and recognition of prior learning, as long as practical skills are still carefully evaluated. Flexibility does not have to be synonymous with diminished quality. Instead, it should be flexible with the timing, the setting and the context of learning, and maintain the standards for competency attainment. This is particularly true for rural and peri-urban communities where a "traditional" centralised college may be too far away or too expensive to sustain.

Further, a more effective coordination among levels of government is needed to service place-sensitive policy. The various stakeholders in Vocational Education in Nigeria are federal regulators, state ministries, public and private institutions, employers, development partners and informal training networks. Fragmentation can lead to some areas of duplication and others gaps. The World Bank (2015) reported horizontal coordination issues among agencies and vertical coordination issues between federal and state. The Federal Ministry of Education skills policy of 2024 provides a policy framework for more systematic coordination and NBTE accreditation architecture can be used to ensure quality assurance. But the coordination should not only be administrative – it should be shared regional planning. Providers, labour demand, vulnerable youth population and enterprise clusters could be mapped at the state level, and that information used to prioritise investment through state-level skills councils or similar arrangements. This would enable allocation to be more responsive to actual regional capability deficits.

The contrast between areas of high wider deprivation and areas of high NEET for different reasons strengthens the proposition. Very high child multidimensional poverty in the North-East and North-West signals a strong demand for integrated interventions where foundational education and household constraints are tackled before and during the provision of vocational training. Higher NEET rates in the annual 2023 data suggest that better levels of education do not necessarily equate to smoother transitions from school to work, particularly in the South-East, South-South and South-West regions. Policy, therefore, needs to distinguish between exclusion resulting from lack of educational opportunity and exclusion due to under-absorbing from the labour market. In both scenarios, an increase in institutions might not be efficient. It is important to understand that it is the specific capability deficit that is being targeted and the type of intervention that best addresses the capability deficit that will provide the greatest opportunity to increase effective opportunities.

Also there is a compelling evidence for enterprise finance and vocational education. Skills can only be translated into economic productivity if young people can be empowered with tools, working capital, premises, markets and business networks. The Nigerian context of entrepreneurship and vocational education has been consistently linked with training and enterprise creation, with evidence pointing out that skills are insufficient to drive sustainable business results (Kareem et al., 2024; Egunjobi & Ademisola, 2023). A financially inclusive TVET model would thus link completion with enterprise incubation, cooperative purchasing, microfinance referral, procurement opportunities and market information. These should be carefully planned to not shift the risk to untrained graduates. One aim is not to ensure that every trainee will become an entrepreneur, but to ensure the option of entrepreneurship is open for those who have realistic possibilities for enterprise in their local economies.

Lastly, policy making for places should be monitored using equity indicators – not national averages. An overall national rise in TVET enrolments can mask a decline in enrolment of young females in one zone or the ongoing marginalisation of rural youth in another zone. These could be monitored on regional dashboards and include enrolment, completion, gender, rurality, disability, programme quality, distance to provider, work placement, employment and enterprise outcomes and NEET transitions. The significance of this method is that it transforms the nature of the regional inequality issue from descriptive to a planning variable. This study shows that there are already a lot of institutional elements that are required for such a system in Nigeria such as official education data, TVET regulation, labour force surveys and an emerging skills policy framework. The only thing that remains is to bring these elements together using the goal of enhancing young people's actual potential to learn, work and succeed, no matter where they live.

6.4 Cross-Thematic Synthesis

The evidence in all three propositions suggests that there is a reinforcing interaction between residents' place, the educational opportunities available to youth, the quality of vocational education and training, and the economy in which youth are trying to participate. The best analytical statement is therefore that one region is more efficient in using educational resources to create opportunities for others than another region is in doing so. Where there are differences in foundational schooling, household poverty, security, and industrial structure and employer networks, the same investment can yield varying returns. The capability approach provides an explanation for this phenomenon, as it distinguishes between formal availability of a resource and effective freedom to access it. Therefore, a regional inclusion policy should be realized on the basis of identification of constraints for conversion and integrated interventions. This also suggests that the assessment system should be based on travelling along the entire pathway—access, participation, competence, transition and sustainable economic activity.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusion

The analysis shows that regional disparities in regard to vocational education are best seen as a cumulative opportunity problem. Youth are not starting their TVET on an equal footing. They have varying backgrounds in terms of their previous education, access to household resources, access to transportation, exposure to insecurity, information on careers and linkages to labour markets. Formal institutions thus play a role, but only one part of inclusion. It is evident from the evidence that both the North-East and North-West are continuing to suffer serious wider educational and socioeconomic disadvantage, that the national labour market has significant variations in youth NEET rates and that there is widespread informality. Meanwhile, there are also high NEET rates in some southern states showing that a simple 'north–south' dichotomy cannot be posited as a means to reducing regional inequality. Effective TVET policy should rather recognise the various combinations of constraints that exist in different places and address the entire learning to productive economic participation process.

7.2 Recommendations

1) Equitable Increase in the Infrastructure of Vocational Education: It is therefore recommendable that both the Federal and State Governments should give greater consideration to the equitable establishment and rehabilitation of Vocational and Technical Education institutions in Nigeria especially those areas with poor educational facilities. The emphasis of funding should be on modern workshops, labs, electric power, digital equipment and competent teachers. This geographically balanced investment would help to minimize regional inequalities, enhance access and equip marginalized youth with employable skills and appropriate technical skills.
2) Improving the Link between Vocational Training and Jobs: Government authorities must improve the links between vocational education providers and the labour market by means of structured apprenticeships, employer-related placements, entrepreneurship support and collaboration with employers in the private sector. The training curriculum should take into account opportunities in the local economy and current industry needs. Effective school-to-work transition mechanisms would help the vocational graduates to apply the competences they gained to gain access to productive, sustainable jobs, better income and wider economic participation.
3) Targeted support for economically disadvantaged youths: Governments at the federal, state and local levels should implement targeted financial and social measures for the benefit of disadvantaged young people, especially in areas where poverty levels are high and a high proportion of the population is economically excluded. Vocational programmes should be supported by scholarships, training grants, transportation facilities,

equipment and accessible credit. These would lower costs of entry and make sure that vocational education makes a meaningful contribution to inclusive employment and poverty reduction.

7.3 Research Limitations

The chief research drawback is reliance on the secondary sources, which are rather heterogeneous with respect to the years covered, the field of application, the definition and institutional objective. The study lacks original field evidence from young people, employers and training providers and cannot attribute the impact of vocational access to economic inclusion solely to it. The results should thus be interpreted as a thematic synthesis of documented regional trends based on theoretical arguments, not as an impact assessment. A more granular level of evidence at state, local government and institution level would support future analysis.

7.4 Recommendations for further research

Future research should involve a mix of longitudinal administrative data and field based qualitative interviews and when possible, quantitative analysis at the household level. Research could explore the impact of the distance to training centres, costs, transport, gender, insecurity and digital access and local industry structure on entry and completion. Patterns of panel use would also provide a measure of the effectiveness of vocational graduates' transition to work, enterprise or further training compared to their peers. A comparative study of geopolitical zones with urban-rural and gender-specific disaggregation would help to understand the effectiveness of policy instruments in varying regional contexts.

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Note on interpretation. The figures in this paper are descriptive visualisations constructed from the cited secondary sources. They are not causal estimates and should not be read as evidence that vocational access alone determines youth economic outcomes.