

Sectoral Development: Assessing the Conditions that Drive Youth Employment in Key Sectors of the Nigerian Economy

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Working Paper GSYE-011

AFRICAN ECONOMIC RESEARCH CONSORTIUM
CONSORTIUM POUR LA RECHERCHE ÉCONOMIQUE EN AFRIQUE

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AERC Working Paper GSYE-011
African Economic Research Consortium, Nairobi
August 2022

THIS RESEARCH STUDY was supported by a grant from the African Economic Research Consortium. The findings, opinions and recommendations are those of the author, however, and do not necessarily reflect the views of the Consortium, its individual members or the AERC Secretariat.

Published by: The African Economic Research Consortium
P.O. Box 62882 - City Square
Nairobi 00200, Kenya

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List of abbreviations and acronyms

AEZs	Agro-Ecological Zones
ARDL	Autoregressive Distributed Lag
AU	African Union
CAP	Capacity Acquisition Programme
CSWYE	Community Service, Women and Youth Employment
EIG	Employment Intensity of Growth
ERGP	Economic Recovery and Growth Plan
FGUYS	Graduate Unemployed Youths and Women Scheme
GDP	Gross Domestic Product
GEEP	Government Enterprise and Empowerment Programme
GGDC	Groningen Growth and Development Centre
GIS	Graduate Internship Scheme
GZ	Geopolitical Zones
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
ITC	International Trade Centre
KII	Key Informant Interviews
LIFE	Livelihood Improvement Family Enterprise
NADDAC	National Automotive Design Development Council
NAPEP	National Poverty Eradication Programme
NCTP	National Cash Transfer Programme
NDE	National Directorate of Employment
NEP	National Employment Policy
NHGSFP	National Home-Grown School Feeding Programme
NIRP	Nigerian Industrial Revolution Plan

N-SIP	National Social Investment Programme
NIYEAP	Nigerian Youth Employment Action Plan
NYP	National Youth Policy
OgunYES	Ogun State Youth Empowerment Scheme
OLS	Ordinary Least Squares
PAP	Poverty Alleviation Programme
PWC	PricewaterhouseCoopers
RCA	Revealed Comparative Advantage
SURE-P	Subsidy Reinvestment and Empowerment Programme
UNCTAD	United Nations Conference on Trade and Development
UNODC	United Nations Office on Drugs and Crimes
VVF	Vesicovaginal Fistula
WITS	World Integrated Trade System
YCAD	Youth in Commercial Agriculture Development
YEAP	Youth Employment in Agriculture Programme
YISA	Youth Initiatives for Sustainable Agriculture
YESSO	Youth Employment and Social Support Operations

Abstract

Youth unemployment is a condition that has worsened in Nigeria over the past two decades. This situation became more glaring since 2015 due to a decline in the economy arising from the fall in oil prices. Given Nigeria as the focus, this study assessed the conditions that drive youth employment in key economic sectors of the Nigerian economy by specifically identifying the promising economic sectors with job creation potential for young men and women; analysing the differential impact of sectoral growth on youth employment across rural and urban areas as well as on gender lines; identifying the key economic and political constraints to developing key sectors relevant for youth employment; and determining the specific conditions needed for investment in the identified sectors. The study used both secondary and primary data, which was analysed using descriptive statistics, revealed comparative advantage (RCA), employment elasticity and logit regression model. The findings from the study have shown that all the economic sectors in Nigeria have potential for creating employment, although at different levels. The findings have also shown that Nigeria has revealed comparative advantage in 17 products exported from Nigeria. Also, several productions, industrial, and trade clusters have been identified across the country and proper harnessing of the products and the various sub-sectors in which these clusters exist can contribute to massive youth employment creation. The employment elasticity of the 12 sectors understudied positively ranged between 0.056 to 0.734, with the financial services as the highest contributor and manufacturing sector as the lowest contributor to employment. The findings from the differential impact of sectoral growth on youth employment by gender has shown that increase in age, high school education, residing in the urban areas, employment in the industry, construction, and services sectors positively influenced the male employment; while marital status, receipt of remittances, and employment in the trade sector influenced female employment. Furthermore, some key political and economic constraints to developing economic sectors with potentials for employment creation include inadequate access to finance, poor infrastructure, corruption, instability, and inadequate access to land. Some conditions required to facilitate investment in promising sectors include promoting access to capital, improving infrastructure, favourable land tenure and property rights policies, and addressing the issue of insurgency and political instability.

Acknowledgements

We wish to express deep appreciation to the African Economic Research Consortium (AERC) for all the support that facilitated the undertaking of this research. We are also eternally grateful to the INCLUDE Secretariat for technical and financial support, as well as the Economic Research Forum (ERF) and Overseas Development Institute (ODI) for intellectual support. We would like to as well acknowledge the resource persons who guided the whole process with in-depth comments and suggestions that shaped this study from inception to completion. The findings made and opinions expressed in this paper are exclusively those of the authors. They do not necessarily represent the views of AERC, or any other organization linked with this project. The authors are thus solely responsible for content and errors in this paper.

1. Introduction

Background

Unemployment is a condition that has worsened in Nigeria over the past two decades. The situation has become more intensified since 2015 due to economic decline arising from the fall in oil prices which is the main export product in Nigeria. Unemployment is a key macroeconomic indicator that is determined by economic growth (Abraham & Sasikumar, 2018; Afonso et al., 2018; Ademola & Badiru, 2016). Unemployment is a situation where people within the age bracket of 15-64 are available for work and are actively seeking for work but are without work, while underemployment refers to a situation when people are engaged in activities that underutilises their educational qualifications, time, and skills by working less than 40 hours but more than 20 hours on an average in a week (National Bureau of Statistics, 2015). Youth unemployment, according to Alanana (2003), refers to the situation where young people, aged between 18 and 35 are not guaranteed full employment.

The labour market in Nigeria is complex with high instances of underemployment. In recent years, there has been focus on the “youth” but this category is heterogeneous with multiple definitions (Flynn et al., 2017). A third of the Nigerian population are estimated to be females and males within age bracket 15-34, with the males and females accounting for 48.4% and 51.6%, respectively (Adesugba & Mavrotas, 2016).

Unemployment has become a major problem facing Nigerian youth therefore causing dejection, dependency on family members and friends in some cases as well as frustration (Ajufo, 2013). It has been identified to have a notable adverse effect on the social, economic, and political developments in Nigeria, being one of the major causes of social vices—increasing militancy, kidnapping, destitution, political thuggery, armed robbery, prostitution, restlessness, and political instability amongst others (Ajufo, 2013; Adejumola & Tayo-Olajubulu, 2009; Fanimu & Olayinka, 2009).

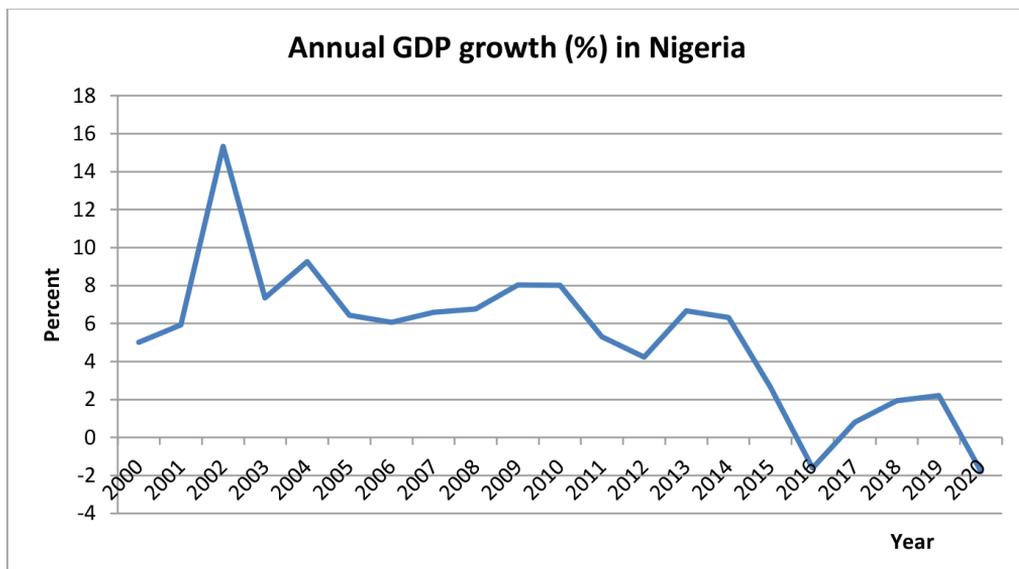
According to a PWC report, the informal sector employs 68% of the labour force in Nigeria and contributes 41% to the Gross Domestic Product (GDP). This was reiterated by Adesugba and Mavrotas, 2016) who reported that majority of the job growth in Nigeria is provided by the informal sector with a higher share of youths in the informal sector than the formal sector (Adams et al., 2013).

The Nigerian economy presents a unique situation that suggests that increasing economic growth rates do not translate to decreasing unemployment rates (Arewa & Nwakanma, 2012; Babalola et al., 2013; Akeju & Olanipekun, 2014; Obodoechi & Onuoha,

2019; Kalu et al., 2020) implying that Nigeria is characterized with economic growth alongside high unemployment level. The Nigerian economy is largely underdeveloped¹ despite the increase in growth rate declared yearly as it is challenged with high unemployment regardless of its possession of vast human and natural resources (Ademola & Badiru, 2016). This situation could occur based on a couple of factors. It could be that resources in the country are substantially channelled towards unproductive activities; also, it could suggest that the Nigerian economy's growth is due to oil trade (dependent on the oil sector) with limited capacity for employment creation (Oloni, 2013).

Although there has been growth in some economic sectors in Nigeria over time, Figure 1 which shows the annual growth rate of Nigeria's GDP from 2000 to 2020, reveal that Nigeria's annual GDP growth rate has been on a decline since 2003. This may well be attributed to decline in oil prices and periods of economic recessions in the country.

Figure 1: Nigeria GDP annual growth rate (2000-2020)



Source: World Bank National Accounts data; and OECD National Accounts data files.

As it is evident in other developed and developing countries, Nigeria included, various strategies have been developed over time to attract increased foreign direct investment. Some of these policies categories developed by countries include trade policy, financial sector policy, investment and investment promotion policy, competition policy, human capital development policy, taxation policy, ethical best business practice policy, infrastructure development policy, and corporate governance (United Nations Conference on Trade and Development [UNCTAD], 2018).

Based on this premise, our study will identify promising economic sectors in Nigeria with high youth employment (informal and formal) creation potentials and identify the conditions in terms of policies, infrastructure, and institutions that need to be in place that will stimulate investment in the identified sectors.

Statement of the problem

The United Nations estimated Nigeria's population in 2020 at 200 million people. This population is marked with a high proportion of youths aged 15–34 years, therefore indicating a very young population. Even though the Nigerian economy is thriving with high economic growth in some sectors, it does not necessarily translate into employment creation, especially for youths. The National Bureau of Statistics reported that unemployment rate in Nigeria rose from 23.1% in Q3, 2018 to 27.1% in the second quarter of 2020, therefore signifying that about 21.7 million persons were unemployed, out of which 13.9 million are Nigerian youths (National Bureau of Statistics, 2020).

The problem of employment in Nigeria has manifested in underemployment, especially in the informal sector which accounts for 54% of the jobs created, while the private formal sector accounted for 37% and the public sector about 9% of the jobs in 2013 (World Bank, 2016). Generally, most people employed work for themselves or their families, or close to their homestead, and in informal working conditions. In some cases, they work on multiple jobs and earn less than is required to escape the poverty trap (World Bank, 2016).

In tackling these problems, it is important to identify the promising economic sectors in Nigeria that have high job creation potentials for youth, as well as the political and economic constraints that militate against these sectors coupled with the conditions that will stimulate investment in these sectors.

Research questions

Given the above problem statement, this research will provide answers to the following questions:

1. What is the trend of youth employment and economic growth in Nigeria?
2. What are the promising economic sectors² for job creation potential for young men and women in Nigeria?
3. Does the impact of sectoral growth differ on employment across rural and urban areas as well as on gender lines?
4. What are the economic and political constraints to developing key sectors relevant for youth employment?
5. What are the specific conditions (in terms of policies, infrastructure, and institution) in Nigeria needed for local and foreign private sectors to invest in identified sectors?

Objectives of the study

The overall objective of this study is to identify which sector(s) of the Nigerian economy has potential for youth employment in both urban and rural areas. The specific objectives are as follow:

- i. to determine the trend of youth employment and economic growth in Nigeria;
- ii. to determine the promising economic sectors for job creation potential for young men and women in Nigeria;
- iii. to analyse the differential impact of sectoral growth on youth employment across rural and urban areas as well as on gender lines;
- iv. to identify key economic and political constraints to developing key sectors relevant for youth employment; and
- v. to determine the specific conditions in Nigeria needed for local and foreign private sectors to invest in identified sectors.

Significance of the study

Though efforts are being made by the Government of Nigeria to improve the status of employment through decent job creations, those efforts are still being faced with unending challenges. To have a realization of her efforts—that is, to improve employment, it is important to identify the sectors that have the potential to create more employment and the nature of the type of employment that would lead to increased economic growth. To this end, empirical studies identifying the sector(s) that have sustainable potential on youth employment could prove indispensable to policy makers. This study is, therefore, intended to empirically identify the sector(s) within the Nigerian economy that has the potential to stimulate youth employment while also assessing the conditions that will stimulate both local and foreign investment in these sectors.

The rest of this study is structured as follows. Section 2 presents the review of related literature; Section 3 outlines the econometric methodology to be adopted for the study; while Section 4 presents the results. Section 5 is the conclusion and implications for policy.

2. Literature review

Theoretical review

Unemployment is a situation in which people that are willing and able to work cannot find any gainful employment. Unemployment in the views of classical and neoclassical economists depends on the level of real wage. It occurs when real wages are fixed over the equilibrium level due to external rigidities imposed in the labour market such as wage law, taxes, and possible regulation relating to hiring of minimum workers (Hussain et al., 2010). Classical economist viewed the labour market as a single, static market characterized by perfect competition, spot transactions and institutions for double auction bidding (Damane & Sekantsi, 2018). The classical theory assumed that, in the labour market, every unit of labour service is the same and every worker receives the same wage. An essential feature of the classical view is that unemployment is a temporary phenomenon and is the forces of supply and demand response to changes in real wage in the labour market (Dagume & Gyekye, 2016; Goodwin et al., 2006).

In contrast, Keynesian economists emphasized that unemployment is due to insufficient effective demand for goods and service in the economy (in terms of aggregate demand and seeing demand for labour as a derived demand). That is, if the goods market situation is such that it is a buyers' market where sales are restricted by demand. This infers that the demand for labour is determined by the quantity of labour needed to produce the quantity of products demanded. It is expected that productivity growth (a la Verdoorn's Law), should increase labour demand thus reducing unemployment. In the Keynesian framework, increase in employment, capital stock, and change in technology are largely endogenous (Grill & Zanalda, 1995; Hussain & Nadol, 1997). Keynesians believe in strong aggregate demand and prescribe that for reducing unemployment; there should be increase in aggregate total demand through an increase in direct government policies and spending which in turn encourage private investment. Goodwin et al. (2006) explained that aggregate employment level is dependent on aggregated demand level in an economy.

The type of unemployment that exists in an economy depends on the situation in the goods market. Romer (1990) established that growth brought inter-sector change that exists within sectoral structure of the economy, and this change brought structural unemployment. The mode of production within an economy can be structured

through technological innovation change. The wake of new technological innovation introduction creates labour unemployment which destroys jobs in one firm and create job in another (Aghion & Howit, 1994). The high rate of unemployment that occurs makes it challenging matching demand for employment with supply.

Empirical review

In the Nigerian economy, unemployment has taken an upward trend, especially in recent years. For example, unemployment was recorded at 40% in the third quarter of 2017, with unemployment of people with ages 15 and 24 standing at 33.1% and 20.2%, respectively (Imhonopi & Urim, 2018). Imhonopi and Urim (2018) attributed the surge in youth unemployment to artificial problems created by the Nigerian state, narcissistic and clannish actions, and words of politicians and their military overlords, among others. Nevertheless, their study proposed that an inclusive country framework be built on a tripod consisting of inclusive politics, inclusive economy, and inclusive socio-cultural context so as to address youth unemployment in Nigeria.

Te Velde et al. (2016) assessed areas in which Nigeria can change, expand and increase productivity through economic potentials by using revealed comparative advantage, Lin's growth identification framework and Hausmann's product analysis. They identified several products with high export potential gains that Nigeria could diversify into. They further identified some areas for priority policy actions that would improve investment to include access to finance; infrastructure in the transport, power and aviation sectors; reduction in cost associated with trade and import protection; and higher productivity especially in the agricultural value chains through lower cost associated with the business environment and capacity building especially in the education and health sectors.

Similarly, Treichel (2010) identified the construction, wholesale/retail, manufacturing, ICT, oil palm, meat and poultry, and cocoa sectors as sectors with the highest employment potential although the possibility of achieving the growth in these sectors differs by geographical area. Townsend et al. (2017), World Bank (2016), Allen et al. (2016), and Filmer and Fox (2014) have reported that, in the foreseeable future, small non-agricultural household enterprises and agriculture in both urban and rural areas will account for majority of new jobs.

Abada et al. (2021), in their study on curbing unemployment through job creation as panacea to inclusive growth in Nigeria, focused on three sectors of the economy including agriculture, manufacturing, and the industrial sectors. Data covering 1970–2014 was analysed using the Autoregressive Distributed Lag (ARDL) bounds test approach. They reported that the agriculture and industrial sectors would significantly contribute to reducing unemployment, while the manufacturing sector did not. They suggested that the reason for this could be due to the use of some machinery which may have reduced the need for manual labour.

Making Cents International (2016) identified the hospitality, construction, trade and manufacturing sectors as those with high growth potentials and the main sectors for job creation, especially in the formal economy. Also, the report revealed that there were higher unemployment rates amongst youths as compared to adults; underemployment is higher in rural areas than in urban centres, and underemployment and unemployment rates higher amongst women than males.

In a report by the World Bank (2016), it was reported that sectors in Nigeria such as entertainment service, information and communications technology (ICT), and manufacturing industries have made significant contributions to recent economic growth (World Bank, 2016). Eseyin et al. (2021) identified the challenge facing the youth in the labour market by investigating the linkage between youth employment, gross capital formation, governance, and economic growth using the Granger non-Causality technique. Their findings revealed that a bidirectional causal connection exist between governance and economic growth and between youth employment and economic growth in Nigeria. Furthermore, there was no causal connection between governance and employment and between gross capital and employment.

Uddin and Uddin (2013) conducted a cutting-edge study to ascertain the causes, effects, and solutions to youth unemployment, since there has been a surge in youth unemployment in recent years. From their study, they found six contributing factors to youth unemployment, ranging from rural-urban migration, rapid population growth, low standard of education, corruption, rapid expansion of the educational system, to lack of steady and sustainable power supply. The authors concluded that efficient labour market that works better for youth be created, and that investment in education that enables youth become self-reliant, instead of being job seekers, be prioritized.

As a contribution to existing problem with regards to youth unemployment in Nigeria, Akanle and Omotayo (2019)] recommended the creation of incubation hubs for young people who enter the labour market force as a possible way of mitigating the problem of rising unemployment. Incubation hub spaces provide domicile start-ups and various types of support to aid growth and development—thus creating jobs for new members of the labour force. However, the challenging task here is that there is no evidence to whether the incubation hub would lead to job creation, as this idea is a new one. Nnabuogor (2017) in the study on “An empirical assessment of tourism development and planning in Nigeria: A sustainability approach” using simple deductive logic (inductive reasoning), revealed that tourism awareness and its development in Nigeria are still at the very early stages as the industry is plagued with bureaucratic bottlenecks which hinders the industry.

Oloni (2013) assessed how economic growth in Nigeria has affected job creation using Vector Error Correction model. The findings have shown that the relationship was positive but not significant. Using Ordinary Least Squares (OLS) regression, Sodipe and Ogunrinola (2011) estimated the effect of economic growth on employment and discovered that there was a significant and positive effect on employment, although a negative relationship was reported between Gross Domestic Product growth rate and aggregate employment growth rate.

Ajakaiye et al. (2015) evaluated the relationship between employment and growth using the employment intensity of growth and the Shapley decomposition approach. They reported employment elasticity of growth although positive, but quite low. Similarly, economic growth in Nigeria within the last decade has been “jobless” and mainly due to the factor reallocation instead of productivity enhancement. Using data from 1970 to 2010, Olajide et al. (2012) assessed the relationship between economic growth and agricultural output using Ordinary Least Squares regression. They reported that a significant and positive relationship exist between agricultural output and Gross Domestic Product in Nigeria.

Using Nigerian data from World Development Indicators for 1991–2019, Dauda and Ajeigbe (2021) investigated the employment intensity of growth (EIG) in the three main sectors in Nigeria: industry, agriculture, and services within the framework of Okun's theory/law. Elasticity was generated by decomposing into different regimes and periods. Their study revealed a positive EIG in the services sector and a negative EIG in the industrial and agriculture sectors. They concluded that there should be a significant investment in services sector by the government while effort be made to mechanize the agricultural sector to boost productivity, and regular supply of raw materials be available to the industrial sector to enhance job creation.

3. Methodology

To achieve the objective of this study on assessing the conditions that drive youth employment in key sectors of the Nigerian economy, the study made use of both primary and secondary data from various sources and analysed using descriptive statistics, revealed comparative advantage, concentration index, employment elasticity, and logit regression model.

Data source

Data collection procedure

The study made use of secondary and primary data extracted from various sources. The primary data was obtained from key informant interviews (KII) from various stakeholders identified within key sectors with potential for employment creation. The secondary data was extracted from multiple sources including websites, various reports, journals, websites, and other scientific publications. To determine the trend of youth employment in Nigeria, national data on youth employment from 2010 to 2019 was obtained from the National Bureau of statistics, Labour force statistics for 2017 to Q3 2018, International Labour Organization (ILO), and the 2018/2019 Wave 4 Generalized Household Survey data. The second data set on real Gross Domestic (GDP) by economic activities was extracted from the Economic Transformation Database of the Groningen Growth and Development Centre (GGDC) to determine the trend of economic growth by sub-sectors.

To assess the economic sectors with high employment creation potential, data on trade related and non-trade related indices were obtained. Data on trade indices such as Revealed Comparative Advantage (RCA), diversification index and concentration index were extracted from United Nations Conference on Trade and Development (UNCTAD) and from World Bank World Integrated Trade System (WITS). To estimate both the Arc and Point Employment Elasticities, data on gross value-added at constant 2015 prices (millions, local currency) for twelve sectors (agriculture, mining, manufacturing, utilities, construction, trade services, transport services, business services, financial services, real estate, government services, and other services) and the number of persons engaged (thousands) for the twelve sectors (agriculture, mining, manufacturing, utilities, construction, trade services, transport services, business services, financial services,

real estate, government services, and other services) were obtained from the Economic Transformation Database of the Groningen Growth and Development Centre (GGDC). Sectoral definition is presented in Appendix A.

Further information on Nigerian government policies and geo-ecological conditions were also obtained from websites and other reports to further assess relevant sectors with high job creation potentials. Data was also extracted from the 2018/2019 Wave 4 Generalized Household Survey—data that is representative of 5,000 households in Nigeria—to analyse the differential impact of sectoral growth on youth employment across rural and urban areas by gender. To address the specific objectives on key economic and political constraints to developing key sectors relevant for youth employment, data were obtained from the Enterprise Survey data extracted from the World Bank and from the information obtained from the key informant interviews. In identifying the specific conditions in Nigeria needed for local and foreign private sectors to invest in identified sectors; data on Productive Capacity Index were extracted from United Nations Conference on Trade and Development (UNCTAD) and from the KII. Other relevant information was obtained from government ministry and National Directorate of Employment websites.

Analysis of objective matrix

The summary of the study's objectives is presented in form of a matrix in Table 1.

Table 1: Objective matrix

	Specific Objectives	Source of Data	Analytical Tool
1	To determine the trend of economic growth and youth employment in Nigeria.	Economic Transformation Database of the Groningen Growth and Development Centre (GGDC); International Labour Organization; and 2018/2019 Wave 4 Generalized Household Survey data.	Content analysis by desk review and descriptive statistics.
2.	To determine the promising economic sectors for job creation potential for young men and women in Nigeria.	Secondary sources; 2018/2019 Wave 4 Generalized Household Survey data; World Development Indicators; United Nations Conference on Trade and Development (UNCTAD); and from World Bank World Integrated Trade System (WITS).	Content analysis by desk review; Descriptive Statistics; Revealed Comparative Advantage Index; Diversification and Concentration Indices; and Employment Elasticities.
3	To analyse the differential impact of sectoral growth on youth employment across rural and urban areas as well as on gender lines.	2018/2019 Wave 4 Generalized Household Survey data.	Logistic regression model.

continued next page

Table 1 Continued

	Specific Objectives	Source of Data	Analytical Tool
4	To identify key economic and political constraints to developing key sectors relevant for youth employment.	Key Informant Interviews; and World Bank Enterprise Survey.	Content analysis by desk review; and descriptive statistics from Key Informant Interviews (KII) and Enterprise Survey.
5	To determine the specific conditions in Nigeria needed for local and foreign private sectors to invest in identified sectors.	Productive Capacity Index; and Key Informant Interviews.	Content analysis by desk review; and descriptive statistics from key informant interview.

Estimating model/model specification

The data obtained was analysed using descriptive statistics, trend analysis, and inferential statistics to achieve the objectives of this study. A trend analysis was used to achieve objective one which was to determine the trend of youth employment and economic growth in Nigeria. To achieve objective two, which is to identify economic sectors in Nigeria with high employment creation potential, various methods were used building on the work of te Velde et al. (2016). These methods were based on political and eco-geological characteristics attributes which was used to identify the commodities (products) and sectors in which there exist potential for economic growth and commensurate employment potential due to the huge deposit of materials or available infrastructure and export products in which Nigeria trades. Statistically, the arc and point employment elasticities were used to identify the key economic sectors with potential for generating employment, and in forecasting future growth in employment.

Government policies analysis, enterprise analysis and geopolitical area comparative advantage

This section involved a content analysis from desk review with inferences made based on the government, geopolitical area comparative advantage, and entrepreneurial infrastructures currently in place within the country.

Revealed comparative advantage index (Balassa index)

A country is said to have revealed comparative advantage (RCA) in any given product i when the product's export ratio to its total exports of all goods (products) is higher than the same ratio for the world (UNCTAD, 2021).

That is:

$$\frac{\frac{X_{Aj}}{\sum_{j \in P} X_{Aj}}}{\frac{X_{wj}}{\sum_{j \in P} X_{wj}}} \geq 1 \quad (1)$$

Where:

P is the set of all products (with $i \in P$),

X_{Aj} is the country A's exports of product i ,

X_{wj} is the world's exports of product i ,

$\sum_{j \in P} X_{Aj}$ is the country A's total exports (of all products j in P), and

$\sum_{j \in P} X_{wj}$ is the world's total exports (of all products j in P).

A country with RCA for a given product ($RCA > 1$), is said to have a competitive producer and exporter of that product relative to a country producing and exporting that good at or below the world average. The higher the RCA value for a product, the higher its export strength in that specific product. Intensification in the production and export of any good with RCA that is greater than 1 will require additional labour to meet up with demand, and this will ultimately reduce unemployment.

Diversification and concentration indices

These indices measure the degree of concentration of goods exported excluding services. The concentration index describes whether a large share of a country's exports is accounted for by a small number of commodities or if its exports are evenly distributed among many products. This indicator is defined as a normalized Herfindahl–Hirschmann index of the product concentration of merchandise exports at the country level. This index ranges from 0 to 1, with a larger value denoting a higher concentration of exports. For example, a value of H_j equal to 1 indicates that all exports of country j come from a single commodity, while a value of 0 implies that the country's exports are homogeneously distributed among all products. It is calculated according to the following formula:

$$H_j = \frac{\sqrt{\sum_{i=1}^N \left(\frac{X_{ij}}{X_j}\right)^2} - \sqrt{\frac{1}{N}}}{1 - \sqrt{\frac{1}{N}}} \quad (2)$$

Employment elasticities

Employment elasticities are measures of the responsiveness of employment to growth in a particular sector or total GDP. These elasticities are commonly used to track sectoral potential for generating employment, and in forecasting future growth in employment.

$$\varepsilon = \frac{\Delta L/L}{\Delta Y/Y} \quad (3)$$

Here L measures employment while Y denotes GDP for the whole economy. The numerator is interpreted as the per cent change of employment, while the denominator refers to the per cent change of income, that is, the growth rate of GDP. The elasticity ε is thus interpreted as the per cent change of employment for every 1% change of GDP. Equation 3 measures the arc elasticity, thus implying that the elasticity computed is between two different points in time, rather than the point elasticity (ILO, 1999). Although the methodology is computationally very simple, Islam and Nazara (2000) and Islam (2004) have demonstrated that annual employment elasticities calculated using this method may exhibit a great deal of instability and may not be appropriate for comparative purposes.

An alternative estimation method involves a double-log linear equation to show the relationship between employment and GDP. The basic form of the equation is as follows:

$$\ln L = \beta_0 + \beta_1 \ln Y \quad (4)$$

Variables L and Y are defined as before, and \ln stands for the natural logarithm of the relevant variable. Here, the regression coefficient β_1 is the employment elasticity. This form of estimation generates the point elasticity. The point elasticity measures the percentage change in those employed if GDP changes infinitesimally close to zero. Table 2 presents how to interpret employment elasticities following Kapsos (2005). In interpreting employment elasticities, it is important to note that any economy that experiences positive GDP growth and negative employment elasticity implies that the economy is experiencing negative employment growth and positive productivity growth.

Table 2: Interpretation of employment elasticities

Employment Elasticity	GDP Growth	
	Positive GDP Growth	Negative GDP Growth
$\varepsilon < 0$	(-) Employment growth (+) Productivity growth	(+) Employment growth (-) Productivity growth
$0 \leq \varepsilon \leq 1$	(+) Employment growth (+) Productivity growth	(-) Employment growth (-) Productivity growth
$\varepsilon > 0$	(+) Employment growth (-) Productivity growth	(-) Employment growth (+) Productivity growth

Source: Kapsos (2005).

Similarly, with an economy that is experiencing negative GDP and negative employment elasticity, the implication is that it will translate to positive employment growth and negative productivity growth. The reverse is so for an economy with a positive and a negative GDP growth, respectively, especially when employment elasticity is greater than one. Essentially, if the employment elasticity lies between 0 and 1, an economy with positive GDP growth will experience positive employment and productivity growth. It is very imperative to note that productivity growth and employment elasticity growth are essential in any economy for poverty reduction. The reason being that, while employment elasticity growth gives the quantitative part of employment growth, the latter is the qualitative characteristic of employment growth and therefore one part should not be stressed more than the other (Khan, 2001; Kapsos, 2005).

Differential impact of sectoral growth on youth employment across rural and urban areas by gender

We addressed objective 3, which is to analyse the differential impact of sectoral growth on youth employment across rural and urban areas by gender using logistic regression model. The logistic regression model involves the regression of a dichotomous dependent variable against a set of independent variables. It takes two values, 1 if male and employed, and 0 if not. The probability of being a male depends on a set of variables denoted as x such that:

$$Prob (Y=1) = \frac{e^{\beta'x}}{1+e^{\beta'x}} = A(\beta x) \quad (5)$$

$$\sum\left(\frac{y}{x}\right) = 0 [1 - F(\beta x)] + 1 [F(\beta x)] = F(\beta x) \quad (6)$$

$$Z_i = \ln\left(\frac{P_i}{1-P_i}\right) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_n X_n + \varepsilon_i \quad (7)$$

Where,

Z_i is the log odds of being an employed female or male youth (15-35 years), α is constant, $\beta_1, \beta_2, \beta_3,$ and β_n are coefficients of independent variables $X_{1i}, X_{2i}, X_{3i},$ and X_{ni} , and ε_i is an error term for being employed.

- X_1 = Age (years)
- X_2 = Remittances (Yes=1, No=0);
- X_3 = Marital status (Married =1, Others =0);
- X_4 = Educational level_ Primary school;
- X_5 = Educational level_ High school;
- X_6 = Educational level_ higher degrees;
- X_7 = Economic activity/ occupation_ Agriculture;
- X_8 = Economic activity/occupation_ Industry;
- X_9 = Economic activity occupation_ Construction;
- X_{10} = Economic activity/occupation_ Trade;
- X_{11} = Economic activity/occupation_ Services;
- X_{12} = Location (Rural =1, 0 = Urban);
- X_{13} = Geopolitical zone_ North East;
- X_{14} = Geopolitical zone_ North West;
- X_{15} = Geopolitical zone_ North Central;
- X_{16} = Geopolitical zone_ South-South;
- X_{17} = Geopolitical zone_ South West;
- X_{18} = Geopolitical zone_ South East

Descriptive statistics

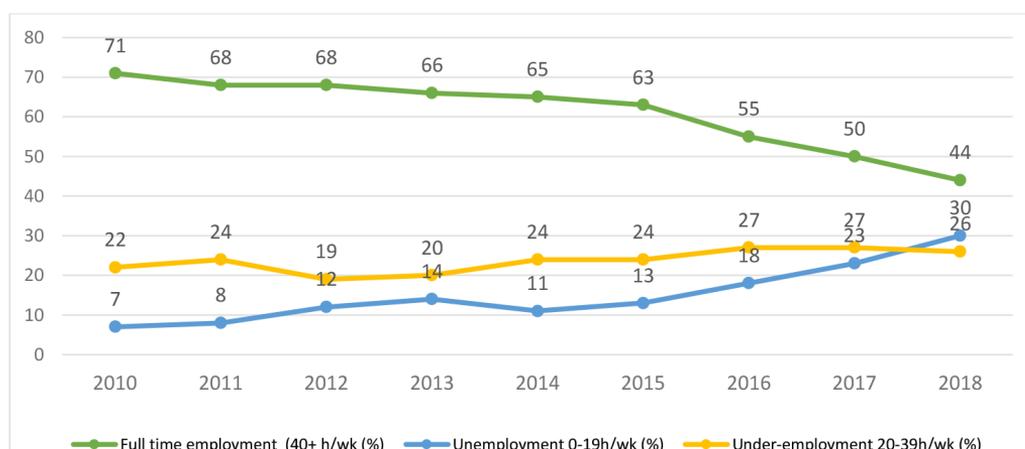
Some descriptive statistics such as mean and charts were used to analyse objectives 4 and 5 using data from the Productive Capacity Index, World Bank Enterprise Survey, and the findings from the key informant interviews (KII) for Nigeria.

4. Results and discussions

Trend of youth unemployment in Nigeria

The youth constitute one-third of the economic active population group in Nigeria (Adesugba & Mavrotas, 2016). The youth are believed to be an important asset for innovation and creativity in any society; however, this peculiarity could be lost if the capabilities of the youths are not well harnessed (Gilbert, 2010; Vremudia, 2012). Figure 2 presents the trend of youth employment, underemployment, and unemployment in Nigeria for the period 2010–2018. The result has shown that full time employment for youth aged 15–34 years has been on the decline since 2010 with a decline from 50% in 2017 to 44% in 2018, while unemployment rate has been on a steady increase with an increase from 23% in 2017 to 30% in 2018. Even with a high level of underemployment rate right from 2010 as compared to unemployment in the same year, it is obvious that many youths were employed although underemployed because they were willing to be engaged in different types of employment in any sector which may be beneath their skills and educational qualifications to avoid unemployment.

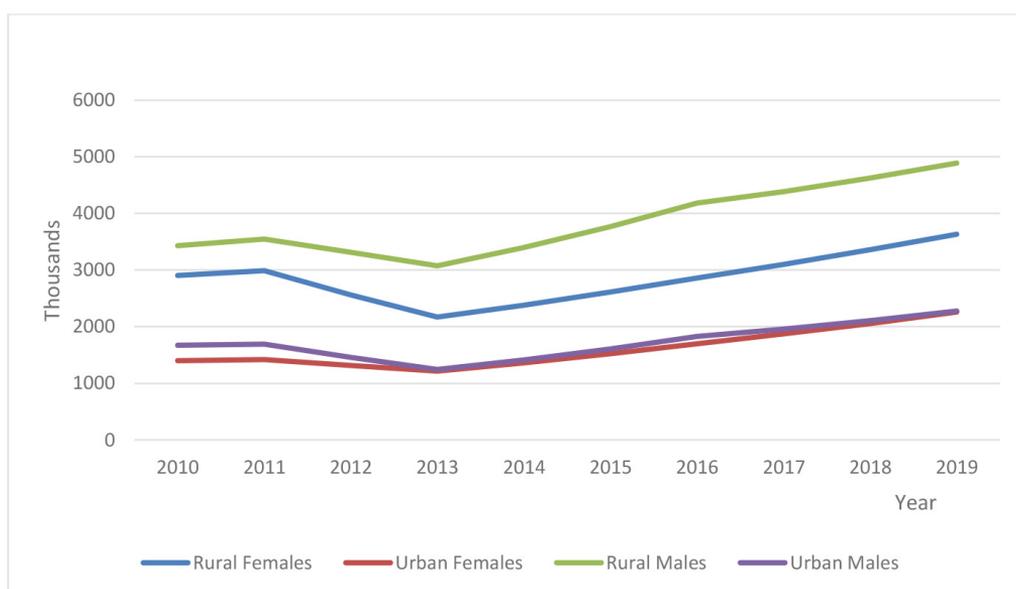
Figure 2: Trend of youth (15–34 years old) employment, underemployment and unemployment rates in Nigeria, 2010–2018



Source: Computed from National Bureau of Statistics, Labour Force Statistics: Volume I: Unemployment and Underemployment Report, Q3 2018.

Figure 3 shows the trend of youth employment by location in Nigeria. It was interesting to note that youth employment was higher in the rural areas as compared to the urban centres and among males as compared to females. The trend in employment across all categories has shown a gradual upward increase from 2010 to 2019 with a slight decline in 2013. Since 2010, young males in the rural areas have experienced higher incidence of employment as compared to the various categories. This may be attributable to the agriculture sector that tends to employ able bodied youths for field activities and likely due to menial jobs in construction, trade and services sector. This is further reiterated by the Making Cents International (2016) who reported that rural youths are often engaged in farming, construction, and home enterprises.

Figure 3: Trend of youth employment by location in Nigeria



Source: Computed from international Labour Organization statistics (2018).

Economic Sectors and Sectoral Economic Growth in Nigeria

Economic growth following Zhattau (2013) is the basis of prosperity increase which comes from the accumulation of more capital and innovation that leads to technical progress. Graphs (a) to (l) in Figure 4 present economic growth by sector in Nigeria from 1991 to 2018 using the GGDC data. Across the 12 sectors, the construction sector experienced the highest growth at 40.9% in 2018 and the lowest in real estate sector at 0.5%. It was interesting to note that growth rate in the agriculture sector (comprising of crop production, livestock production, forestry, and fishing) rose from 11.3% in 2017 to 14.3% in 2018. Nyabam et al. (2018) identified the agriculture sector as a sector with potential of reducing youth

unemployment in Nigeria because it has been the highest employer of labour through provision of great prospects for job creation either directly or indirectly especially for the young population.

Growth in mining declined from 91.6% to 30.5%, while growth in the manufacturing sector rose from 12.8% in 2017 to 24% in 2018. Although annual GDP growth has been downward sloping, it is obvious that some sub-sectors are experiencing some level of growth compared to others. In the services sector, the transport sector experienced a higher growth rate in 2018 at 30.3% as compared to the other sub-sectors within the sector.

The distribution of youth employment by economic sectors in Nigeria is presented in Figure 5. The result has shown that the services sector, which comprises of ICT, financial, public service, hospitality and tourism, trade, and entertainment, amongst others, is the highest employer of youths both in the rural and urban areas. The ICT sub-sector has over the years contributed to youth employment generation by offering youth empowerment opportunities (Michael & Samson, 2014) and income generation particularly in the areas of ICT and telecommunication based businesses (GSM recharge card printing, cybercafé, computer training, service and repair centres, vendors of mobile phones and accessories, cable and satellite TV installations, mobile phones services and repairs, internet service providers, etc.) which require very little funds to start up (Oladunjoye & Audu, 2012; Olasanmi et al., 2012). Also, the deregulation and liberalization of telecommunication has, not only lowered the prices of telecommunication products, but has also increased competition among its operators (Akanbi et al., 2015).

The trade sector was the second highest employer of youth labour. In most cases, this sector requires little or no experience to enter. This is because in the informal sector in Nigeria, the share of youth is higher than in the formal sector (Adams et al., 2013) with most employment in the non-agricultural informal sector such as trade and services. Majority of Nigeria's population remains in the agricultural and informal non-agricultural sectors.

The agricultural sector embodied huge potentials for employment with growing commitment from the Nigerian Government and development partners for engaging youths in agribusiness (Awogbenle & Iwuamadi, 2010), which is reflected in the various implemented programmes within the agricultural sector geared towards youth engagement. These programmes include: Fadama Graduated Unemployed Youths and Women Support (FGUYS) programme; Youth in Commercial Agriculture Development Programme (YCAD); Livelihood Improvement Family Enterprise (LIFE) programme; Youth Employment in Agriculture Programme (YEAP); and Youth Initiatives for Sustainable Agriculture (YISA) programme (Adeyanju et al., 2020). The decline in youth employment in the agriculture sector may be attributed to their search for employment in sectors other than agriculture mainly to obtain jobs that will pay better income and are less stressful (Awumbila et al., 2016; Abramitzky et al., 2013). Also, the inability of the youth to access land basically due to land tenure security and titling drives unemployment in the agriculture sector (Ghebru et al., 2018). Interesting, there was low incidence of female youth employment in the construction and industrial sectors.

Figure 4: Trend of GDP growth across economic sectors in Nigeria, 1991-2018

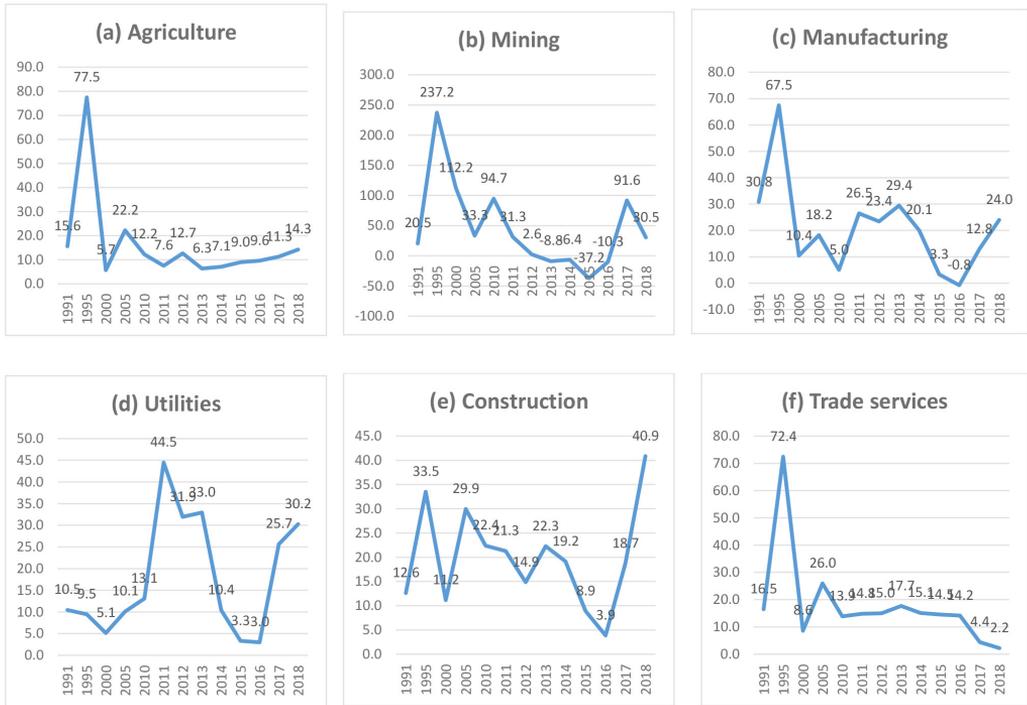
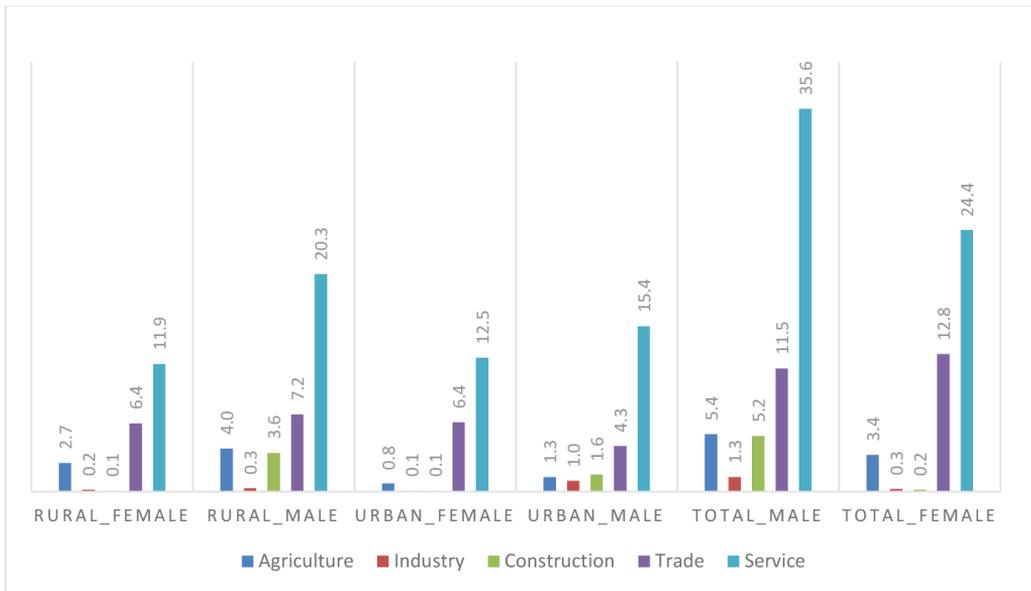


Figure 5: Youth employment distribution by economic sectors in Nigeria, 2018-2019



Source: Authors' computation from Generalized Household Survey data, 2018/2019.

This may be attributable to the fact that these sectors require a high level of expertise and in most cases brute strength especially for unskilled labour.

Table 3: Sectoral contribution to employment and gross domestic product in Nigeria

Year	Employment by Sector	Share of Employment	Gross Domestic Product 2018	Share of GDP
Agriculture	33,110,198.98	46.45	27,371,295.76	21.42
Mining	116,586.58	0.16	13,674,382.25	10.70
Manufacturing	5,083,657.69	7.13	12,455,527.91	9.75
Utilities	94,607.70	0.13	1,083,076.50	0.85
Construction	1,647,188.02	2.31	6,031,060.77	4.72
Trade services	11,392,293.16	15.98	23,062,810.53	18.05
Transport services	2,501,720.93	3.51	2,328,367.79	1.82
Business services	5,444,268.71	7.64	17,869,956.56	13.99
Financial services	915,974.21	1.29	3,996,755.06	3.13
Real estate	69,791.90	0.10	8,632,817.11	6.76
Government services	4,632,626.33	6.50	6,482,313.23	5.07
Other services	6,267,405.88	8.79	4,774,182.12	3.74
Total	71,276,320.07		127,762,545.59	

Source: Authors' computation from Economic Transformation database, de Vries et al. (2021).

Table 3 presents the contribution of the 12 economic sectors to employment and GDP. Our findings have shown that agriculture accounted for 33,110,198.98 in 2018 and contributed 46.45% to total employment. It was also the highest contributor to GDP with a share of 21.42%. The least contributor to employment was the real estate sector which accounted for 69,791.90 employed persons and contributed just 0.10%. Interestingly, the mining sector contribution to GDP was quite high, with it contributing 10.7% to total GDP. Other sectors that were high contributors to employment included trade services, manufacturing, business services (information and communication; administrative and support service activities, professional, scientific and technical activities), government services (public administration and defence; education; human health and social work activities, compulsory social security) and other services (arts, entertainment and recreation; other service activities; activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; activities of extraterritorial organizations and bodies). These sectors also contributed higher shares to total GDP in Nigeria. With trade services, business services, mining, manufacturing, government services, and construction contributing 18.05%, 13.99%, 10.70%, 9.75%, 5.07%, and 4.72%, respectively.

Economic sectors with job creation potential for youths in Nigeria

To identify the economic sectors in Nigeria with high potential for job creation, this study relied on the use of both trade related indicators, employment elasticities and drew inference based on government policies, Nigeria's geopolitical area comparative advantage and enterprise analysis.

Existing government policies analysis, enterprise analysis, and geopolitical area comparative advantage

Agro-ecological zones potentials analysis

Across the agro-ecological zones (AEZs) and geopolitical zones (GZ) in Nigeria, several areas (clusters) have been identified over the years as areas with high production intensities for several crops and livestock. It is perceived that the intensification and commercialization of these products will further lead to employment generation especially amongst the youths.

Agriculture sector

In Nigeria, despite the high dependence on imports, evidence has shown that the country has the potential to be self-sufficient and be a net exporter of several crops and livestock. According to the geopolitical zones (GEZ) classifications, several crops have been identified which have the potential to generate revenue to the country and create jobs if production is intensified and commercialized. Based on the GEZ, in the Southeast, there is huge potential for cashew, cassava, fish, oil palm and rice; in the South-South: banana, fish, plantain, rice and oil palm; North Central: cassava, cashew, yam and rice; Southwest: bush mango, cassava, cocoa and poultry; Northwest: onions, rice, sorghum, wheat and watermelon; and in the Northeast: Yam and wheat.

Across the country, several crop clusters exist with already existing infrastructure that will aid production and processing such as the Kadawa Tomato Cluster, Kano; Gassol Rice Cluster, Taraba; Badeggi Rice Cluster, Niger; Omor Rice Cluster, Anambra; Kebbi Rice Cluster; Makurdi Citrus Cluster, Benue; Agadu-Alape Cassava Cluster, Kogi; Ketu-Ereyun Corridor Aquaculture; Oban Pineapple Cluster, Cross River, Abuja Crop Processing Cluster, FCT and Osogbo Poultry and Feed Cluster (te Velde et al., 2016; Strategic Framework Implementation Plan, 2016). With the existence of these products and trade clusters, employment in food processing is expected to grow in future (Allen et al., 2018).

The existence of these infrastructure will make the agriculture sector and its sub-sectors more attractive especially for youths who tend to avoid agriculture or

agriculturally related courses because they perceive that farming is antiquated and unprofitable (International Fund for Agricultural Development [IFAD], 2016). This will also make it attractive for investors.

Construction and industry sectors

Nigeria has a high deposit of solid minerals across various parts of the country. Some of these minerals are traded in high quantities. For example, the existence of large deposit of limestone is beneficial to the cement industry with several companies in Nigeria involved in this sub-sector. This is evident with companies such as the Dangote Cement Plc under the Dangote Group that happens to be one of the leading cement companies in Nigeria with presence in several African countries. Both the construction and industry sectors have potential for job creation because of urbanization and the boom in real estate in Nigeria especially in many mega cities and the Federal Capital Territory. There are constant and never-ending building constructions both for residential and commercial purposes. Some of the resources currently available that are likely to drive employment include: computer village in Otigba in Lagos; large deposit of Tin (Plateau), an auto and industrial spare parts fabricator in Nnewi; large deposit of Coal (Enugu) and leather tannery in Kano; amongst others (Ekesiobi et al., 2018; te Velde et al., 2016; Chete et al., 2014; Madichie & Nkamnebe, (2010). The aim of the Nigerian Industrial Revolution Plan (NIRP) is to promote the industrial sector as a key employment and income generator by identifying priority sectors capable of promoting competitiveness.

Wholesale and retail trade sector

In every economy, the role of trade whether wholesale or retail cannot be overemphasized as it employs both skilled and unskilled labour. Often, it is the first choice for people with little or no skill. Engaging in this sector at the informal level requires little or no skill for entry except in the case of specialized trade. Nigeria is home to several retail clusters, some of which are internationally known such as the Kurmi Artefacts Retail Cluster in Kano State, Dawanau Grains Retail Cluster in Kano, Potiskum Livestock Retail Cluster in Yobe, Osoba Adire/Kampala International Market Retail Cluster in Ogun, Alaba Retail Cluster in Lagos and Ariaria Leather Products Cluster in Abia (Strategic Framework Implementation Plan, 2016). Bank of Industry (2018) identified the following industrial clusters: Nnewi (automobile), Yabacon Valley (ICT), Otigba (technology), Onitsha (plastic), Kano (leather) and diverse export processing and trade zones through policy mandates. Harnessing the potential of this sub-sector and its organized clusters will go a long way in regulating prices and making it more attractive for investors thereby ultimately leading to job creation.

Services sector

This sector has the potential to employ many people because of its numerous sub-sectors. Some of the sub-sector requires little or no skills to engage in them. Across the 36 states and Federal Capital Territory in Nigeria, some proportions of the population are employed in the public service at the various ministries at both state and federal level. The services sector in Nigeria continues to grow at an astronomical rate due to sub-sectors such as ICT, finance, entertainment, health, public administration, and education, amongst others. From Figure 5, it is obvious that this sector will continue to grow. Harnessing the potentials in the tourism and entertainment industries will greatly promote job creation.

Existing government policies analysis

Increased unemployment rates and poverty are Siamese evil facing Nigeria's path to growth and development. The world poverty clock of 2018 stated that Nigeria became the poverty capital of the world after overtaking India with about 86.9 million of her population living in extreme poverty (Odey & Sambe, 2019). Government of Nigeria at one level or the other and at various times have implemented some initiatives and scheme aimed at alleviating poverty and reducing unemployment especially among the youths and women. The Economic Recovery and Growth Plan (ERGP) is targeted at creating jobs and developing labour-intensive sectors (such as agriculture, manufacturing, housing and construction) by fostering infrastructure development in these sectors with capacities to create demand for labour, particularly local labour. Under the ERGP, the government's social housing programme would also create jobs for artisans and craft-workers. The National Employment Policy (NEP) is targeted at government interventions for employment generation, especially in the agricultural sector. It focuses on education, skills development, access to credit, small businesses, infrastructure development, cooperatives, and labour market information.

The National Youth Policy (NYP) (2019–23) aims at providing an appropriate framework for the protection of the fundamental human rights of all youth. Its main strategic thrusts are: (1) Productive workforce and sustainable economic engagement of youth; (2) Participation, inclusiveness and equitable opportunities for all youth; (3) Health and health-promoting lifestyle; (4) Promotive and protective environment for youth development; and (5) Partnership building and effective collaboration.

The Nigerian Youth Employment Action Plan (NIYEAP) seeks to leverage current policies and development strategies to speed up the impact on youth employment and create synergies among different stakeholders and their respective interventions. It aims at advancing the implementation of youth employment related commitments of sectorial policies and broader development frameworks. Other related policies to youth employment include National Digital Economy Policy and Strategy (2020–30), National Policy on Labour Migration, and National Social Protection Policy

National Poverty Eradication Programme (NAPEP) was initiated by President Olusegun Obasanjo and established in 2001 to eradicate extreme hunger and poverty in Nigeria with core programmes aimed at youth empowerment. This programme was designed to replace the Poverty Alleviation Programme (PAP). Embedded in the programme is the Capacity Acquisition Programme (CAP) with emphasis on skills acquisition and training for self-reliance (Sule et al., 2019). Among the goals of NAPEP are youth training in vocational trades, internship support, micro-credit support, employment creation in the automobile industry and provision of assistance to Vesicovaginal fistula (VVF) patients (Wohlmuth et al., 2008).

The Subsidy Reinvestment and Empowerment Programme (SURE-P) was established in 2011 under President Goodluck Jonathan administration at the wake of the protest by Nigerians due to the government's withdrawal of subsidy from petroleum products. It was a social intervention scheme targeted at providing employments for unemployed graduates through internship programmes. It was believed that the fund saved from the subsidy withdrawal is to be reinvested to job opportunities generation for the unemployed in the country (Charles et al., 2019). The core mandate of SURE-P was to mitigate youth unemployment in Nigeria through youth empowerment in three key areas: Vocational Training Scheme, Community Service, Women and Youth Employment (CSWYE), and Graduate Internship Scheme (GIS) (Charles et al., 2019; Dauda et al., 2019). The vocational training scheme through the establishment of vocational training centres across the six geopolitical zones was designed at training youths on various skills ranging from Information and Communication Technology (ICT), agro and agro allied production, fabrication technology, artisan, and creative industries, among others.

The aim of the Graduate Internship Scheme (GIS) was to create attachment opportunities for 185,000 graduates per annum to firms or organizations through mentorship with the hope that it may ultimately culminate into permanent employment for the interns (SURE-P Report, 2013; Premium Times, 2013). The youth employment and empowerment projects of the SURE-P looks promising at addressing the high rate of unemployment in Nigeria; however, with the increasing number of graduate seeking employment in public and private establishment and rising rate of unemployment in the country, the programme was not fully capable of addressing Nigeria unemployment problem. This may also be because the companies that were involved in the scheme were unable to adsorb the unemployed during the life span of the programme. This was further buttressed in a study by Charles et al. 2019 who reported that SURE-P has been poorly implemented as there is no significant reduction in unemployment with the implementation of SURE-P irrespective of its potentials in reducing youth unemployment.

The Community Service, Women and Youth Employment (CSWYE) was targeted at immediate short-term employment opportunities creation for women and youth through labour-intensive public workforce. Among the focus of CSWYE was to bridge the gap to formal employment by empowering youths, women, and vulnerable groups; creating employment opportunities for about 185,000 women and youths; reducing

the vulnerability of women and youth through income support opportunities offers; amongst others.

National Social Investment Programme (N-SIP) initiative was established in 2016 to address a range of social issues such as poverty incidence, youth unemployment, school enrolment and entrepreneurship orientation (Akujuru & Enyioko, 2019). The N-SIP initiative is made up of four components: N-Power Scheme; National Home-Grown School Feeding Programme (NHGSFP); National Cash Transfer Programme (NCTP); and Government Enterprise and Empowerment Programme (GEEP). The N-Power Scheme is the job creation component of the policy initiative focused on reducing poverty and unemployment and targeted toward Nigerian youth (Dauda et al., 2019).

The N-Power Scheme is targeted towards graduate job creation, poverty alleviation and empowerment initiatives through volunteering services. The scheme is available for both graduates and non-graduates with the focus of instilling the learn-work entrepreneurship culture in Nigeria youths between the ages of 18-35 (FGN, 2018). The graduate's category of the scheme is divided into N-Agro, N-Teach and N-Health while the non-graduate category is made up of N-Build. Among the goals of N-Power Scheme is to reduce the rate of unemployment in the country, facilitating the transfer of entrepreneurial, technical skills and employability ability and bringing solution to active public service and government diversification policy (Kabeer, 2018). It ensures that each participant learns and practices most of what is necessary in securing or creating a job.

Another programme is the Anchor Borrower's programme of the Central Bank of Nigeria across various states in Nigeria. The focus is on the empowerment of youths in agribusiness and entertainment. The agribusiness focus is because it is believed that it could lift many youths out of unemployment, and entertainment because many youths have shown a high level of passion and prowess.

Other interventions include the World Bank assisted Youth Employment and Social Support Operations (YESSO) programme; FADAMA Graduate Unemployed Youths and Women Scheme (FADAMA GUYS) which is particularly unique because it is targeted at two main vulnerable groups of our population, the youth and women; Ogun State Youth Empowerment Scheme (OgunYES), and various farm settlement schemes, for example, Owowo Farm Settlement in Ogun state.

Trade related indices economic sectors with job creation potential in Nigeria

Revealed comparative advantage

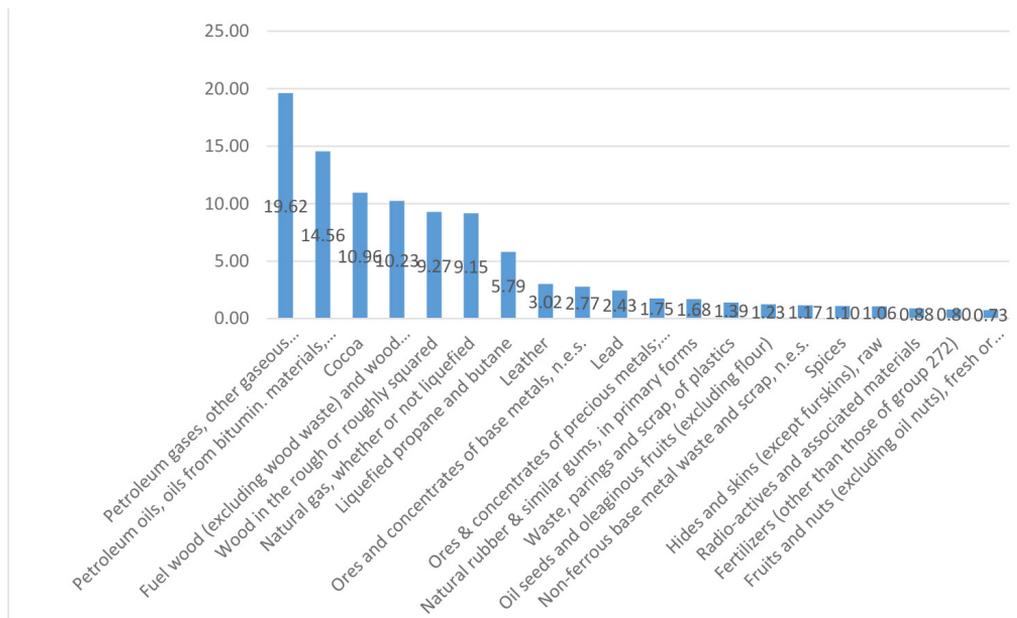
Figure 6 presents Nigeria's RCA for the top 20 exports in 2019. Although Nigeria is a country that depends largely on petroleum and its products, the analysis suggests that Nigeria has RCA in products such as cocoa, fuel wood, oil seed, fruits and nuts, spices ores, natural rubber, lead, amongst others, and manufactured goods such as different types of leather. As a result, when these products and their sub-sectors are

properly harnessed, they can contribute to massive youth employment creation. Out of 205 goods exported from Nigeria, only 17 have RCAs greater than one.

Diversification and concentration indices

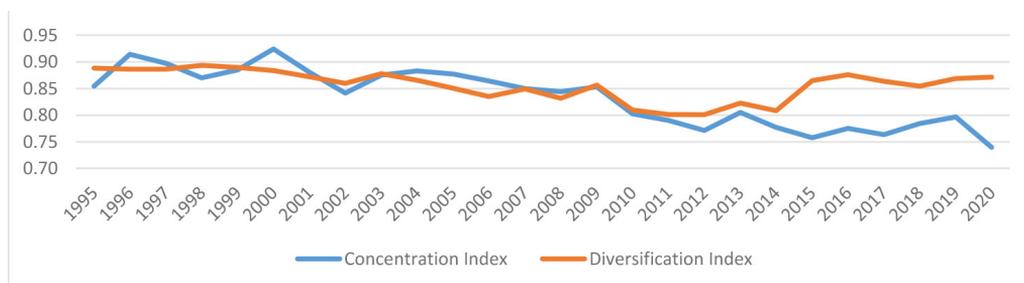
The diversification and concentration indices for Nigerian merchandise exports are presented in Figure 7. Although Nigeria has diversified, the value-added in exports comes from mineral products. It is interesting to note that the rate of diversification is interwoven with that of the concentration of its products. From Figure 3, the rate of diversification and product concentration has been between 0.7 to less than 1, thus implying that the country's products are not diversified but concentrated on one main product which is petroleum and its products in the case of Nigeria. This is reiterated by Yaméogo et al. (2014) that natural resource endowment (especially oil resources) may affect countries negatively in terms of complexity. Even though over 200 products were exported in 2020, the main product(s) still comprises of oil and gas evident from Figure 8.

Figure 6: Nigerian revealed comparative advantage disaggregated by products, 2019



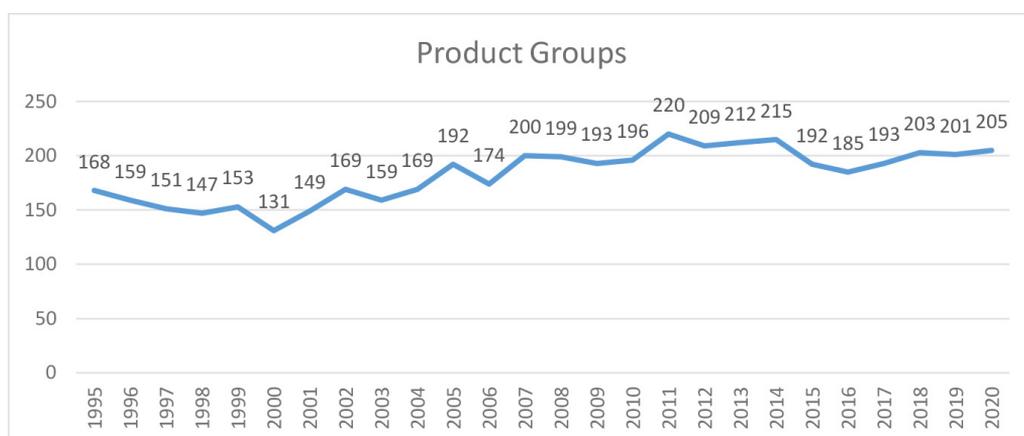
Petroleum products have a concentration index of 0.76, thereby implying that almost all the exports from Nigeria comprises petroleum products.

Figure 7: Diversification and concentration indices for Nigerian merchandise exports



Source: Authors' computation from UNCTAD (2021).

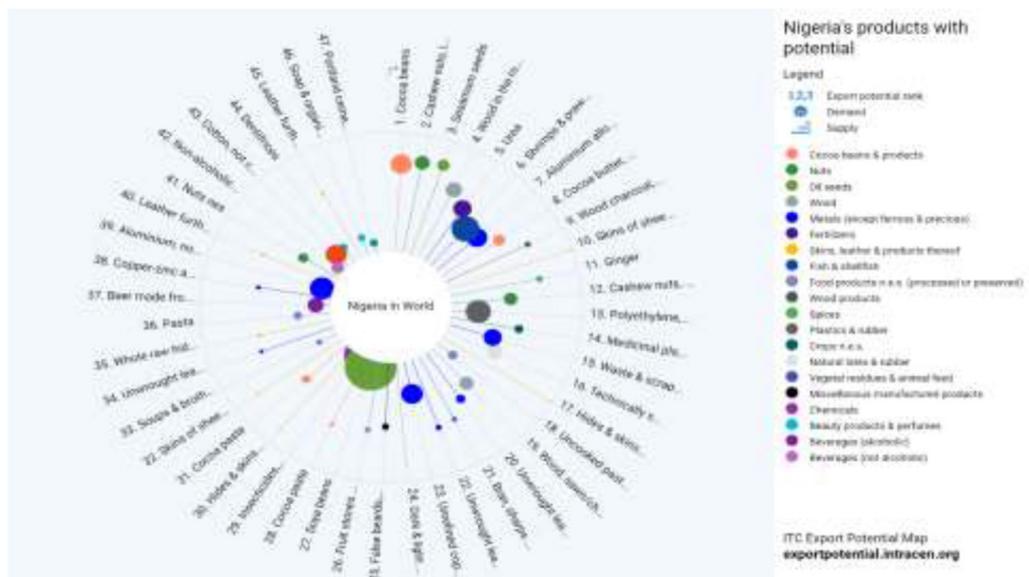
Figure 8: Number of traded products in Nigeria, 1995-2020



Source: Authors' computation from UNCTAD (2021).

Figure 9 shows the Export Potential Map for Nigeria's diversification products. This map presents practical information on export opportunities for over 4,000 products. The focus of such a map is to help countries identify areas of untapped export potential and opportunities for export diversification. According to the International Trade Centre (ITC), Nigeria's total untapped export potential is estimated at US\$2.2 billion.

Figure 9: Export potential map for Nigeria's diversification products



Source: International Trade Centre (2021)

The products from Nigeria with the highest export potentials to the world include cocoa beans, cashew nuts in shells, and sesame seeds. Tapping these potentials will immensely contribute to youth employment, especially in the production and processing of such products. This corroborates the finding of Treichel (2010) that identified meat and poultry, oil palm, and cocoa as sectors with the high employment potential.

Employment elasticities

We determined the economic sectors with high youth employment potential using data from the Economic Transformation Database of the GGDC. Two approaches were used to generate employment elasticities using the basic descriptive approach and the double log approach. Although the scope of the analysis covers the total employed population, we make claims specifically to the relevant sectors based on the assumption that analysis is relevant to the youth.

These employment elasticities are presented in Tables 4 and Table 5. The arc employment elasticities reveal what is occurring between two periods (years) while the elasticity generated from the double log model reveals the point elasticity which measures the percentage change in the numbers employed if GDP changes infinitesimally close to zero. The arc elasticities for 2018 were all positive for the 12 economic sectors. The 2018 arc elasticities for real estate, government services and trade sectors were positive with elasticities above unity thus implying that a 1% increase in these sectors will result in more than a 1% increase in employment in the sectors.

The point elasticities generated for the whole period (1991–2018) were all positive for all economic sectors with the highest elasticities in the financial services. This is not surprising as previous studies such as Dauda and Ajeigbe (2021) have reported positive employment elasticity in the services sector. Based on our findings, the fastest growing sector and the sector with the most job-intensive growth was the financial service sector (comprising financial institutions and insurance companies) where for every one percent point of growth in the services sector, employment increased by 0.73-point per cent. This was closely followed by the transportation services which will bring about a 0.60-point per cent increase in employment with a 1% increase in growth. This result is not too surprising as efforts have been made by the Nigerian Government to improve different components of the transportation sector. Furthermore, as reported in the Guardian Newspaper, Simba Group has been in partnership with the government through agencies such as National Directorate of Employment (NDE), National Automotive Design Development Council (NADDAC), among others, to empower youth through trainings to become mechanics and tricycle (keke) riders at no cost.

The manufacturing and mining sectors particularly are unique sectors where qualified young men are easily employed. Usually, employees of these sectors are well trained and are fewer in numbers as compared to other sectors. It was not surprising to note that both sectors had the lowest employment elasticities amongst the 12 sectors.

In this case, the likelihood of a per cent increase in economic growth in both the manufacturing and mining sectors would bring about a 0.056-point per cent and 0.057-point per cent in employment, respectively. Even though they have low employment elasticities, they are still sectors that are high contributors to the GDP. Every related service sectors such as utilities (electricity, gas, air conditioning supply; water supply; sewerage and waste management), trade services (wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities), business services, (information and communication; administrative and support service activities, professional, scientific and technical activities); government services (public administration, defence; education; human health and social work activities); and other services (arts, entertainment and recreation; amongst others) increased employment by 0.176-point per cent, 0.252-point per cent, 0.452-point per cent, 0.327-point per cent, 0.332-point per cent, respectively.

The elasticity for the agriculture sector was low compared to the other sectors, with it contributing only 0.080-point per cent to employment with a 1% increase in economic growth. This result is surprising and contradicts established theories and schools of thought. However, a probable reason for the low elasticity may be due to data availability as the data may not have been able to capture the informal sectors and because the labour force is shifting out of agriculture at a high speed due to the rate of lagged farm productivity growth (Yeboah & Jayne, 2018). Many youths prefer to seek employment in off-farm activities as they perceive that there is not much incentive in the agricultural sector.

Table 4: Estimate for Arc employment elasticities

Year	Agri- culture	Mining	Manufac- turing	Utilities	Construc- tion	Trade	Transport Services	Business Services	Financial Services	Real estate	Government Services	Other Services
1991	0.351	-0.466	0.079	-0.034	0.357	0.063	0.351	0.373	0.766	0.388	0.106	0.046
1992	0.063	0.017	-0.270	0.786	0.178	0.020	0.150	0.463	0.537	0.356	0.025	0.257
1993	0.023	0.174	-0.221	0.048	0.176	0.014	0.082	0.353	1.163	0.155	0.086	0.108
1994	0.023	0.412	-0.126	0.751	0.122	-0.035	0.016	0.407	-0.341	0.040	0.154	0.029
1995	0.056	0.006	-0.166	-0.212	0.095	-0.027	0.049	0.375	0.141	0.128	0.060	0.085
1996	0.064	0.122	-0.213	0.296	0.103	-0.039	0.119	0.320	0.194	0.259	1.312	0.255
1997	0.134	-0.088	-0.684	-0.298	0.406	-0.052	0.281	0.560	1.404	0.857	0.269	0.561
1998	0.051	-0.044	11.010	-2.864	0.200	0.068	0.181	0.476	0.663	0.221	0.044	0.531
1999	0.409	-0.212	-0.493	0.163	0.404	0.046	0.267	0.321	0.813	0.239	0.182	0.425
2000	0.592	0.090	-0.298	0.300	0.403	-0.050	0.381	0.426	0.776	0.368	0.027	0.283
2001	0.024	-0.187	0.014	0.057	0.379	0.020	2.683	0.262	0.394	0.757	0.100	0.346
2002	0.034	-0.828	0.169	0.968	0.273	0.214	0.798	1.129	0.611	1.577	3.325	0.506
2003	0.158	0.435	-0.050	0.943	0.408	0.185	0.317	-0.045	-2.726	-0.071	0.234	0.021
2004	-0.183	0.047	0.237	0.876	-0.035	0.564	0.865	0.168	0.339	0.179	0.997	0.365
2005	0.112	-0.008	0.148	0.602	0.422	0.428	2.500	0.189	0.349	0.185	0.463	0.358
2006	0.042	-0.220	0.159	0.112	0.846	0.278	1.134	0.134	0.095	0.946	0.492	0.362
2007	0.137	-0.645	0.317	0.476	2.107	1.122	2.447	0.369	0.763	0.853	0.486	0.342
2008	0.124	-0.323	0.167	0.213	0.905	0.771	16.226	1.841	0.787	0.787	0.438	0.646
2009	0.045	0.009	0.237	0.158	0.934	0.559	1.809	1.937	1.125	1.080	0.458	0.652
2010	0.163	0.093	1.233	0.164	1.018	0.393	0.693	0.386	2.120	0.741	1.020	0.916
2011	0.152	0.274	0.228	0.029	0.952	0.341	0.932	0.306	-1.507	0.766	0.585	0.836

continued next page

Table 4 Continued

Year	Agri- culture	Mining	Manufac- turing	Utilities	Construc- tion	Trade	Transport Services	Business Services	Financial Services	Real estate	Government Services	Other Services
2012	0.034	0.183	0.776	-0.114	0.609	0.120	0.450	1.479	0.835	0.246	-3.229	0.064
2013	-0.008	-0.005	0.615	-0.104	0.456	0.089	0.565	0.796	1.712	0.268	0.337	0.212
2014	0.056	0.128	0.580	-0.453	0.600	0.233	0.735	1.620	1.947	0.592	0.710	0.344
2015	0.028	0.030	4.087	-1.043	0.965	0.281	0.809	1.854	2.049	0.791	1.924	0.378
2016	0.136	0.316	-12.339	-2.540	0.069	0.021	0.424	2.139	2.726	1.299	0.658	0.310
2017	0.247	0.021	0.936	-0.235	0.310	0.877	0.690	7.336	4.182	1.492	2.089	1.151
2018	0.163	0.144	0.137	0.141	0.050	1.807	0.154	0.624	0.860	11.360	1.029	0.891

Source: Authors' computation from Economic Transformation Database (2021),

Table 5: OLS estimates for point employment elasticities

Economic Sectors	Elasticity	Standard Error
Agriculture	0.080	0.002
Mining	0.057	0.007
Manufacturing	0.056	0.047
Utilities	0.176	0.018
Construction	0.364	0.021
Trade services	0.252	0.023
Transport services	0.602	0.047
Business services	0.452	0.021
Financial services	0.734	0.052
Real estate	0.359	0.018
Government services	0.327	0.029
Other services	0.332	0.013
Total	0.155	0.011

Source: Authors' computation from Economic Transformation Database, 2018.

Differential impact of sectoral growth on youth employment across rural and urban areas

The third objective which was to analyse the differential impact of sectoral growth on youth employment across rural and urban areas by gender was analysed using the logit regression model. Table 6 presents estimates of two sets of similar regressions. The first one analysis uses a broader categorization—the African Union (AU) Youth Charter Categorization (18-35 years) of youth upon which our study is based and the Nigerian Youth Categorization (15-29) under the new National Youth Policy for 2019–2023 (National Youth Policy, 2019). Both coefficients and marginal effects were estimated for the two regressions. The dependent variable is employed female or male youths, which takes the value of 1 if it is an employed male youth; and 0 if it is an unemployed female youth. Based on the AU Youth Charter Categorization of the age of youths, 13 variables significantly affected youth employment by sex in Nigeria.

The regression results reveal that an increase in age by one year increases the probability of a male getting a job by 2.5% and 1.2% percent for the Nigerian and AU youth categorizations, respectively. This result is not surprising and corroborates the findings of Adesugba and Mavrotas (2016) which reported that, as youth age, there is higher likelihood of securing employment as compared to their younger counterparts. A probable reason for this could be attributed to the belief that age goes with experience. As such, employers would like to hire youths who they perceive are matured based on age.

Marital status was found to have a negative effect on male employment. For example, youths that were married were less likely to secure jobs as compared

to unmarried youths. Particularly, being a married youth reduces the probability of securing a job by 34.5% and 19.8% percent using the Nigerian and AU youth categorizations, respectively. Employing firms may be hesitant to employ youths that are married on grounds that those youths have huge responsibilities to bear. Since start-up jobs do not pay higher salaries, employers may fear that employing married youth could lead them to some sort of inefficiency or corruption—this being something that could explain their choice for unmarried youths especially when the job involves some travelling or relocation.

Remittance, as one of our key variables, was found to have a negative impact on youth employment. An increase in inward remittance by one naira reduces the chances of youth employment by 24.4% using Nigerian youth categorization and 12.8% using the AU youth categorization. This result is not surprising as literature have identified inward remittance as a disincentive to work. In many cases, if young people have some wealthy relatives abroad who send them money regularly, those youths may likely feel reluctant in searching for and securing a job.

Educational status showed some surprising results. For example, using the Nigeria Youth categorization, it was found that the higher a youth gets educated, the less likely he/she is to be employed. This finding is contrary to well established fact that higher education leads to better job security and thus income. This result may be because a higher proportion of the respondents had lower educational levels. Although this result was contrary for the age group 15-29, the opposite was the case with the AU categorization (15-35), as there was a positive relationship between male employment and secondary school education with an implication that there was a higher likelihood for a youth with secondary education to be employed.

For occupation status, it was found that male youths were most likely to secure jobs in the industrial, construction, and services sectors as compared to their female counterpart. For example, being a male increases the chance of securing employment in the industrial sector by 62.1% and 40.5%, using the Nigerian and AU youth categorizations, respectively. For the construction sector, being a young man increases the chances of getting employed by 89.5% and 82.6%, respectively. The services sector also followed suit in favour of being a young man, though the magnitude is lower relative to the other occupation sectors.

On the other hand, being a male reduces the chances of getting employed in the trade sector by 6.6% and 7.5% using the Nigerian and AU youth categorizations, respectively. These results point to the fact that the males dominate employment in certain sectors, while their female counterparts dominate the informal sector, such as petite trade (Adesugba & Mavrotas, 2016).

Geographically speaking, male youths from the South-South and Southeast regions were less likely to secure jobs as compared to their female counterparts from the same regions. On the other hand, male youths from the Northwest and Northeast regions were most likely to secure employment, as compared to their female counterparts from those same regions

Table 6: Logit regression model to measure the differential impact of sectoral growth on youth employment

	Nigerian Youth Categorization (15-29 Years)			AU Charter Youth Categorization (15-35 Years)		
	Coeff	Z value	Marg. Effect	Coeff	Z value	Marg. Effect
Age	0.105***	3.93	0.025	0.052***	3.84	0.012
	(0.000)		(0.000)	(0.000)		(0.000)
Marital status	-1.443***	-6.94	-0.345	-0.832***	-5.99	-0.198
	(0.000)		(0.000)	(0.000)		(0.000)
Remittance	-1.020***	-4.38	-0.244	-0.538***	-3.52	-0.128
	(0.000)		(0.000)	(0.000)		(0.000)
Primary_ Edu	-0.128	-0.39	-0.031	0.119	0.49	0.028
	(0.694)		(0.694)	(0.625)		(0.625)
High school_ Edu	-0.337	-1.42	-0.080	0.304*	1.91	0.072
	(0.155)		(0.155)	(0.056)		(0.056)
Tertiary_ Edu	-0.762***	-2.67	-0.182	0.011	0.07	0.003
	(0.008)		(0.008)	(0.947)		(0.947)
Occupa_ Agric	-0.066	-0.18	-0.016	0.009	0.04	0.002
	(0.853)		(0.853)	(0.970)		(0.970)
Occupa_ Industry	2.597**	2.38	0.621	1.700***	2.59	0.405
	(0.017)		(0.017)	(0.010)		(0.010)
Occupa_ Constru	3.745***	3.59	0.895	3.467***	4.73	0.826
	(0.000)		(0.000)	(0.000)		(0.000)
Occupa_ Trade	-0.277	-1.21	-0.066	-0.315**	-2.04	-0.075
	(0.226)		(0.226)	(0.042)		(0.042)
Occupa_ Service	0.383**	2.08	0.091	0.269**	2.08	0.064
	(0.037)		(0.037)	(0.037)		(0.037)
Location	0.244	1.30	0.058	0.314**	2.34	0.075
	(0.193)		(0.193)	(0.019)		(0.019)
Southwest	-0.109	-0.36	-0.026	-0.237	-1.18	-0.056
	(0.717)		(0.717)	(0.240)		(0.240)
South-South	-0.270	-1.00	-0.065	-0.457**	-2.30	-0.109
	(0.318)		(0.319)	(0.022)		(0.022)
Northeast	-0.656**	-2.18	-0.157	-0.709***	-3.35	-0.168
	(0.029)		(0.029)	(0.001)		(0.001)
Northwest	1.110***	3.74	0.265	0.886***	4.21	0.211
	(0.000)		(0.000)	(0.000)		(0.000)

continued next page

Table 6 Continued

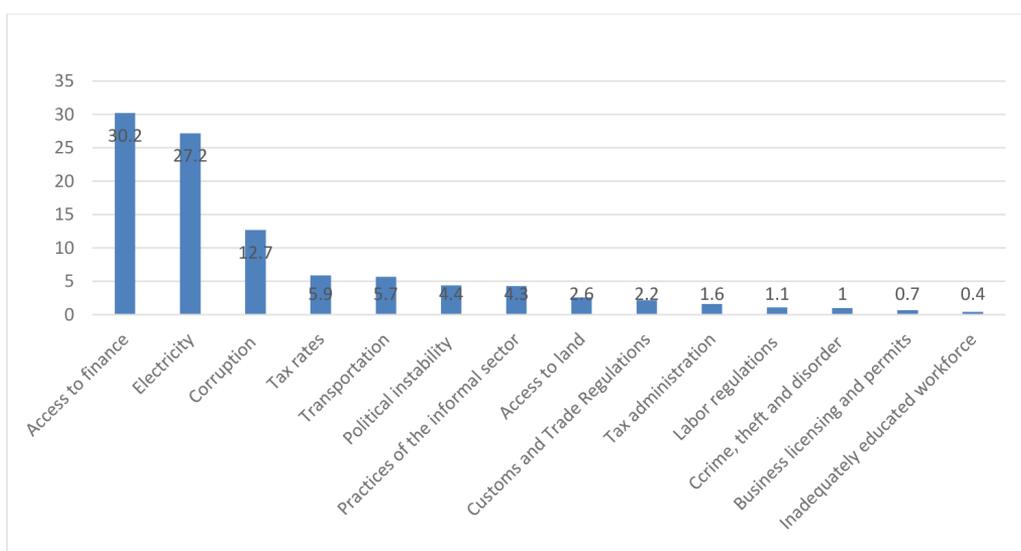
	Nigerian Youth Categorization (15-29 Years)			AU Charter Youth Categorization (15-35 Years)		
	Coeff	Z value	Marg. Effect	Coeff	Z value	Marg. Effect
Northeast	1.106***	3.36	0.264	1.118***	4.80	0.266
	(0.001)		(0.001)	(0.000)		(0.000)
Constant	-1.700**	-2.51		-1.079**	-2.54	
	(0.012)			(0.011)		

Notes: P-values are in parenthesis; *, **, *** represent 10%, 5% and 1% significance level, respectively.
 Source: Authors' computation from Generalized Household Survey data, 2018/2019.

Economic and political constraints to developing key sectors relevant for youth employment

We identified the key economic and political constraints to developing key sectors relevant for youth employment in Nigeria using data obtained from the Enterprise Survey data for 2014 and from primary data obtained from the key informant interviews. The economic sectors in Nigeria are often faced with challenges that inhibit their abilities to create jobs for the ever-teeming youths despite their huge potentials for growth. Across the different economic sectors in Nigeria, the key economic and political constraints to developing these sectors include, but are not limited to:

Figure 10: Constraints to the business environment in Nigeria

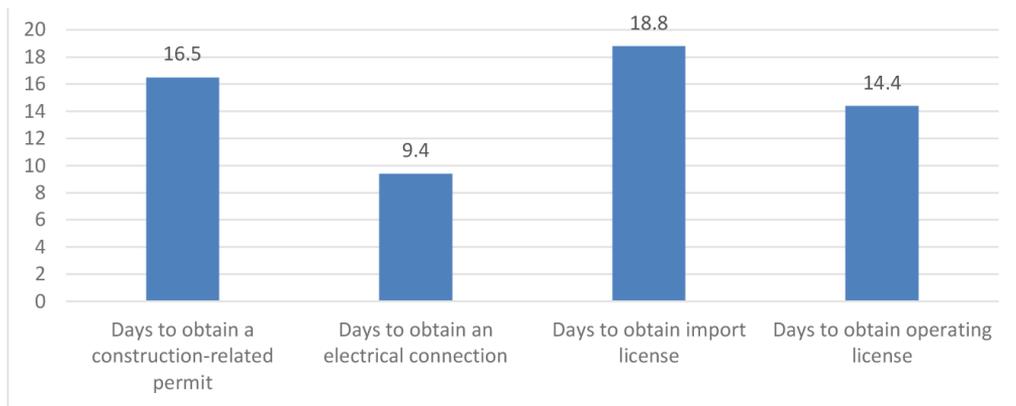


Source: Authors' computation from Enterprise Survey, 2014.

Figure 10 presents the constraints to the business environment in Nigeria using the data from the Enterprise Survey data for 2014. Our findings have revealed that most firms reported that access to finance (30.2%) was a major constraint for them followed by access to electricity (27.2%) and corruption (12.7%). Firms will be unable to scale up production or enjoy economies of scale if they lack access to funds or have inadequate funds, so many of them end up operating at a loss. Access to infrastructure such as electricity and water was also a major challenge for firms. It is believed that the competitiveness of firms that have access to basic infrastructure will be enhanced thus making the business environment conducive for growth and development. Access to infrastructure will increase a firm's efficiency, while lack of access will reduce their productivity because of higher production cost.

Corruption is a challenge that has entrenched itself into the fabric of the society. According to the United Nations Office on Drugs and Crimes (UNODC, 2019), 32.3% of surveyed Nigerian citizens reported that they were asked to pay a bribe, or they paid bribes with at least a single contact with a public official. This is not good for promoting the business environment as it increases the cost associated with running any business. Other constraints identified by diverse firms include increased tax rate, high cost of transportation for moving raw materials and finished products, political instability, and access to land, amongst others.

Figure 11: Period required for licensing for business start-up and related regulations



Source: Authors' computation from Enterprise Survey, 2014.

Figure 11 presents information on the period required to obtain licensing for business start-up and related regulations. Firms reported that it took them 18.8 days to obtain import license and 16.5 days to obtain a construction related permit. The number of days required to obtain an electrical connection was the lowest (9.4 days). The implication of this is that the longer the period taken to obtain necessary documentations that would aid in achieving the objectives of any business, the higher the cost in terms of time and human resources expended.

To further validate the findings from the Enterprise Survey, we have identified key political and economic constraints using key informant interviews (KII) where our stakeholders were selected based on our findings on identified sectors with high employment creation potentials and the interview guide in Appendix A was administered. The findings from the various sectors have shown that:

Agricultural sector

The findings from agricultural experts from the KII in the agricultural sector have identified: financial crisis, skills mismatch, lack of entrepreneurship and life skills education, and inadequate access to capital as economic constraints to developing the agricultural sector. This is like the findings of Kaleem et al. (2021) where they identified some constraints to aquaculture and fish farming in Nigeria to include inadequate infrastructure, high input price, inadequate supply of fish feed, high feed cost, irregular electricity supply, poor extension services, poor finance, land acquisition, disease and poaching, poor market/price and cannibalism. From the KII, political constraints to the agriculture sector include policy inconsistency and discontinuity, lack of stability and continuity in programmes by succeeding governments due to different political interests, therefore affecting majority of youth empowerment programmes. It is believed that if all these constraints are addressed, then there will be increased employment generation.

Construction and industrial sectors

Similarly, the construction and the industrial sectors require high skill levels as compared with some of the other sectors. As a result, there is low entrance into these sectors except for the lower levels that require limited or no skills. Some of the identified constraints from the KII include high tariffs on construction materials, inadequate access to land, unfavourable exchange rates, and stringent building regulation, standards, and codes.

Services sector

In recent years, the services sector has played significant role in employment creation, especially for youths and those with limited or no education. Some of the sub-sectors require little or no skills for entrance. Over time, the sector has been faced with constraints such as access to finance, inadequate infrastructure, and fiscal and monetary policy inefficiencies. Based on findings from the KII, in the education sector, the key economic constraints include access to capital, high interest rates by the lending agencies, skills mismatch, limited training opportunities, inflation, and unfavourable policies that deter investors and limit investments. Political constraints include policy without financial backing, insecurity, corruption, and policies that are politically motivated and devoid of fairness.

In the digital economy sub-sector, economic constraints include inadequate budgetary provision for the agency as this has limited the operationalization of the various initiatives planned for youth employment, while political constraint include independence of the institution from the legislature.

In the telecommunication sub-sector, economic constraints include high cost of mobile phone technologies, poor power supply, high cost of real estate, unimproved ultra-modern Internet facilities in the region, while political constraints include high expenses associated with skill development and job searches, and unfriendly government policies, for example ban on SIM registration which left about 500,000 youths jobless.

In the health sector, economic constraints include access to finance and inadequate skilled personnel. Due to inadequate funds, hospitals and other health related organizations are unable to integrate fresh graduates into their internship and fellowship programmes.

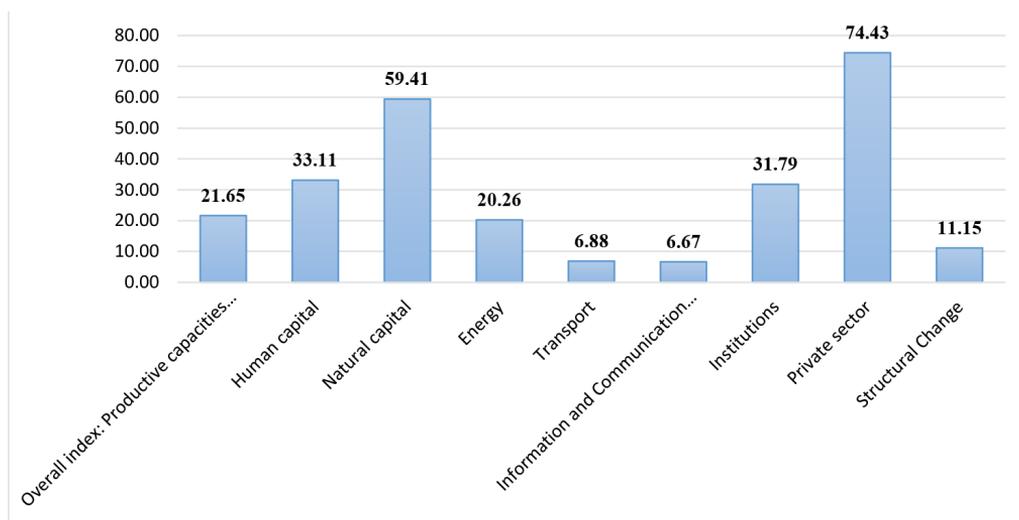
In the financial sector, constraints include high public debt, limited tenure securities and weak liquidity. Poor or limited interest from international and domestic investors (Beck et al., 2011) because of the lengthy administrative procedures associated with listing, high transaction costs, malpractices and corruption, poor regulatory compliance and enforcement, inadequate training and knowledge about capital markets, lack of transparency, and weak corporate governance in some marketplaces.

Conditions required for local and foreign private sectors to invest in identified sectors in Nigeria

To harness the potential that the three main economic sectors (agriculture, industrial, and services) have for job creation, it is important that certain conditions be in place to make these sectors attractive to investors. Based on Nigerian Productive Capacity Index, 2018, in Figure 12, it is evident that the country is richly endowed with natural resources (59.41) thus making it a country where economic activities tied to natural resources have higher potential for job creation. With very high human capital due to the large population, inadequate labour is not likely to be a challenge when properly utilized. Common challenge is often due to insufficient or decent jobs to meet the ever increasingly high number of unemployed graduates and non-graduates. The role of the private sector cannot be overlooked as it plays a crucial role in the economy because it accounts for a lot of businesses and is an employer of a large proportion of the Nigerian economy. Private sector in this context examines the ease of cross border trade (in terms of export and import cost) and support to businesses through domestic credit and time associated with starting up a business. It is evident that the condition is quite okay (74.43) as it has been able to meet some of these conditions therefore making it a good place for investment. On a scale of 1 to 100 in terms of the institutions (political stability), Nigeria had

a score of 31.79 which is quite low. Businesses and investment will thrive in an economically and politically stable environment. In terms of infrastructure, such as ICT and transport, the score was abysmally low, thereby implying that in terms of infrastructure, Nigeria is still far behind; therefore, there is need to improve on infrastructure to increase the ease of doing business and make investment in the country more attractive and profitable.

Figure 12: Nigerian productive capacity index, 2018



Source: Authors' computation from UNCTAD (2021).

The Nigerian situation is unique because of the large population which also translates into a huge market potential. Under the right conditions and enabling environment—such as, access to improved infrastructure, access to capital or funds for existing businesses or new business start-ups, improved road network, improved power supply (electricity), access to market, reduced taxes or tax holidays, and favourable monetary policies, amongst others—efficiency would increase as businesses in different sectors will be able to perform at their optimal capacity with adequate room for expansion, and this will ultimately result in increased employment opportunities especially for the youths.

Table 7 presents a breakdown of the conditions that are required for investment in identified sectors in Nigeria from the KII. Across the various sectors identified with high youth employment creation potentials, the most common condition that stakeholders identified that needs to be put in place is increased access to finance. This is an important condition for business start-ups and for scaling up production.

Table 7: Conditions required for investment in identified sectors in Nigeria

Sector	Sub-sector	Conditions/Enabling Environment to be Put in Place
Services	Digital Economy	Access to finance, Access to infrastructure, and Independence of national institutions as it is crucial to gaining investors' confidence in the sub-sector.
Services	Education	Training opportunities, Favourable policies, e.g., tax reductions, exchange rate, Access to lands for investors, Political stability and corruption reduction, and Access to improved infrastructure (good road, water, and electricity).
Services	Health	Access to well-equipped infrastructure, Access to health insurance, and Access to competitive salaries and welfare packages.
Services	Telecommunication	Access to finance to scale up broadband, Introduction of investor-friendly policy for ease of business, National security and social stability, and Access to infrastructure.
Service	Finance	Improve regulation and incentives such as tax breaks, Technical capacity building to enhance staff capacities, and Compliance with the central bank regulations.
Agriculture	General	Increased access to finance, Land access and tenure securities, Introduce technical and vocational education, trainings and other training programmes, Reduction in corruption, Political stability by addressing insecurity from Fulani Herdsmen, and Increased access to productive inputs at subsidized rates.
Construction	Construction	Access to finance, Access to infrastructure, Reduction in corruption, Deduction of expenses and capital allowance, and Exemption of withholding tax on foreign loans and capital gains tax.

Source: Authors' computation from Key Informant Interviews.

Another priority area stakeholders expect from the government is access to infrastructure. Access to good or improved feeder roads, air, water and rail transport will reduce the time taken for product delivery and cost associated with transportation. For highly perishable agricultural products, incidence of losses will be substantially reduced. Access to other infrastructure such as power, energy, water, and storage facilities will greatly reduce production cost. In sectors with some elements of trade (exports and imports), stakeholders expect the government to come up with favourable policies such as reduced taxes, tax exemptions and exchange rate policies that will improve the ease of doing business and boosting trade facilitation.

Other key conditions that would stimulate investment in the identified sectors include political stability, security, and lack of corruption. Investors will be more willing to invest in an economy that is politically stable and in which they consider safe as compared to one in which their lives and investments are perceived to be under threat. There is need to urgently address the insurgency challenge in the country to preserve lives and reduce capital flight. Doing this will stimulate investors' interest. These findings are like some of the major conditions (economy stability, stable political environment, increased access to finance, and reduced corruption) reported by the McKinsey Global Institute (2012) as a means of tackling political and economic constraints to the business environment.

5. Conclusion and policy implications

Conclusion

The study assessed the conditions that stimulate youth employment in key economic sectors of the Nigerian economy. The research specifically: determined the trend of economic growth and youth employment in Nigeria; determined the promising economic sectors for job creation potential for young men and women in Nigeria; analysed the differential impact of sectoral growth on youth employment across rural and urban areas, as well as on gender lines; identified key economic and political constraints to developing key sectors relevant for youth employment; and determined the specific conditions in Nigeria needed for local and foreign private sectors to invest in identified sectors.

Data from both secondary and primary sources were used to achieve this objective. The findings from this study have shown that unemployment has been on the increase during the past one decade with employment amongst youths (15-34 years) highest amongst rural males and lowest amongst urban females. The findings from the study have shown that all the economic sectors in Nigeria have potential for creating employment although at different levels.

Nigeria has revealed comparative advantage in 17 of the 205 products exported from Nigeria, including cocoa, fuel wood, wood in the rough, leather, natural rubber, spices, hides and skins, and oil seeds and oleaginous fruits. Across the country, several crops, industrial and trade clusters have been identified to include Kadawa Tomato Cluster (Kano); Omor Rice Cluster (Anambra); Computer village in Otigba (Lagos); leather tannery (Kano), Dawanau Grains Retail Cluster (Kano), Osoba Adire/Kampala International Market Retail Cluster (Ogun), and Alaba Retail Cluster (Lagos), amongst others. Proper harnessing of the products and the various sub-sectors in which these clusters operate can contribute to massive youth employment creation.

The employment elasticity of the 12 sectors understudied positively ranged between 0.056 to 0.734, with the highest contributor from the financial services sector and manufacturing sector as the lowest contributor to employment growth intensity. The main sectors with potential for youth employment based on their high employment elasticities include the financial sector, transportation sector, business services sector, construction, real estate, other services, government services, and trade services. Although manufacturing and agriculture have low employment

elasticities, they have the potential to create jobs because the agriculture sector still has very high untapped potentials based on comparative advantage and the existence of production and trade clusters across the country. The manufacturing sector experiences a high level of productivity coupled with well-targeted policies and industrial clusters.

The findings from the differential impact of sectoral growth on youth employment by gender has shown that, increase in age and high school education positively influenced male employment, while marital status and receipt of remittances influenced female employment. Furthermore, more young males are employed in the urban areas, and in the industry, construction, and services sectors as compared to female youths who are employed in the trade sector.

In the same vein, key political and economic constraints to developing economic sectors with potentials for employment creation include access to finance, power supply, corruption, high taxation, policy inconsistency and discontinuity, poor transportation system, political instability, inadequate access to land, rigorous customs and trade regulations, extended tax administration, labour regulations and business licensing permits coupled with poorly educated workforce. To facilitate local and foreign investment in identified sectors, some conditions that need to be in place to create an enabling environment include promoting access to capital for investors, creating a single registration portal for all business registration to increase transparency and reduce processing time for business licensing, establishing and/or repairing existing infrastructure such as feeder roads, airways and waterway network, power grids and water networks, introducing stable macroeconomic instrument such as favourable exchange and taxation rates, introducing favourable land tenure and property rights policies, and addressing the issue of insurgency by empowering the defence sector with modern arms.

Policy implications

1. The policy implication of this study is that, even though all the 12 sectors have potential for job creation at different levels, it is important to focus more attention on sectors such as the financial services, transport services, business services, construction, real estate, government services, trade services, agriculture, manufacturing, other services because they have high growth employment intensity as compared to the utility and mining sectors.
2. Secondly, since more males are likely to be employed in the industry, construction, services and agriculture sectors as compared to female youths in the trade sector, therefore effort must be made to strengthen these sectors through targeted welfare reforms by enhancing the capacities of the youths for sectoral relevance. To promote start-ups in these sectors, it is important to promote access to capital for business especially for those who have undergone a form of entrepreneurial training.

3. Government will be able to attract both local and foreign investors by encouraging public-private partnerships in a politically stable economy using both fiscal and monetary instruments such as the substantial reduction of taxes or the introduction of tax holidays or through the provision of matching funds or the introduction of favourable lending or exchange rates.
4. Government should build and improve on existing infrastructure in terms of logistics (road, air, train, and ports), communications, power (energy) and water to increase supply chain efficiency. All of these can be set up at various strategic locations especially for those close to production, trade, and industrial clusters.
5. In driving growth in the transport sector, the government can partner with countries such as Denmark and Australia that have achieved great success in building a sustainable transport sector.
6. As insecurity is a key challenge in certain parts of the country, especially in the Northeast and in pockets of small communities across Nigeria, it becomes very important to address this issue by finding a sustainable solution as investors and businesses are closing in some of the affected areas and relocating to other parts of the country and in some extreme cases to other countries.
7. Government can formulate and implement favourable policies that promote public-private partnerships through which skills acquisitions centres and empowerment programmes will be established. Also, there is need to monitor and constantly evaluate such empowerment programmes so that they achieve their aims of reducing youth unemployment. Access to finance and market for trained youths will enhance their capacities, and ultimately make them employers of labour in the long run.

Notes

1. Underemployment, in this case, is the situation in which productive resources are not fully and/or efficiently utilized.
2. Promising economic sectors are those sectors that may have huge potential for growth in the future but may not be in use now.

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Appendixes

Appendix A: List of sectors and definitions

Sectors	Definition
Agriculture	Agriculture; forestry; fishing.
Mining	Mining and quarrying.
Manufacturing	Manufacturing.
Utilities	Electricity, gas, steam and air conditioning supply; sewerage, water supply; remediation activities and waste management.
Construction	Construction.
Trade services	Wholesale and retail trade; accommodation activities, repair of motor vehicles and motorcycles; food service activities.
Transport services	Transportation and storage.
Business services	Information and communication; administrative and support service activities, professional, scientific and technical activities.
Financial services	Financial and insurance activities.
Real estate	Real estate activities.
Government services	Public administration and defence; education; human health and social work activities; compulsory social security.
Other services	Arts, entertainment and recreation; other service activities; activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; activities of extraterritorial organizations and bodies.

Source: Authors' computation from the Economic Transformation database; de Vries et al. (2021).

Appendix B: Key informant interview questionnaire guide

We are a team of researchers conducting a study titled “Sectoral Development: Assessing the Conditions that Drive Youth Employment in Key Sectors of the Nigerian Economy”. The study will provide evidence-based recommendations that will better inform policy makers on what to do so that decent jobs can be created and sustained in all sectors of the Nigerian economy.

Name (Optional):

Institution:

Sector:

Sub-sector:

Position:

1. What potential does your current sector/sub-sector have for job creation for young men and women in Nigeria?
2. Does this potential for employment differ across rural and urban areas?
3. Does this potential for employment differ for young men and women?
4. What national policies/programmes/initiatives currently exist that address youth employment in your current sector/sub-sector?
5. What infrastructure currently exists that promote youth employment in your current sector/sub-sector?
6. What legal and economic institutions currently exist that promote youth employment in your current sector/sub-sector?
7. What specific (political and economic) conditions do you think needs to be in place to promote local and foreign private investment in your current sector/sub-sector?
8. What are the economic constraints to youth employment in your current sector/sub-sector?
9. What are the political constraints to youth employment in your current sector/sub-sector?
10. In your opinion, how do we promote equal access and opportunity for youths to new sources of work and income in your current sector/sub-sector?



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