Identifying Pathways to Employment for Youth in the Niger Delta

An Analysis of Abia, Akwa Ibom and Rivers States

PIND DAI NDPI

FORD FOUNDATION

Produced by: Foundation for Partnership Initiatives in the Niger Delta (PIND) in collaboration with Niger Delta Partnership Initiatives (NDPI) with funding support from Ford Foundation.

Prepared by: DAI

First Published in June 2018

Acronyms

AFDB - African Development Bank
CEED – Center for Entrepreneurship Education Development
CSR – Corporate Social Responsibility
DFID – United Kingdom Department for International Development
E4E – Education for Employment
GoN – Government of Nigeria
ICT – Information and Communication Technology
IGHUB – Innovation Growth Hub
IOC – International Oil Company
ITF – Industrial Training Fund
LGA – Local Government Area
MADE – Market Development Program
MIT REAP – Massachusetts Institute of Technology's Regional Entrepreneur Acceleration Program
MOU – Memorandum of Understanding
NABTEB – National Business and Technical Examinations Board
NBS – National Bureau of Statistics
NBTE – National Board for Technical Education
NDDC – Niger Delta Development Commission
NDE – National Directorate of Employment
NDYPP – Niger Delta Youth Pathways Program
NEBOSH – United Kingdom's National Examination Board in Occupational Safety and Health
PIND – Foundation for Partnership Initiative in the Niger Delta
PTI – Petroleum Training Institute
SSCE – Senior School Certification Examination
SLAB – Skills and Leadership Advancement Boot Camp
SME – Small and Medium Enterprise
SMEDAN – Small and Medium Enterprises Development Agency of Nigeria
TVET – Technical and vocational education
UNN – University of Nigeria Nsukka
USAID – United States Agency for International Development

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Executive Summary

Nigeria is the eighth most populous country in the world, with a current population of 184 million people that is expected to grow to 310 million by 2035.[1] More than half of Nigerians are under the age of 30, and approximately 85 million residents are considered part of the labor force (ages 15-65).[2][3] This youth bulge could be a boon for the economy as the workforce swells, but only if sufficient opportunities exist for youth to be gainfully employed. Yet Nigeria's national unemployment rate for youth aged 15-24 spiked to an all-time high of over 33% in the third quarter of 2017.[4] Women are disproportionately affected, as more than 50% of unemployed youth are female. Even among Nigerians that are employed, productive jobs that generate sufficient income to keep people out of poverty are scarce.[5] Youth employment is also critically linked to de-escalation of conflict in the Niger Delta.

In light of these issues, the Foundation for Partnership Initiatives for the Niger Delta (PIND) is investing in a Niger Delta Youth Employment Pathways (NDYEP) program to address youth job readiness, workforce development, and job creation in three states - Rivers, Abia, and Akwa Ibom, support from the Ford Foundation. PIND and its partner, DAI, worked together to assess opportunities for advancing youth unemployment and develop a program design that would then be implemented working with various partners in the region.

As the first phase of NDYEP, this study analyzes the current state of the labor market in Nigeria and specifically the three target states. It focuses on four priority sectors noted for having high potential for youth employment opportunities: agriculture, information and communications technology (ICT), construction, and renewable and solar energy. Entrepreneurship was a cross-cutting theme but was particularly relevant to the ICT sector.[6] Field work in Abia identified the leather and garments sector as an additional area worth analyzing due to its prevalence in the state's economy.

This study is divided into three sections. First, it analyzes the national and regional context, including macroeconomic trends, labor market trends, demographics, and workforce development systems. It also reviews each of the target sectors at the national level in terms of competitiveness, skills needs and gaps, and youth employment. Next, the study moves to the state level to assess the selected sectors, including opportunities for growth, skills and training, and sector constraints. Finally, the study concludes with a discussion of sectoral opportunities and key considerations for a youth employment program design.

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1 GIZ. "The Nigerian Energy Sector: An Overview with a Special Emphasis on Renewable Energy, Energy Efficiency, and Rural Electrification." June 2015. https://www.giz.de/en/downloads/giz2015-en-nigerian-energy-sector.pdf.

2 NBS. "Labour Force Statistics Q3 2017 Vol 2"

3 World Bank. "World Development Indicators 2017." https://data.worldbank.org/data-catalog/world-development-indicators.

4 https://tradingeconomics.com/nigeria/youth-unemployment-rate

5 Alakaiye, Olu, Alaba Olufunke, Jerome Afeikhena, and David Nabena. Understanding the Relationship Between Growth and Employment in Nigeria.

6 Leather and Garments was added as a fourth sector in Abia state given its predominance in the state economy. The ICT sector was omitted in the Akwa Ibom section due to a lack of available data and replaced with an Entrepreneurship sub-section.

Key Objectives of the Study
1. **Map the ecosystem of stakeholders** concerned with youth unemployment within the three states and understand their key constraints 2. **Understand national and subnational economic, demographic, and social trends** impacting labor and workforce issues within the workforce development system in the three target states. This includes current labor and workforce constraints such as quantity of labor supply, quality of supply (education/skills requirements by occupation and career pathway), and the main factors that encourage youth engagement within the broader system. 3. **Identify entry points for youth** within the sectors, namely in the agriculture, information and communication technology, construction, solar and renewable energy sectors and others such as leather and garments. 4. **Synthesize key programmatic considerations** for supporting youth employment in the three states based on stakeholder meetings, report findings and stakeholder validation.

KEY FINDINGS IN THE THREE TARGET STATES

Similar to the national economy, the economies of both Rivers State and Akwa Ibom are largely driven directly by the oil and gas sector and government spending derived from oil and gas sector proceeds. Apart from the construction sector, which historically benefited from considerable oil and gas sector and public sector investments, the private sector in the three states is relatively shallow in terms of larger, anchor-type firms and lack high concentrations of formal small and medium sized enterprises (SMEs). Abia is a bit of an outlier, as the oil and gas sector does not have a considerable presence in the state, and subsequently has developed a more diversified economy with a substantial leather and garment products manufacturing sector largely comprised of SMEs.

The government civil service and oil and gas sector historically have been the primary employers in the three target states. Not surprisingly, a rapid survey of youth in the Niger Delta by PIND revealed a belief that public sector jobs were the most attractive, and that the public sector was responsible for providing jobs.[7] Yet these sectors alone lack the capacity to absorb the growing supply of youth labor.

The results of stakeholder interviews and youth focus group meetings suggest that residents' ideas and perspectives are widening beyond government jobs. Technology entrepreneurship is increasingly perceived as a viable career pathway, and more people are venturing into entrepreneurial activities by creating micro and small enterprises. In addition, medium-scale agriculture is gradually starting to emerge in the region, the hospitality and retail sectors are growing, and several local, retail-oriented companies such as Genesis Foods and Jevinik are becoming increasingly competitive and expanding both locally in target states, neighboring states and even outside of the Niger Delta region.

As these sectors grow, so does the demand for labor at various skill levels. However, across sectors, numerous skills gaps and skills mismatches were reported, pointing to a gap between educational

[7] PIND. Technical Vocational Education and Training – TVET in Niger Delta. A Situational Report with Suggestions for Possible Further Action by the PIND Foundation. 2011.

institutions and the private sector. Stakeholders widely agree that a significant disconnect often exists between the type of training programs being supplied and the actual occupations and skills in demand in the labor market. Many graduates from tertiary institutions more often find employment that is not proportional to their educational qualifications, accepting positions requiring lower levels of knowledge, skills and experiences as these are often the only available opportunities.[8] Others in the information and communication technology (ICT) sector for instance, find that non-traditional training programs provided by new ICT hubs[9] are more beneficial than universities, as they are more flexible and relevant to the labor market. Partially responsible for this disconnect is a dearth of mechanisms and systems for transmitting labor market demand information from employers to educational institutions to inform educational priorities and curriculum design. For example, training institutions and private sector actors noted they rarely engage with one another beyond providing internships to students. Private sector companies are often not involved in curriculum development to ensure that the education system is teaching the appropriate skills in demand for specific jobs.

And although many issues have been identified in this report, our diagnostic and analytical work to date has identified the following principal issues and discussion points that should be considered as they will be key to the achievement of the project's goals going forward.

Stakeholder interviews and: Margaret Adesugba and George Mavrotas, "Youth Employment, Agricultural Transformation, and Rural Labor Dynamics in Nigeria." IFPRI Discussion Paper 01579, December 2016

ICT "hubs" in Nigeria can generally be described as dedicated co-working space that often also offers some type of incubation and/or acceleration-type services.

Table 1: **Summary of Key Findings**

Key Insights for Program Design		
Overarching Critical Issues	• Three different state economies - Each state's economic structure is unique and those forces that are driving or could potentially drive employment demand in the target sectors is different depending on the specific context within the state. • Narrow economic and revenue base – Target states substantially reliant on the oil and gas sector and federal revenue transfers and constrained by relatively undiversified economies. • Inadequate employment demand data - Lack of state level employment and economic output data limits insights into where jobs exist and will be created in the future. • Cross-cutting infrastructure deficiencies - inadequate access to capital, electricity, and technology and transportation infrastructure issues negatively affect three target sectors and effectively act as constraints to job creation. • Entrepreneurship a cross-cutting opportunity - Entrepreneurship across sectors present opportunities for employment, in particular, the technology startup ecosystem is a growing source of dynamism and opportunity for young people in the target states. • Workforce development system challenges - Skills gaps and mismatches, inadequate linkages between private/education sectors, fragmented skills development marketplace, lack of appropriate trainings/standards are all very prevalent in the three target states' labor markets. • Currency devaluation - The currency devaluation is affecting different value chain actors in the target sectors in different ways, improving the competitiveness of some actors and inhibiting the competitiveness of others. Changing implications will need to be monitored.	
Labor Demand		
	Drivers	Barriers
Job Creation Issues	• Increasingly entrepreneurial mindsets • Uptake of ICTs in various sectors • Emerging technological platforms permit development stage "leap-frogging" • Potential forthcoming large-scale infrastructure projects and other investments in the region • Devaluation of the national currency	• Inadequate access to capital for SMEs • Unreliable access to electricity and internet • Lack of basic infrastructure in some areas • Poor enabling environment for business growth including security situation • Lack of sector growth data to inform investment decisions • Devaluation of the national currency
Labor Supply		
	Drivers	Barriers
Youth Labor Absorption Issues	• Entrepreneurship increasingly perceived as a viable career pathway by youth • Flexible, non-traditional types of employment such as freelance, project-based becoming appealing to youth • Potential to leverage existing non-traditional skills delivery mechanisms (e.g. ICT hubs, Master Aquaculture Service Providers etc.)	• Overarching insufficient job creation • Labor markets dominated by civil service, not very dynamic or well diversified • Disconnect between training programs being supplied and actual occupations and skills in demand • Poor soft skills and attitude related to work amongst many youth • Lack of mechanisms to obtain labor demand data to align curriculums

	• Potential to build off of existing youth's skills base and up-skill to meet technical occupations in demand in target sectors	
Target Sectors		
	Challenges	Opportunities
Agriculture Sector	• Low youth interest in traditional production activities, yet majority of labor demand is currently in production • Lack of sizeable anchor firms • Underdeveloped value-addition activities due to unreliable power, low access to finance, and underinvestment in agro-processing infrastructure • Low land ownership among youth and cumbersome acquisition process • Educational institutions not adequately providing in-demand skills • Smallholder farmers struggle from poor transportation infrastructure	• Following currency devaluation certain industry segments and value chain components more competitive • Olam's investment supports positive outlook for the feed value chain component and industry segments reliant on feed inputs such as aquaculture and poultry • Existing effective, non-traditional, practical skills delivery mechanisms such as Master Aquaculture Service Providers • Low barriers to entry for youth in certain agriculture activities such as aquaculture • Short term income generation opportunities in certain agriculture activities such as aquaculture
Construction Sector	• Vocational training graduates not trained with practical technical skills that are currently most in demand • Existing workforce largely lacks soft skills including, attention to detail; positive attitude, commitment, integrity, timeliness to work, work ethic etc. • High cost of raw materials and transportation. • Non-market factors: security situation, currency devaluation, political context/upcoming elections, corruption • Construction sector growth largely tied to growth in other sectors with heavy current reliance on government demand • Few large and well-structured indigenous firms	• Potential to build off of existing youth's skills base and up-skill to meet in-demand skills (e.g. painting, carpentry, joinery, and tiling). • Government investment creating demand for residential, commercial and transportation construction services, especially for the mid-sized construction company industry segment not as reliant on oil and gas sector projects. • Expected extension of Nigerian Content Act to construction sector to create increased demand for local industrial construction services • Alignment with flexible project-based types of employment that are appealing to youth
ICT Sector	• Fragmented ecosystem with actors often operating in isolation • Existing ICT Hubs largely lack existing capacity to realize impact potential nor maintain long-term sustainability	• Existing effective, non-traditional, practical skills delivery mechanisms such as ICT Hubs • Potential to build off of existing youth's skills base and up-skill to meet in-demand skills requirements (e.g. front end and back end software development, web design,

	• Inadequate access to capital • Lack of industry-informed ICT skills training programs • Accessing grid electricity is expensive and unreliable • Negative perception of ICT as a viable career path among older generation • ICT has limited capacity to absorb labor on a large scale in short term	Raspberry Pi, 3D printing, Android/iOS development, digital marketing, cyber security, networking) • Alignment with flexible, non-traditional types of employment such as freelance, project-based that are appealing to youth • Tech entrepreneurship/ICT employment increasingly perceived as viable career by youth • ICT has transformative potential and can unlock growth in other sectors (such as agriculture)

Source: Project Team analysis

Several factors are driving potential job creation in the target states. Businesses across sectors are benefiting from uptake of information communication technologies (ICTs) and emerging technological platforms that permit development stage "leap-frogging." In addition, the expected extension of the Nigerian Content Act to the construction sector and potential large-scale infrastructure projects in the pipeline offer prospects for job growth in construction and related sectors as well as benefits to all businesses in the surrounding area once the projects are complete.

Meanwhile, a cultural shift is taking place among youth towards increasingly entrepreneurial mindsets, as tech entrepreneurship and more flexible types of employment like freelancing and project-based positions are becoming more appealing and widespread. Many stakeholders interviewed by the project team reported that these trends largely align with many of the occupations that are in demand in specific industry segments and value chain components in the agriculture, construction, and ICT sectors in the target states.

At the same time, systemic and structural issues are negatively impacting the growth of the target sectors. These structural barriers to job creation will continue to be a challenge and a consideration, regardless of the program design ultimately chosen.

Further, the results of stakeholder interviews indicate that it is relatively clear which technical and soft skills are necessary to fill occupations in these specific industry segments and value chain components. However, the lack of mechanisms to transmit labor demand data to educational and training organizations hinders their ability to act on this market information and align curriculums accordingly.

The barriers to job creation and youth labor absorption underscore the considerable challenges confronted by the three target states workforce development systems to improve opportunities for youth employment and bring local labor markets into better equilibrium. That said, these challenges can be converted to opportunities if addressed appropriately.

PRIORITY AREAS FOR PROGRAM INTERVENTION

Taking the job creation and youth labor absorption drivers and barriers and the sector-specific challenges and opportunities identified into account, the project team synthesized a set of key labor demand and supply factors that are relevant across the three target sectors. The project team then used these factors to evaluate industry segments or value chain components in the three target sectors that are best positioned for pilot program interventions and narrow the focus to priority areas for program intervention. If specific industry segments or value chain components in these sectors are likely to grow, then it can be assumed that there will be increased employment demand in those industry segments and value chain components and the three target states' workforce development systems can aim to align labor supply accordingly.

Key Labor Demand Factors	Key Labor Supply Factors
• Existing market demand • Potential to absorb youth labor • Potential to generate income in short term • Potential to leverage existing private sector dynamism • Anticipated increased investment	• Alignment with youth's career interests and the types of employment appealing to youth • Potential to leverage existing skills delivery mechanisms • Potential to build off of existing youth's skills base • Opportunities for vulnerable populations and gender mainstreaming

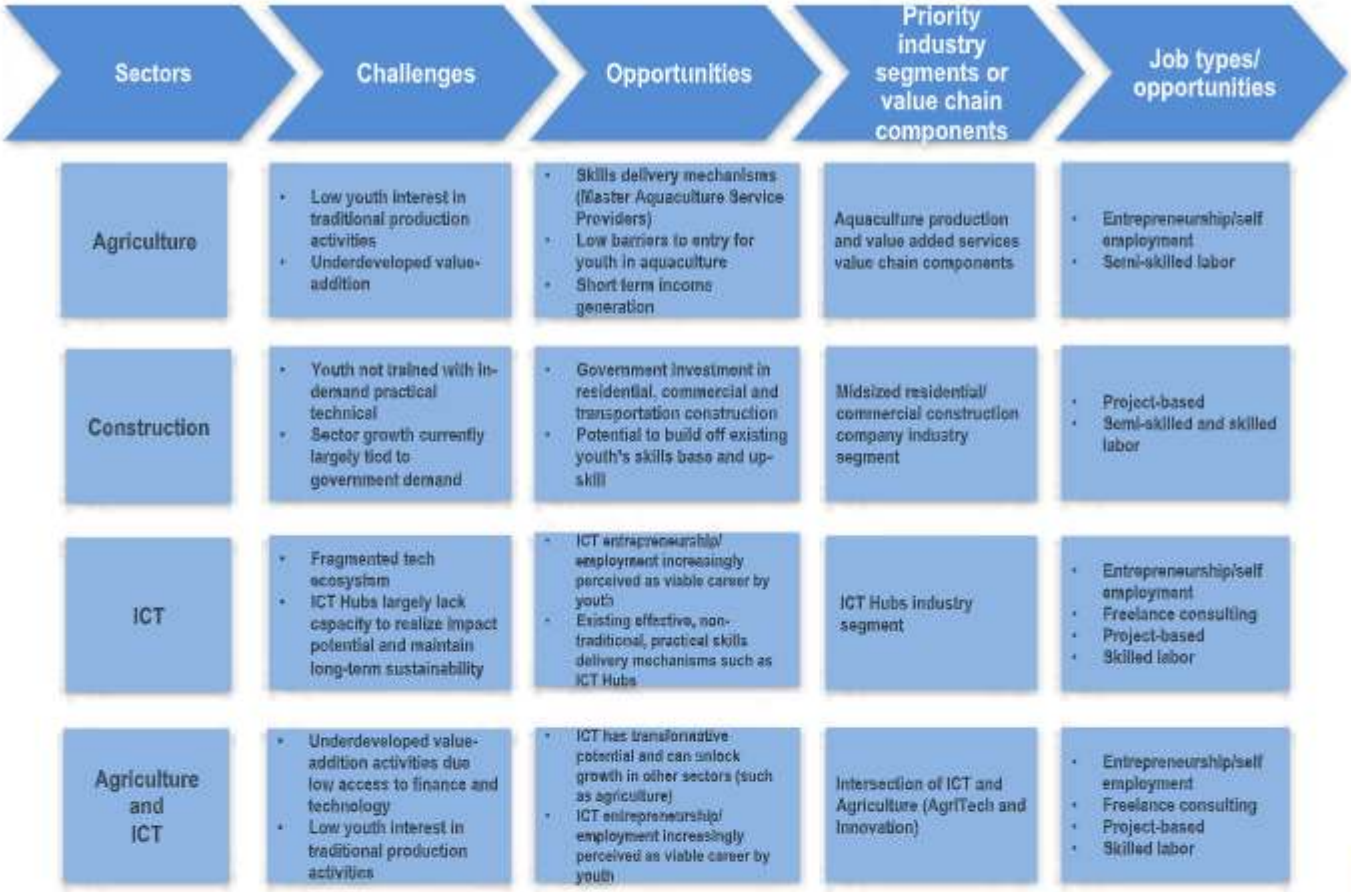
In sum, recent macroeconomic shocks including the drop in oil prices, recession, currency devaluation and inflation have caused volatility and uncertainty throughout the Niger Delta regional economy. Yet as economic actors adjust to these shocks, the analysis reveals considerable opportunities to strengthen and improve the environment for creating opportunities for youth employment in the three target states.

In analyzing the target sectors in light of their constraints and opportunities for youth employment, the findings revealed four industry segment or value chain component priority areas for potential program intervention:

- Aquaculture production and value added services value chain components
- Midsized residential and commercial construction
- ICT Hubs (incubators, accelerators, coding schools, co-working spaces)
- Intersection of ICT and Agriculture (AgriTech and Innovation)

As depicted in Figure 1 below, thorough analysis of the data collected during this effort allowed for enhanced understanding of key sector challenges, revealing the most pertinent opportunities, which in turn, lead to the identification of the most appropriate industry segment or value chain component priority areas.

Figure 1: Analytical pathway to identify industry segment or value chain component priority areas



Source: Project Team analysis

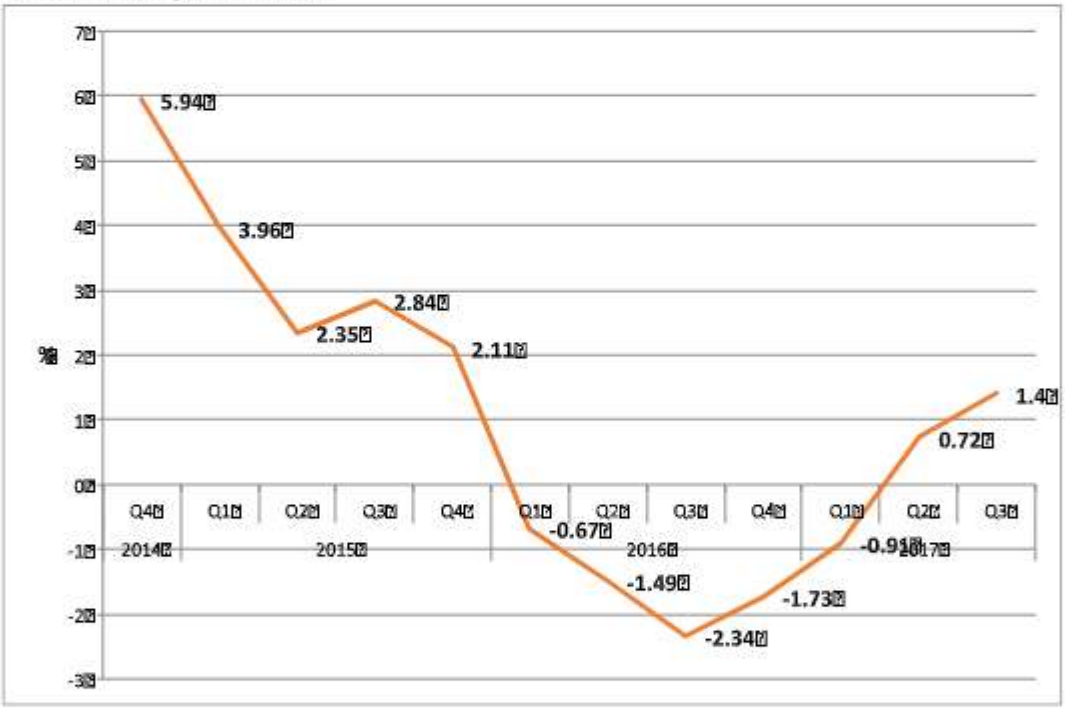
Keeping the underlying logic of these analytical pathways in mind, from sector specific challenges and opportunities to the identification of priority industry segments or value chain components and their corresponding job types and opportunities, will be critical as this effort transitions from data collection and analysis to program design, pilot project prioritization and implementation.

National Context

ECONOMIC CONTEXT

In 2013, Nigeria surpassed South Africa, making it the largest economy on the African continent.[10] At the same time, the Nigerian economy once dominated by oil extraction is becoming more diverse, and Nigeria's oil sector contribution to GDP at 10.5% is the lowest in OPEC.[11] Still oil and gas sector proceeds continue to account for about 70% of the federal government's revenues.[12] And as a result of relatively high oil prices and economic diversification efforts, Nigeria's economy had maintained steady growth with an average growth rate of 6.8% between 2005 and 2015.[13]

However, a Nigeria's oil export revenue began to decline precipitously in 2016. Inconsistent government policies and continuing violence in Nigeria's oil-producing regions compounded the difficult situation by affecting oil production levels.[14] The combination of these factors culminated in 2016, with Nigeria's first economic recession in two decades.[15] As the figure below demonstrates, during this recessionary period Nigeria's GDP was -1.58% in 2016.



[10] In 2013, Nigeria's gross domestic product (GDP) measured $509.9bn USD compared to South Africa's $370.3bn USD. BBC. "Nigeria Becomes Africa's Biggest Economy." April 6, 2014. http://www.bbc.com/news/business-26913497.

11 Federal Ministry of Budget and National Planning. "Nigeria's oil sector contribution to GDP lowest in OPEC – Blueprint." http://www.nationalplanning.gov.ng/index.php/news-media/news/news-summary/333-nigeria-s-oil-sector-contribution-to-gdp-lowest-in-opec-blueprint.

[12] British Broadcasting Corporation, "Nigerian economy slips into recession." http://www.bbc.com/news/business-37228741

13 Average growth rate between 2005 and 2015 was 6.8%. Accenture. "Private Sector Landscape Analysis of Nigeria: Empowering Women and Girls Through Partnerships."

[14] NKC African Economics, "Nigeria Country Profile." September 2017

15 IFPRI. "Youth Employment, Agricultural Transformation, and Labor Dynamics in Nigeria. December 2016. http://www.ifpri.org/publication/youth-employment-agricultural-transformation-and-rural-labor-dynamics-nigeria.

Source: National Bureau of Statistics, "Nigerian Gross Domestic Product Report (Q3 2017)." November 2017 https://tradingeconomics.com/nigeria/gdp-growth-annual

Nigeria's relatively long period of steady economic growth has not been accompanied by a commensurate increase in employment or human development because overall economic growth has been due to the export of commodities such as crude petroleum and petroleum gas, rather growth of employment-intensive industries such as manufacturing.[16] Instead, where job growth that has taken place in petroleum and gas production has intensified income inequality.[17] This is particularly troubling for women, who tend to participate less in extractive industries. Investment reflects this, and more money goes has gone into petroleum production than into the production of agricultural and other goods. Instead of decreasing during the previous period of growth, unemployment levels have increased since 2011, and much of the population still lives in extreme poverty, as available jobs tend to be low production and low wage work, creating fragile employment conditions.[18]

LABOR MARKET AND EMPLOYMENT CONTEXT

Labor Market Overview

Despite the continuing diversification of the Nigerian economy such as outlined in the above sectors, growth has been neither sustainable nor inclusive due to continuing constraints in the economy and labor market. In Nigeria, this is due to limited opportunities in formal employment, and the growth of the low skilled, informal sector. Moreover, Nigeria has low levels of human capital, as the country was ranked 120 of 124 countries in the 2015 World Economic Forum Human Capital Rankings.[19] Further, 46% of youth were unemployed or underemployed in 2015. While youth (age 15-24) today are comparatively more educated than their older counterparts in the labor market (25-64), many youth do not transition to secondary education and beyond, often terminating their formal education around the end of primary school. These youth, who leave the education system prematurely, are left with few options in the labor market. Rural youth who turn to low skilled work often participate in farming, home-based enterprises, or construction, while urban youth find low skilled work in informal retail, trade, manufacturing, or other services.[20] The growing youth population in Nigeria is now and will continue to put pressure on systems, infrastructure, and the labor market. Approximately 85 million are considered part of the labor force (ages 15-65).[21]

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[16] MIT. Observatory of Economic Complexity. "Nigeria." 2017. http://atlas.media.mit.edu/.

17 Ajakaiye, Olu; Jerome, Afeikhena; Nabena, David, and Olufunke Alaba. "Understanding the Relationship Between Growth and Employment in Nigeria" *Understanding the African Lions – Growth Traps and Opportunities in Six Dominant African Economies*. May 2016.

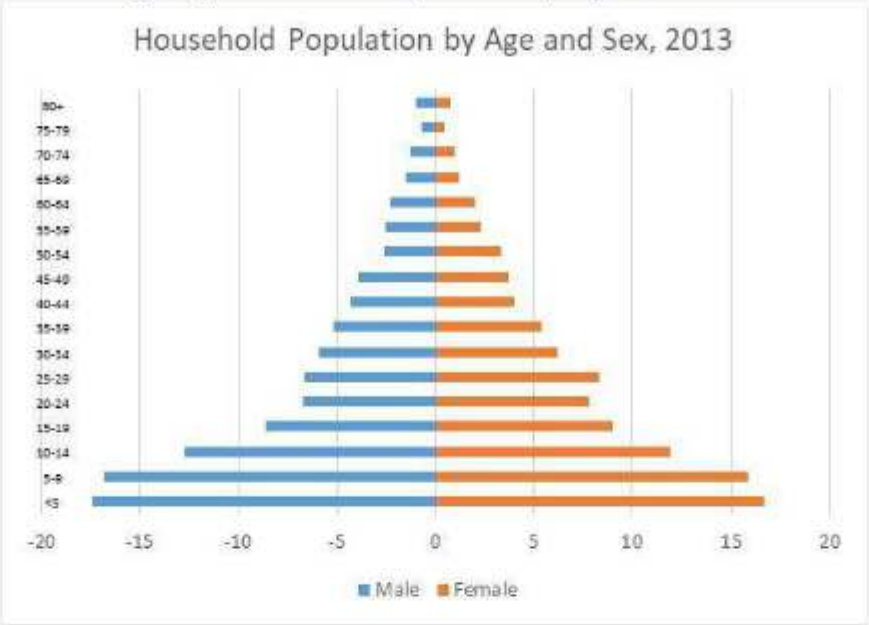
[18] Alakaiye, Olu, Alaba Olufunke, Jerome Afeikhena, and David Nabena. *Understanding the Relationship Between Growth and Employment in Nigeria*. Africa Growth Institute at Brookings. Washington, DC. May 2016. https://www.brookings.edu/wp-content/uploads/2016/07/growth-employment-nigeria-ajakaiye-jerome-nabena-alaba.pdf.

19 World Economic Forum. "2015 Human Capital Report. http://reports.weforum.org/human-capital-report-2015/the-human-capital-index/.

[20] USAID. Workforce Development and Youth Employment in Nigeria: Desk Review. March 2016.

21 NBS. "Labour Force Statistics Q3 2017 Vol 2"

Figure 3: Household Population by Age and Sex



Source: Demographic and Health Survey 2013

Notably, unemployment rates are generally high regardless of education, suggesting the link we normally see between education and employment is relatively weak in Nigeria. In fact, people with post-secondary education have a higher unemployment rate (24%) than people with primary education (18%) or below primary (15%).[22] Many college graduates leave the country as the labor market is not able to absorb them. At the same time, education, training and labor market systems in Nigeria are strained by the growing youth population, leaving many youth outside of both labor market and educational systems.[23]

Employment Distribution

Noteworthy aspects of employment distribution in Nigeria include the major role of agricultural employment and high levels of informality, with approximately 70% of jobs in lower paying jobs in the informal sector.[24] However because most people cannot afford to be unemployed, many individuals and families lean on insecure, low wage informal jobs in order to survive.[25]

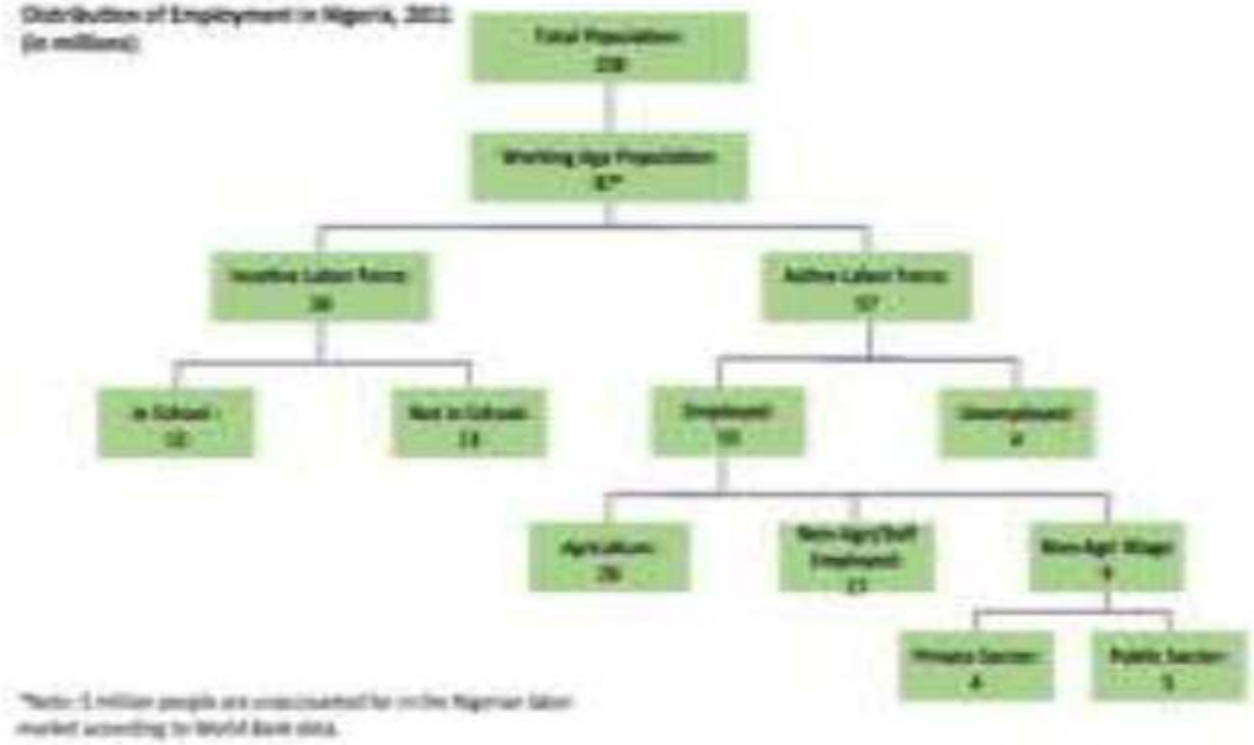
22 Alakaiye, Olu, Alaba Olufunke, Jerome Afeikhena, and David Nabena. Understanding the Relationship Between Growth and Employment in Nigeria.

[23] National Bureaeu of Statistics. Unemployment/Underemployment Report Q4 2016. Abuja, Nigeria. http://www.nigerianstat.gov.ng/report/564.

[24] USAID. *Workforce Development and Youth Employment in Nigeria: Desk Review*. March 2016. Washington, DC. https://static.globalinnovationexchange.org/s3fs-public/asset/document/Workforce%20Development%20and%20Youth%20Employment%20in%20Nigeria%20Desk%20Review%20Final%20Draft-Public%20Version%20(4).pdf?bjOwIqelAVJ9jWukmDOh.GcrIQV.oFSm.

[25] National Bureau of Statistics. "Job Creation Survey, 2nd and 3rd Quarters of 2016. Summary Findings and Selected Tables." December 2016. https://youtheconomicopportunities.org/sites/default/files/uploads/resource/Delving_deeper_into_the_agricultural_transformation_and_youth_employment_nexus_The_Nigerian_case.pdf

Figure 4: Distribution of Employment in Nigeria, 2011 (millions)



Source: World Bank 2016. More, and More Productive, Jobs for Nigeria: A Profile of Work and Workers.

The public sector, industry and services have generally higher paying jobs compared to agriculture. About half of the working population is employed in low productivity agriculture, and half of those working in agriculture belong to the poorest 40% of the population.[26] However, jobs at the production stage are threatened by changing attitudes about youth's attitudes about "decent" farm jobs. A wide range of Nigerian survey research cite that young people perceive that farm-sector jobs are dead-end opportunities. Nigerian rural youth prefer to migrate to cities, being pulled by the fast-growth economy of the coastal urban areas such as Lagos. Thus, rural agricultural sectors are witnessing labor supply shortages of youth. These labor shortages pose true challenges to modernization of agriculture, which requires a more qualified farm workforce. Additionally, these labor supply constraints pose human capital and recruitment problems for agricultural processing industries.[27]

In contrast, the richest 20% of Nigerians account for nearly half of all employment in the public sector. Currently, only 5 million people are employed in the public sector. Eighty percent of Nigerians are self-employed (17 million), primarily earning income from their smallholder family farm or household enterprise, and while only 9 million are engaged in non-agriculture based wage labor. This parallels other lower-middle income countries in Sub-Saharan Africa and contrasts with upper-middle income countries, where formal wage labor employs most of the working population. Indeed, the richest 20% of

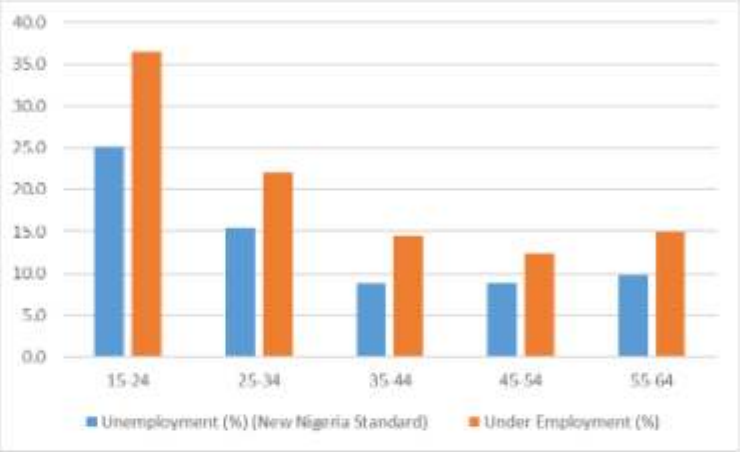
[26] World Bank 2016. More, and More Productive, Jobs for Nigeria: A Profile of Work and Workers.
[27] IFPRI. "Youth Employment, Agricultural Transformation, and Labor Dynamics in Nigeria." December 2016. http://www.ifpri.org/publication/youth-employment-agricultural-transformation-and-rural-labor-dynamics-nigeria.

Nigerians account for 40% of formal wage work in the country.[28] Formal wage labor represents an underdeveloped sector in Nigeria and a potential pathway to better, higher income jobs, but is disconnected from the working reality of most Nigerians and from present opportunities in the labor market.

Employment Trends

In terms of employment, the oil sector is negligible, providing only 0.01% of Nigeria's total jobs.[29] Agriculture is a key but risky sector due to the challenges that have arisen from conflict over land resources, and employs about 45% of the workforce (or two-thirds of the population), contributing 23% of GDP.[30] Youth participation in the agriculture sector is considerably lower than other segments of the population due to a lack of interest and patterns of urban migration to major cities such as Lagos, Kano, Port Harcourt, Ibadan, Abia and Abuja. The wholesale and retail trade industries are important here, as many economic activities in the two industries are interrelated. The services sector accounts for 44% of employment and 53% of GDP and is rapidly growing, with major service subsectors including retail and wholesale, real estate, and ICT. Even at high growth rates, the ability of the services sector to absorb sufficient labor from agriculture is questionable however, as some subsectors like ICT are not labor-intensive.

Figure 5: Unemployment and Under Employment (%) by Age Group, 2016, National Bureau of Statistics

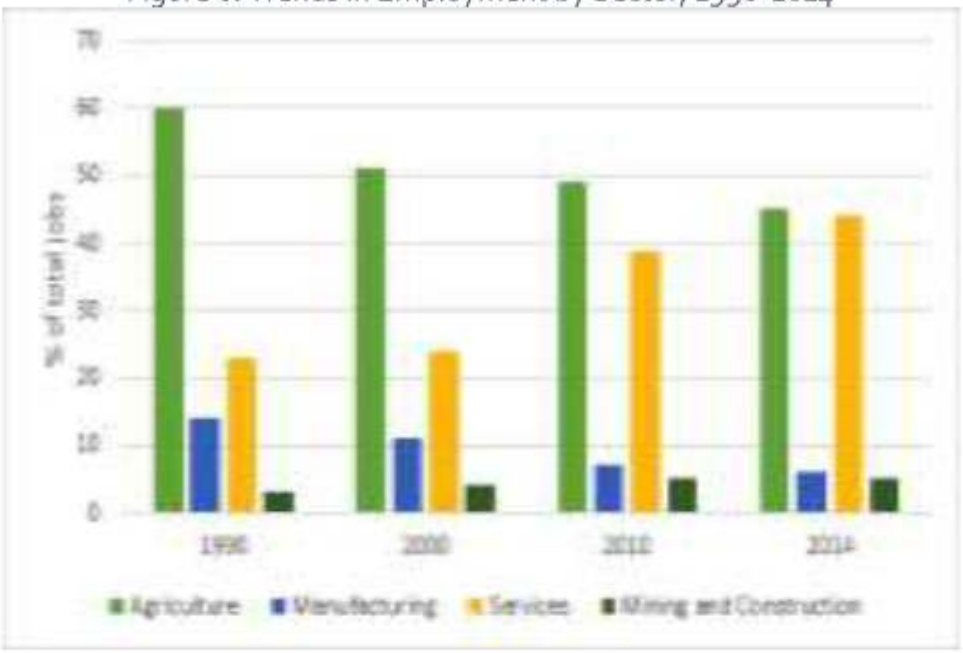


Source: NDHS 2013.

As noted in Figure 6, through 2014 agriculture has continued to be Nigeria's largest employer with the service industry rapidly growing.

[28] World Bank. More, and More Productive, Jobs for Nigeria: A Profile of Work and Workers. Washington, DC. 2016.
[29] Eboh, Michael. "Unemployment: Oil Sector Employs 0.01% of Nigerian Workforce." Vanguard. June 4, 2014. http://www.vanguardngr.com/2014/06/unemployment-oil-sector-employs-0-01-nigerian-workforce/.
[30] Santander. "Nigeria Economic Outline." June 26. https://en.portal.santandertrade.com/analyse-markets/nigeria/economic-outline.

Figure 6: Trends in Employment by Sector, 1990-2014



Source: Adapted from Ajakaiye et al., 2016

When evaluating the number and types of jobs created in the Nigerian economy the extreme recent volatility recently and the pronounced role of informal jobs in the national labor market are readily visible in the figure below:

Job creation began to decline precipitously in the latter part of 2015 as the economic shocks took hold before moderately rebounding in 2016. And in general, job creation in the national economy has not been sufficient to meet the expanding labor supply resulting in increased unemployment.

As the figure below demonstrates, this rebound, at least in the formal sector, has been primarily driven by the human health and social services and agriculture sectors.

It has been widely reported that the information and communication and arts, entertainment and recreation sectors are emerging growth sectors in Nigeria. However, their low formal job creation figures suggest that much of the employment in these sectors remains informal. Nationally, growth in the construction sector is forecast to be slow, but the expected extension of the Nigerian Content Act to the construction sector is likely to create increased demand for construction services in oil and gas producing regions such as the Niger Delta.

Youth Unemployment and Underemployment

In evaluating the most critical challenges confronting Nigeria's workforce development system and help perpetuate the continuing youth unemployment and underemployment problems, a recent job creation study produced for the Vice President, Federal Republic of Nigeria found that that: [31]

- According to employers, the skills gap in Nigeria is a critical bottleneck for job creation;
- There are few linkages between the private sector and education sector;
- The skills development marketplace is fragmented and characterized by overlaps in skills delivery;
- There is an overall lack of appropriate trainings and standards;
- Educational program reach is insufficient both in terms of scale and geography;
- Many jobseekers pursue inappropriate or unnecessary qualifications; and,
- In many cases, teacher quality is poor across the education sector.

The national youth unemployment rate (which includes unemployment and underemployment, or those working between 20-40 hours a week) was 46% in 2015 and is projected to rise further.[32] Dissecting this figure, the National Bureau of Statistics defined this as 13.7% unemployed, and 33.8% underemployed in 2015.[33] Female youth are disproportionately affected: more than 50% of unemployed youth are female, and the gender trend in unemployment and underemployment continues as women age in the labor market.

Unemployment rates are generally high regardless of education, suggesting the link we normally see between education and employment is relatively weak in Nigeria. In fact, people with post-secondary education have a higher unemployment rate (24%) than people with primary education (18%) or below primary (15%).[34] One reason for this discrepancy is that employers are not hiring those with higher levels of education because despite their education, they do not possess skills, knowledge, and attitudes demanded on the firm level to be able to contribute to productivity and competitiveness within a firm, and justify a higher wage. Secondly, because many youth who study on the tertiary level leave the country to study elsewhere, the economy suffers from "brain drain," and highly skilled Nigerian youth are working outside of the country where they encounter more advanced opportunities.[35]

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[31] Dalberg Advisors. "Strategic Framework and Implementation Plan for Job Creation and Youth Employment in Nigeria." March 2016. https://www.dalberg.com/our-ideas/strategic-framework-and-implementation-plan-job-creation-and-youth-employment-nigeria.
[32] Alakaiye, Olu, Alaba Olufunke, Jerome Afeikhena, and David Nabena. Understanding the Relationship Between Growth and Employment in Nigeria.
[33] National Bureau of Statistics. Unemployment/Underemployment Report Q4 2016. Abuja, Nigeria. http://www.nigerianstat.gov.ng/report/564.
[34] Alakaiye, Olu, Alaba Olufunke, Jerome Afeikhena, and David Nabena. Understanding the Relationship Between Growth and Employment in Nigeria.
[35] World Education News and Reviews. *Education System Profiles: Education in Nigeria.* March 7, 2017. http://wenr.wes.org/2017/03/education-in-nigeria.

TARGET STATE CONTEXT - ABIA, AKWA IBOM AND RIVERS

ECONOMIC CONTEXT

Economic Structure

Consistent with the national and Niger Delta economies, the target states' economies, in particular Rivers State and Akwa Ibom, are largely driven directly by the oil and gas sector and government spending derived from oil and gas sector proceeds. In fact, Akwa Ibom, Rivers and Abia are the 1st, 3rd and 9th leading oil producing states respectively in Nigeria.[36] Rivers State and Akwa Ibom are home to significant oil and gas sector operations, hosting numerous exploration facilities and Port Harcourt serves as an important commercial center for the oil and gas sector. Akwa Ibom is particularly reliant on the oil and gas sector. The state's industrial base does not include a high concentration of formal small and medium sized enterprises and historically the state has been one of the biggest oil and gas producing states in the country, in turn receiving one of the highest federal revenue allocations.[37]

Abia is a bit of an outlier, as the oil and gas sector does not have a considerable presence in the state and subsequently has developed a more diversified economy with a substantial leather and garment products manufacturing sector largely comprised of small and medium sized enterprises (SMEs). But Abia is still considerably reliant on government revenue allocations as the Project Team's calculations show that the state's budget is the 17th largest per capita out of 36 states.

In terms of industry composition, a recent study produced by the Vice President, Federal Republic of Nigeria reports that: a substantial existing construction cluster exists in Rivers state (driven by the oil and gas sector) in and around Port Harcourt; an existing leather and leather products industry cluster exists in Abia; and technology content development clusters are emerging in Rivers and Akwa Ibom.[38]

Employment Demand

The government civil service and oil and gas sector historically have been the primary employers in the three target states, yet these sectors alone lack the capacity to absorb the growing supply of labor. The government civil service's key role in the labor market is not surprising considering that many states in the Niger Delta have been heavily reliant on federal transfers rather than on non-oil sources generated internally within the state. It has been estimated that the Federal Government of Nigeria transferred over US$39.5 billion into the Niger Delta region between 2010-14 with most government revenues derived from the oil and gas sector.[39] For example, between 2009 and 2011 in Akwa Ibom State, approximately 90% of state revenues were derived from federal revenue transfers with less than 10% of budgeted revenue generated from non-oil sources generated internally within the state.[40] And Rivers and Akwa Ibom only trailed Lagos in terms of nominal total state budget size in 2017. [41] As a result, per

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[36] https://infoguidenigeria.com/oil-producing-states/

[37] Umoh, Boniface. "Baseline Survey on Youth Unemployment in Akwa Ibom State." Institute for Development Studies, (IDS) University of Nigeria, Enugu Campus, 2015

[38] Dalberg Advisors. "Strategic Framework and Implementation Plan for Job Creation and Youth Employment in Nigeria." March 2016. https://www.dalberg.com/our-ideas/strategic-framework-and-implementation-plan-job-creation-and-youth-employment-nigeria.

[39] Nextier Advisory and Stakeholder Democracy Network, "Markets For Development In The Niger Delta: Recommendations For The Way Forward."

[40] Umoh, Boniface. "Baseline Survey on Youth Unemployment in Akwa Ibom State." Institute for Development Studies, (IDS) University of Nigeria, Enugu Campus, 2015

[41] BudgIT , "State of the States – The 2017 Edition." © 2017.

the Project Team's calculations, Akwa Ibom, Rivers, and Abia have the 2nd, 5th and 17th largest state budget revenues per capita, respectively, out of 36 Nigerian states.[42]

But Figures 7 and 8 below demonstrate that dependence on federal revenue transfers has decreased marginally in Akwa Ibom and Rivers over the past few years as Internally Generated Revenue (IGR) has trended upwards. In fact, Rivers is one of the top 3 states (along with Lagos and Ogun states) in terms of IGR per capita.[43]

Figure 7: Internally Generated Revenue (IGR) 2012-2016 (Nbn)

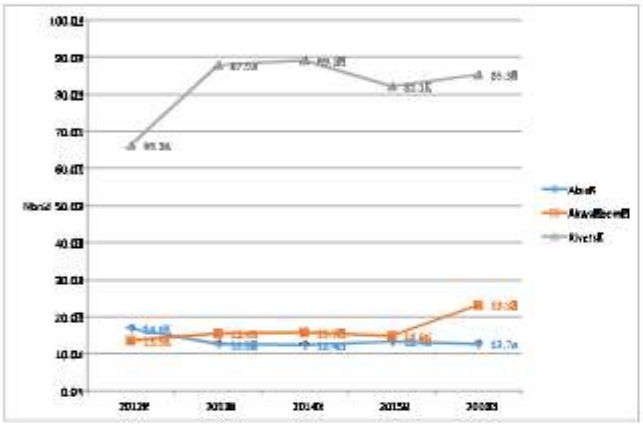
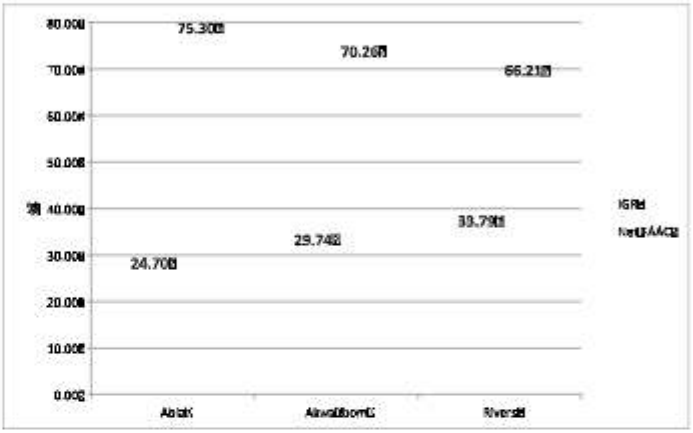


Figure 8 Structure of State Revenue in 2017 Comparing Internally Generated Revenue (IGR) and Net Federal Revenue Transfers (Net FAAC)



Source: BudgIT , "State of the States – The 2017 Edition." © 2017.

This trend suggests that the three states are either becoming more dynamic or their tax collecting capabilities have improved, or both. Though it is important to note that Lagos still accounts for roughly 37% of total internally generated revenue collected by all Nigerian states, underscoring the still substantial dependence most Nigerian states have on federal revenue transfers. [44]

Consequently, apart from the construction sector (which has historically benefited from considerable oil and gas sector and public sector investments when the oil and gas sector was expanding) the private sector in the three states is relatively shallow in terms of larger, anchor-type firms[45] and lack high concentrations of formal SMEs (with the exception of Abia's leather garments sector). Much of the economic dynamism is currently concentrated in locally oriented retail, hospitality and wholesale trade sectors. Moreover, many sizeable firms are state-owned, for instance Champion breweries, Akwa Feeds

[42] Akwa Ibom State receives the highest statutory revenue allocations, or 9.4% of the total revenue allocated to the 36 states in Nigeria with an estimated GDP of US$ 11.8 billion in 2012. Source: Umoh, Boniface. "Baseline Survey on Youth Unemployment in Akwa Ibom State." Institute for Development Studies, (IDS) University of Nigeria, Enugu Campus, 2015.

[43] "State governments and state-controlled entities (local governments) collect and control all revenues generated from personal income tax, property tax, road tax, radio and television tax among others." Source: BudgIT , "State of the States – The 2017 Edition." © 2017.

[44] BudgIT , "State of the States – The 2017 Edition." © 2017.

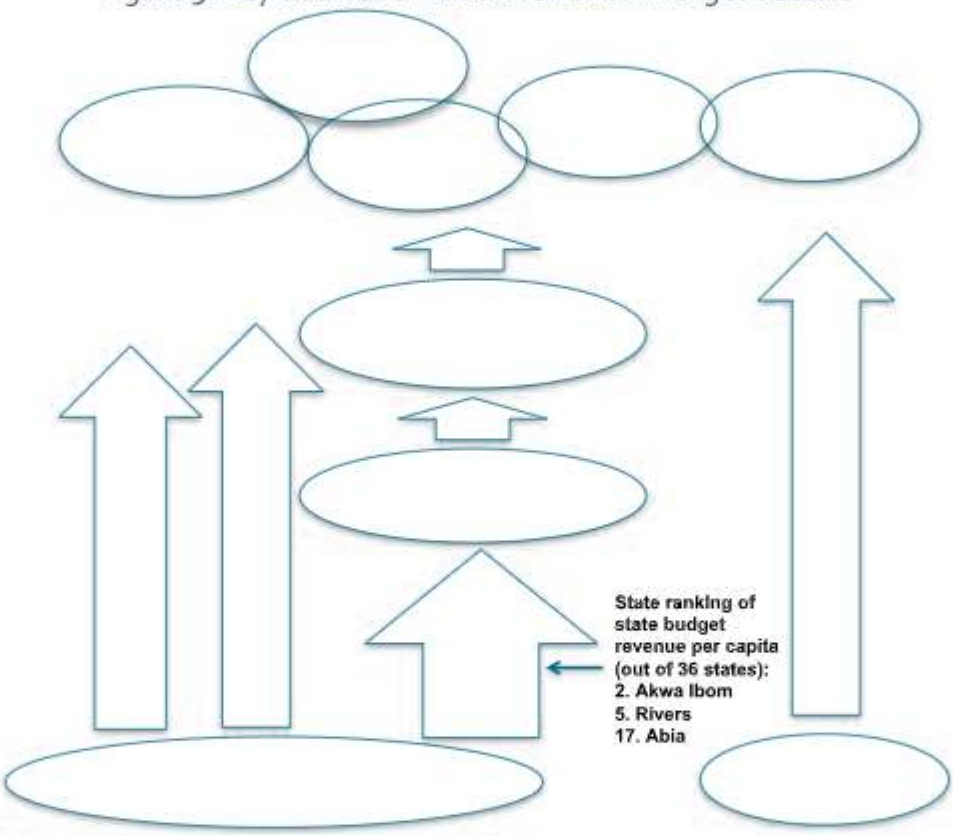
[45] Many competitive value chains or clusters have at least one large firm functioning as an anchor company, acting as a catalyst or magnet for other companies. In the context of SME development, new businesses may start out as subcontractors or suppliers to the anchor firm, or they may be formed through spin–offs from the large firm. New enterprises may also benefit from the market access and technological and market knowledge arising from the anchor firm.

limited, Plasto crown, quality ceramics, Qua steel company, Asbestos limited, Pamil industries limited, Peacock paints, international biscuits and Sunshine batteries in Akwa Ibom state. [46]

This trend suggests that the prevailing narrow economic and revenue base and the need for a more formal, dynamic and competitive private sector in the target states will act as significant constraints to formal employment growth until enhanced enterprise development and private sector competitiveness can be achieved relative to states that have been historically strong competitors in the target sectors, for example Lagos' more dynamic ICT sector and Cross Rivers palm oil production)

The narrowness of the economic and revenue base and overarching importance of the oil and gas sector is partially captured in Figure 9 below.

Figure 9: Key Sources of Labor Demand in Target Sectors



Source: Project Team analysis

As seen in the diagram, the oil and gas sector generates employment demand in the target sectors directly, through procurement and corporate social responsibility (CSR) initiatives, and indirectly, through revenues paid to the federal government. Procurement primarily benefits the construction sector, while CSR initiatives often target youth as the primary beneficiaries. Simultaneously, the federal government channels revenues from the oil and gas sector to state governments, which are then able to

[46] Dr. Boniface Umoh, "Baseline Survey on Youth Unemployment in Akwa Ibom State." Institute for Development Studies, (IDS) University of Nigeria, Enugu Campus, 2015

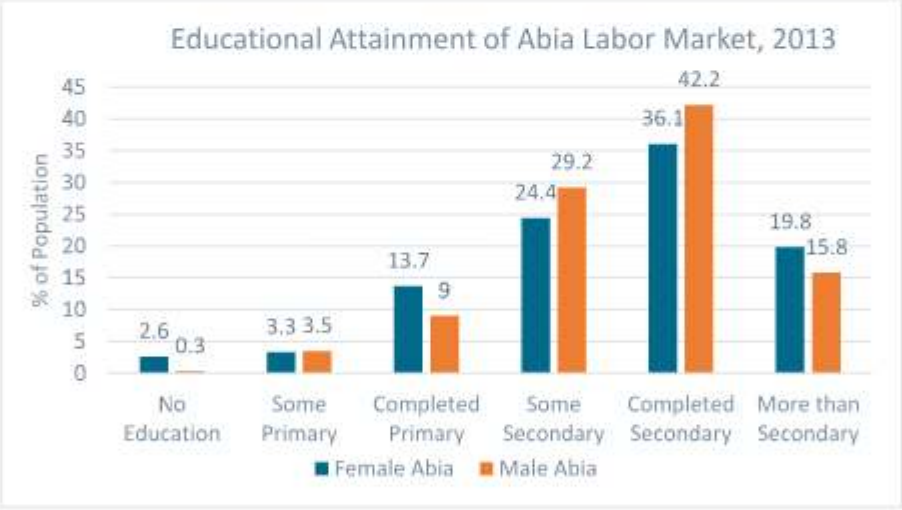
employ large numbers of people.[47] In turn, this economic stimulus creates demand locally in the retail, hospitality and wholesale trade sectors for goods and services produced by target sector actors.

This dynamic driven by the oil and gas sector has caused significant market distortions in the target states over the last few decades, particularly in Rivers State and Akwa Ibom. In this context, historically most industries in the target states have been local serving or retail-oriented and have had little incentive to grow and improve quality. As such, apart from some isolated cases, there are relatively few private sector firms in our target sectors that are highly competitive and competing in markets outside the local area. This may indicate that employers at these firms are not incentivized to invest in infrastructure, high skilled or specialty labor, thus diminishing household economic growth potential for a large pool of low skilled workers.

Education and Labor Supply

While youth (age 15-24) today are comparatively more educated than their older counterparts in the labor market (25-64), many youth do not transition to secondary education and beyond, thus terminating their formal education around the end of primary school.[48] Nationally, primary school enrollment reaches 85%, however just 44% of school aged children transition to secondary institutions.[49] Enrollment is challenged not only by economic factors, but also by hostile environments in both the Niger Delta as well as other parts of Nigeria. Social norms within families influence the prioritization of education based on gender, where male family members are more likely to attend school than female members.

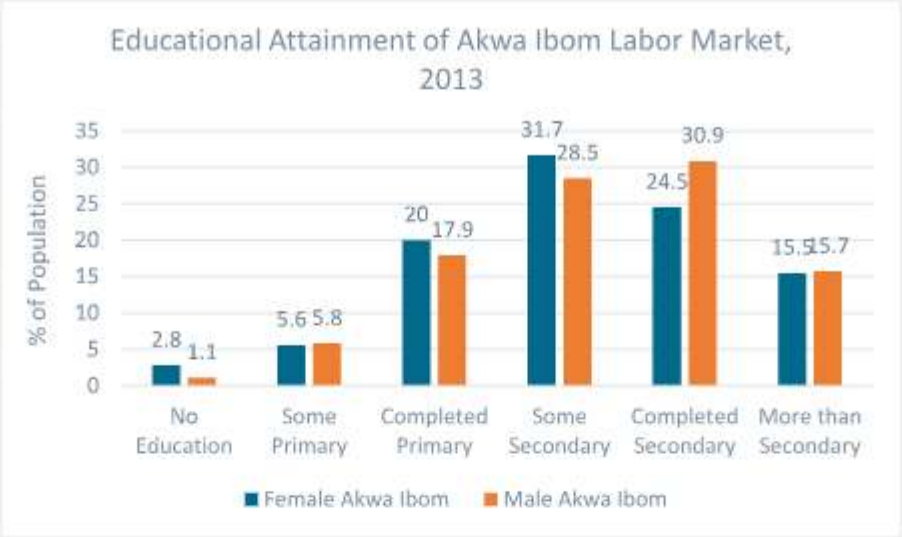
Figure 10: Educational Attainment in Three Target States, 2013

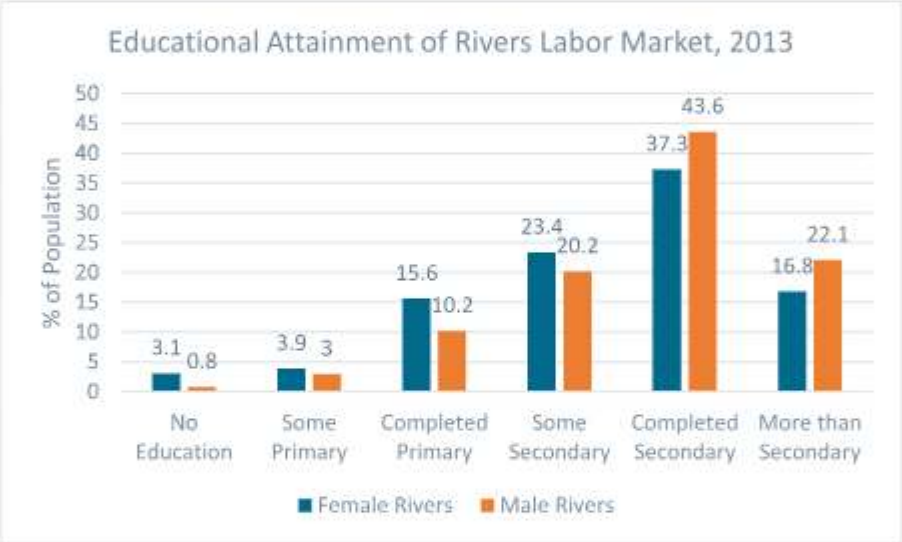


[47] For example, Akwa Ibom State receives the highest statutory revenue allocations, or 9.4% of the total revenue allocated to the 36 states in Nigeria with an estimated GDP of US$ 11.8 billion in 2012. Source: Umoh, Boniface. "Baseline Survey on Youth Unemployment in Akwa Ibom State." Institute for Development Studies, (IDS) University of Nigeria, Enugu Campus, 2015.

[48] World Bank. More, and More Productive, Jobs for Nigeria: A Profile of Work and Workers; National Bureau of Statistics. Selected Basic Public Education Statistics in Nigeria. Education Data 2013-2014. http://nigerianstat.gov.ng

[49] USAID. Workforce Development and Youth Employment in Nigeria: Desk Review.





Approximately 50% of the labor force is between the ages of 15-34 nationally. Across age groups of the labor market on the state level (15-64), men and women have achieved varying levels of education. For example, in Rivers state, more women complete primary and some secondary education than men, while men complete secondary education and go beyond this to universities, polytechnics, or technical schools at higher rates than women. In Abia State, women more often complete primary and study beyond the secondary education. In Akwa Ibom, women also obtain higher levels of primary and some secondary levels of education, and obtain approximately the same rate than men at the "more than secondary level." Nationally, dropout rates are the highest between primary to secondary levels due to higher school fees and fewer available secondary schools.[50] As a result, many students prematurely exit the education system during these critical periods.

[50] USAID. Workforce Development and Youth Employment in Nigeria: Desk Review.

LABOR MARKET AND EMPLOYMENT CONTEXT

Youth unemployment and underemployment are critical issues that can negatively or positively impact both economic development and de-escalation of conflict in the Niger Delta. The narrow economic and revenue base in the three targets states made them especially susceptible to the recent shocks and uncertainty caused by lower oil and gas sector proceeds, the economic recession, the currency devaluation and other related challenging macroeconomic issues. According to the National Bureau of Statistics, the three target states' labor markets are currently characterized by high incidences of unemployment or underemployment with recent data showing that there are currently over 5 million unemployed or underemployed person in Abia, Akwa-Ibom and Rivers combined and in Rivers, 61.4% of the state's labor force is either unemployed, or underemployed.

Table 2: Key Labor Sector Indicators in Abia, Akwa-Ibom and Rivers States (Q3 2017)

State(s)	Labor Force Population	Unemployment Rate (%)	Under Employment Rate (%)	Unemployment & Underemployment Rate (%)	Total Unemployed & Underemployed persons
Niger Delta Region*	22,893,337	30.1	18.7	47.1	10,777,451
Abia	1,977,464	28.3	16.3	45.3	895,692
Akwa-Ibom	3,314,394	36.6	18.2	54.8	1,814,706
Rivers	4,301,988	41.8	19.5	61.4	2,639,589
				Total	5,349,986

*Niger Delta Region comprised of Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers States.
Source: National Bureau of Statistics, "Labour Force Statistics Q3 2017 Vol 2."

Further, the results of the stakeholder interviews confirm the findings of secondary sources indicating that the labor markets have been dominated by civil service employment in Rivers and Akwa Ibom, and to a lesser extent in Abia as well. [51] In fact, the government has been the largest employer in the target states for some time, particularly in Akwa Ibom, and it is estimated that 60-70% of employment is informal. [52]

Subsequently, apart from Abia, the regional labor market is not very dynamic or well diversified. Not surprisingly, a rapid survey of youth in the Niger Delta by PIND revealed a belief that public-sector jobs were the most attractive, and that the public sector was responsible for providing jobs.[53] This is

[51] "Akwa Ibom State is predominantly civil service state with the government being the major engine of growth." Source: Enefiok E. Ibok, Ph.D and Sunday E. Ibanga, Ph.D "The Impact of Human Capital Development and Economic Empowerment on the Socio-Economic Development of Akwa Ibom State, Nigeria" Global Journal of Human Resource Management Vol.2,No.3,pp.37-44, September 2014

[52] "In Nigeria...about 5 percent of the jobs created in the economy are in the public sector, while about 61 percent and 33 percent, respectively, are in the informal and formal sectors." Source: Margaret Adesugba and George Mavrotas, "Youth Employment, Agricultural Transformation, and Rural Labor Dynamics in Nigeria." IFPRI Discussion Paper 01579, December 2016

[53] PIND. Technical Vocational Education and Training – TVET in Niger Delta. A Situational Report with Suggestions for Possible Further Action by the PIND Foundation. 2011.

potentially a misinterpreted understanding of public sector employment however, as Nigeria's public sector lost approximately 7,000 jobs in 2016.[54]

However, the results of stakeholder interviews suggest that residents' ideas and perspectives are widening beyond government jobs. Technology and other types of entrepreneurship are increasingly perceived as viable career pathways and more people are venturing into entrepreneurial activities and creating micro and small enterprises. In addition, stakeholder interviewees report that medium scale agriculture is gradually starting to emerge in the region, the hospitality and retail sectors are growing and several local, retail-oriented companies such as Genesis Foods and Jevinik, are becoming increasingly competitive and expanding both locally and into neighboring states, providing employment opportunities for many youth as these companies expand.

However, in this area and others, numerous skills gaps and skills mismatches were reported, and stakeholders widely agree that a significant disconnect often exists between the training programs being supplied and the actual occupations and skills in demand in the labor market. It was reported that many graduates from tertiary institutions only find employment that is not proportional to their educational qualifications. [55] Others in the information and communication technology (ICT) sector for instance, find that non-traditional training programs provided by new ICT hubs are more beneficial than universities as programs are flexible and skills are more closely related to those needed in the labor market. Further, there are few mechanisms for transmitting labor market demand information from employers to educational institutions to inform educational priorities and curriculum design. [56] In fact, the critical challenges confronting Nigeria's workforce development system overall [57] including skills gaps, inadequate linkages between the private and education sectors, fragmented skills development marketplace, lack of appropriate trainings and standards, insufficient scale/geography reach of educational programming and jobseekers pursuing inappropriate or unnecessary qualifications, are all very prevalent in the three target states' labor markets as well.

Stakeholders interviewed reported that many universities and other educational institutions are interested in aligning their needs with the private sector. However, universities, polytechnics, and the National Board for Technical Education upgrade curriculum every 4-5 years and are reportedly not always well-informed by prevailing employment demand requirements, leaving cohorts of students at risk for being unprepared for the current needs of the labor market. Training institutes have integrated experiential learning through required group projects and internships; however private sector actors still complain that young graduates do not have a balanced education between practical training and theory. In areas where large private sector companies do not exist, such as Akwa Ibom, universities struggle to place their students in external internship experiences, such as the Students Industrial work experience scheme (SIWES).

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54 National Bureau of Statistics. "Job Creation Survey, 2nd and 3rd Quarters of 2016. Summary Findings and Selected Tables." December 2016.

55 Stakeholder interviews and: Margaret Adesugba and George Mavrotas, "Youth Employment, Agricultural Transformation, and Rural Labor Dynamics in Nigeria." IFPRI Discussion Paper 01579, December 2016

56 Stakeholders universally supported the importance of acquiring more data from the private sector, particularly understanding the hiring needs of the private sector so that curricula can be matched to private sector needs and requirements.

57 Dalberg Advisors. "Strategic Framework and Implementation Plan for Job Creation and Youth Employment in Nigeria." March 2016. https://www.dalberg.com/our-ideas/strategic-framework-and-implementation-plan-job-creation-and-youth-employment-nigeria.

RIVERS STATE ANALYSIS

Overview

Oil and gas companies have created distortion not only in local markets, but in the minds of young people, as many believe that oil companies, government projects, and other donor funded youth employment programs are handouts, not opportunities. This has caused many youth to have a negative attitude toward work, while on the other hand, other youth are increasingly engaged and create self-employment opportunities in the areas of ICT and agriculture. Across sectors, young people and young entrepreneurs transitioning into the labor market do not receive the practical, market driven education necessary to be competitive beyond the local market. Moreover, the entrepreneurship ecosystem, incubators, universities, and other key stakeholders often operate in isolation, impeding nascent new industries.

AGRICULTURE IN RIVERS

Overview

Agriculture is the primary means of economic activity in Rivers, with 40% of the population working in agricultural production that serves local markets.[58] In Rivers, cassava, cocoyams, rice, beans, maize, palm oil, and fish such as tilapia and catfish are commonly produced according to a recent labor market assessment completed by the Nigeria Stability and Reconciliation Programme.[59] Stakeholders noted that these value chains are creating labor demand for young people, in addition to poultry, snails, piggeries, rabbits, grass cutters, agricultural inputs and extension services. One farmer stated that poultry, snails and pig production are particularly important as the growing Delta population consumes more protein. For women, DFID's MADE project has identified production and market opportunities specifically for women in agricultural inputs, palm oil, fisheries, poultry, and cassava. Maize is also of interest as large companies such as Nestle look to smallholder farmers to meet growing demand.

Indeed the entry of a major investor like Olam into the the aquaculture feed sector supports the positve outlook for, and investor confidence in, the aquaculture sector in the Delta region. [60] And stakeholder interviewees contend that Rivers and Akwa Ibom are especially well positioned to take advantage of the aquaculture sector's expansion. It is estimated that Rivers' aquaculture subsector is currently comprised of 3000 farmers, 25 hatcheries and 100 fish processors. [61]

58 Adetula, David. "Will Agriculture Better Distribute Wealth in the Niger Delta?" October 26, 2016. http://venturesafrica.com/will-agriculture-better-distribute-wealth-in-the-niger-delta/.

59 Chovwen, Anthony and Chuks Ofulue. Rivers State Labour Market Assessment Report. Nigeria Stability and Reconciliation Programme. July 2017.

60 Partnership Initiatives in the Niger Delta, "Fish Feed Value Chain Analysis in the Niger Delta." December 2017.

61 Foundation for Partnership Initiatives in the Niger Delta (PIND) estimates.

Despite the prevalence of agriculture in the Rivers economy, stakeholders in agriculture noted the heavy stigma attached to work in the agriculture sector for young people, who associate farming with either traditional methods, subsistence agriculture performed by their parents, or both. This perception of the agricultural sector has thus created the idea that agriculture does not present long term career pathways for youth looking for productive and satisfying work in the global economy. This attitude negatively affects youth participation in agriculture. Moreover, as Rivers State is considered the epicenter of Nigeria's oil industry, the lure of wealth from oil and gas companies draws young people looking for opportunities off the farm and into growing, crowded urban cities such as Port Harcourt, even though economic opportunities in oil and other industries are minimal for low skilled laborers.

> "Extension services are an area of aspiration for youth in agriculture. They can go onto a farm with their earphones and jeans and making a living. They are on the farm, but doing something different than what their parents did. They work hard Monday-Saturday on the farm, and then it's Sunday best, and they can take their girlfriend out to the movies. That is exciting to them."
>
> – Civil Society Actor, Abuja

Growth Opportunities

The push to integrate technology into agriculture is presenting new opportunities, potentially shifting the sector from "conventional to aspirational" for young people. A recent report by Oxford Business Group notes that technology solutions and innovation in the agriculture space have eased the shocks of wider economic trends, creating resiliency in the agriculture sector during the recent economic recession. However, ICT driven solutions across agriculture value chains remain stifled in their growth capacity due to limitations in energy infrastructure.[62]

Agriculture activities of interest to youth

- Agric-mechanization
- Marketing
- Extension services
- Small processing
- Aquaculture

In addition, actors in the agriculture sector mentioned agric-mechanization, small processing, and aquaculture as areas where youth could be interested and engaged in the sector at large. By supporting operations of this size, the private sector, government, and donors alike are investing in youth employment generation through entrepreneurship.

Outgrower schemes in areas such as small seed sowing machine are another area where youth can provide a value to both, smallholder farmers and to themselves. Such services would address some of the constraints that farmers face in terms of harvesting at optimal times and decreasing post-harvest losses.

Skills and Training

Despite the opportunities outlined above, employers looking to hire technical workers in the outlined value chain noted mismatches between labor supply and demand: "There are jobs available for skilled workers, but no skilled workers, and there are educated persons, but no jobs for these individuals." This illustrates the complicated nature of economic growth in agriculture and employment opportunities in Rivers state. Many employers outlined that their laborers are either those who have practical experience

[62] Oxford Business Group. *The Report: Nigeria 2017*. https://oxfordbusinessgroup.com/nigeria-2017.

working in a given area of production. For higher skilled positions, employers require Senior School Certification Examination (SSCE), and then receive supervised on-the-job training once hired.

Others noted that they struggle to find low-skilled workers with the ability to read and write properly, skills which employers require when hiring new workers. Other skills include the ability to withstand physically demanding work. Employers note that women as well as persons with disabilities are also considered for employment if they meet this requirement. However, due to the physically demanding nature of work in on farm activities, these requirements can disqualify particularly persons with disabilities if they are unable to meet strength and coordination requirements, thus making work conditions unsafe. For those working in agriculture input production, most hire operators with a certificate related to the area and spend approximately two years for this person to be trained for company standards, a significant loss to the company. These jobs require soft skills including strong work ethic, positive attitude, leadership, and communication skills.

A variety of institutions provide skills training to workers in agriculture, including traditional universities, polytechnics, donor-supported development projects, and companies themselves. Some of these include UNIPORT, Rivers State University, and the University of Education. Several companies take on interns from these institutions, which they believe gives students practical knowledge to build on their theory based training. Fertilizer production company Notore Chemical Industries Nigeria Limited noted for instance that they have a standing agreement with the University of Port Harcourt for Petroleum Studies that allows post-graduate students to acquire hands on skills training for 1-3 months. Other companies such as Indorama and Dangote are also exploring the advantages of internships, which would be jointly developed and certified by both the employer and the university.

Some private sector actors reported that traditional training institutions are not providing the skilled workforce they need. As a result, companies often rely on short term donor programs such as DFID's MADE to increase the skills of their own workforce. Ibiteinye Integrated Farms, Limited located on the outskirts of Port Harcourt also provides ad hoc capacity building and training programs to local universities such as Rivers State University, as well as private sector entities in Rivers State. Such training programs offer a flexible curriculum, which allows for the integration of new technology and methodologies. Universities do not necessarily have the capacities to keep up with agricultural trends which is why their programs are viewed by the private sector as less relevant than shorter term, technical degrees.

Additional Sector Constraints

Aside from human capital constraints, agricultural producers face many challenges that limit growth of the sector, which affects employment prospects for young people.

- **Tariffs on imported infrastructure and agricultural inputs:** High tariffs limit smallholder farmers' access to quality inputs, of which 90% are still imported, as well as mechanized farming equipment and replacement parts.
- **Low quality inputs:** Even with the increased availability and accessibility of inputs such as seed and fertilizer from China, farmers are not using optimal inputs, leading to lower yield. One farmer explained how buying poor inputs killed many of the farm's chickens, leading to greater veterinary costs and decreasing production for many months.

- **Access to Land:** Women and youth in general are adversely affected due to their lower rates of land ownership. .
- **Access to Markets:** Smallholder farmers struggle to get their crops from farm to market due to the lack of transportation and challenge of road infrastructure. As a result, the process of harvesting for farmers is often not financially viable. Others experience constraints in access to market as private sector processing companies have not engaged with smallholder producers in the past, creating challenges particularly for women to integrate into growing value chains.
- **Energy:** The high cost and unreliable nature of fuel sources in the Delta constrain production for producers and for processors alike. To address this problem, oil and telecommunication companies and other private sector firms are moving to diversify the energy sector in Rivers and elsewhere in the Niger Delta through new investments in clean energy, while other actors noted an increased interest in biofuel and alternative energy sources to be energy self-reliant.

ICT IN RIVERS

Overview

ICT jobs can be divided into two categories: those within established companies and those created through entrepreneurship. Established ICT companies in Rivers, including Cinfores, CAD Consulting, and Trisat Communications, Ltd., offer ICT solutions and consulting to a variety of sectors, including IT networking, software development and training; education, government, healthcare, communications, and financial services. Companies in various sectors are hiring in-house ICT specialists in areas such as database maintenance and web design, and network installation and maintenance, though these jobs are very few and far between. More often, companies will hire independent consultants to provide these services on a short-term basis. Oil and gas companies hire few local ICT professionals as local skills and capacities may not match up with the complexity of networks installed by multinational companies.

Entrepreneurs are also creating jobs for themselves and others, though it takes a while before startups become profitable enough to hire in numbers. Entrepreneurship in ICT offers limitless potential to successful young people as the market is on a global scale and opportunities are not restricted to local markets. One private ICT training facility indicated that between 60-70% of their graduates end up as entrepreneurs as they cannot find permanent jobs in the local economy. "There are no jobs right now," noted the Nigerian Institute for Information Technology (NIIT), "and self-employment is better than young people sitting at home and doing nothing." Additionally, it is common for young entrepreneurs seeking work in the formal sector to register their business, as companies looking for specific services are more comfortable engaging with formal business entities.

A nascent entrepreneurship ecosystem is supporting tech startups in Rivers, including the Ken Saro-Wiwa Innovation Hub in Port Harcourt, though it is relatively underdeveloped when compared to larger cities such as Lagos and Abuja. Nevertheless, the startup sector is starting to take off with small companies such as Digital Farm, Urango, ThrowAway, and WeFix, among others. Efforts for developing the tech ecosystem are supported by universities such Rivers State University, who have hosted events such as the Campus 24 Hackathon Challenge, Startup Port Harcourt Week, as well as developer

conferences.[63] Such events allow entrepreneurs to convene, share ideas, and collaborate. However, while relationships among innovation hubs and universities are developing, innovation hubs stated that universities need to do more in order deliver up to date curriculum to students, who could feed into and contribute to ideas being incubated in technology hubs. In terms of gender, stakeholders noted that while ICT is still a male-dominated field, this is changing, and women are often recognized as top performers in competitions. For example, Rivers' ICT sector recently hosted over sixty women across public and private sector for the "Women in ICT" conference, demonstrating a movement of female leadership in the state.

Growth Opportunities

Access to finance is changing for ICT hubs, as the diaspora movement is willing to invest money from abroad with less restriction than traditional banks. Entrepreneurs in Port Harcourt are encouraged by the diaspora population looking to both give back and invest in their home country, and individuals stated that because of this shift in investment type, they are less concerned with financial constraints than in previous years. Further, the tech sector ecosystem is gradually expanding in Rivers with at least eight existing ICT hubs within Port Harcourt alone.

The government is also looking to invest in and scale these investments through policy. For example, in 2016, the federal government announced that would create tax incentives to boost employment in the ICT industry, aiding the government in reaching its three million jobs target by 2018. While the news of tax incentives including tax holidays and ICT innovation funds sparked interest nationally, entrepreneurs in the ICT space in Rivers have not been able to access these tax incentives, even those who have engaged with the state government on this issue.

In terms of sub-sectors generating current and future employment demand in Rivers State, it was mentioned that opportunities exist and will arise in hardware, as devices become smaller, more advanced, and more integrated. This could potentially provide hardware maintenance as a youth entry point for skills development and employment. Software is a second area for exploration, as "the opportunities for skills development and employment in this space is limitless," an ICT communications firm emphasized. Specific opportunities include for programming, coding, systems analysts; UI/UX (user interphase/User Experience experts) data base administrators, artificial intelligence, web application developers, cloud computing, among others. For larger firms, youth are often absorbed when companies win large projects, particularly for digital marketing and branding as well as software developers and coders. Young people with less experience and knowledge of the industry may be at an advantage at smaller firms, as firms are often not able or not willing to pay for more experienced workers, making less experienced more desirable, less expensive candidates.

Skills and Training

ICT offers young people with low levels of formal education an entry point to gainful employment, as stakeholders in education noted that willingness to learn, a strong work ethic, positive attitude, personal values, and passion for the work are more qualifying in this field than other industries. Young people must have basic "digital literacy" and reading and writing skills, but otherwise, technical expertise can be

[63] Chuka, Fortune. "Ecosystem Base Profile: Rivers State University." February 3, 2018. TechActive. http://techativeng.com/2018/02/03/ecosystembase-profile-rivers-state-university/.

learned through practical application. Young people at low levels of secondary education could find opportunities in ICT if they are digitally literate.

One major constraint in terms of skills and training in Rivers is that stakeholders in the ICT sector, including government, education institutions, and ICT hubs, are largely disjointed and often operate in isolation from each other. For example, the head of a technology education institute said that he was unaware of any ICT hubs in Port Harcourt, while there are at least eight existing hubs within the city. This fragmented relationship could explain the mismatch of skills, where education institutions are training people, but they often do not know for what jobs, nor do they know where young people are being employed after completing a certificate or degree program.

Actors in the ICT space in Rivers complain of the huge gaps in knowledge and skills between universities and industry. One medium sized ICT firm stated that often, applicants "have a nice curriculum vitae, but little ability to deliver," and as a result, spend about two years of in house training and support to bring individuals up to the level of quality performance required by the firm. However, the siloed operations between university programs and the private sector in the ICT sector may be changing. One company hiring ICT specialists noted that it was only in the past 2-3 years where universities began to recognize their limitations and began to engage with private sector and the wider ecosystem through the development of entrepreneurship and innovation centers such as the Rivers State University Entrepreneurship Development Center. As noted above, the creation of this center has led to the development of new conferences and technology challenges for startups and entrepreneurs.

ICT hubs such as the Ken Saro Foundation Innovation Hubs are responding to the inflexibility of traditional institutions: "hubs fill in some of the skill gaps from universities; they encourage people to identify problems and build solutions." While the function and capabilities of each hub is distinct, many hubs provide training, mentorship, co-working spaces, support communities, and incubation programs that give young people the skills they need today. These hubs are not only responding to the needs of market, they are bringing new markets to Rivers State. One entrepreneur stated that there was no educational system to support his interests and unique set of skills in animation, but he saw and understood the potential in the global market and self-trained. Now he is a part of a wider community in Rivers state, where he is teaching and learning from others, integrating animation into the skill set portfolio of Port Harcourt's ICT hubs.

> "We see that those who would traditionally go into a university and study computer science are now opting to access knowledge and training within ICT hubs because this is where they gain market driven skills. Even bigger companies are starting to recruit from hubs rather than universities." – ICT Entrepreneurs, Port Harcourt

Additional Sector Constraints

- **Access to Energy:** Accessing grid electricity is expensive and unreliable, and many businesses and homes use petrol generators to fulfill their needs. Power outages are frequent, thus disrupting workflows and the ability for businesses to provide consistent and quality services to

customers. According to Dalberg, many alternative energy sources that are proven and cost-effective are unavailable in Rivers state and Nigeria at large.[64]

- **Isolated ecosystem:** The ICT sector is still nascent in Rivers state, and therefore communication among different groups and stakeholders is just starting to take place. There seems to be most synergy among the eight different hubs in Rivers state, while education and training institutions often operate separately from the needs of the wider ecosystem, though this dynamic seems to be improving.
- **Access to Finance:** Access to finance is a constraint for young people and entrepreneurs regardless of age in the ICT space, as products are not traditional and markets are global instead of local. Traditional loans from banks do not align with the needs of young entrepreneurs, and therefore many look for alternative options, such as international investors. The diaspora is influential here, as many feel a desire to give back and be active in their home country. ICT hubs and practitioners mentioned seeking to engage the government in supporting additional angel investors, venture capital, and crowd funding mechanisms in Rivers state.

CONSTRUCTION IN RIVERS

Table 1: Rivers Youth Engagement by Sector (per survey respondents)	
Sector	% of Respondents
Technical/Artisan/Welder/ Carpentry/Vulcanizer	12.2
Wholesale/Retail Trade	11.8
Agriculture/Farming/ Fishery/Livestock	10.2
Education	8.7
Transport/Storage	8.4
Information and Communication Technology	8.2
Administrative Support/Civil Servant	6.0
Construction	6.0
Arts/Entertainment/ Recreation	4.9
Manufacturing/Processing	4.4
Health/Social Work	4.2
Oil & Gas	4.1
Real Estate	3.5
Professional Scientific/Technical Activities	3.1
Finance/Insurance	2.7
Logging/Mining	1.7
Source: Rivers State Labour Market Assessment Report, 2017	

[64] All-On and Dalberg. "Nigeria: Energy Needs Assessment and Value Chain Analysis." 2016. http://www.all-on.com/publications/_jcr_content/par/textimage_284420566.stream/1478606782853/0ba32874a083b51ad6fc3db6419342c9e807e68999b0a2be27671d8209638c9b/CD4678_Shell_nigeria_technical_brochure_24pp.pdf.

Overview

The cyclical nature of the construction industry in Rivers state is tied to international oil companies' investments in infrastructure, as well as the state government's investments in infrastructure with the growing urban population in Port Harcourt. Prior to the fall in oil prices and the ensuing recession, the construction sector had been an important engine of growth as the local oil and gas and retail sectors expanded to respond to increased demand. However, Nigeria's recent macroeconomic difficulties have dampened demand for new construction, deeply affecting the sector's recent performance.
Unique to the Niger Delta is the government requirement that certain percent of employment generated from oil and gas related projects must go to local communities. However, this does not always translate to high skilled high paying jobs; more often, the MOU is fulfilled by filling locals in low paying security, cleaning, or "helping jobs." One company did mention that while they are required to fill 40% of the labor from the local community, they aim for much higher numbers to "avoid headaches and keep the peace." These jobs are used as bargaining chips with local governments and community members who play a vital role in carrying out projects. This extra step can be an assurance to a company that criminal groups are less likely to disrupt projects, avoiding expensive delays on projects.

Growth Opportunities

Despite the recent downturn in construction over the past several years that forced local construction companies to be heavily reliant on government-funded construction projects, construction companies project that the industry will pick up in 2018, with a pipeline of projects in the oil industry underway. One such project in this space is Total's Brick Factory that will require labor to build the factory itself and an estimated 500 trained employees to work once the factory is operable. In addition, there is optimism that the expected extension of the Nigerian Content Act to the construction sector will create increased demand for local construction services.

Opportunities in construction may also be seen in the housing construction sector. According to a medium sized construction company in Rivers State, Nigeria is experiencing a housing deficit of 17 million, which would not only create jobs in carpentry, masonry, and bricklaying, but also create a demand for more skilled labor such as plumbing, electricity, tiling, etc. Of these, carpentry is in demand as workers are unwilling to work in this sector, and instead come from neighboring countries. Interview with an expert at the Rivers State University also highlighted carpentry as a growing area of demand, particularly in terms of finishing (doors, furniture, cabinets, etc.) as well as tiling and plumbing trades. Employers emphasized a lack of professional skills in the Niger Delta construction sector but also stressed that there is good potential to build off of existing youth's construction skills base and up-skill to meet in-demand professional skills. As such, Rivers State's mid-sized construction company industry segment that is diversified and not as reliant on oil and gas sector projects seems especially well positioned to take advantage of anticipated investment that will create demand for residential, commercial and transportation construction services.

Skills and Training

For construction companies, full time employees are those working in administrative roles and as highly skilled engineers, often from abroad. Otherwise, lower skilled labor (such as welders, fitters, painters, plumbers, etc.) is sourced from contract companies who fill labor supply only as project needs arise. However, even lower skilled laborers in Rivers state are not necessarily from Rivers state; it has become increasingly common for artisans from Togo, Ghana, and neighboring Delta states to fill these roles. Companies note that Rivers residents do not want these jobs, and those that may be interested are not trained enough to fulfill them.

For project-based industries such as construction, in bust periods, only highly skilled employees are retained and paid as full time staff. Contractors noted that they generally hire lower skilled workers from the same pool of candidates, as "there's no time for amateur workers on high risk job sites in the oil and gas industry." Major contractors ensure quality work not only by looking to the same pool of applicants, but also by enforcing international standards and certification for every individual on the job site. Certification is expensive, and must be renewed every few years. This means that low skilled occupations in the construction sector are not structured in a way to create advanced career pathways for those who enter. For example, a welder who is required to have the proper certification and must be periodically recertified is not likely to invest in higher levels of education to change occupations to become a manager or an engineer. Contract companies hire directly for the positions they are looking for, not considering the potential of skills upgrading from within the firm itself.

Education and training in the construction industry in Rivers is sourced from both government technical and vocational training institutions such as the Government Craft Development Center in Port Harcourt, University of Education, technical and vocational training centers, polytechnics and public works training programs such as the World Bank's SEEFOR invest in programs that seek to address the "skills gap" that private sector companies often complain about. For larger companies with a greater demand for labor, companies noted that the Petroleum Training Institute (PTI) located in neighboring Warri, Delta State is known to provide high quality training for certificate programs in pipeline welding and fabrication as well as national diploma programs in mechanical engineering, industrial safety and environment technology; welding engineering and offshore technologies, among others.

Likewise, the University of Education in Port Harcourt offers paid training for 3-6 months in areas such as shipping and maritime studies; pipeline welding and fabrication; safety and fire management, among others. Paid trainees in these programs are typically 20-40 years of age. The University of Education also offers entrepreneurship skills training for students (Age 17-30) in year 2-3 of their study in the university which provides a basic certification for those looking for opportunities as entrepreneurs. The university has a signed agreement with them, which allows Total to provide direct input into the development and upgrade of curriculums.

However, despite existing programs, private companies stated that polytechnics and universities are not well known to train students with practical knowledge such as in-demand advanced software. Moreover, graduates of universities such as University of Port Harcourt (UNIPORT) have a hard time competing with PTI for skilled jobs related to oil and gas in national diploma programs because of the level of practical knowledge integrated into the curriculum. As a result, oil companies scout talent at the Institute of Petroleum Studies Master's program at UNIPORT. Multinational oil and gas companies also commonly hire internationally educated and trained workers. Lower skilled workers requiring internationally recognized certificates such as the United Kingdom's National Examination Board in Occupational Safety and Health (NEBOSH) certification and from the American Welding Society must also meet certain standards in construction related to the oil and gas industries. Human resource managers explained that when these individuals are not working on a specific project, they move into more local markets looking for short term gigs until the industry picks up again.

Beyond technical skills learned in the classroom and on the job, construction companies emphasized important soft skills including, attention to detail; positive attitude, commitment, integrity, timeliness to work, work ethic, among others.

Women play a small but significant role in the sector. Noteworthy, one field manager stated that of the 200 workers he manages, only 3 are women. More often, women in construction work in administration, with one private sector Company stating that women are more honest and trustworthy as accountants than men. However, various actors mentioned their potential for skilled labor as crane operators, or highly skilled engineers.

Additional Sector Constraints

- **Human Capital:** A medium sized company noted labor constraints they face are not necessarily insufficient numbers, but hiring for project with people who work productively and effectively. "If I need a man to carry something who can do it himself, I need to hire two men to get the job done," stated the manager. Poor attitudes related to work, means that some employers plan for the deficits of low skilled workers by hiring additional low skilled labor.
- **High Interest Rates:** Private developers and subscribers are subjected to credit charges as much as 25-27% p.a.
- **Security**: Industry actors stated that "since 2007, Nigeria has been distracted and the system fell apart." Insecurity caused by violent groups made it increasingly difficult to move safely and efficiently between job sites in rural areas, as road blockages and hijackings became commonplace. This caused many companies to invest heavily in security escorts from both local police and national army, as opposed to investing in high efficiency equipment, new technology, or additional labor.
- **Corruption**: Companies who must pay for security note that, "you never know where the money goes."
- **Political Context:** With the upcoming 2019 presidential election, private sector companies already feel there is a risk of country stagnating ahead of elections.

RENEWABLE AND SOLAR ENERGY IN RIVERS

Overview

According to a recent report by All-On and Dalberg, there is a large opportunity in Rivers state to provide alternative energy sources to small, medium, and large scale enterprises, as well as to remote enterprises needed by entrepreneurs. Petroleum based energy sources, such as kerosene lanterns, petro-generators, are significant energy sources for Rivers state households and SMEs, as grid electricity is not expected to increase significantly in the short run. Currently, 22% of the Rivers population is "off-grid," while 98% of SMEs in Rivers use generators to power businesses. Given these reality, individuals and SMEs must seek energy alternatives.

The installation and maintenance of solar panels provides one such energy alternative. Companies such as Green Village Electricity Projects, Limited (GVE) uses solar photovoltaic (PV) systems to reach customers, providing energy alternatives to both homes and businesses such as commercial banks. Green Village Electricity Projects, as well as companies such as ANERGY, GO SOLAR, LUMOS, ECOWAS, ECREEN, and IRENA, are creating awareness of the existence and the potential of solar power in the Rivers State market. Private companies are also beginning to see more support from both government and donors in terms of employee training programs, grant resources, and policy support from the Nigeria Electricity Regulatory Agency (NERC). One such example is DFID's Solar Nigeria Program, strengthening the solar energy market across Nigeria through grants to companies that provide solar products and services, particularly those who reach the "last mile customer."65 This program will indirectly generate employment as the market is incentivized as more individuals require training in installation and maintenance services in remote areas served by solar energy companies. Others actors working in the solar energy sector include the African Development Bank, (AFDB), Shell All-On, the Bank of Industry, the National Board for Technical Education (NBTE) among others.

Growth Opportunities

Actors in the renewable energy space believe that there are growing opportunities in solar PV systems as there are still gaps in the installation, maintenance, and management of systems. The company estimates that even within cities in Rivers State, 60-70% of the households and businesses are underserved and in many cases, generate 80-90% of their energy needs themselves. This coupled with the increasing appetite for alternative energy sources creates significant opportunities for growth. In rural areas as well, GVE has identified several communities can be viable locations especially for solar based rural electrification programs such as Akuku toru and Oyokoto, home to fishing settlements in Rivers State.

Skills and Training

One constraint faced by solar installation and repair companies is that many of those working in the sector are "mostly old time electricians who have taken on solar installation through practice, self-training and apprenticeship. However, technical workers formally trained are not widely available in the labor market," stated Green Village Electricity Projects. Because workers are widely those who have training in a related field, technical expertise is gained through on the ground training. The industry requires installation and maintenance workers who have obtained a basic education, or those who have prematurely left secondary school, as well as ordinary diploma holders from polytechnics. However, those working in systems design require university degrees. Outside of technical expertise which can be learned through training, team building is an important soft skill for those working in the solar sector.

Green Village Electricity Projects provides internship opportunities lasting one month, but do not have established relationships with educational institutions to provide a pathway for youth transitioning from the classroom to the workplace.

Additional Sector Constraints

- **High Costs of Solar Systems:** For Nigeria, cost per unit is considered high, estimated for home systems at about N19,600/unit for a 150w unit plus N150/day charge. These smaller units designed for individual family consumption may not be adequate for SMEs that require more powerful systems and additionally are cost prohibitive. Efforts to reduce the capital intensive nature of solar are being addressed through the efforts of 'Impact driven Investors' such as Shell All On, the Bank of Industry, AFDB, Lumos, among others.
- **Lower Return on Investment in the Niger Delta**: Return on Investment is higher in northern states as the north experiences longer hours of radiation (10-12 hrs.) compared to the south (5-10 hours). Exposure to sun light drops during rainy season.
- **Negative Perceptions:** The impact of failed solar projects (for instance street lighting projects) has been a disincentive to invest in solar.

[65] DFID. "Solar Nigeria Programme: Solar Power that Works, Where It's Needed the Most."2017. http://www.solar-ng.com/wp-content/uploads/2017/09/Solar-Nigeria-Programme-Consumer-Programme-Brief-Final1.pdf.

ABIA STATE ANALYSIS

OVERVIEW

Abia state is known as the "SME capital of Nigeria" due to the large presence of small and medium-sized enterprises (SMEs). According to a 2013 survey by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and the National Bureau of Statistics (NBS), Abia state is home to 904,712 micro-enterprises, 1,769 small enterprises, and 40 medium enterprises, and entrepreneurship is encouraged by both government and university policies and programs (See Table 4 below for sectoral make up of SMEs in Abia State). As such, entrepreneurial spirit defines youth in Abia state due to the commonplace nature of home based enterprises, or "cottage-industries, viewed as valuable contributors to both employment and local economic activity.[66]

> "Majority of youth prefer to be self-employed due to the fact that Aba is the industrial nerve center of the East and southern states of Nigeria."
>
> - University representative, Abia State

Table 4. Sectoral Composition of Organized Private Sector in Abia State

Sector of Business	# of Entities	%
Agriculture and Forestry	325	20.6
Manufacturing	246	15.6
Building and Construction	237	15.0
Hotels, Restaurants, Cafes and Tourism	66	4.2
Communication and ICT	63	4.0
Real Estate, Renting and Business Activities	54	3.4
Electricity, Gas and Water Supply	29	1.8
Wholesale/Retail Traders	21	1.3
Educational Services	19	1.2
Health and Social Work	18	1.1
Transport and Storage	7	0.4
Fishing Industries	6	0.4
Mining and Quarrying	4	0.3
Financial Intermediation	4	0.3
Public Administration and Defense	1	0.1
Other	476	30.2
Totals	1576	100.0

[66] SMEDAN, NBS. "SMEDAN and NBS Collaborative Survey: Selected Findings 2013." http://nigerianstat.gov.ng/pdfuploads/SMEDAN%202013_Selected%20Tables.pdf.

Employers in Abia state interviewed for this study emphasized that one of the greatest challenges to working with the youth population is a need for "attitudinal change and reorientation of the mind." This theme of attitude was consistent across sectors, and a positive attitude was highlighted by private sector stakeholders as one key characteristic of making youth "trainable" for current and growing needs of the labor market, particularly in the leather and garment industries. Additional interviews with polytechnics indicated that in addition to a shift in attitude, part of making youth "trainable" includes soft skills training targeting skills for entrepreneurship such as communication, teamwork, professional networking, and leadership, as well as business management.

Making youth "trainable and trained" for the needs of the labor market is also at the forefront of the Government of Abia's agenda. The National Directorate of Employment (NDE), operating in Abia State since 1991, has 7 job centers established in LGAs, and programs targeting youth unemployment in all 17 local governments of Abia. NDE has trained over 5,000 women and youth since 2014. The employment programs and job centers run by NDE provide six week to six months skills training programs for women and youth in vocation and artisanal skills based on youth's interests. These centers and programs partner with local businesses to move young people from education to employment. Likewise, businesses requiring specific skills often contact NDE centers for professional references.

Additionally, the governor has provided full support to promote technical and vocational education (TVET) through the Education for Employment (E4E) program, using a work-based skills training platform known as the Nigerian Skilled Qualification Framework. The well-received program is collaborating with the organized private sector and government agencies as well as capacitating technical colleges and skills centers to be responsive to the needs of the labor market. For example, E4E has conducted a pilot training on Information Technology skills. Moreover, in collaboration with Dangote Industries, E4E recently opened the first Job Center in Isialangwa North. The government plans to create similar centers in the sixteen other local government areas (LGAs) under E4E.[67]

AGRICULTURE IN ABIA

Overview

The agriculture sector is Abia's largest employer, as 70% of the workforce works in agricultural related activities. Agriculture contributes 27% to Abia's GDP.[68] Noteworthy agricultural value chains with presence in Abia state include yams, maize, potatoes, plantain, taro, and cassava and palm oil, and cashew are considered important contributions to the agriculture sector.[69] Seed companies highlight rice, cassava, wheat, sorghum, maize and yam as their principle products in Abia state. Important investments have been announced in the palm oil and cassava sub-sectors and those sub-sectors are expected to expand in the state. [70] Further, the aquaculture subsector is increasingly important with it estimated that it is currently comprised of 1500 farmers, 22 hatcheries and 50 fish processors/smokers. [71]

Initiatives from both the public and private sector have launched to engage youth in the agriculture sector. For example, a significant number of youth are applying to the Central Bank of Nigeria's (CBN) Anchor Borrowers' Program (ABP) which started in 2015 by President Muhammadu Buhari. The objective of this program is to not only create economic linkages between smallholder farmers and large-scale processors, but also to provide access to finance through low interest rates, as well as capacity building to increase production and employment for "a new generation of farmers and entrepreneurs."[72] In Abia, the program focuses on poultry and oil palm.

Government officials noted that more youth were interested in exploiting the program for its benefits rather than in using the benefits to propel an existing or budding business. The perception that government programs are handouts hold true for many programs across the Niger Delta Region.

Growth Opportunities

Programs such as the Anchor Borrowers' Program highlight the potential that youth have to not only build market linkages to large scale processors, but to become processors themselves. Several actors across agriculture value chains highlighted the need for increased infrastructure for agro-processors as there are growing opportunities in aquaculture and poultry processing and packaging. Other opportunities exist in, animal and fish feed production, and poultry processing and packaging. Currently youth are limited due to availability of equipment and training courses.

67 Government of Abia. "Education for Employment (E4E)." http://abiae4e.org.ng.
[68] Abia State Government, "Abia Economic Development Blueprint (2015 – 2025) Version 8".
69 Government of Abia State. "Inside Abia's Leather and Garment Industry." April 2017.
[70] BudgIT, "State of the States – The 2017 Edition." © 2017.
[71] Foundation for Partnership Initiatives in the Niger Delta (PIND) estimates.
72 Olawale, Abdulsalam. "How to Access Anchor Borrows Fund." *AgroBusiness Times*. January 12, 2017. http://www.agrobusinessngr.com/how-to-access-anchor-borrowers-fund/#forward.

Other opportunities exist in the processing of agriculture inputs. Given the low quality of inputs, employers recommended further investment in high skilled workers such as biotechnologists and seed breeder for seed production and preservation. This would have a wide impact on the industry, as well as employ in demand skill labor in Abia state.

"The ability to earn a living without depending on anybody also gives youth the drive to deliberately seek out opportunities in agriculture." Civil Society Actor, Abia State

Skills and Training

Employers in Abia state noted that the level of education required by employee's ranges from out of school youth to those with a Master's degree, depending on the job. According to data collected, the level of skills needed varies according to size of the farm. Larger farms employ graduates with technical skills to optimize production. The Michael OKpara University of Agriculture in Umudike also offers undergraduate, post-graduate and certificate programs. Understanding the changing structure of the economy and labor market, the University requires that first year students take courses in small-scale businesses as well as entrepreneurship for agriculture through the Center for Entrepreneurship. The Center for Entrepreneurship Education Development (CEED) at the Abia State Polytechnic has a similar requirement, as all students must pass through the center to have practical experience and skills to prepare them for self-employment.

The National Agricultural Seed Council was noted as providing valuable training for the agriculture sector. However, weighed more by employers in the agriculture sector than educational attainment in Abia is attitude: "the willingness to work as a farm hand despite qualification" is critical, and lacking in Abia. Employers stated that poor attitude of youth affect their ability to carry out their responsibilities. Some of the soft skill required include attitude to work, human relation, personal values and integrity especially for the casual staff. The focus on manual tasks in agriculture can be a challenge for employers to hire more women.

Additional Sector Constraints

- **Low Quality, High Cost Inputs:** The region's farmers for many years depended on seed development companies in the North-East, and as a result, would receive lower quality seed in Abia state. It was not until recently that a regulated seed company started, but still farmers are often left with lower quality inputs, thus affecting their outputs.
- **Lack of Agro-Processing Infrastructure:** The government has done a lot to support the development of the leather and garment cluster, but must invest in agro-processing machinery to support youth entrepreneurs' ventures in agro-processing.
- **Limited Knowledge of Best Global Practices:** There are opportunities to learn about animal feed production from Ukraine and Sri Lanka.
- **Poor Enabling Environment:** Lack of consistent energy supply and poor policies create a poor enabling environment for businesses to thrive.
- **Access to markets:** Due to the seasonality of products such as aquaculture, farmers often struggle to profit from their labor due to middle men cutting costs during harvest. Additional access to processors would allow farmers to diversify their markets.

- **Monitoring and Evaluation:** This is low for many programs on both the government and private sector side. Many programs do not track students after the period of a program, and therefore do not know how their program was effective, if at all.
- **Export:** Businesses are often unable to export due to lack of quality or quantity of goods; additionally, farmers do not necessarily have access to the equipment and knowledge for either locating available export markets, or to sell internationally for processing.

ICT IN ABIA

Overview

The ICT ecosystem in Abia state is budding with hubs, co-working spaces, and fabrication and innovation centers such as the Innovation Growth Hub, Lean Factory, and the Clintonell Innovation Center to both meet and create market demand. Awareness in the ICT sector has also increased to the wider public about opportunities in technology with radio programs such as "tech on radio," which discuss how, why and where technology is important beyond areas of social media. The "computer village" in Aba, a large market for technology sales and maintenance services, is a hub of activity in the ICT sector, filling a critical role in the local tech ecosystem.

Abia Innovation Hubs and Co-working spaces

- Innovation Growth Hub
- RAD 5
- Learn Factory
- Clintonell Innovation Center
- Vivid Computers
- Renet Computers

Hubs such as the Innovation Growth Hub in the city of Aba are creating startup businesses building solutions to market constraints yet to be defined by consumers. Co-working spaces such as Vivid Computers and Renet Computers provide creative working spaces to those with limited access to infrastructure and resources. While the startup community is still growing, as members of the IGHUB stated that of the 19 startups that they have developed, today eight are thriving businesses. There is a perception that new and innovative startups are more interesting to young people than traditional jobs. Technology hubs such as RAD 5 provide support services to these budding entrepreneurs as they promote products and services online through their "Market City" platform.

"People are embracing technology and innovation fast," noted an innovation hub. ICT hubs such as the Innovation Growth Hub, Lean Factory, the Clintonell Innovation Center, Learn Factory and RAD 5; and co-working spaces such as Vivid Computers and Renet Computers contribute to the growing ecosystem. The Technology Incubation Center in Aba also plays an important role, providing free incubation to students who stay for up to three years. This center connects entrepreneurs with research institutions and private companies to carry out specialized training for students in areas such as leather products, agro-processing, chemical and allied goods, foundry, beverages, and renewable energy. A growing number of youths are getting involved in Abia State with a number of young entrepreneurs starting small businesses in the "computer village," which has become a successful hub for young people to start businesses.

There are no accelerators in Abia state, however, the incubators and hubs such as the Technology Incubation Center collaborate and support one another to provide services related to what would be offered in an accelerator. The lack of current government support for the ecosystem is concerning for

some entrepreneurs as they feel they are overlooked for other job creation initiatives such as the Made in Aba campaign promoted in the leather and garment industries. However, the Federal Ministry of Trade and Investment has provided grants to entrepreneurs in the past in areas outside of leather and garment value chains, such as in ICT.

Growth Opportunities

Increased dependence on ICT has caused demand in this area of the service sector to grow; internet services, graphic design, digital marketing, web development, computer maintenance and repairs including hard and software maintenance, are valuable services for businesses, universities, and government ministries alike, and as a result, provide meaningful technical work for young people interested in technology.

For ICT hubs, because there are no accelerators in the state , technology entrepreneurs require additional platforms for cross knowledge sharing with other ICT stakeholders in other states, which will create a platform for learning, knowledge sharing and service expansion.

Skills and Training

The ICT has low entry requirements for young people in terms of formal education, and so there are few barriers to learn and grow in the industry. For example, employers in the ICT field stated that youth must be willing to work, learn, and must be dedicate and passionate. Others mentioned that youth must be "trainable and learnable, irrespective of qualifications," suggesting that a good attitude and basic digital literacy skills are important. Business owners stated that a secondary school certificate was necessary to enter training.

Those in the ICT space realize that because technology is constantly evolving, their idea of evaluating competencies must also be flexible and not tied to traditional education institutions that may not teach relevant skills for the market. Actors complained that the education sector must upgrade both curriculum and technology to train young people for the realities they will meet in the global market instead of limiting their reach to meet only local demand. While the needs of the private sector are nimble based on needs of the market, ICT company Afri-Point Networks based in Umuahia emphasized the need for soft skills in marketing, customer service, quality assurance, and customer relation skills, on top of technical knowledge. This company partners with Akanu Ibiam Polytechnic to develop both technical and soft skills through internship opportunities with university students. Bems Network also stressed the value of a well-rounded candidate, and noted that youth often struggle in this area due to poor attitudes. This negatively affects individuals' timeliness, customer service skills, and professional behavior during working hours.

The Indian Institute of Hardware Technology (IIHT) is one training institute in Abia State, providing certified training programs in Oracle, CISCO, and Microsoft. Privately funded IIHT training institutes emphasized that the minimum qualification for entry into ICT training is generally some level of secondary education, though completion is not a requirement. More than education, a desire to learn is stressed. Microsoft training packages are the most desired as they are needed across industries. The Technology Incubation Center in Aba that connects research institutions and private sector with entrepreneurs trains its participants in areas of business skills, standardization of products, awareness of relevant agencies in a given industry, and how to scale business in order to create jobs upon completion of the program.

The Abia State Education for Employment Program (E4E) program indicates that youth have a preference to learn skills related to ICT and commerce. So far 468 youth (53% female) participants (across 17 LGAs) have graduated from ICT training with a completion rate of 98%, owing part of its success to fully subsidized training costs. These graduates receive a Modular Trade Certificate in Information Technology from the National Business and Technical Examinations Board (NABTEB). Top performers of the program are supported to start their own businesses while others will be logged on to the Abia State Job Centre Portal and supported to gain employment with identified members of the organized private sector such as Dangote Industries and Innoson Motors.

Leaders in the ICT space in Abia such as IGHUB work with reliable training organizations located in Abia state that support its ecosystem such as Skills and Leadership Advancement Boot Camp (SLAB) for out of school youths, the Clintonell Innovation Center (ICT training), Learn Factory, RAD 5, among others. These organizations provide a variety of services and support to the ICT industry in Abia State. For instance, IGHUB works with young people, startups, graduates, and both the public and private sector to build the technical capacities of youth; integrate ICT into school curriculums, and help graduates obtain the skills necessary to meet market demand. Specifically, IGHUB has courses on web development, mobile application development, content writing, social and digital marketing, graphic design, and animation (UI/GX). The Clintonell Innovation Center, a technology hub and fabrication lab, focuses on training young people to become to become great inventors, scientists, and engineers. They teach and use such technology as Industrial Rapid Prototype Machine (3D Printer), Plastic filament extrusion Machine, Automatic Spooling Machine, Interactive LED cube, Programmable Intelligent Robot, Oscilloscope and other electronic tools and machines. IGHUB is in the process of creating a virtual working system where they hope to recruit 1,000 youths.

Additional Sector Constraints

- **Access to Finance:** Actors in the ICT space noted that access to capital for young people in the ICT space is limited, however, a few angel investors exist such as Sky Business, African Business Angel Network, etc. These new investor models are providing resources for this nascent industry.
- **Lack of Infrastructure:** ICT companies, hubs, and entrepreneurs are limited by their access to reliable power sources and internet sources, and instead often rely on generators
- **Fixation of Government on other areas of the economy**: Government in Abia state is heavily focused on the leather and garments sector and has invested in campaigns such as the Made in Aba initiative. Those outside of this sector feel that the government is concentrating too much on one sector, and instead needs to diversify in new industries.
- **Perception of Jobs in ICT:** Because ICT is a new, and non-traditional industry, stakeholders note the skepticism on the part of parents to support their children going into this sector. This may be due to a lack of awareness of the potential that jobs in the sector offer.

CONSTRUCTION IN ABIA

Overview

The demand for increased accessibility to roads and bridges stems in part from the push by the government to promote the leather and garments goods as well as from the oil and gas industry which contributes over 39% to Abia's GDP.[73] For the purposes of trade and movement of goods from artisan shops to the international market, the government has in recent years invested in infrastructure to support both Abia's artisans, traders, and potential investors. Major actors identified include Descon Engineering, Zerock Construction Company, and Arab Contractors. Employment in the construction industry is male dominated, as individuals must be able to lift heavy equipment and according to actors interviewed, perceived by women as less desirable work.

Growth Opportunities

Actors interviewed in Abia state noted that there are opportunities in the construction of roads and buildings, as funded by the government and potentially, to support potential expected investments in Abia's leather and garments sector.

Skills and Training

Apprenticeship is most common form of training as this model allows individuals to "grow into the workforce." The Boys' Technical College, Abia also trains young men in areas of construction for skills such as carpentry, wood joinery, roof installation, plumbing, tiling, electrical installation and maintenance; radio and electronic services; mechanical welding and fabrication. Auto mechanic programs include a one year industrial attachment period for practical learning. Top performing graduates are often recruited by the Enugu Electricity Company or International Equitable Company. However, the curriculum focuses on training for entrepreneurship over jobs in the formal sector. While aforementioned technical expertise requires certificates, permanent staff in construction companies such as engineers and surveyors require university degrees. Private sector companies such as Descon Engineering often carry out their own training for technical skills, as they believe that the education sector is not well equipped to deliver skilled youth ready for employment.

Additional Sector Constraints

- **Taxes**: Companies in the construction sector note that high government taxes have forced companies to shut down, relocate to other states, or not have the resources to hire the necessary workforce.
- **Community Relations:** Construction companies must navigate community relationships to quell security situations that could interrupt projects.
- **Attitude:** Youth attitude is a major hindrance on the workforce's ability to perform at high quality standards.
- **Inputs and Transportation:** High cost of raw material (laterite) and transportation due to poor road infrastructure.
- **Government Connections:** A strong link or relationship with State Government determines level of patronage, in this regards the foreign companies holds sway to the detriment of the indigenous one
- **Energy**: Unreliable access to power

RENEWABLE AND SOLAR ENERGY IN ABIA

Overview of Sector

This is an emerging sector in the state. Cloud Energy Photoelectric Limited is the major solar company in Abia, though there are other smaller solar panel installation firms and technicians active within in the state. According to Cloud Energy Chief Executive, business transactions and growth is still largely based on referrals by users as its products are services are yet to be fully known to people. However, the growth outlook in the near future is positive given the advantages of solar systems such as reduced daily purchase of fuel, reduced noise and air pollution and better assurance of electricity for homes and businesses.

[73] Government of Abia State. "Inside Abia's Leather and Garment Industry." April 2017. https://www.youtube.com/watch?v=3xuSC27aU8Q.

Growth Opportunities

In order for growth in the renewable and solar energy sector to take place, perception of cost, maintenance and utility need to be overcome. Many people understand the value of renewables. Demonstrating the value of solar power systems especially to micro, small and medium enterprises in Abia is critical to accelerating the growth and unlock further employment opportunities for young people. As awareness increases, there will be a need for solar power electrical technicians and installers, as well as sales and marketing professionals to sustain growth.

Skills and Training

Employers such as Cloud Energy Photoelectric Limited stated that it is difficult to find people with skills for jobs within the renewable energy sector, including electrical technicians, and installers. As a result, the firm must develop their own training for the staff it recruits. This training also focuses on areas such as communication, writing, building professional relationships, and attitude. Recruitment is done through word of mouth or in-house referrals. Recruitment for managerial positions such as accounting, sales, and marketing staff are done through recruiting agencies, social media and contacts within personal and professional networks. Notable training institutions serving the sector include University of Nigeria Nsukka (UNN) and the Federal University of Technology Owerri (FUTO). Additionally, the Technology Incubation Center under the National Board for Technology Incubation provides incubation services and training for entrepreneurs working in the renewable energy space. In general, it is noted also that the education sector needs to be more practical in its teaching methodology, as workers often struggle to translate knowledge from the classroom to practice at the workplace.

Sector Constraints

- **Awareness**: In Abia, there is still a low level of awareness about renewable energy as a source of energy for end users as well as employment for youth.
- **Cost**: High cost of purchase and installation of renewable energy systems and products is a deterrent for many, though government and private sector companies are addressing this through grants and mobile payment plans.

LEATHER AND GARMENTS IN ABIA

Overview

For the past 40 years, Abia State has been known as a hub leather and garment product manufacturing both domestically and abroad, gaining comparable advantage in the region. The fourteen leather clusters identified across Abia are believed to be comprised of approximately 11,000 registered members (not including their respective workforce), generating more than 150,000 jobs for registered members. Public officials in Abia state estimate there to be approximately 250,000 total artisans working in the industry in the city of Aba alone.[74]

Leather and garment making and other trades are areas of entrepreneurship perceived by youth as ventures where they can "make it big." One business owner echoed this and noted that, "our work is craft based; anyone who has the desire and willingness to learn can find success." However, this drive toward entrepreneurship is often negative for employers who complain about the high rate of youth attrition, as many leave to establish their own enterprises. Youth, heavily influenced by their peers are likely to perceive entrepreneurship as a viable option based on how they experience success or failure of business ventures. Moreover, ICT enterprises are also moving into this sector and have created platforms for leather and garment artisans to leverage technology in their businesses.

Growth Opportunities

Currently, African countries such as Togo, Cameroon, South Africa, Niger, Liberia, Rwanda, and Ghana are large buyers of "Made in Aba" goods. The government estimates approximately 1 million pairs of shoes leaving Aba every day for neighboring African countries. The "Made in Aba" campaign promoted by both state and federal governments seeks to expand and standardize quality goods such as shoes, belts, bags, and other leather goods, while at the same time reducing the demand for imported goods to the Niger Delta. One such notable initiative by the government in is with the development of the world-class Leather and Garment Industry City Cluster, a 28-hectare facility earmarked by the government to support production and expansion of the leather industry. The government and artisans alike hope that the promotion and expansion of Abia's leather industry creates international marketing outlets abroad in countries like the United States, Japan, United Arab Emirates, among others in order to attract a growing list of global clients.[75]

> "The MADE IN ABA campaign is gaining ground and people are taking pride in our products, even outside of Nigeria." *Actor in leather industry, Abia State*

Skills and Training

Training in the leather and garment industries is through apprenticeships with master craftsmen. Interviews with actors in this industry suggested that those who have left school prematurely often work in the leather and garment industry. One civil society stakeholder highlighted that these training periods are more effective for youth when they have the opportunity to learn from their peers, suggesting the strong influence that youth have on one another. Another stakeholder noted that women are pushing themselves into the trade without going through the apprenticeship process. . Apprenticeships start as early as age 13, and are solely focused on the technical craft. Typically, apprenticeships last for a period of four years, but there is a push by local government to reduce the period of training to one and a half years, also potentially impacting quality. One actor noted that even for those who do graduate from school, many go through apprenticeships in order to have a trade and be self-employable.

Additional Sector Constraints

- **Power/Electricity:** Inconsistent energy supply hinders the consistent production of quality goods. Industrial machines are rendered useless if power is not available, making upgrading of technology a risky investment.
- **Infrastructure**: Currently, artisans use small scale and manual machines to produce their goods in the absence of accessible machinery designed for mass production such as those used in places like China or India. The government is facilitating the import of this infrastructure through the Leather and Garment Industry City Cluster.
- **Branding:** Branding is important and would increase quality, as having a name attached to a product will make artisans more invested in their product.
- **Informality**: With the plethora of artisans and craftsman, many of them operating informally, it is hard to know who and where they are; what constraints they are facing; what human resource needs they have in terms of skilled labor, etc. The Made in Aba campaign has helped to organize micro and small enterprises, but still many operate under no regulation or quality control. Some stakeholders doubt the sustainability of the campaign beyond the political career of those currently in office.

[74] Government of Abia State. "Inside Abia's Leather and Garment Industry." April 2017.

[75] Vanguard. "Abia Government Moves to Market Made-in-Aba Products Globally." April 5, 2017. https://www.vanguardngr.com/2017/04/abia-govt-moves-market-made-aba-products-globally/.

AKWA IBOM STATE ANALYSIS

OVERVIEW

Akwa Ibom is Nigeria's largest oil producing state and has been characterized as a civil service state; this is ascertained by the presence of very few industries in the state. Apart from Exxon Mobil in the oil and gas sector, Akwa Ibom State lacks private sector investments that attract a large labor force. As a result, youth who look for formal employment look to the state to create and provide young people economic opportunities. However, with the onset of the recent recession, stakeholders across the state are pushing youth toward entrepreneurship and the growth of small and medium scale enterprises: "it is time for our youths to understand that politics is not a career, but only an avenue to service; entrepreneurship and strong visionary leadership have been acknowledged globally as the engine of socio-economic growth and transformation," the Director of Alert Nigeria, a grassroots level business incubator recently stated.[76] The more recent focus on SME development is widening people's perspectives beyond government, and gradually, businesses are growing.

Given the need to boost economic activity in the state, the government, together with SMEDAN is fostering entrepreneurship, employment generation, and economic growth through a variety of initiatives including the construction of the Industrial Development Center (IDC). Within the last year, SMEDAN stated that the organization would convert the IDC in Akwa Ibom state into an enterprise zone to create common facilities and workspaces for MSMEs in the state, a strategy that may be beneficial to young entrepreneurs.[77]

Additionally, the government is supporting youth to be able to take advantage of initiatives such as SMEDAN's through skills training and youth development programs. For example, Ministries of Commerce & Industry, Youth Development, and Women's Affairs are addressing trade skills development and youth empowerment on the public-sector level benefitting youth ages 18-35. It was reported that some educational institutions such as the Technological Incubation Centre in the state capital of Uyo are also providing business incubation for student-led startups and emerging businesses working on developing market solutions through technology. New private universities and polytechnics are opening such as Ritman University which will provide both additional training opportunities. Non-governmental organizations like the Applicants Welfare & Development Centre are also providing youth employment programs for university graduates in areas such as ICT, life skills training, and microenterprise training such as soap making.

[76] Onuegbu, Chioma. "NGO Undertakes to Create 124 Entrepreneurs in A'Ibom Annually." October 17, 2017. *Vanguard*. https://www.vanguardngr.com/2017/10/ngo-undertakes-create-124-entrepreneurs-aibom-annually/.
[77] Nigerian Pilot. "SMEDAN Plans Upgrade of 23 Industrial Development Centres Nationwide." *Nigerian Pilot*. January 18, 2016. http://nigerianpilot.com/smedan-plans-upgrade-of-23-industrial-development-centres-nationwide/.

AGRICULTURE IN AKWA IBOM

Overview

Akwa Ibom is one of Nigeria's largest palm oil producing states and is a major component of the state's agriculture sector.[78] And as the devalued national currency continues to make palm oil an important substitute for imported palm oil and potentially a more attractive export product, it is expected that this sub-sector will attract further investment and continue to grow. Yam, rice and beans are other important agricultural crops in the state and cocoa cultivation has been expanding. [79] In addition, stakeholders interviewed contend that Akwa Ibom is well positioned to take advantage of the aquaculture sector's continued expansion and the sector was also noted for its low barriers to entry. It is estimated that Akwa Ibom's aquaculture subsector is currently comprised of 2000 farmers, 20 hatcheries and 100 fish smokers. [80]

Actors across the agriculture sector in Akwa Ibom noted the diversifying and growing trend toward animal husbandry, particularly in poultry, aquaculture, piggery, rabbits, snail rearing, and grass-cutting, as well as palm. Those working on the production level in areas of animal husbandry are required to have technical skills in these areas, such as in crop science and animal husbandry. Medium sized companies prefer to hire those who have obtained a senior secondary level school completion certificate, however also hire school leavers as farmhands requiring only that employees can read and write.

Most often, those working on farms are considered youth between the ages of 25 and 35 due to the physical demands of the job. Women are less frequently employed by the private sector, and employers noted the difficulties of hiring those with physical disabilities in agriculture due to the physical demands.

Growth Opportunities

Employers stated that with opportunities existing in animal husbandry, occupations such as animal scientists (in piggeries and fisheries) and veterinarians will be in demand to meet growing need. Additionally, distribution schemes will need to grow, providing opportunities for young people to sell products and services as part of an out-grower scheme. Opportunities in aquaculture production and recent investment in the fish feed sector, which have brought down feed costs significantly.

[78] http://www.nairaland.com/3978186/palm-oil-production-states-nigeria
[79] BudgIT , "State of the States – The 2017 Edition." © 2017.
[80] Foundation for Partnership Initiatives in the Niger Delta (PIND) estimates.

Skills and Training

Private sector companies look to training institutes such as the University of Uyo, Akwa Ibom State University, and Michael Okpara University of Agriculture in Umudike not only to recruit students, but also to provide consolatory services directly to businesses. Government has also supported the development of animal husbandry value chains through the Integrated Farmer Scheme (2000-2013). Specifically, the Ministry of Agriculture and Natural Resources has trained over 8,000 youth in animal husbandry in areas such as poultry, piggeries, rabbit rearing and snails. Of these, 50% of youth participants engaged in poultry, and 30% participated in piggeries.[81] More than half of the beneficiaries of this program were women, and 70% of trainees received grants for not only businesses related to animal husbandry, but also marketing and processing.[82] The government has also developed a tomato and hatchery project in Uruan, Akwa Ibom State. Another important initiative in the agriculture sector is the AKEES program, which has trained approximately 300 young people on the production of 16 cash crops, including tomatoes and cucumber. The program has also worked with the supply chain company, FARMALOT, which provides logistics to move farm produce to ten large outlets such as stores like Shoprite and Genesis. Finally, the Akwa Ibom Sustainable Community Association has provided women (ages 14+) with training and mentorship to develop piggeries.

While some attribute unemployment due to the low number of private sector companies and the lack of investment, others attribute unemployment to the high number of unskilled workers in the economy, creating difficulties for farmers to hire suitable skilled persons or youth willing to do the job. As one employer noted, "The universities are doing their best but there is need for improvement especially in the need to balance theory with practical training to improve graduate skills; 40% of youths in Akwa Ibom are not employable; 60% are employable, however the majority are not interested in doing the job." Skill deficits include the lack of self-management skills along with attitude. Other companies such as Joebaz Farms highlighted the skills deficit in specialized labor such as veterinary medicine.

> 40% of youths in Akwa Ibom are not employable; 60% are employable, however the majority are not interested in doing the job."
> - Farmer, Akwa Ibom State

Additional Sector Constraints

- **Lack of Finance:** Farmer and private sector companies do not have access to finance to be able to invest in their businesses. This means that the high costs of equipment and input supplies are often unattainable for smaller businesses.
- **Lack of Energy:** The lack of consistent energy supplies renders some of their machines useless despite the investment that companies make.

[81] Nzeh, Emeka; Bassey, Emeka, Efiok, Joseph. "Agriculture and Youth Empowerment in Nigeria: Lessons and Insight from Akwa Ibom State Integrated Farmers' Scheme Experience." Unugu State University of Science and Technology. March, 2015. http://www.nemisjournals.org/NJAS/NJAS15012.pdf

[82] AgroNigeria. "8,000 Akwa Ibom Youths Benefit from Integrated Farmers Scheme. *AgroNigeria*. November 1, 2013. https://agronigeria.com.ng/8000-akwa-ibom-youths-benefits-from-integrated-farmers-scheme/

CONSTRUCTION IN AKWA IBOM

Overview

Infrastructure development took off in 2007 under the administration of the former state governor, Godswill Akpabio. His administration transformed the public infrastructure of Uyo with new highways, intercity roads, an international airport, flyover bridges, as well as new Governor's House Complex, hotels, conference spaces and more. The heavy investment made by the government was not only to increase mobility inside and outside of city limits, but also to increase safety as dark roads became well-lit with street lamps. Business tourism increased, drawing both national and international crowds of people to conferences, meetings, and new entertainment and shopping centers. The Industrial Development Center was built to spark economic activity in the state as well. More than ten years later, actors note that this sector is still largely controlled by the government, as there are no large companies demanding construction projects. Artisan labor exists to cater to smaller construction of residential houses and other such projects.

Growth Opportunities

Increased demand for construction services in Akwa Ibom state is anticipated as a result of the expected extension of Nigerian Content Act to the construction sector. Increased demand for construction services in Akwa Ibom state will create demand for a number of skilled engineers and electricians. These individuals must be creative in their approach to design.

Skills and Training

Employers note that the curriculums from training institutions do not currently match the needs of the private sector, as courses offer theoretical training with little or no practical training. For the construction industry, polytechnics are better in terms of developing students with relevant skills. Companies like Hensek Integrated Services mentioned that it is challenging to find those with technical skills in the area of civil works and road construction. Others such as Metering Solutions Manufacturing Services conduct in-house training developed by experts for its employees to supplement their practical skills.

Important high-level skills include civil engineering, surveying and procurement.

Additional Sector Constraints

- **Technical Competencies of workforce:** Construction companies note that training institutions do not teach technical competencies in demand, and as a result, training must be done in house or by the private sector.

ICT IN AKWA IBOM

Overview

Within the private sector, some business innovation hubs are springing up. Some the groups engage in ICT training in specific skills areas such as programmers, software developers, media designers etc. These training programs provide good professional knowledge and business foundation for participants who often start their own businesses or provide their skilled service in employment. One such organization is Alert Nigeria, a business incubator that has provided approximately 5,000 young people the support to develop and implement their business ideas. Alert Nigeria is an important stakeholder in the ICT ecosystem as it connects incubation to ICT hubs by training young people on ICT and entrepreneurship.

They also offer institutional support for hubs, as well as host a radio talk show on youth development and initiatives. Alert Nigeria has a unique relationship to the private sector and university training programs as they collaborate on the curriculum they offer to meet the needs of private sector companies. Another ICT and entrepreneurship hub, Root Hub Acceleration Systems, has a close relationship with the private sector as they not only support entrepreneurs who begin their own ventures, they also receive offers from ICT companies and provide job placement services for highly skilled workers. Key soft skills for those working in the ICT industry are the willingness and capability to learn; team player; and bring innovation and creativity to projects.

ICT Hubs and Incubators in Akwa Ibom

- Alert Nigeria
- Root Hub Acceleration Systems
- Hubitz
- Start Innovation Hub

Related to Alert Nigeria is Hubitz business incubator that aims to mentor small scale businesses from idea, to stability to success through training, coaching, and mentoring. Skills currently in demand in the sector include programming and network engineering. In the future, stakeholders interviewed in this sector noted the increased need for digital marketing to increase businesses of nascent SME environment, as well as mobile application developers and cyber security experts. Other occupations currently and expected to be in demand in the future include software engineers, graphic design, robotic, artificial Intelligent, application development, multimedia design, social media development, content development, e-commerce; financial experts, data scientists, etc. Alert Nigeria emphasized the important role of women in ICT, and highlighted that women are given a preference at their trainings and also provide free training to women in many areas.

Current areas for employment opportunities include programming and animation. ICT and agriculture also produce high demand for employment, and artificial intelligence technology may provide solutions to measuring temperature, humidity and soil testing.

Growth Opportunities

A number of ICT hubs in Akwa Ibom are training people for the workforce with practical skills, especially in the area of programming and animation. Some technology entrepreneurs are focusing on the intersection between Agriculture and ICT are as they are providing technical skills for jobs and there are also opportunities for technology to better measure temperature and humidity and soil testing.

Skills and Training

The Akwa Ibom Employment and Enterprise Scheme (AKEES) developed through a partnership with the public and private sector has developed a 3 – 6month pilot training program based on the skills gaps that exist. This training includes leadership and communication skills, ICT, vocational training (tailoring & fashion design, carpentry etc.), agriculture and small scale production. . To date, 2,500 youth have been trained on multimedia, graphic design and entrepreneurship through the program, with an additional 300 trained across sixteen cash crops including tomatoes and cucumbers. Beyond technical skills, AKEES stresses the importance of a qualitative reasoning mindset, professionalism, and entrepreneur and leadership skills.

Additional Sector Constraints

- **Lack of Infrastructure:** Students lack internet and computers that hinder their ability to be self-employed; high cost of internet
- **Parents:** Youth are often challenged in the ICT sector by their parents who do not understand the viability of employment as it is a less traditional job. Parents may perceive work in this field as illicit.

DISCUSSION AND CONCLUSION

KEY FINDINGS

Key Insights for Program Design

Although many issues have been identified in this report, our diagnostic and analytical work to date have identified the following principal issues and discussion points that should be considered as they will be key to the achievement of the project's goals going forward.

Three different state economies - Each state's economic structure is unique and those forces that are driving or could potentially drive employment demand in the target sectors is different depending on the specific context within the state. For instance, Rivers and Akwa Ibom are centers of oil and gas production and enjoy favorable conditions for significant aquaculture production, Abia is a center of textiles manufacturing and has a vibrant SME sector, and all three states are home to significant palm oil production and ICT entrepreneurship. Thus, a "one-size-fits-all" or "cookie cutter" approach to the three target states is not appropriate and interventions to improve opportunities for youth employment and enhance labor market equilibrium will need to be duly customized to the prevailing conditions and labor market requirements in each state.

Narrow economic and revenue base – The three states under study have been largely reliant on the oil and gas sector and federal revenue transfers and have been constrained by relatively narrow economic and revenue bases and undiversified economies. Therefore, historically there are few private sector firms in the target sectors that are currently highly competitive and competing in markets outside the local area. This will represent a constraint to job creation in the target sectors as achieving enhanced enterprise development and private sector competitiveness is not likely to occur at scale in the short term.

Employment demand data – The lack of employment data or economic output data at the state level severely limits the ability to identify where jobs exist and will be created in the future. In the absence of data regarding formal statistical employment demand, achieving labor market equilibrium will depend on other mechanisms whereby labor market demand information from employers can be effectively transmitted to educational institutions to inform educational priorities and curriculum design. New initiatives such as the RivJobs online jobs portal initiated by the Rivers State government if actively used by both employers and other stakeholders, could generate useful employment information over time.

Cross-cutting issues – Several systemic critical issues such as inadequate access to capital, electricity, and technology are negatively affecting all three target sectors and effectively act as constraints to job creation. For example the analysis points to market opportunities in several agro-processing activities such as aquaculture and palm oil. But accessing grid electricity can be expensive and unreliable with frequent power outages that disrupt workflows and the ability for businesses to provide consistent and quality services to customers. If private sector actors continue to be constrained by inconsistent access to, and/or the high price of, energy inputs, this will impact the potential for job creation related to these agro-processing activities. These critical issues are beyond the scope of this assessment but dovetailing with the employment demand data challenge noted above, these issues should be taken into account when considering the types of employment in the target sectors that most likely will be in demand.

- **Investment:** State government should invest more in attracting investment and new businesses to Akwa Ibom.
- **Inadequate Understanding of ICT:** ICT skills are not utilized due to the limited understanding of the application of ICT; unaware of new technology or software
- **Energy:** Internet and steady power supply are not adequate at the state or national level.
- **Low Purchasing Power:** People only buy necessities, therefore the purchasing power of individuals within the state is low which doesn't encourage entrepreneurship

RENEWABLE AND SOLAR ENERGY IN AKWA IBOM

Overview

The solar sector in Akwa Ibom is necessary to provide energy alternatives to both urban and rural customers alike. However, while solar is an emerging sector, it is perceived as costly and the lack of awareness limits widespread integration of solar usage and expansion. Traditional electric companies exist in the state, such as Ibom Power.

Growth Opportunities

The state government has made several recent announcements about solar-related investments including a proposed solar products factory that a Chinese firm is planning to build in the state. But similar to the situation in Abia, perceptions of cost, maintenance and utility will need to be overcome for the uptake of renewable products and the growth in the solar energy sector to take place. As solar uptake increases, there will be continued need for electrical technicians and installers, as well as sales and marketing professionals.

Skills and Training

Ibom Power, a government owned Power Company, trains the labor market for the needs of wider industry, and employs the strongest trainees as needs arise. The majority of those employed by Ibom Power are those who have left the education system prematurely, followed by high school graduates (30%), and university degree holders (20%).

Another project that is addressing both youth unemployment and the perception of the renewable energy sector is a project called, "Light Up Naija," developed by Asteven International, a German company operating in Uyo since 2016. The project provides youth with basic training and product knowledge to be able to promote products in both rural and urban areas. These youths are either those with the passion to learn skills in the industry, or electrical engineers, and are often recruited from employment websites such as "Jobberman," a Lagos based startup. As youth come with a range of skill abilities, the company invests in internal training programs, on the job learning and mentorship opportunities with support from headquarters in Germany. Training processes are largely internal, and offers young people interested in this industry, skills for vertical professional advancement. Solar companies often require that young people and employees must gain a basic knowledge of electricity and be passionate about learning to advance in their career. Technicians are more often male.

Additional Sector Constraints

- **Lack of Infrastructure:** Poor power supply and poor internet connectivity hinder the business enabling environment across the sector.
- **Lack of Finance:** High cost of infrastructure and lack of financial resources limits the market for solar installation.
- **Technical Training**: High level of technical training may create a barrier for those wishing to enter the sector. Companies often do not find the skills needed in the labor market, and retrain electricians or those with relevant skills to specialize in this industry.

Entrepreneurship as a cross-cutting opportunity – Entrepreneurship emerged as a common theme across sectors as presenting opportunities for employment. In particular, the technology startup ecosystem is a growing source of dynamism and opportunity for young people in the target states.

Workforce development system challenges – the critical challenges confronting Nigeria's workforce development system overall [83] including skills gaps, inadequate linkages between the private and education sectors, fragmented skills development marketplace, lack of appropriate trainings and standards, insufficient scale/geography reach of educational programming and jobseekers pursuing inappropriate or unnecessary qualifications, are all very prevalent in the three target states' labor markets to different degrees as well. When taken into consideration with the other principal issues described earlier, these challenges should inform the priorities and guide the design for future programming.

Currency devaluation – The recent devaluation of the national currency is affecting different private sector actors in the target sectors in different ways. For some private sector actors, new market opportunities have recently emerged and whole agricultural sub-sectors have suddenly become more competitive. Subsectors like palm oil and value chain actors such as animal feed producers seem to be well positioned to take advantage of import substitution opportunities created by the devaluation. But for other actors, the price of inputs has risen substantially, making these actors and their products or services less competitive. Going forward, it will be important to understand the nuanced impact and net effect of the devaluation on different sub-sectors and value chain actors to ascertain those forces that are driving or could potentially drive employment demand in the target sectors.

Job Creation Drivers and Barriers

After careful analysis and taking into account the principal issues outlined above, it is evident that a number of factors are driving potential job creation in the target states. Businesses are benefiting from uptake of information communication technologies and emerging technological platforms that permit development stage "leap-frogging." The devaluation of the national currency has made some sectors less competitive and other sectors more competitive. In addition, potential large-scale infrastructure projects in the pipeline offer prospects for job growth in construction and related sectors as well as benefits to all businesses in the surrounding area once the projects are complete.

At the same time, there are other systemic and structural issues that are negatively impacting the growth of the target sectors. These structural barriers to job creation will continue to be a challenge and a consideration, regardless of the program design ultimately chosen.

[83] Dalberg Advisors. "Strategic Framework and Implementation Plan for Job Creation and Youth Employment in Nigeria." March 2016. https://www.dalberg.com/our-ideas/strategic-framework-and-implementation-plan-job-creation-and-youth-employment-nigeria.

Drivers of Job Creation	Barriers to Job Creation
• Increasingly entrepreneurial mindsets • Uptake of ICTs in various sectors • Emerging technological platforms that permit development stage "leap-frogging" • Potential forthcoming large-scale infrastructure projects and other investments in the region • Devaluation of the national currency	• Inadequate access to capital for SMEs • Unreliable access to electricity and internet • Lack of basic infrastructure in some areas • Poor enabling environment for business growth including security situation • Lack of sector growth data to inform investment decisions • Devaluation of the national currency

Inadequate access to capital for small and medium-sized enterprises is a major constraint on growth of these companies. For instance, a technology company in Rivers State had grown from 4 employees to over 100 in the space of 13 years and established a solid and growing book of customers throughout Nigeria and West Africa. Yet the firm still has not been able to secure a loan from a commercial bank to help grow the business. In addition, virtually all companies, from agro-processing facilities to technology incubators, reported that unreliable access to power and internet significantly affects the competitiveness of their businesses.

Some of these structural issues, such as high energy prices and high cost of credit, are partially driven by macroeconomic factors like the recession and currency devaluation.[84] Cultural considerations play a role as well -- for instance, commercial banks reportedly perceive that lending to ICT companies is risky, and thus demand stringent lending terms that many small firms cannot comply with.

Youth Labor Absorption Drivers and Barriers

Meanwhile, a cultural shift is taking place among youth towards increasingly entrepreneurial mindsets, as tech entrepreneurship and more flexible types of employment like freelancing and project-based positions are becoming more appealing and widespread. And many stakeholders interviewed reported that these trends largely align with many of the occupations that are in demand in specific industry segments and value chain components in the agriculture, construction and ICT sectors in the target states.

Further, the results of stakeholder interviews indicate that it is relatively clear which technical and soft skills are necessary to fill occupations in these specific industry segments and value chain components. However, the lack of mechanisms to transmit labor demand data to educational and training organizations hinders their ability to act on this market information and align curriculums accordingly.

[84] "A Report on the Effect of the Naira's Devaluation on Agricultural Value Chains in the Niger Delta." Foundation for Partnership Initiatives in the Niger Delta and Market Development in the Niger Delta. June 2017.

Drivers of Youth Labor Absorption	Barriers to Youth Labor absorption
• Entrepreneurship is increasingly perceived as a viable career pathway by youth • Flexible, non-traditional types of employment such as freelance, project-based are becoming appealing to youth • Potential to leverage existing non-traditional skills delivery mechanisms (e.g. ICT hubs, Master Aquaculture Service Providers etc.) • Potential to build off of existing youth's skills base and up-skill to meet technical occupations in demand in 3 target sectors	• Overarching insufficient job creation • Regional labor market dominated by civil service employment and not very dynamic or well diversified. • Disconnect between training programs being supplied and actual occupations and skills in demand • Poor softs skills and attitude related to work amongst many youth • Lack of mechanisms to obtain labor demand data to align curriculums to demand.

The overarching disconnect between training programs being supplied and actual occupations and skills in demand is especially problematic as numerous skills gaps and skills mismatches prevent enhanced absorption of youth into the labor market. This reality points to the local workforce development system's current incapacity to effectively respond to ongoing employer labor needs and deliver both the technical and soft skills that employers demand.

Target Sector Challenges and Opportunities

The barriers to job creation and youth labor absorption underscore the considerable challenges confronted by the three target states workforce development systems to improve opportunities for youth employment and bring local labor markets into better equilibrium. That said, these challenges can be converted to opportunities if addressed appropriately.

Given the prevailing economic situation and lack of state-level data that sheds light on those sectors that are generating current and future employment in our three target states, the project team endeavored to evaluate how target sectors are likely to grow. If specific industry segments or value chain components in these sectors are likely to grow, then it can be assumed that there will be increased employment demand in those industry segments and value chain components and the three target states' workforce development systems can aim to align labor supply accordingly. The key challenges and opportunities identified per sector include:

Table 5: Key challenges and opportunities identified in three target sectors

	Challenges	Opportunities
Agriculture Sector	• Low youth interest in traditional production activities, yet majority of labor demand is currently in production • Lack of sizeable anchor firms • Underdeveloped value-addition activities due to unreliable power, low access to finance/technology and underinvestment in agro-processing infrastructure • Low landownership among youth • Educational institutions not adequately providing in-demand skills • Smallholder farmers struggle from poor transportation infrastructure	• Following currency devaluation certain industry segments and value chain components more competitive • Olam's investment supports positive outlook for the feed value chain component and industry segments reliant on feed inputs such as aquaculture and poultry • Existing effective, non-traditional, practical skills delivery mechanisms such as Master Aquaculture Service Providers • Low barriers to entry for youth in certain agriculture activities such as aquaculture • Short term income generation opportunities in certain agriculture activities such as aquaculture
Construction Sector	• Vocational training graduates not trained with practical technical skills that are currently most in demand • Existing workforce largely lacks soft skills including, attention to detail; positive attitude, commitment, integrity, timeliness to work, work ethic etc. • High cost of raw materials and transportation. • Non-market factors: security situation, currency devaluation, political context/upcoming elections, corruption • Construction sector growth largely tied to growth in other sectors with heavy current reliance on government demand	• Potential to build off of existing youth's skills base and up-skill to meet in-demand skills (e.g. painting, carpentry, joinery, and tiling). • Government investment creating demand for residential, commercial and transportation construction services, especially for the mid-sized construction company industry segment not as reliant on oil and gas sector projects. • Expected extension of Nigerian Content Act to construction sector to create increased demand for local industrial construction services • Alignment with flexible project-based types of employment that are appealing to youth
ICT Sector	• Fragmented ecosystem with actors often operating in isolation • Existing ICT Hubs largely lack existing capacity to realize impact potential nor maintain long-term sustainability • Inadequate access to capital • Lack of industry-informed ICT skills training programs • Accessing grid electricity is expensive and unreliable • Negative perception of ICT as a viable career path among older generation • ICT has limited capacity to absorb labor on a large scale in short term	• Existing effective, non-traditional, practical skills delivery mechanisms such as ICT Hubs • Potential to build off of existing youth's skills base and up-skill to meet in-demand skills requirements. • Alignment with flexible, non-traditional types of employment such as freelance, project-based that are appealing to youth • Tech entrepreneurship/ICT employment increasingly perceived as viable career by youth • ICT has transformative potential and can unlock growth in other sectors (such as agriculture)

Source: Project Team analysis

PRIORITY AREAS FOR PROGRAM INTERVENTION

Identifying Priority Industry Segments or Value Chain Components

Taking the job creation and youth labor absorption drivers and barriers and the sector-specific challenges and opportunities identified into account, the project team synthesized a set of key labor demand and supply factors that are relevant across the three target sectors:

Key Labor Demand Factors	Key Labor Supply Factors
• Existing market demand • Potential to absorb youth labor • Potential to generate income in short term • Potential to leverage existing private sector dynamism • Anticipated increased investment	• Alignment with youth's career interests and with the types of employment appealing to youth • Potential to leverage existing skills delivery mechanisms • Potential to build off of existing youth's skills base • Opportunities for vulnerable populations and gender mainstreaming

The project team then used these factors to evaluate industry segments or value chain components in the three target sectors that are best positioned for pilot program interventions and narrow the focus to priority areas for program intervention.

During this assessment, the project team aimed to identify those industry segments or value chain components where there is overlap between employment demand and the types of employment and career aspirations of youth. And as the Norway example underscored, the project team also sought to prioritize opportunities where there is a strong likelihood of strengthening the linkages between the private sector and educational actors can better train youth with the appropriate skills to enter the job market and help counter the existing expectation for public sector employment.

The results of this analysis identified four industry segment or value chain component priority areas for potential program intervention:

- Aquaculture production and value added services value chain components
- Midsized residential/ commercial construction company industry segment
- ICT Hubs industry segment
- Intersection of ICT and Agriculture (AgriTech and Innovation)

Rationale for Industry Segment or Value Chain Component Priority Areas Identified

The rationale for prioritizing these areas for program intervention was further substantiated when each priority area was evaluated in relation to the key supply and demand factors (See Table 6).

Table 6: Characteristics of Selected Priority Industry Segments

Factors		Priority industry segments or value chain components identified			
		Aquaculture production and value added services value chain components	Midsized residential/ commercial construction company industry segment	ICT Hubs industry segment	Intersection of ICT and Agriculture (AgriTech and Innovation)
Labor Demand Factors	Existing market demand	↑	↑	↑	↔
	Potential to absorb youth labor	↑	↑	↓	↓
	Potential to generate income in short term	↑	↑	↔	↔
	Potential to leverage existing private sector dynamism	↑	↔	↑	↔
	Anticipated increased investment	↑	↑	↑	↑
Labor Supply Factors	Alignment with youth's career interests	↑	↔	↑	↔
	Alignment with types of employment appealing to youth	↑	↑	↑	↑
	Potential to leverage existing skills delivery mechanisms	↑	↔	↑	↑
	Potential to build off of existing youth's skills base	↓	↑	↑	↔
	Vulnerable populations and gender mainstreaming	↑	↑	↓	↓

LEGEND:
↑ = Factor is relevant in the given industry segment or value chain
↓ = Factor is <u>not</u> relevant in the given industry segment or value chain
↔ = Factor is <u>somewhat</u> relevant in the given industry segment or value chain

Source: Project Team analysis

Aquaculture production and value added services value chain components – These value chain components are positioned to benefit from the sector's continued expansion and lower feed costs and also offer opportunities to absorb youth labor generate meaningful income for youth in the short term. These value chain components also align with youth's interest in entrepreneurial activities, offer potential to leverage the existing Master Aquaculture Service Providers skills delivery mechanism while offering opportunities for vulnerable populations.

Midsized residential/ commercial construction company industry segment – This industry segment is poised to benefit from anticipated increased demand for residential, commercial and transportation construction services and also has the potential to absorb significant levels of youth labor in the short term. Further, there is good potential to build off of existing youth's skills base, there is good alignment with youth's career interests and also offers opportunities for vulnerable populations.

ICT Hubs industry segment – This industry segment offers potential to leverage significant existing private sector dynamism and growing demand for youth with technology skills and anticipate increased investment in the ICT sector. In addition, this industry segment aligns very well with youth's career interests in entrepreneurial activities and the flexible types of employment appealing to youth while also offers the potential to leverage existing skills delivery mechanisms that the ICT Hubs represent.

Intersection of ICT and Agriculture (AgriTech and Innovation) – ICT has transformative potential and can unlock growth in agriculture. As such, investment is expected to be targeted towards the intersection of ICT and Agriculture as agriculture sector actors seek to innovate and thus, look to partner with the ICT sector to design solutions, for instance for innovative soil testing methods and better ways to measure temperature and humidity. Additionally, AgriTech and Innovation aligns with youth's career interests in entrepreneurship, ICT, and agriculture and the flexible types of employment appealing to youth while also offers the potential to leverage existing ICT Hubs skills delivery mechanisms.

Concluding Thoughts and Next Steps

In sum, recent macroeconomic shocks including the drop in oil prices, recession, currency devaluation and inflation have caused volatility and uncertainty throughout the Niger Delta regional economy. Yet as economic actors adjust to these shocks, the analysis reveals considerable opportunities to strengthen and improve the environment for creating opportunities for youth employment in the three target states.

Keeping the underlying logic of these analytical pathways in mind, from sector specific challenges and opportunities to the identification of priority industry segments or value chain components and their corresponding job types and opportunities, will be critical as this effort transitions from data collection and analysis to program design, pilot project prioritization and implementation.

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Abuja, Head Office
25 Jimmy Carter Crescent Asokoro
+234 (09) 291 0454

Warri, Delta State
Economic Development Centre
1 PIND- EDC Drive Egbokodo – itsekiri
+234(0)8172401598, 09030808794

Port Harcourt, Rivers State
Economic Development Centre
6 Tombia Street GRA Phase 2
+234(0)8110521802, 09034577987

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