# STRUCTURAL CHANGE, GROWTH AND INEQUALITY: IMPLICATIONS FOR POVERTY ALLEVIATION IN NIGERIA

BY

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#### **ABSTRACT**

During the last few decades studies on long-run economic growth and development are quite numerous. Most of these studies conducted in the industrialized as well as the newly emerging economies like those of East Asian miracle economies confirm Kuznets' hypothesis that the agricultural sector dominates at the early stage of growth. This situation changes as the economy's growth momentum proceeds due to rising productivity in agricultural and manufacturing sectors as a result of improvement in technology and human capital. During the process of structural change based on inclusive growth the economically active labour force must be absorbed in better paid jobs and sectors. This gives rise to increase in income of individuals and households leading to improvement in welfare and reduction in poverty incidence. As the rise in growth is sustained, the services sector takes over as the leading sector in the economy contributing more to GDP and providing more employment. This is because as income increases individuals and households devote more of their income to services which are in most cases labour intensive and income elastic in nature. This process of economic growth is referred to as structural transformation. As observed in many countries, a smooth and well balanced structural transformation leads to a very significant improvement in overall welfare, improved income distribution and sustained poverty reduction. However, given the importance of structural transformation in the development process and its relevance to poverty reduction the studies on economic growth and inequality during the process of structural transformation are rather scanty in Nigeria. This thesis aimed at filling this gap. The study uses both descriptive and empirical analysis to examine the interrelationship among the relevant variables. Beside using the OLS to test the strength of association, the bound testing technique based on the Autoregressive Distributed Lag (ARDL) is used to examine the longrun relationships among four variables (poverty, structural change, economic growth, and inequality). The Johansen and Juselius approach to cointegration is also used to investigate the sectors that contribute most to poverty reduction in the country. The study finds that although Nigerian economy has benefitted from all the oil windfalls, it had not been able to make use of the opportunities to address the issue of poverty and inequality. This has been blamed on the lack of good governance and economic mismanagement that emanated due to rent-seeking activities of politicians and government officials thereby making the economy vulnerable to "Dutch Disease". Therefore, poverty remained endemic in the country despite the huge amounts of revenues generated from sales of oil. Poverty alleviation policies and programmes, implemented over the years, were ineffective due to poor implementation, endemic corruption and mismanagement. It is found that despite very low rate of structural change in Nigeria, there exists long-run relationship among the variables in the study. The insignificance of the structural change variable in the first model confirms our earlier findings on slow trend of structural transformation. It also confirms the claims that lack of effective and pro-poor structural transformation is one of the major development issues facing the country. Inequality reduction is found to be the major driving force in reducing poverty in Nigeria. It has been observed that there is a wide gap between the rich and the poor and among the states and the regions in the country not only in terms of incomes but also in terms of socioeconomic and political opportunities manifest through the distribution of both economic and intellectual power resources. Poverty incidence appears to be the highest in the Northern zones where human development encompassing education & health is the lowest. Hence, improvement in the distribution of economic and intellectual power resource is the most fundamental way to address the problems pertaining to unbalanced growth in the country.

## ملخص البحث

خلال العقود القليلة الماضية دراسات على المدى الطويل النمو الاقتصادي والتنمية كثيرة جدا. معظم هذه الدراسات التي أجريت على البلدان الصناعية و الاقتصادات الناشئة حديثا مثل تلك الاقتصادات المعجزة الشرق الآسيوية تأكيد فرضية Kuznets "أن القطاع الزراعي يسيطر على مرحلة مبكرة من النمو. هذا الوضع يتغير مع النمو الاقتصاد بسبب ارتفاع الإنتاجية في قطاعات الزراعة والصناعة التحويلية نتيجة لتحسن في التكنولوجيا ورأس المال البشري. أثناء عملية التغيير الهيكلي معتمد على النمو الشامل تستوعب القوة العمل النشطة اقتصاديا في وظائف أفضل أجرا وأفضل القطاعات. هذا يؤدي إلى زيادة في الدخل للأفراد والأسر مما يؤدي إلى تحسن في الرعاية والحد من انتشار الفقر. لما استمر ارتفاع النمو وقطاع الخدمات يتولى منصب القطاع الرائد في الاقتصاد الأكثر المساهمة في الناتج المحلى الإجمالي وتوفير المزيد من فرص العمل. وهذا لأن زيادات دخل الأفراد والأسر يؤدي إلى تكريس المزيد من دخلها على الخدمات التي هي في معظم القضايا في الطبيعة العمالية المرنة ومكثفة الدخل. يشار هذه عملية النمو الاقتصادي على أنه التحول الهيكلي. كما لوحظ في العديد من البلدان على نحو سلس والتحول الهيكلي متوازن يؤدي إلى تحسن كبير جدا في الرفاه العام، وتحسين توزيع الدخل والحد من الفقر المستدام. ومع ذلك نظرا لأهمية التحول الهيكلي في عملية التنمية وأهميتها في الحد من الفقر الدراسات على النمو الاقتصادي وعدم المساواة خلال عملية التحول الهيكلي نادرة إلى حد ما في نيجيريا. هذه الدراسة تهدف إلى سد هذه الفجوة. تستخدم الدراسة التحليل الوصفي والتجريبي على حد سواء لدراسة العلاقة المتبادلة بين المتغيرات ذات الصلة. بجانب استخدام OLS لاختبار قوة الجمعيات يستخدم اختبار تقنية محددة تقوم على تأخر الانحدار الذاتي الموزعة (ARDL) لفحص علاقات طويلة المدى بين أربعة متغيرات (الفقر، والتغير الهيكلي والنمو الاقتصادي، وعدم المساواة). كما يستخدم النهج يوهانسن و Juselius لتكامل المشترك للتحقيق القطاعات التي تساهم أكثر في الحد من الفقر في البلد. توصلت الدراسة إلى أنه على الرغم من أن الاقتصاد النيجيري استفادت من جميع غنائم نفط، إلا انه لم يكن قادرا على الاستفادة من الفرص المتاحة لمعالجة قضية الفقر وعدم المساواة. وألقى باللوم على عدم وجود الحكم الرشيد وسوء الإدارة الاقتصادية التي انبثقت بسبب ساعية إلى أنشطة السياسيين والمسؤولين الحكوميين مما يجعل الاقتصاد عرضة لل"المرض الهولندي ولذ لك، لا يزال الفقر متوطنا في البلاد على الرغم من كميات ضخمة من الإيرادات المتأتية من مبيعات النفط. وكانت سياسات التخفيف من شدة الفقر والبرامج وتنفيذها على مر السنين غير فعالة بسبب سوء الفساد وسوء الإدارة تنفيذ المستوطنة. وحدت أنه على الرغم من انخفاض معدل التغير الهيكلي للغاية في نيجيريا هناك الطويل العلاقة بين المتغيرات في الدراسة على المدى. والتفاهة المتغير التغير الهيكلي في النموذج الأول يؤكد النتائج التي توصلنا إليها في وقت سابق يوم الاتجاه بطء التحول الهيكلي. كما يؤكد المطالبات التي تفتقر للفعالية والتحول الهيكلي لصالح الفقراء هي واحدة من قضايا التنمية الرئيسية التي تواجه البلاد. تم العثور على الحد من عدم المساواة لتكون القوة الدافعة الرئيسية في الحد من الفقر في نيجيريا. فقد لوحظ أن هناك فجوة واسعة بين الأغنياء والفقراء وبين الدول والمناطق في البلاد ليس فقط من حيث الدخل ولكن أيضا من حيث الفرص واضح السياسية والاقتصادية الاجتماعية من خلال توزيع الاقتصادية والفكرية على حد سواء مصادر القوة. انتشار الفقر ويبدو أن أعلى المعدلات في المناطق الشمالية حيث التنمية البشرية التي تشمل التعليم والصحة هو أدني. وبالتالي تحسين في توزيع الموارد الاقتصادية والفكرية السلطة هي الطريقة الأساسية لمعالجة المشاكل المتعلقة النمو غير متوازن في البلاد.

## **APPROVAL PAGE**

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## **DECLARATION**

I hereby declare that this dissertation is the result of my own investigations, except
where otherwise stated. I also declare that it has not been previously or concurrent
submitted as a whole for any other degrees at IIUM or other institutions.
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My Parents Alhaj Ibrahim Naiya and Hajiya Amina Naiya and to my wife Binta and children:

Ibrahim, Hafsa, Nusaiba, Khadija and Muhammad for their love, support and patience.

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#### LIST OF ABBREVIATIONS

ACGS Agricultural Credit Guarantee Schem

ADF Augmented Dickey-Fuller

ADP Agricultural Development Programmes

AGR Agriculture Share in GDP
AIC Akaike Information Criterion

ARCH Autoregressive Conditional Heteroskedasticity

ARDL Autoregressive Distributive Lag

BLP Better Life Programme C<sub>0</sub> Contribution to Poverty

CAPPA Community Action Programme for Poverty Alleviation

CB Community Banks
CBN Central Bank of Nigeria

CBR Crude Birth Rate
CDR Crude Death Rate

CUSUM Cumulative Sum of the Recursive Residuals

DFRRI Directorate for Food, Roads and Rural Infrastructures

ECT Error Correction Term

E-G Engel-Granger

FCPE Free and Compulsory primary Education

FDI Foreign Direct Investment

FEAP Family Economic Advancement Programme

FGN Federal Government of Nigeria

FGT Foster, Geer, and Theobecke Poverty Measure

FSP Family Support Programme GDP Gross Domestic Product GINI Gini Coefficient Index GNS Gross National Savings

GR Green Revolution

HDI Human Development Index

IDN Indonesia

IMR Infant Mortality RateIND Industry Share in GDPIsDB Islamic Development Bank

J-J Johansen-Juselius

KPSS Kwiatkowski, Phillips, Schmidt and Shin

LCHS Low Cost Housing Scheme

Lgdppc Log of Gross Domestic Product Per Capita

MBs Marketing Boards

MMR Maternal Mortality Rate

MYS Malaysia

NAPEP National Poverty Eradication Programme

NBS National Bureau of Statistics

NDE National Directorate of Employment

NEEDS National Economic Empowerment and Development Strategy

NGA Nigeria

OECD Organization for Economic Co-operation and Development

OFN Operation Feed the Nation
OLS Ordinary Least Squares
P.B.U.H Peace Be Upon Him

P/KM<sup>2</sup> persons per square kilometre

P<sub>0</sub> Headcount Poverty Measure or index

P<sub>1</sub> Poverty Gap

Poverty Severity

PAP Poverty Alleviation Programme

PBN People's Bank of Nigeria

PP Phillip-Peron

PPP Purchasing Power Parity

PRSP Poverty Reduction Strategy Paper

R&D Research and Development

R.A Radhiyallahu Anhu

RBDA River Basin Development Authorities

RBP Rural Banking Programme
RES Rural Electrification Scheme

RESET Ramsey Regression Equation Specification Error Test

SAP Structural Adjustment Programme

SAW Sallahu Alaihi Wasallam (Peace Be Upon Him) SCINAV Structural Change Index (Norm of Absolute Value)

SEEDS State Economic Empowerment and Development Strategy

SERV Services Share in GDP

SHDI Human Development Index for States

SIC Schwarz Information Criteria

SSA Sub-Saharan Africa SWA Subhanahu Wa Ta'ala TFR Total Fertility Rate

TUR Turkey

U5MR Under Five Mortality Rate

UME University Matriculation Examination

UN United Nations

VECM Vector Error Correction Model WDI World Development Indicators

## **CHAPTER ONE**

### INTRODUCTION

#### 1.1 BACKGROUND OF THE STUDY

Poverty, the inability of individuals or households to "meet the basic needs for survival" (Sachs, 2005) has invariably been the most critical development challenge facing humanity. As a result, poverty alleviation has preoccupied global development agenda in the recent years. During the last decades there has been intense debate in economics literature on the relationship between economic growth and poverty. The optimists strongly support the idea that economic growth is inevitably associated with poverty reduction. They, therefore, converge on the view that poverty alleviation is more effective through economic growth that hinges on increase in value-adding capabilities of factors of production (World Bank, 1990; Roemer and Gugerty, 1997). As output of goods and services increases more employment is generated and household earns income as the secondary sector expands and surplus labour migrates from the primary to secondary sector. This is based on the premise of the modern economic growth advanced by Kuznets (1955, 1966). Kuznets' (1955) famous inverted 'U' hypothesis states that inequality will widen at early stages of development due to differential impact on different sectors of the economy. But as growth continues to a certain level, income disparities will narrow as a result of the free movement of income and resource from inefficient to more efficient sectors.

The sceptics, on the other hand, are of the opinion that economic growth may not impact on poverty reduction as higher aggregate incomes may not necessarily mean higher entitlement of food and other basic necessities of life (Dreze and Sen, 1989). Moreover, due to differences between economies, there are different scenarios through which economies achieve economic growth and the impact on poverty alleviation also differs. Kuznets hypothesis, highlighted above, was based on the growth characteristics typical of industrialized economies which differ from the growth characteristics of the developing economies. He assumed structural change shaped by the secondary sector in the economy, high technological progress in both sectors but mainly in the secondary sector, and openness of the global economy. In addition, certain level of human capital development and free movement of resources between the different regions of the economy are assumed.

The premise that societies achieve economic development by undergoing transformations in their productive activities refers to the change in production structures from relatively low to higher productivity of factors of production. This leads to expansion in productive activities and increase in the absorption of factors of production. It therefore, creates opportunities for employment, higher income and increase in both quality and variety of goods and services available for consumption, which is the key ingredient of prosperity (the absence of poverty). However, as the process of structural change is not automatic, countries have to adopt relevant policies and processes. In a situation where such policies and processes are not properly implemented, transformation could be crippled and that could severely affect the incidence of poverty and efforts to alleviate it. Factors such as, resource endowments, relation and mode of production, the pattern of income distribution prevalent in the society and other socio-economic and political factors could make the impact of structural change vary between countries or even among different regions of the same country.

With a population of over 140 million people<sup>1</sup>, constituting nearly 47 percent and 20 percent of West Africa's and Africa's population, respectively, Nigeria is the most populous country in Africa and the eighth most heavily populated countries in the world (National Bereau of Statistics, 2005; World Bank, 2008). Nigeria occupies 923,768 square kilometres of land in West Africa with different vegetations ranging from mangrove forest on the coast in the South to desert in the far North. It is endowed with human and natural resources including hydrocarbon, making it one of the largest and richest economies in Sub-Saharan Africa.

The structural transformation of Nigeria's economy has been burdened with challenges of effective management of oil and gas revenues since the discovery of oil in 1958. In effect, the country is caught in the web of "poverty amidst plenty" due to large accruable revenue from oil exports with highly skewed income distribution. The structural transformation has been subdued by the discovery of oil and associated challenges of macroeconomic management. This is likely to provide insights into the causes and dimensions of poverty as well as the performance of poverty alleviation measures in Nigeria.

Moreover, since GDP is an aggregate measure of sectoral components of economic growth, viewing structural change from disaggregated components would give more insights on the sectors that are more appealing to poverty alleviation (Chatterjee, 1995). This could also shed more light on regional differences in the incidence of poverty given the differences in regional resource endowments and other forms of inequalities in the country. Since sustained economic growth is expected to bring about structural change in the sectors of the economy through movement of resources from inefficient to more efficient sectors and migration of labour, it follows

<sup>&</sup>lt;sup>1</sup> The 2006 National Census put the population of Nigerians at 140,431,790 people <a href="http://www.population.gov.ng/">http://www.population.gov.ng/</a>

that distortions of structural change could also have negative consequences on economic growth and by extension poverty alleviation both at national and regional levels. Such effects may be disproportional among the regions due to the different characteristics they possess. Although the impact of economic growth on poverty has attracted the attention of the economists during the recent decades, detailed empirical studies on the impact of structural change on poverty, especially at country level, are still lacking.

#### 1.2 STATEMENT OF THE PROBLEM

The process of structural change entails decline of the relative contribution of primary sector (agriculture) to GDP and employment in the face of increase in the contributions of the secondary (manufacturing) and tertiary (services) sectors. Given the relatively high value added composition of secondary sector, structural change leads to increase in goods and levels of income as well as expansion in household participation in economic activities<sup>2</sup>. The interrelated processes of structural change that go with economic development in the long run are called 'structural transformation' (Syrquin, 1988; Timmer and Akkus, 2008).

Natural resource boom provides opportunity for accelerating economic growth and the process of structural change. However, it could also lead to distortion of the process of structural transformation if the generated revenues from those resources were not properly channelled into productive activities which, in turn, negatively affect poverty alleviation in the country.

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<sup>&</sup>lt;sup>2</sup> It is pertinent to point out at this juncture that the causal relation between economic growth and structural change is a contentious issue that is still a subject of debate (Dietrich 2009, Cortuk and Singh 2010).

The Nigerian economy evolved a process of structural change several years before the discovery of oil in commercial quantity in 1958. Since then, oil and gas activities have become the most significant aspect of the Nigerian economy. For instance, oil constituted only 3 percent of total exports from Nigeria in 1960; it increased to 58 percent by 1970, and remained above 96 percent since 1980s. This has affected the process of structural change with implications for the incidence and depth of poverty, as well as efforts for its alleviation. The fiscal structure of the Nigerian economy that recognizes differences in endowments is reflected in the mechanisms for the allocation of resources. In addition, the differences in natural resource endowments give rise to variations in the impacts of natural resource boom on structural change in the different regions. By extension, the extent to which oil revenue has affected the process of structural change and poverty levels will vary.

Numerous studies investigate the relationship between economic growth and poverty reduction at cross-country and national levels (Roemer and Gugerty, 1997; Deininger and Squire, 1996; Ravallion and Chen, 1996; Agrawal, 2008; and Aigbokhan, 2008). However, studies on the impact of structural change on poverty alleviation, in general, and Nigeria, in particular are very limited.

## 1.3 OBJECTIVES OF THE STUDY

Considering the need to understand the variations in the impact of structural change on economic growth, inequality and poverty alleviation, this study seeks to:

- (i) Analyze the nature and process of structural change since Nigerian independence in 1960;
- (ii) Investigate the interactions between poverty, structural change, economic growth, and inequality;

- (iii) Analyse the differential impacts of leading sectors of the economy on poverty;
- (iv) Empirically assess the short-run and long-run relationships among poverty, structural change, economic growth and inequality in Nigeria.
- (v) Draw policy implications for sustained economic development and poverty reduction based on the findings of the study.

#### 1.4 SIGNIFICANCE OF THE STUDY

There has been for long a growing concern among the stakeholders and academics about poverty. Recent studies have shown marked differences in the incidence of poverty between the states and regions of Nigeria with the situation in the Northern region actually deteriorating. Between 1992 and 2004 (when poverty surveys were conducted), the incidence of poverty increased from 46.0 percent to 67.0 percent in North Central, 54.0 percent to 72.2 percent in North East, and 36.5 percent to 71.2 percent in North West, respectively. In contrast, the incidence of poverty fell from 40.8 percent to 35.1 percent in South-South, 41.0 percent to 26.7 percent in South East, and 43.1 percent to 43.0 percent in South West within the same years (National Bureau of Statistics, 2005). This worsening situation in the incidence of poverty in Nigeria and its regional dimensions raised the concerns of policymakers. As a result, various poverty alleviation strategies were devised and implemented in the country since independence in 1960. Although several factors might have contributed to the widening gap in the incidence of poverty in Nigeria and among its regions, this study focuses on the impact of structural change on economic growth and poverty reduction. In this process the implications of economic growth and inequalities for structural change and poverty alleviation in Nigeria are also investigated.