



***NON-FARM DIVERSIFICATION, SHOCKS, CAPITAL ENDOWMENT AN
INCIDENCE OF POVERTY AMONGST FARM HOUSEHOLDS IN RURAL
NIGERIA***

ABDULAZIZ SHEHU

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**NON-FARM DIVERSIFICATION, SHOCKS, CAPITAL ENDOWMENT AND INCIDENCE OF
POVERTY AMONGST FARM HOUSEHOLDS IN RURAL NIGERIA**

By

ABDULAZIZ SHEHU

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia in Fulfillment of the Requirements for the Degree of
Doctor of Philosophy**

January 2015

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DEDICATION

This thesis is dedicated to the memory of my late father Alhaji Shehu Sokoto and his senior brother late Alhaji Ibrahim Maigandi who passed away on 24th June, 2014 while I was in Malaysia undergoing the Ph.D. programme.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree Doctor of Philosophy

NON-FARM DIVERSIFICATION, SHOCKS, CAPITAL ENDOWMENTS AND INCIDENCE OF POVERTY AMONGST FARM HOUSEHOLDS IN RURAL NIGERIA

By

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January 2015

Chair: Shaufique Fahmi bin Ahmad Sidique, PhD
Faculty: Economics and Management

The study comprised of three independent objectives that examined the effects of non-farm diversification, shocks and capital endowments on incidence of poverty among farm households in rural Nigeria, using nationwide representative data of Nigerian rural households collected by the Nigerian Bureau of Statistics in collaboration with the World Bank. The first and second objectives utilized the data collected in 2010/2011 while the third objective used the data collected in 2010/2011 and 2012/2013. The first objective examined the determinants of non-farm diversification (NFD) among the households and its effect on their economic wellbeing. Tobit result showed that NFD significantly depends on household members' education, social capital, financial capital, community level infrastructures and regional location. Two Stages Least Squares and Propensity Score Matching results also suggested that NFD has a significant positive impact on per capita consumption expenditure of the households. However, the result revealed that non-poor households are benefiting more than the poor ones from NFD. The second objective explored the effect of shocks on household consumption and choice of coping measures. The result suggested that whilst idiosyncratic shocks measured by illness and death had no significant impact on household consumption, covariate shocks specifically climatic and economic shocks had significant negative effect on household consumption. This portrayed the relevance of informal coping strategies in smoothing household consumption. However, the Multivariate Probit result revealed that the informal coping strategies chosen by the households are likely to make them vulnerable to poverty. The third objective assessed the contribution of initial capital endowments to changes in per capital consumption expenditure and incidence of poverty of the households, using Variant Difference Model and Multinomial Logit model respectively. The study found that initial endowments of physical, human, financial and social capital, significantly improved wellbeing and reduced poverty. On this basis, the study recommend for the provision of adequate and

essential capital endowments to improve the wellbeing of the households. Overall results obtained are potentially useful to policy makers in developing effective policies that would improve household economic wellbeing as well as reduces rural poverty.



Abstrak tesis yang dikemukakan kepada Senate Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KEPELBAGAIAN BUKAN PERTANIAN, KEJUTAN, PEMBIAYAAN
MODAL DAN KADAR KEMISKINAN DI KALANGAN ISI RUMAH
PETANI DI KAWASAN LUAR BANDAR NIGERIA**

Oleh

ABDULAZIZ SHEHU

Januari 2015

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Kajian ini terdiri daripada tiga objektif tidak bersandar yang menyelidik kesan kepelbagaian bukan pertanian, kejutan dan pembiayaan modal terhadap kadar kemiskinan isi rumah para petani di kawasan luar bandar Nigeria, dengan menggunakan data isi rumah para petani di kawasan luar bandar yang dikumpul daripada Biro Statistik Nigeria dengan jalinan kerjasama Bank Dunia. Objektif pertama dan kedua menggunakan data yang dikumpul pada tahun 2010/2011 manakala objektif ketiga menggunakan data yang dikumpul pada tahun 2010/2011 dan 2012/2013. Objektif pertama adalah mengkaji penentu kepelbagaian bukan pertanian (NFD) di kalangan isi rumah dan kesannya terhadap keadaan ekonomi mereka. Hasil kajian Tobot menunjukkan NFD sangat bergantung kepada pendidikan ketua isi rumah, modal sosial, modal kewangan, infrastruktur peringkat komuniti serta lokasi serantau. Keputusan daripada dua peringkat kuasa dua terkecil dan pendekatan kecenderungan yang hampir sama mendedahkan mencadangkan bahawa NFD mempunyai kesan positif yang ketara ke atas peningkatan perbelanjaan isi rumah. Walau bagaimanapun, keputusan mendedahkan bahawa isi rumah yang tidak miskin menerima faedah daripada NFD melebihi daripada golongan yang miskin. Objektif kedua adalah penerokaan kesan kejutan pada penggunaan isi rumah dan pilihan untuk penyesuaian keadaan. Hasil kajian menunjukkan bahawa kejutan semasa bersendirian yang diukur dengan penyakit dan kematian yang tidak memberikan kesan yang besar ketara ke atas penggunaan isi rumah, kejutan lain khususnya kejutan iklim dan ekonomi sebaliknya memberikan kesan negatif yang ketara kepada penggunaan isi rumah. Ini menggambarkan perkaitan pelbagai strategi penyesuaian keadaan yang tidak rasmi dalam melicinkan penggunaan isi rumah. Walau bagaimanapun, hasil probit kepelbagaian berlainan menunjukkan bahawa strategi penyesuaian keadaan yang tidak rasmi yang dipilih oleh isi rumah memungkinkan mereka terdedah kepada kemiskinan. Objektif ketiga adalah mengkaji peranan pembiayaan modal permulaan terhadap perubahan dalam perbelanjaan

penggunaan modal dan situasi kemiskinan di kalangan isi rumah menggunakan Model Pembezaan Varian dan juga Model Logit Nomial. Kajian ini mendapati bahawa pembiayaan awal dari segi modal fizikal, manusia, kewangan dan modal sosial adalah sangat ketara dalam pertambahan nilai kesejahteraan hidup serta pengurangan kadar kemiskinan. Secara asasnya, hasil kajian ini mencadangkan bahawa peruntukan yang secukupnya dalam pembiayaan modal adalah sangat mustahak untuk penambahbaikan kesejahteraan isi rumah.

Hasil kajian secara keseluruhannya adalah sangat berguna kepada penggubal dasar dalam membangunkan dasar yang berkesan dalam penambahbaikan kesejahteraan ekonomi isi rumah selain daripada pengurangan kemiskinan di luar Banda.

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Abdulaziz Shehu (February, 2015)

I certify that a Thesis Examination Committee has met on 20 January 2015 to conduct the final examination of Shehu Abdulaziz on his thesis entitled "Non-Farm Diversification, Shocks, Capital Endowments and Incidence of Poverty among Farm Households in Rural Nigeria" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

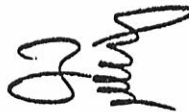
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LIST OF ABBREVIATIONS

NFD	Non-farm Diversification
NBS	National Bureau of Statistics
USD	United State Dollar
ADP	Agricultural Development Project
RBDA	River Basin Development Authority
NFDP	National Fadama Development Program
NACB	Nigerian Agricultural Cooperative Bank
GDP	Gross Domestic Product
CBN	Central Bank of Nigeria
IFAD	International Fund for Agricultural Development
RNFE	Rural Non-Farm Economy
OLS	Ordinary Least Square
2SLS	Two Stages Least square
PSM	Propensity Score Matching
ATT	Average Treatment Effect on the Treated

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

High incidence of poverty has been a serious challenge facing households in developing countries, especially those living in the rural areas. In micro context, poverty can be defined as the inability of an individual household to possess sufficient resources or income needed to provide its members with a minimal standard of living (World, Bank, 2010). This is often taken as a minimal consumption level or subsistence budget for the provision of the basic needs of the household. The nature of economic activities undertaken by the household members is the most important determinant of poverty as it indicates the ability of the household to provide itself with essential needs of livelihood, basically food, shelter and clothing. Importance of studying poverty from household perspective cannot be overemphasized as poverty is fundamentally a phenomenon that arises at micro level. Hence, its accurate measurement, characterization and effective reduction could best be achieved through micro level information to be gathered from household level studies (Couloumbe and McKay, 1996; Deininger and Squire, 2005).

The sub-Saharan Africa has been placed as the region with the highest rate of poverty in the world with nearly 60% of its working population living below the world absolute poverty line of USD1.25 per day (World Bank, 2010). Unfortunately, Nigeria is one of the countries in the region with highest rate of poverty. Statistics have shown that about 69% of its population are living below the world absolute poverty line with limited access to basic amenities and services such as schools, health facilities, infrastructures, social services and safe drinking water [Nigerian Bureau of Statistics, (NBS), 2010].

The high incidence of poverty in the country limits the capability of individual household members to attain a minimal state of wellbeing measured in terms of education, health, food security and human development. It also poses major threat to income inequality, human, social and economic development of the nation. This has been the cause of all forms of social vices that the country has been facing over the years. Realizing the consequences of poverty in the country, successive governments in Nigeria initiated various poverty alleviation programs, among which are the Directorate of Food, Road and Rural Infrastructure (DFRFI) in 1986; National Directorate of Employment (NDE) in 1987; Family Economic Advancement Program (FEAP) in 1993; Family Support program (FSP) in 1998; Poverty Alleviation Programme (PAP) in 2000; National Poverty Eradication Program (NAPEP) in 2001. These programs ended in futility and the incidence of

poverty have been increasing over time and consequently all ended without achieving the desired impact.

Given the current situation, it is clear that poverty alleviation in the country has remained elusive. This has raised many questions as: Why did the various programs introduced by the government failed in alleviating poverty? What are the alternative strategies that should be used to deal with the menace of poverty in the country? How government should allocates its limited resources to effectively reduce poverty? Hence, answers to these questions largely depend on the studies that have been carried out on the causes and ways to escaped poverty in the country. In addition, little attention have been given to empirical studies on household poverty in the country. As such, the causes and dynamics of poverty have been considerably misunderstood. Thus, to bring an end to the menace of poverty in the country, there is the need for adequate empirical studies on causes of poverty and how specific individuals and communities have escaped from poverty (De Janvry and Sadoulet, 2001).

To fill the current in the literature, this study used the nationally representative household level data collected across rural Nigeria by the Nigerian Bureau of Statistics in collaboration with the World Bank to achieve its three specific objectives that aimed at proffering possible suggestions on how to reduce rural poverty in the country. The first objective examined the determinants and effects of non-farm diversification (NFD) on the economic wellbeing of farm households, using the nationally representative general household survey data of 2010/2011. Non-farm diversification is seen as the engagement of farm households into various forms of self and wage employed activities that are undertaken in the non-farm sector of the economy (Lanjouw and Lanjouw, 2001). Households tend to diversify into skilled and unskilled wage employment activities such as teaching, civil service jobs, guard, maid, casual labor, etc. They also engage in high and low investment business activities such as local manufacturing, processing, marketing, mining, trading, construction, transportation and other forms of self-employed human services. Literature affirmed that non-farm diversification helps in providing employment opportunities, smoothing household consumption, reducing income inequality, which in turns slowdowns rural -urban migration and improve household economic wellbeing (Reardon, 1997; Lanjouw, 2007; Owusu et al, 2011)

The second objective explored the impact of shocks on household consumption and choice of coping measures, using the nationally representative general household survey data of 2010/2011. Shocks are uncertainties that are naturally beyond the control of an individual human being, which could either be idiosyncratic or covariate (Dercon, 2002). Idiosyncratic shocks occur at an individual household level and it affects only an individual household, such shocks are attributable to the death or illness of income generating member of the household, theft or death of livestock. On the other hand, covariate shocks occur at the community level and tends to affect all the households at the same time, for example drought, flooding or unpredictable farm yield. Households affected by the shocks adopt informal

coping strategies such as selling their income generating assets, which make them vulnerable to poverty in the absence of formal insurance and credit institutions.

The third objective assessed the impact of capital endowment on poverty reduction, using the nationally representative data of the same sample collected in 2010/2011 and 2012/2013. The endowments comprise of human, physical, social and financial capital owned by the household members. Capital endowments have been widely recognized as a long-term solution to poverty. It helps in increasing productivity and income of the existing and potential labor force, which alleviates poverty and reduces the risk of variability in farm income (Glewwe, 1998; Grootaert et al., 1997; Ellis, 1998). As such, it is expected that a household with adequate human, physical and social capital would be able to generate substantial income from other sources in addition from farming, which plays a vital role in escaping the household out of poverty.

1.1.1 The Study Area: Nigeria

Nigeria lies across the equator in West Africa. The country is relatively the most populous country in Africa with approximately 163 million people (NBS, 2010). It occupies about 923,768 square kilometers and is bordered to the south by approximately 800 kilometers of the Atlantic Ocean, to the north by the Republic of Niger, to the east by the Republic of Cameroon and to the west by the Republic of Benin. It is a federation of 36 states comprising a total of 774 Local Government Areas and the Federal Capital Territory, (FCT) Abuja. The states are grouped into six geopolitical zones - North-Central, North-East, North-West, South-East, South-South and South-West. Nigeria's population is largely dominated by three main ethnic groups- Hausa-Fulani in the North, Yoruba in the West and Igbo in the East and hundreds of minority ethnic groups. The climate of the country falls within the humid tropics, and its vegetation ranges from mangrove forest in the coast of savannah grass in the far north.

The Gross Domestic Product (GDP) of the country in 2012 was estimated at USD 262.61 billion with a growth rate of 6.18% (Central Bank of Nigeria; CBN, 2012). Unemployment rate in the country stands at about 23.90% (CBN, 2012). Agricultural sector is the largest sector of the economy and contributes about 42% of the total GDP. The sector provides employment for the bulk of population in the country, especially those living in the rural areas (International Fund for Agricultural Development; IFAD, 2011). It also serves as a source of food for the bulk of Nigerians and source of raw materials for the local industries.

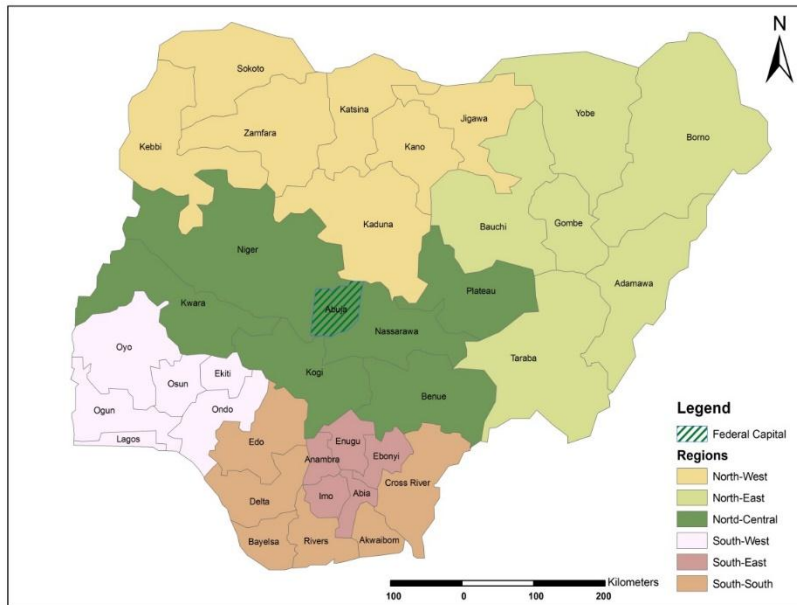


Figure 1.1 Map of the Study Area

Source: (NBS, 2010)

1.1.2 Trend of Poverty in Nigeria

Nigeria is ranked among the 20th poorest countries in the world. Statistics have shown that incidence of poverty in the country is widespread and continually increasing in the past 34 years. It increased from 27.2% in 1980 to 65.6% in 1996, declined to 54.4% in 2004 and rose again to about 71% in 2012 (see Figure 1.2).

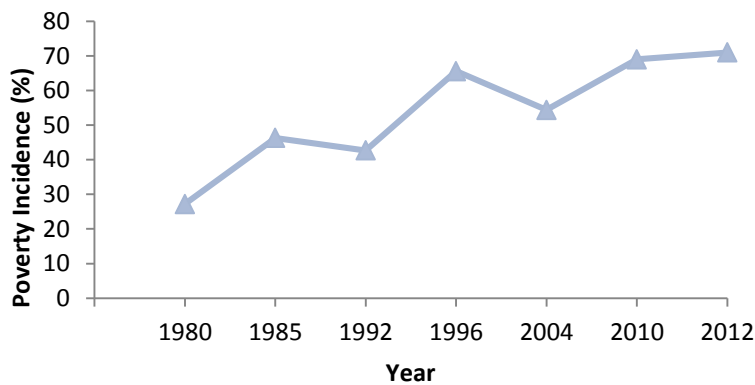


Figure 1.2. Trend of Incidence of Poverty in Nigeria

Source: (NBS, 2010; World Bank, 2014)

As at 1980, poverty statistics revealed that out of 60 million Nigerians about 17.7 million people were poor on the basis of the world absolute poverty line (see Figure 1.3). With the increased in population to 75 million in 1985, the number of poor people rose to about 34.7 million. In 1992 the poverty rate reduced by 4% and despite the decline, the number of poor people increased to 39.2 million. By 1996, the proportion of poor people in the country escalated to 67.1 million out of 102.3 million people. When the rate of poverty dropped from 65.6 percent in 1996 to 54.4 percent in 2004, the number of poor people increased from 67.1 million to about 68.7 million out of 120 million population. As at 2010, the estimated population is 160 million with about 112 million poor people (69%). The latest survey conducted in 2012 revealed that the incidence of poverty increases to about 71.2% with about 124 million poor people out of its estimated population of 173.6 million (NBS, 2010; World Bank, 2014)

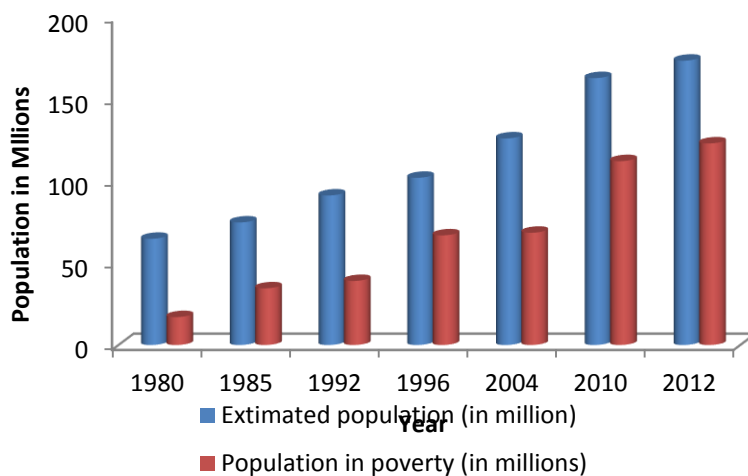


Figure 1.3. Trend of Population in Poverty

Source: (NBS, 2010; World Bank, 2014)

Nigerian National surveys have consistently shown poverty as a rural phenomenon. The incidence of rural poverty increased from 29.3% to 51.4% in the period 1980-1985. It decreased slightly to 46.1% in 1992, but shoot up to 69.8% in 1996. By 2004, rural poverty decreased slightly from 69.8% to 63.8% and rose again to 74.11% in 2012. In contrast, urban poverty has been relatively stable from 1980 to 1992 that ranges from 17% to 40%. However, urban poverty incidence rose to 58.2% in 1996, dropped again to 43.1% in 2004 and rose sharply to 63.4% in 2012.

The incidence of poverty in Nigeria tends to be higher in rural areas than urban areas (see Figure 1.4). The wide gap of the incidence of poverty between rural and urban households in the country reflects disparities of access to infrastructures and livelihood of opportunities. The current situation made the majority of the rural households to lack access to good shelter; living in poor and overcrowded houses with only one or two pairs of clothing; subjected to massive physical work either in the farm or in other occupations. It has also made them unable to afford the educational expenses of their children such as school uniforms, school fees and transportation costs (IFAD, 2009; Obayelu and Ayoyemi, 2010). Indeed, the unabated rise in the level of poverty has led to a continuous decline in the economic wellbeing of the rural households in the country.

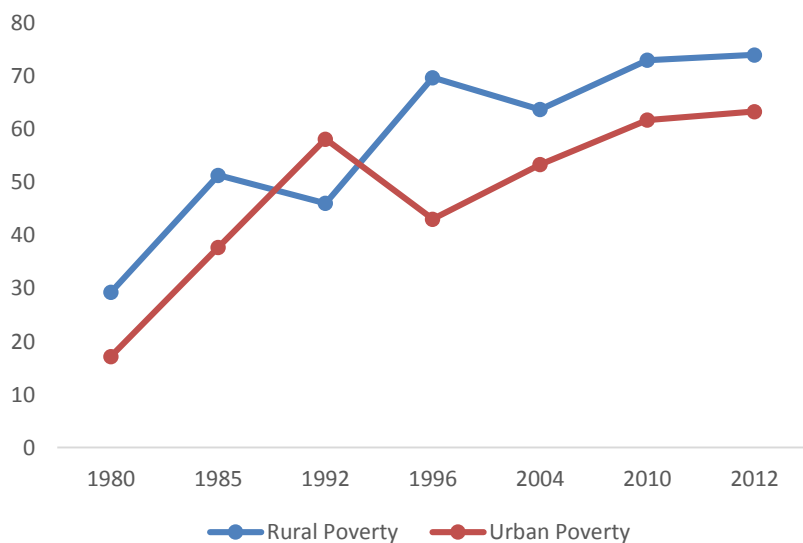


Figure 1.4 Trend of Rural and Urban Poverty in Nigeria

Source: (NBS, 2010; World Bank 2014)

1.2 Statement of Research Problem

Poverty has been a serious challenge in Nigeria despite the various poverty reduction programs introduced by successive governments. Many attempts have been made to understand the causes and way out of abject poverty in the country. However, there are still research gaps on the effects of non-farm diversification, shocks and capital endowments on the incidence of poverty among the rural farm households that need to be addressed for effective poverty reduction policies in the country, such gaps are explained in the subsequent sections.

1.2.1 Non-Farm Diversification and Household Economic Wellbeing

In Nigeria, incidence of poverty tends to be higher among the rural households whom predominantly depend on subsistence farming as a means of their livelihood (NBS, 2010). Records have shown that the incidence among the rural households increased from 29.3% to 51.4% in the period 1980-1985. It decreased slightly to 46.1% in 1992 and shot to 69.8% in 1996. As at 2004, the incidence decreased slightly to 63.8% and rose again to 73.11% in 2010. This resulted to hunger, illiteracy, income inequality and all forms of social vices. Given this situation, it is apparent that subsistence farming alone cannot adequately cater for the livelihood of the rural farm households in the country (World Bank, 2008; NBS, 2010).

To improve rural livelihood, literature suggests non-farm diversification as one of the key strategies of improving household wellbeing (Reardon, 1997; Abdulai and Crolerees, 2001; De Janvry and Sadoulet, 2001; Ali and Peerlings, 2012). This is attributed to its potential role in increasing income, reducing income inequality and slowing down rural-urban migration (Reardon, 1997; World Bank, 1997; Lanjouw, 2007, Babatunde and Qaim, 2010). Despite the potential evidences of the role of non-farm diversification in improving household welfare in developing countries (Reardon, 1997; Abdulai and Crolerees, 2001; Ali and Peerlings, 2012) little is known about the effect of non-farm diversification on the economic wellbeing farm households in rural Nigeria (Olugbiri et al, 2010; 2012). This may be as a result of endogeneity concern of non-farm diversification to household welfare. Studies in the country (Iliya, 1999; Babatunde and Qaim, 2009; Babatunde and Qaim, 2010; Awotide et al., 2010; Olugbiri et al., 2012; Sekumade and Osundare, 2014) focused more on determinants of non-farm diversification without given much attention to the effect of entry barriers on NFD despite the fact that only 44% of its farm households diversifies into non-farm activities (NBS, 2010).

The aforementioned studies also used discrete variable as a measure of non-farm diversification, which takes the value one for household that diversifies into non-farm activities and zero otherwise. They overlooked the actual share of the household members that diversify into non-farm activities, which may affect the reliability of their findings on the effects of non-farm diversification on household welfare. Moreover, they failed to incorporate the poverty status of the households in their studies despite its importance in obtaining the vital information needed in designing effective poverty reduction policies.

In addition, the existing studies used either state or regional level data with a small sample size to examine issues related to non-farm diversification. As such, their findings cannot be generalized for the entire Nigeria due to its heterogeneous nature. The only exceptions are Olugbiri et al., (2012) and Oseni and Winters, (2009) who used the outdated Nigerian nationally representative household survey conducted in 2001 by Nigerian Bureau of Statistics (NBS) to examine the effect of non-farm diversification on household welfare and crop expenses respectively.

1.2.2 Shocks and Household Consumption

The farm households in the rural parts of the country are naturally prone to a number of unpredictable shocks that may occur in individual households, whole villages, regions or countries (World Bank, 2014). Available statistics from the recent household survey carried out by NBS in 2010/2011 have shown that in the last five years preceding the survey, about 24% of rural households faced price shocks, 19 % experienced climatic shocks, 16% report death shock, 13% experienced health shock and 3% report physical shock (NBS, 2010/2011).

The frequent occurrence of shocks coupled with limited access to formal shock coping mechanisms such as insurance and financial institutions in the country affect the income and subsequently the consumption of the rural farm households (Alayende and Alayende, 2004; Omobowale, 2008; Oyekale et al., 2010). This situation is further aggravated by their limited capacity to make informed decisions on choosing effective shock coping strategy. In the absence of effective formal shocks coping strategies and social protection measures, the victims dispose their productive assets such as livestock and equipment in order to meet their immediate consumption needs. This made the non-poor ones vulnerable to poverty and entangle the poor households into the perpetual vicious circle of poverty (Alayende and Alayende, 2004).

Several literatures have examined the impact of shocks on household consumption and choice of coping mechanism (Townsend 1995; Ravallion and Chaudhuri, 1997; Dercon and Krishnan, 1996; Dercon, 2004; Tongruksawattana et al., 2008). However, a better understanding of this linkage is lacking in developing countries due to lack of comprehensive empirical data on shocks (Dercon and Krishna, 1996; Tongruksawattana et al., 2010). In the context of Nigeria, there are few existing studies on shocks at household level (Alayende and Alayende, 2004; Omobowale, 2008; Oyekale et al., 2010; Olawuyi et al., 2011). The very few studies based their research on a very small set of villages with a relatively small sample size that range from 80 to 107 respondents. As such, the outcome of their studies cannot be generalized to the entire country.

The existing studies also focused mainly on the effect of shocks on choice of aggregate coping mechanism without looking at the possible impact of shocks on household consumption and coping mechanism. However, an adequate understanding of both the impact of shocks on household consumption and choice of coping actions serves as one of the essential requirements needed for the provision of effective social protection measures to cope with the adverse effect of shocks on wellbeing.

1.2.3 Capital Endowments and Poverty Reduction

Nigeria as a nation has a great potential for development in term of human, material and natural resources. Despite this abundant resource, poverty has continuously been increasing, particularly among the rural farm households. The recent household survey in the country has shown that out of 160 million Nigerian populations, about 112 million people were surviving on less than \$1.25 per day as a means of sustaining their livelihood and about 70% of them are rural farm households that predominantly depends on subsistence farming as a means of livelihood (NBS, 2010).

One of the important determinants of household poverty that have been widely recognized in the literature is capital endowments (Grootaert et al., 1997; Ellis, 1998.) The endowments play a vital role in alleviating poverty by increasing the

level of agricultural productivity as well as access to income from different sources. It also reduces the risk of variability in farm income as a result of climatic shocks (Grootaert et al., 1997; Ellis 1998). It is expected that a household with adequate human, physical and social capital would be able to generate substantial income from other sources apart from farming. Hence, this would play a vital role in escaping out of poverty and influencing households' abilities to respond to economic changes.

In spite of the potential role of capital endowments in improving household welfare, there are few studies that examined its role in reducing poverty in Nigeria (Olaniyan, 2002; Awotide et al., 2011; Dare, 2012). The existing studies have also not looked at the impact of some important household endowments that may contribute positively to the improvement in household wellbeing, such endowments include educational attainment of adult members of the household, composition of the household size, non-farm enterprises, financial and social capital. Without adequate knowledge of the impact of such endowments on household welfare it would be very difficult to identify the possible resource endowments that should be considered in reducing poverty among the households.

The current studies measured poverty as a discrete variable, which resulted in the loss of the relevant available information that are essential in assessing the impact of household endowments on poverty reduction. The use of a discrete measure of poverty provides only relative rankings and potentially ignores the actual effect of capital endowments on welfare of the households. None of the past studies also have looked at the relationship that exists between capital endowments and poverty reduction in Nigeria. This is dictated by the lack of panel data on household survey until the recent one collected in 2010/2011 and 2012/2013. As such, it is impossible for the past studies to track the changes in the poverty status of the households over time. An adequate knowledge of the essential components of capital endowments associated with improvement in household welfare is one of the critical requirements needed in the designing of effective policies that promotes equitable growth and reduce poverty among the households.

1.3 Objectives of the Study

The general objective of this study is to examine the effects of non-farm diversification, shocks and household endowments on the incidence of poverty among farm households in rural Nigeria. The general objective would be achieved through the following specific objectives:

1. To examine the determinants of non-farm diversification among the farm households and its effects on their economic wellbeing.
2. To assess the impact of shocks on household consumption and choice of coping mechanism.
3. To explore the role of capital endowments in reducing poverty among the households.

1.4 Significance of the Study

The study is expected to have both empirical and practical significance. Empirically, the study intends to improve upon the growing literature on rural development by addressing the specific research objectives, each of which is treated independently.

The outcome of the first objective provides additional empirical evidence on the contribution of non-farm diversification (NFD) to household economic wellbeing in rural areas developing countries. It also improved on the existing studies by treating non-farm diversification as a continuous variable instead of discrete variable. The ability of the study to disaggregate its sample into poor and non-poor household on the basis of the absolute World poverty line of \$1.25 dollar per day tends to give a better estimate of the effect of NFD on household wellbeing for effective poverty reduction policies.

The second objective built on existing studies of shocks at the micro level as it utilized the nationally representative household survey data of the most populated country in Africa to examine the impact of both idiosyncratic and covariate shocks on household consumption and also the choice of coping measures. In contrast to previous studies, this study disaggregates the result by poverty status of the households, thus allowing assessing whether shocks have differential impact on poor and non-poor households.

The third objective adds to the development of the existing literature on rural development as the study carried out an in depth analysis of the effects of household endowments on poverty reduction, using growth in per capita consumption expenditure as a measure of poverty reduction. Being it a continuous variable, it utilizes much of the available information that has been lost by previous studies that had used discrete poverty measure. In contrast to previous studies that used cross sectional analysis, this objective used a panel analysis to identify the essential household endowments that are responsible for the improvement in the wellbeing of the rural farm households as well as change in their poverty status during

Regarding the practical significance, the first objective examined the relationship that exists between non-farm diversification and household economic wellbeing. The outcome provides sound policy suggestions on how to promote non-farm diversification as a measure of improving household welfare. It also identifies the factors that need to be considered in the designing of effective policies that would promote the participation of the poor farm households into high return non-farm activities. The findings also provides adequate information to relevant stakeholders, government, international organizations and donors concerning the contribution of non-farm sector in enhancing the economic wellbeing of the poor farm households in rural areas of developing countries.

The second objective offers adequate information to the policy makers on the effects of shocks on household consumption and choice of coping measures. It reveals how both the poor and non-poor households that experienced shocks used their assets, borrowing and non-farm diversification to cope with the adverse effect of shocks on their welfare in the absence of insurance and formal credit markets. The outcome of the study would help the policy makers, donors and international institutions in identifying the most vulnerable rural farm households as well as the effects of informal shock coping strategies on their welfare. Based on its findings, the study suggests appropriate risk management policies and social protection measures that should be used in assisting the households that have experienced shocks in rural areas of developing countries.

The third objective provides adequate information to the policy makers on what the set of human, physical, financial and social capital should best be promoted as a strategy to improve the welfare of the poor households. With the use of panel data of two periods, the study has identified the essential resource endowments that need to be provided to improve the wellbeing of the poor households. It also identifies the characteristics that differentiate those who escape and fall into poverty. Based on the research outcome, the study suggests policies and programs that would enhance the endowments of the poor households for improvement in their welfare as well as their poverty status.

1.5 Scope of the Study

The study focuses solely on farm households as its unit of analysis. Rural farm households are chosen as the unit of inquiry throughout this research because issues related household wellbeing can best be assessed through micro level information to be obtained at household level. The survey for this study defined rural farm household as a group of related or unrelated people who usually slept in the same dwelling, share meals and depends primarily on farming activity as the means of their livelihood. A household can consist of a man and his wife/wives and children; father, mother, nephew and other relatives. It can also be a single person; or a couple/several couples with or without children. A person that has been away from the household for more than six months is not considered to be part of the household except if the person is identified as household head, student and seasonal workers, who have not been living in another household (NBS,2010).

The second reason of focusing on rural households is that the incidence of poverty in the country is higher among the rural ones than the urban ones. Moreover, rural poverty is one of the factors that fuels urban poverty. The majority of the poor people in the urban areas are migrants trying to escape rural poverty. Thus, if rural poverty is reduced, it would have a significant positive impact on poverty reduction in both the urban and rural sectors of the country.

The identification of whether towns in predominantly rural areas are classified as rural or urban; at what size a settlement becomes rural or urban; the treatment of

migration and differentiating between rural areas are issue that have been subject of debate in the literature. However, the institution that collected the data for this study define rural as areas that do not fall under the jurisdiction of a city, municipality, town or urban boards (NBS, 2010). This definition eliminates the urban rather than narrating what comprises a rural area.

1.6 Scheme of Chapters

The study is divided into six chapters. Chapter one introduces the subject matter of the study by outlining its background, research problem, research objectives, significance of the study, scope and scheme of chapters.

The chapter two is the literature review. It undertakes a review of the existing theories, empirical literature and related works on the three specific objectives of the study. Chapter two is divided into four sections. Section 2.1 discusses the introduction while section 2.2 gives an insight on the theoretical and empirical literature on the determinants of non-farm diversification and its effects on household wellbeing. Section 2.3 provides a conceptual theories and empirical works on the impact of shocks on household consumption. Section 2.4 offers a theoretical and empirical review of the related literature on the effects of household endowments on poverty reduction. Overview of works related to the nature of the rural economy in developing countries are discussed in section 2.5 and the summary of gaps in the existing studies were captured in the last section.

Chapter three introduced the first objective, which centered on determinants of participation of farm households in non-farm activities and its effect on their economic wellbeing. Chapter four presented the second objective, which explored the impact of shocks on household consumption as well as its influence on choice of coping strategies. Chapter 5 captured the third objective, which focused on the role of household endowments in reducing poverty among the households. Finally, chapter 6 provided the overall conclusion and recommendation for future studies.

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Abdulaziz Shehu and Shaufique F. Sidique (2014). The Effect of Shocks on Household Consumption in Rural Nigeria. A paper accepted for publication in *the Journal of Developing Areas*.

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