

Poverty, Agriculture and a Nigerian Rural Farmer

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Author's Declaration

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Abstract

Reforms in Nigeria's agricultural sector offers an opportunity to improve the livelihood of a substantial number of its people living in poverty, and, in turn, have positive effects on the nation as a whole. Despite the potential advantages agriculture possess as a tool to reduce poverty in Nigeria, a large number of Nigerians living in its rural areas who in most cases engage in agricultural activities to earn a living continue to live in poverty. Thus, this research sought to understand the limiting factors that hinder agriculture in Nigeria from effectively challenging poverty. In addition, this research project provided a perspective that centred on the Nigerian rural farmer, the conditions created by the current state of Nigeria's agricultural sector with attention to rural smallholder farmers and the Nigerian consumer public.

The study adopted a "farmer's experience" view to identifying the key challenges that require immediate attention for agriculture to more effectively limit the incidences of poverty in Nigeria. Furnished with an understanding of the key challenges of Nigeria's agricultural sector, the study concludes with an exploration of possible steps that can be taken to reposition agriculture in Nigeria to become a more effective tool for reducing rural poverty.

Table of Contents

Author's Declaration	ii
Abstract	iii
Table of Contents	iv
List of Tables	vii
Prologue	1
Introduction	
Significance Overview	4
Context – The Nigerian Outlook	6
Research Structure	11
Literature Review	
Poverty	13
Nigeria and Poverty	16
Agriculture and Poverty	22
Corruption	25
Access to Credit	31
Access to Markets	35
Addressing These Challenges	37
Methodology	46
Research Methods	
Online Survey	51
Research Design: Online Survey	52
Experience Mapping	54
Research Design: Experience Mapping	55
Interviews (Experts)	57
Research Design: Interview (Experts)	59

Data Analysis	
Preliminary Data Analysis	61
Primary Data Analysis	63
Research Limitations	67
Discussion	70
What challenges limit the effectiveness of agriculture as a tool for reducing poverty amongst Nigerian rural household farmers?	71
Corruption	72
Access to Credit	80
Access to Markets	85
A Nigerian Rural Farmer’s Journey	90
What crucial areas require attention to have an immediate impact on the livelihoods of Nigerian rural household farmers?	95
What actions need to be taken to make agriculture in Nigeria a more effective tool for reducing rural poverty?	98
Personas	100
Recommendation	106
The Proposed Solution - HomeGrown	105
Implementing The Proposed Solution	110
Conclusion	115
Future Prospects	123
Sources & References	126
Appendix	
Appendix A – Online Survey Questions	132
Appendix B - Experience Mapping Session Guide & Questions	134

Appendix C - Expert Generative Interview Session Questions	137
Appendix D - Online Survey Results	138

List of Tables

Table 1: Programmes implemented in Nigeria's campaign against poverty	19
Table 2: Factors affecting corruption	28
Table 3: United Nations Development Program (Five principles of good governance)	39
Table 4: Strategies for fighting corruption	42
Table 5: List of Expert Contributors	60
Table 6: Stages of conducting an inductive thematic analysis.	64
Table 7: Experience Map	92

Prologue

The prologue explores the infancy stage of this research project, the experiences that inspired it, and how it was shaped, reshaped and finally framed to become this Major Research Project (MRP). It provides a window into what my perspectives on rural agriculture in Nigeria were before embarking on this project, offering an opportunity for you to question if it aligns with yours or if it presents a different context. This section also offers an explanation as to why I chose to make Nigeria the focus of this research project. Most importantly, this prologue will serve as an anchor point from where one can look back on long after this project is completed.

In the heat of the afternoon sun, she is hard at work drying grains of rice on the open roads while watching the little one play on the floor – for her and many other families alike, this is life. The little she can earn from selling her grains of rice at the local market, from days spent labouring is less of a choice and more of the only option she has to make ends meet. She makes barely enough to put food on the table, clothes on her back and a roof over her head; most would describe these as bare necessities. During my one-year national youth service: a work-service program in Nigeria during which post-secondary graduates are relocated

to different regions in the country. I spent this period teaching in a rural community in the Northern region of Nigeria, in the course of which I was exposed to rural living, the high incidence of poverty that was present and the continued dependency on agriculture as a source of livelihood among most people in the community. My experience left me questioning how these women and other families in the same situation, with agriculture as a source of livelihood remained in poverty? As a result of my one-year work-service program, I had seen first hand the struggles that came with living in rural poverty. My experience left me with an incomplete understanding which developed into more questions, like; How these women, men, families work so hard yet remain poor? Why it lingers? What fuels its persistence? Why or what efforts have been made to improve on this situation? These questions served as the inspiration of this study's research question; how might we reposition agriculture in Nigeria to become a more effective tool for reducing rural poverty.

The next logical question you might ask is; Why Nigeria? The choice of Nigeria as the focus of this research project was a deliberate decision for two reasons, one more obvious than the other. First, as a Nigerian, I have experienced the struggles

that come with living in a developing country, heard stories from my parents of how life used to be, seen how life is and created a mental picture of how life tomorrow could be better. I am no stranger to the situation in Nigeria, the challenges the country faces, how the system operates and the factors at play. My experience and personal ties with the Nigerian system have made the country the most suitable option for this research project. The other reason stems from my passion and concern about the situation in less-developed countries like Nigeria, where the need for solutions that improve the livelihood of its people has become ever more critical. The eventual aim of this project does not end with Nigeria alone but anticipates that by looking at this topic from a Nigerian perspective, the ending results will be applicable to other countries that are also on the march towards development.

Chapter One

Introduction

Chapter One serves as an introduction to this research project. It discusses the relevance and importance of the present study as well as its overarching purpose. In addition, it presents the sub-questions the project aims to answer, the selected approach and concludes by highlighting the structure of this research project.

Significance Overview

The study explored the topic of agriculture from the perspective of small household farmers and the effects of the Nigerian agricultural ecosystem in which they currently subsist. The intention was to establish the present weaknesses, challenges and limitations that exists in Nigeria's agricultural system. This served as a foundation for targeting the main objective of the research project: the repositioning of agriculture in Nigeria by creating a desirable environment for rural household farmers in the country. The research

project also presents an important perspective, as it adopted a “farmer-centred” approach in looking at Nigeria’s agricultural system.

One of the objectives of the study was to explore the topic of poverty in Nigeria and the limiting factors that have hindered agriculture from being an effective tool for poverty eradication. A literature review of studies discussing the topic of poverty in Nigeria and exploring factors that negatively affect Nigeria’s agricultural sector, along with insights from the project’s in-field research and learnings from experts in fields relating to the focus of this study, were used to identify potential points of intervention and to explore strategies with the potential to improve the livelihoods of rural household farmers in Nigeria. This served as the major significance of this paper, as the study hinged on finding ways to improve agriculture in Nigeria. Such improvement could positively impact the livelihoods of the country’s rural household farmers and thereby provide an effective method for challenging the effects of poverty. The concluding recommendation: “HomeGrown” presents a possible solution that has the potential to have positive effects on the lives of Nigerian rural farmers. The focus of the project is primarily on farmers at the smallholder level in rural

communities, who represent the majority of Nigeria's farming population (Nchuchuwe & Adejuwon, 2012). As such, the concluding recommendation put forward in chapter 5 of this study: "HomeGrown", depicts a practical solution that answers the question posed in this present study, on how agriculture in Nigeria can be fashioned to become a more effective tool for reducing rural poverty.

Context – The Nigerian Outlook

A review of the United Nations, World Population Prospects, 2015

By the year 2050, the world's population is projected to increase by 2.2 billion people, reaching over 9 billion. The report estimates that the continent of Africa will be the largest contributor to the projected world population growth, accounting for more than half the total number added to the human population between now and 2050.

Nigeria, which is located in the western part of Africa, has an estimated population of over 180 million, making it the seventh largest country in the world

based on population. The report estimated that Nigeria has the most rapidly growing population among the ten largest countries in the world, which include Bangladesh, Brazil, China, India, Indonesia, Mexico, Nigeria, Pakistan, the United States of America, and the Russian Federation. It was also projected that by 2050 Nigeria's population will have surpassed that of the United States, and it will become the third largest country in the world (United Nations, 2015).

A number of questions are raised by the report's estimations. As a nation, is Nigeria currently equipped to keep up with the projected population growth? How does the nation plan to feed its estimated 260 million people by 2030 and 390 million people by 2050 (population estimates by the United Nations, 2015; "World Population Prospects")? In the 1960s, agriculture played a significant role in the Nigerian economy, accounting for 65–70% of the country's total exports. This fell to about 40% in the 1970s and crashed to less than 2% in the late 1990s (Olajide et al., 2000). The decline in the role of agriculture in Nigeria's economy is largely attributed to the discovery of and increased revenue generated from crude oil (Ibaba & Olumati, 2009; Kware, 2015; Maduagwu, 2000; Odularu, 2008; World Bank, 1993), with some authors wondering whether

the discovery of crude oil in Nigeria was a blessing or a curse (Gruenewaelder, 2013).

The World Bank estimated that about 53.4% of Nigeria's population in 2009 was below the poverty line of \$1.90 USD a day, compared to 43% in 1985 (The World Bank, 2011). A more local look at the country's poverty profile did not tell a much different story. A report published by Nigeria's National Bureau of Statistics in 2010 showed that between 2003 and 2004, 64.2% of the nation's population was below the poverty line, with marginal improvement between 2009 and 2010 to 62.6% (National Bureau of Statistics, 2010). Sala-i-Martin and Subramanian (2013) observed that the trend of poverty occurred simultaneously with the discovery of crude oil in Nigeria. Ross (2003) and Sachs and Warner (1999) described this situation as a resource curse. Murtala et al. (2014) defined a resource curse as a "paradox where countries that have resources (such as minerals in solid, liquid or gas state) in abundance tend to experience low economic growth and even worst development outcomes" (p. 2).

Agriculture provides the main source of livelihood for many Nigerians, particularly for those living in its rural areas. According to the National Bureau of Statistics (2010), four out of five rural households are engaged in some type of agricultural activity. The World Bank estimates that 52.2% of Nigerians live in rural areas, and of that number, the International Fund for Agricultural Development estimates that over 90% are employed in the agricultural sector ("Nigeria at a Glance," 2016).

Three out of four poor people in developing countries – 883 million people – lived in rural areas in 2002. Most depend on agriculture for their livelihoods, directly or indirectly. So a more dynamic and inclusive agriculture could dramatically reduce rural poverty. (World Development Report, 2008, p. 28)

The significant role agriculture can play in combatting rural poverty in Nigeria is in itself an important reason for this study. Nigeria's agricultural sector, like that of most other African countries, is very promising. Salami et al. (2013) described agriculture in Africa as having the potential to generate employment, enabling

the countries within the continent to become self-sufficient, feed their growing populations, earn foreign exchange and provide raw materials for their industries. However, the authors further described Africa's agricultural sector as being "ironic," stating that despite its advantageous position with regard to annual agricultural production, the continent of Africa (to which Nigeria belongs) remains a net importer of food. Agriculture presents an array of possibilities for Nigeria and countries in similar positions, including a means to challenge rural poverty and a tool for economic development. There is little mechanised intensive agriculture in Nigeria, where a large number of farmers operate at the subsistence, smallholder level (Nchuchuwe & Adejuwon, 2012).

As such, this research project aims to answer the following question: How might we reposition agriculture in Nigeria to become a more effective tool for reducing rural poverty? This question will be explored through three sub-questions. First, what challenges limit the effectiveness of agriculture as a tool for reducing poverty amongst rural Nigerian household farmers? Second, what crucial areas require attention to have an immediate impact on the livelihoods of Nigerian

rural household farmers? Third, what actions need to be taken to make agriculture in Nigeria a more effective tool for reducing rural poverty?

Research Structure

The research project is organised as follows. First, an analysis of the current agricultural landscape in Nigeria is presented, with reference to secondary sources, establishing its weaknesses, challenges and limitations. As a second step, a visual representation of the journey of a typical rural farmer in Nigeria is created. To achieve this, the project utilises primary sourced data. The created visual map is then analysed by experts in Nigeria's agricultural sector and compared with insights obtained from a review of previous literature examining agriculture in Nigeria. These issues are explored in detail in Chapters Three, Four and Five, respectively.

This research project is structured to address the overarching question: How might we reposition agriculture in Nigeria to become a more effective tool for reducing rural poverty? Chapter Two presents a review of literature on poverty in Nigeria as well as some strategies adopted by Nigeria over the years to reduce

poverty. The chapter also presents factors that several authors have identified to play crucial roles in Nigeria's agricultural ecosystem, exploring the roles and effects of these identified factors on Nigeria's agricultural sector. In turn, this provides a better understanding of why agriculture as a tool for poverty reduction has been limited or unsuccessful. The third chapter discusses the methodologies employed in executing this study. The basis for the selected research methods and the various strengths of each method are presented. The limitations of the research are then discussed as well as how each method is employed and helps to answer the main research question.

In the fourth chapter, the results and key findings of this study are presented and discussed, which provide an illustration of the present ecosystem of rural farming in Nigeria. The concluding recommendation: HomeGrown, which has the potential to mitigate some of the key challenges faced by rural farmers in Nigeria and answers the research question posed in this study is presented and discussed in the fifth chapter. The sixth and final chapter concludes the research project, presenting the researcher's final thoughts and recommendations for future studies.

Chapter Two

Literature Review

To develop a better understanding of the idea of poverty in Nigeria and the role agriculture has the potential to play, this chapter begins by examining poverty and its prevalence in Nigeria. In addition, the idea of agriculture as a strategy for alleviating rural poverty in Nigeria is explored. The ecosystem of rural farming in Nigeria is illustrated along with the factors that limit the effectiveness of agriculture in alleviating poverty and their consequences. The chapter concludes by presenting established strategies and organizations with aims directed at improving the factors affecting agriculture.

Poverty

The subject of poverty has long been a topic of debate among policymakers within and outside governments, resulting in differences in opinions and several questions around the subject of poverty. Illemez (2001) noted that foundational questions in the debate on poverty still lack conclusive answers. Some of these

questions are as follows: "What is poverty? How can it be measured? Is it a natural phenomenon or a symptom of a poorly ordered society?" (p. 2209).

Navarro (2015) and Illemez (2001) both contend that poverty is a relative concept, with Illemez (2001) describing poverty in a way that is generally acceptable by most scholars: "a person who lacks the means necessary to remain alive" (p. 2210). However, a truly conclusive definition of the term poverty remains elusive, and it may be defined in either absolute (inability to obtain the necessities of life) or relative terms (being worse off than average) (Collin and Campbell, 2008, p. 1). The World Development Report of 2000 and 2001 defined poverty as low income and low human development, broadening the definition further to include vulnerability, powerlessness and a lack of independency. This recognises the multidimensional nature of poverty, and as a result, over time an array of methods have been adopted by various governments, organizations and institutions with the aim of assessing poverty. In attempting to assess poverty in Nigeria, the nation's National Bureau of Statistics, in its publication "Nigeria Poverty Profile 2010," adopted the following

measures to profile poverty in Nigeria: absolute poverty, relative poverty, dollar per day and subjective poverty.

The absolute poverty measure compares the ability of a family or an individual to afford basic necessities such as food. It compares incomes with pre-specified thresholds. Individuals or families with incomes that are not sufficient to meet the pre-determined threshold are assessed to be living in poverty. The relative poverty measure assesses the percentage of a country's population with earnings less than a fixed proportion of the country's median income (Illemez, 2001). The dollar per day measure calculates poverty as living on less than the World Bank threshold of US \$1.25 per day. The subjective poverty measure is not based on income or any predetermined thresholds but rather is a measure of the self-perception of the citizenry, that is, a self-assessment measure (National Bureau of Statistics, 2010). Though they are widely used, these measures of poverty are focused primarily on the monetary aspect of poverty, ignoring other related factors that go beyond income or expenditure. Nigeria's National Bureau of Statistics also acknowledged the multidimensionality of poverty, which includes "inadequate access to government utilities and services, environmental

issues, poor infrastructure, illiteracy and ignorance, poor health, insecurity, social and political exclusion” (Nigeria Poverty Profile, 2010, p. 13).

Poverty has gone from being a developing region phenomenon to one that can now be found in developed countries (United Nations, 2016). And, as the gap between the rich and poor continues to widen, the issue of poverty is becoming even more difficult and poses an even greater challenge due to globalisation (World Bank, 2003). Poverty and the task of reducing it have become a burden that requires the combined efforts, directly or indirectly, of policymakers, the private sector and individuals at all levels. The next section looks at Nigeria and the issue of poverty within its borders.

Nigeria and Poverty

Obadan (2001) observed that in the 1970s Nigeria was among the 50 richest countries in the world. However, it has since backslid to become one of the 25 poorest countries in the world. Anger (2010) remarked that a large proportion of Nigeria’s population lives in poverty and lacks sufficient income to afford minimum standards of food, water, housing, medical care and education. The

country has also been faced with an increasing trend in poverty: 1980 – 28.1%, 1985 – 46.3%, 1996 – 65.6%, 2000 – 70% (Obadan, 2001). The increasing incidence of poverty in Nigeria has resulted in successive governments adopting and implementing a range of strategies and approaches over time to curb its growth. Oladeji and Abiola (2000) noted that the country's policymakers started to focus more on strategies directed at poverty in the 1970s compared to the 1950s and 1960s, when the focus shifted between growth-promoting policies and poverty management strategies.

Ayeni (2004, as cited in Dandago, 2008) identified several strategies implemented by various Nigerian governments since the 1970s: Operation Feed the Nation (OFN); the Green Revolution (GR); Agricultural Development Projects (ADPs); technology transfer; backward integration; the small-scale industries programme; Directorate of Food, Roads and Rural Infrastructure (DFRRI); National Directorate of Employment (NDE); Better Life for Rural Women; Family Support Programme; and National Poverty Eradication Programme (NAPEP). The objectives of these initiatives were directed at national economic development, which also aligned

with poverty alleviation efforts in the country. Ogwumike (2002) further stated that the strategies implemented in Nigeria over the years have focused on three main areas: economic growth, basic needs and rural development approaches. However, despite the host of implemented strategies and programmes (see Figure 1 below), a question remains: What impacts did these strategies have on Nigeria's efforts to reduce poverty, especially of its rural poor, who account for the largest proportion of Nigerians living in poverty?

This study does not extensively explore the successes or failures of past strategies. However, Ogwumike (2002) summarised those successes and failures, noting that poverty alleviation programmes and efforts in Nigeria over the years have failed to produce the desired results, with many Nigerians living in poverty not experiencing the intended positive impacts of such measures. This provides an explanation for why poverty is still present in Nigeria. Oladeji and Abiola (2000) attributed these failures to a lack of coordination among programmes, integration, instability in government and politics. Further, Ogwumike (1998, as cited in Ogwumike, 2002) added that inadequate funding, mismanagement and

corruption were other factors that have undermined the success of some of these programmes over the years.

Table 1: Programmes implemented in Nigeria’s campaign against poverty.

Program	Year Established	Target Group	Nature of Intervention
National Accelerated Food Production Programme (NAFPP)	1972	Peasant farmers	To educate farmers
Nigeria Agricultural and Cooperative Bank (NACB)	1972	Peasant farmers	Agricultural financing
Operation Feed the Nation (OFN)	1979	Rural dwellers	Increase food production
War Against Indiscipline (WAI)/Go Back to the Land	1983	The entire society	War against indiscipline
Directorate for Food, Roads and Rural Infrastructures	1986	Rural areas	Supply and rural electrification

(DFRRI)			
National Directorate of Employment (NDE)	1986	Unemployed youths	Training, finance and guidance
Better Life Programme (BLP)	1987	Rural women	Self-help and rural development programmes, skill acquisition and health care
People's Bank of Nigeria (PBN)	1989	Underprivileged in rural and urban areas	Encouraging savings and credit facilities
People's Bank of Nigeria (PBN)	1989	Under- privileged in rural and urban areas	Securing loans and credit facilities
Community Banks (CB)	1990	Rural residents, micro enterprises in urban areas	Banking facilities
Family Support Programme (FSP)	1994	Families in rural areas	Health care delivery, child welfare, youth development, etc.

Family Economic Advancement Programme (FEAP)	1997	Rural areas	Credit facilities to support the establishment of cottage industries.
National Health Insurance Scheme (NHIS)	2004	The entire society	To provide easy access to health services
National Economic Empowerment and Development Strategy (NEEDS)	2004	The poor in the society	Government reformation, growing private sector, access to health education, welfare, employment, empowerment, security and participatory governance

Source: Oladeji and Abiola (2000) and Arogundade et al. (2011).

Ogwumike (1998, 2002) appraised a number of these programmes aimed at rural development and poverty alleviation, giving specific attention to those implemented from 1989 to 1997. The author focused on the activities of the Directorate of Food, Roads and Rural Infrastructure (DFRRI), the National Directorate of Employment (NDE), the Better Life Programme (BLP), People's Bank of Nigeria (PBN), the Family Support Programme (FSP) and the Family

Economic Advancement Programme (FEAP). He concluded that these programmes recorded some achievements in their various scopes and focuses, including a positive impact on unemployment, growth in the agricultural sector and infrastructural development. However, poverty remains prevalent among a substantial number of Nigerians. Edoh (2003, p. 71, as cited in Anger, 2010) mentioned "corruption and embezzlement, poor leadership, lack of comprehensive national poverty alleviation, lack of sound agricultural policy and protracted neglect of the sector, lack of basic infrastructures, rapid population growth, and excessive internal and external debt burden" as some of the factors that have continued to exacerbate poverty in Nigeria.

Agriculture and Poverty

In its efforts to reduce the number of people living in poverty, Nigeria has adopted various measures, strategies, initiatives and programmes. However, Ogwumike (2002) noted that the majority of Nigeria's poverty reduction strategies have been directed towards its agricultural sector. For example, the National Accelerated Food Production Programme (NAFPP) is aimed at educating peasant farmers, the Nigeria Agricultural and Cooperative Bank

(NACB) provides agricultural financing to small farmers and Operation Feed the Nation (OFN) is a programme targeted at stimulating increased food production in the country. Lawal (2011) described the important role agriculture plays not only in Nigeria's rural areas but also in the country as a whole. The author noted that prior to the discovery of crude oil, Nigeria's agricultural sector was the nation's major foreign exchange earner, providing 70% of Nigeria's exports and meeting 95% of the country's total food needs. He also noted that at that time, Nigeria boasted a thriving agricultural sector, being the world's largest exporter of palm kernel and, in turn, the largest producer and exporter of palm oil, the second largest producer of cocoa and a principal player in the export of hides and skins, cotton, rubber and groundnuts (Lawal, 2011).

The World Bank (2017) estimated that in 2010 31% of Nigeria's population was employed in the agricultural sector, which highlights the significant position agriculture still occupies in the Nigerian economy. The sector plays an even more critical role in Nigeria's rural areas, employing 90% of Nigeria's rural population (FOA, 2016). This explains the high correlation that exists between

rural life and agriculture in Nigeria. Ogwumike (2002) addressed this specific point:

...poverty in Nigeria is largely a rural phenomenon with agriculture accounting for the highest incidence over the years. Besides, poverty reduction depends to a large extent on the agricultural sector, because the sector not only provides food, it also provides raw materials for manufacturing activities, it is the main employer of labour especially in the rural areas. (p. 11)

Moreover, Bourguignon (2008) stated,

Agricultural development is essential for economic growth, rural development, and poverty alleviation in low-income developing countries. Increasing agricultural productivity is an effective driver of economic growth and poverty reduction, both within and outside agricultural sectors. (p. 154)

Bourguignon (2008) further observed that a developed agricultural sector has the ability to directly affect farmers' incomes and employment, with positive ripple effects that can be felt in the overall economic growth and price of food. However, agriculture in Nigeria has encountered numerous challenges, which continue to undermine its ability to be an effective tool for poverty reduction. The reviewed literature points to corruption, access to credit and access to markets as some of the challenges that significantly affect agriculture in Nigeria

(Badiru, 2010; Bourguignon et al., 2008; Fakayode, et al., 2008; Manyong, 2005; Nchuchuwe et al., 2012; Oculi, 1979; Ogen, 2007; Oluwasola, 2010).

Corruption

With the important role government plays in most sectors—agriculture included—this section looks at corruption in government, its causes and factors that influence it and its effects on agriculture in Nigeria.

In the 1960s and 1970s, Nigeria was presented with a unique opportunity due to the discovery of crude oil, a resource the nation could have used to finance its development. However, this did not happen. Salisu (2000) stated that during this period, Nigeria was viewed as the fastest growing nation in Sub-Saharan Africa and a country with great potential. However, such potential is no longer a defining attribute of Nigeria, and the author noted that the nation is known mainly for being one of the most corrupt countries in the world. Nigeria has many unsolved problems that continue to hinder its development, but the one that has received the most focus is corruption.

In many African countries, corruption is regarded to be on the rise. In its 2015 report, Transparency International stated that 58% of Africans polled believed that corruption in Africa was on the rise. The figure was even higher in Nigeria was higher, with 78% of the respondents being of the opinion that corruption had increased in Nigeria (Pring, 2015). Transparency International (2017) defined corruption as "the abuse of entrusted power for private gain." Harsh (1993, as cited in Lawal, 2010) further elaborated on this definition. He said that corruption involves openly pilfering and misappropriating funds or properties owned by the state, acting in a biased way and granting favours to personal associates. Dike (2005, p. 13) summarised corruption as follows: "corruption diverts scarce public resources into private pockets, undermines effective governance, endangers democracy and erodes the social and moral fabric of nations."

A study by Salisu (2000) examined three broad causes of corruption: government policy-induced sources of corruption, natural resource endowments and cultural/socio-political factors. Government policy-induced sources of corruption are the result of pervasive regulations and situations where government officials have a high degree of control in the administration of such regulations. In natural

resource endowments, the presence of natural resources of high value, for example, crude oil, provide a considerable source of economic rents, as they incur low costs of extraction in comparison to their selling prices. Cultural/socio-political factors are related to customs and situations where policymakers and government officials are pressured by family members for favours, leading to the potential for corruption.

Dike (2005) addressed the effects of corruption in government, stating that they are not only destructive to the structures but also to the capacity and legitimacy of the government. He went on to state that corruption leads to the loss of limited public resources. Li et al. (2000), showed that corruption had a tendency to affect growth negatively. Salisu (2000) supported this view, noting that corruption has negatively affected the growth and development of Nigeria. Table 2 presents a convincing synopsis of the diverse factors that support the existence of corruption in various systems, and by extension this applies to the corruption experience in Nigeria.

Table 2: Factors affecting corruption.

<p>Wage considerations</p>	<p>a) inadequate pay b) fringe benefits and other financial incentives</p>
<p>Inefficient internal control</p>	<p>a) inadequate supervision and control systems b) lack of explicit standard of performance for employees and organisations c) poor recruitment and selection procedures for personnel d) too few or too many (non-transparent) rules and procedures (red tape)</p>
<p>Insufficient external control</p>	<p>a) law and order tradition, checks and balances b) lack of information made available to the public and freedom of press c) mechanisms for citizens' participation and complaints d) difficulty of proving cases in court e) high social acceptance of corruption</p>

<p>Statutory penalty rate</p>	<p>a) amount of fines, prison sentences</p> <p>b) administrative sanctions</p> <p>c) prohibition of re-employment in the public sector</p> <p>d) penalties for relatives</p>
<p>Amount of distortions or opportunities in the economy</p>	<p>a) pervasive government regulations</p> <p>b) high statutory tax rates, non-transparent tax regulations</p> <p>c) provision of government services short of demand (government monopolies)</p>
<p>Other factors</p>	<p>a) cultural factors</p> <p>b) culture of bureaucratic elitism and education of civil servants</p> <p>d) leadership</p> <p>e) ethnic diversity</p>

Source: Van Rijckeghem and Weder (1997)

Lawal et al. (2010) argued that a system riddled with corruption is unable to create an environment for development; rather, it presents a barrier. Omenka (2005) and Ogbuagu et al. (2014) identified a compelling connection between the absence of infrastructures of education, healthcare and business and the presence of corruption in Nigeria. Infrastructure is not only necessary but also crucial for the quality of life of Nigerian citizens. Nurudeen et al. (2010) further stated that the impacts of developed health infrastructure are not limited to the improvement of people's health but also affect individual productivity, which in turn encourages economic growth. The reviewed studies indicated that good transportation (road) (Inoni et al., 2009), irrigation, energy and telecommunications infrastructures (Bourguignon, 2008) have direct positive effects on agricultural output and the incomes of rural households.

The prevalence of corruption in Nigeria and its connection to the country's poor infrastructure presents a major constraint to agriculture in Nigeria. A report by the International Fund for Agricultural Development (n.d., 2011) further identified improved transportation infrastructure as an enabler for rural people to access new opportunities. Kherallah et al. (2000) identified poor infrastructure as

a barrier to poverty reduction in Sub-Saharan Africa. He further emphasised efficient transport networks as a priority if further progress is to be achieved in agriculture. Emeasobe et al. (2013) corroborated this view, noting that farmers in Nigeria depend heavily on road infrastructure for moving goods from farms to markets. In creating an environment in which smallholder farmers can achieve their full potential, the provision of infrastructures, in particular good road networks, must be a foundational goal.

Access to Credit

This section draws on literature that provides an understanding of farmers' access to credit. It identifies the sources of credit available to farmers, the limitations associated with each of those sources and presents examples of efforts successive governments in Nigeria have made to improve the current state of farmers' access to credit in the country.

Smallholder farmers in Eastern and Southern parts of Africa face the struggle of meeting the demands of a growing middle class (IFAD, n.d.). The situation in Nigeria is similar due to the nation's expanding population and the continuing

trend of increased spending on consumption imports (Matsilele, 2016). The inability of local farmers to meet growing demands has been attributed to various factors, with access to credit being one of them. Alabi et al. (2016) described the critical role access to credit has on farmers, noting that providing farmers with access to sufficient credit not only enhances their purchasing power but also enables them to acquire modern technologies. He also argued that the availability of credit is essential for both agricultural development and improved productivity. Odoemenem et al. (2010) and Mafimisebi et al. (2005) affirmed that access to credit has a significant influence on farmer's adoption of modern technology. It was further observed that farmers who had greater access to credit readily adopt new technologies, with the opposite being the case for farmers with limited access to credit. However, farmers in Nigeria face several challenges accessing credit, and these challenges have plagued the country's agricultural sector.

Alabi et al. (2016) identified two sources of credit available to farmers in Nigeria's rural communities: formal and informal credit. Formal credit sources are managed by formal financial institutions, for example, commercial banks.

Informal credit sources include a broad range of lenders, such as friends and relatives, and often involves small loans and short-term transactions (Khandler & Farugee, 2003; Adams & Fichett, 2002, as cited in Alani et al., 2016). However, the reviewed literature identified limitations that affect farmers' access to formal credit: a low level of education, a lack of collateral security and a high volume of procedures and requirements (Alabi et al., 2016; Oluwasola, 2010). Adebayo and Adeola (2008) affirmed that the limitations involved in accessing formal credit from commercial banks have led rural farmers to resort to informal sources, such as small co-operative societies, personal savings, funds from friends and relatives, traditional saving associations, credit from produce buyers and moneylenders, as their primary sources of credit. Khandler and Farugee (2003) noted that informal sources of credit provide easy accessibility to credit, loan transactions that are flexible, timely and collateral-free. However, the authors stressed that compared to formal sources of credits, informal sources often do not encourage development due to their high cost, short-term nature and generally low amounts, which are too meagre to stimulate growth. Afolabi (2010) confirmed the high price associated with informal credit, noting that Nigerian farmers who turn to money lenders were exposed to higher interest

rates when compared to credit obtained from formal sources. Anyanwu (2004) observed that commercial banks avoid providing credit to poor and micro-enterprises, as they are considered to have relatively high associated costs and risks when compared to medium and large-scale enterprises, which are perceived to be creditworthy.

The Nigerian government has attempted to mitigate the challenges faced by farmers in accessing credit, implementing several measures and policies over the years. Mbubaegbu (2013) described some of these measures. For example, the NACB set up a programme in 1972 to provide loans to small and large-scale farmers; the Agricultural Credit Guarantee Scheme Fund (ACGSF) was created in 1978 to guarantee loans provided by commercial banks in cases where farmers defaulted in their repayments up to 75.0%; and in 1977, the Rural Banking System Programme required commercial banks to establish a number of their branches in rural areas. Despite measures put in place by successive governments, the former minister of agriculture, Dr. Adesina (2013), noted that despite improvements, gaps remain between those with the funds—commercial banks—and those who need them—the farmers.

Access to Markets

Without markets, farmers have no platform to financially benefit from agricultural production. Hence, this section examines the factors, limitations and barriers that exist in the producer–market relationship.

Herman et al. (2012) discussed the vital role access to markets plays in providing farmers with the opportunity to generate income from selling their farm produce. The author further pointed out that access to markets is not limited to generating income for farmers but also serves as a catalyst for increasing production quantity and quality by increasing demand. However, Nigeria's poor road infrastructure has significantly limited its rural farmers from optimally accessing various markets. Bourguignon (2008) argued that poor transport infrastructure limits market integration. Oculi (1979) and Oluwasola (2010) claimed that the infrastructural challenges in Nigeria create an environment in which smallholder farmers cannot have easy access to markets, leaving an avenue for middlemen (intermediaries) to create barriers and short-change farmers. Nweke (2016) supported this point, citing an example of farmers producing yam in Nigeria. She noted that farmers are unable to deal directly

with wholesalers in urban markets in Nigeria due to the activities of middlemen or intermediaries in these markets; rather, the farmers must pay commissions to these middlemen or intermediaries, who handle negotiations privately, leaving the farmers with no knowledge of how much was paid by the wholesalers.

Okechuku et al. (1999) highlighted another key factor that affects market dynamics (the producer–market relationship): consumer perception. He noted that “poor or negative perception” usually causes a reduction in demand, which not only has effects on income but also on the growth of industries. Studies carried out by Schooler (1971), Tonberg, (1972) and Wang et al. (1983) showed that consumers in developing countries have a stronger preference for goods produced in more developed countries. This was further confirmed by Jaffe et al. (2001), who noted that the Nigerian car industry witnessed a steep decline in the demand for the locally assembled Peugeot 504 car, from an estimated 100,000 units in 1986 to about 4,500 in 1996, as a result of eased import restrictions.

The findings of the research carried out by Okechuku et al. (1999) indicated that Nigerian consumers generally regard products made in Nigeria as sub-standard

compared to foreign products. He also identified superior reliability and technological advancements as the main reasons Nigerian consumers preferred foreign products. The Nigerian government has made many attempts to address this poor reception of locally made products, with little success. Agbonifoh et al. (1999) noted that the government embarked on advertising campaigns, promotions, trade fairs and exhibitions, typically combined with fiscal policies, high tariffs, stringent foreign exchange controls and even outright bans on the importation of particular products. Despite all these efforts and measures, there is still a great demand for imported goods, even if they must be obtained through illegal means (Agbonifoh et al., 1999). The reviewed literature in this section indicate a general negative reception exists among Nigerians for products sourced locally but does directly access this for agricultural products, as a result, in subsequent chapters will explore if this negative perception is the same for locally sourced agricultural products.

Addressing These Challenges

This concluding section of the literature review presents identified strategies in the literature and examples of organizations already working towards limiting the

challenges affecting agriculture in Nigeria. In addition, it presents the examples that offered ideas in the early stage of conceptualising a solution and clues on how this study's final recommendation could function to address the question of this research.

The solution to the issues facing Nigeria's rural farmers and the ability of agriculture to serve as an effective tool for poverty alleviation seem obvious and simple: improve farmers' access to markets and credit. However, due to corruption and its effects, this will take the collective effort of government, private organizations, and individuals. The literature review provided some examples of promising, implementable strategies that have the potential to mitigate the limitations faced by rural farmers in Nigeria's agricultural sector. First, the five principles of good governance drafted by the United Nations Development Program (UNDP) (see Table 3) provide an internationally accepted framework that policymakers in Nigeria can use as a guide when modelling governance in Nigeria.

Table 3: United Nations Development Program (Five principles of good governance).

Principles	Application and Description
1. Legitimacy and Voice	<p>Participation – all men and women should have a voice in decision-making, either directly or through legitimate intermediate institutions that represent their intentions. Such broad participation is built on freedom of association and speech as well as the ability to participate constructively.</p> <p>Consensus orientation – good governance mediates differing interests to reach a broad consensus on what is in the best interest of the group and, where possible, on policies and procedures.</p>
2. Direction	<p>Strategic vision – leaders and the public have a broad and long-term perspective on good governance and human development along with a</p>

	<p>sense of what is needed for such development.</p> <p>There is also an understanding of the historical, cultural and social complexities in which that perspective is grounded.</p>
3. Performance	<p>Responsiveness – institutions and processes try to serve all stakeholders.</p> <p>Effectiveness and efficiency – processes and institutions produce results that meet needs while making the best use of resources.</p>
4. Accountability	<p>Accountability – decision-makers in government, the private sector and civil society organisations are accountable to the public as well as to institutional stakeholders. This accountability differs depending on the organisations and whether the decision is internal or external.</p> <p>Transparency – transparency is built on the free flow of information. Processes, institutions and</p>

	<p>information are directly accessible to those concerned with them, and enough information is provided to understand and monitor them.</p>
5. Fairness	<p>Equity – all men and women have opportunities to improve or maintain their well-being.</p> <p>Rule of Law – legal frameworks should be fair and enforced impartially, particularly the laws on human rights.</p>

Source: Graham et al. (2003).

Graham et al. (2003) noted that there is no absolute solution to this issue and that principles can sometimes be conflicting and complex to apply. However, they argued that these principles can be practically applied in dealing with current governance challenges, and how they will function is subject to the social context. Jain (2017) presented promising examples of practical and

implementable strategies that a country like Nigeria can adopt and adapt in dealing with the effects of corruption.

Table 4: Strategies for fighting corruption.

Strategy	Measures that will help reduce corruption
Create competitive markets	<ol style="list-style-type: none"> 1. Reduce entry barriers, especially for industries dependent on government procurements 2. Open and competitive government procurement
Transparency of bureaucratic decisions	<ol style="list-style-type: none"> 1. Information on government contracts available to the public 2. Enforce public's right to freedom of information
Honest law-making processes	<ol style="list-style-type: none"> 1. Limits on political contributions 2. Disclosure of political contributions 3. Disclosure of lobbying efforts 4. Limits on lobbying capabilities
Accountability	<ol style="list-style-type: none"> 1. Frequent and independent audits 2. Tracking surveys

Increasing costs of engaging in corruption	<ol style="list-style-type: none"> 1. Disclosure of wealth and income of politicians and senior public officials 2. Disclosure of offshore wealth of all citizens to tax authorities 3. Taxation of global income
Encourage whistleblowing	<ol style="list-style-type: none"> 1. Rewards for whistleblowing 2. Protect whistle-blowers against reprisals
Law enforcement	Increased powers for law-enforcement authorities to investigate, moderated by strict and heavy penalties for misuse of that power
Competitive wages	Wages compatible with private-sector wages

Source: Jain (2017).

The literature review in this study revealed that corruption is not the only challenge limiting the potential of agriculture in Nigeria. Access to credit and access to markets are two other crucial factors. As such, to mitigate the

limitations created by access to funds, Nigerian start-ups are making efforts to bridge this gap through technology. Some examples are listed below.

Farmcrowdy: *an online platform created by Onyeka Akumah in 2016 that connects farmers with individuals both in Nigeria and in the diaspora. The platform creates an avenue for these individuals to sponsor these farms, including maize farms, poultry farms, cassava farms and tomato farms. These individuals commit to an agreed sum and receive bi-weekly updates about farm progress and at the end of the cycle get an agreed return on investment.*

ThriveAgric: *through its platform farmers are able to gain access to finances through its crowdfunding design, but they are not limited only to this resource.*

ThriveAgric *also connects farmers to technology-driven advice, insurance, and access to premium markets, helping them to avoid the activities of middlemen in the market.*

Farms.ng: *works to ensure that Nigerian farmers are paid fair prices for their produce and that buyers receive fresh products. This works by connecting*

farmers with buyers in close proximity, enabling farmers avoid the problems that come with transporting their produce to markets. This creates an avenue for farmers to connect directly with buying customers while avoiding the activities of middlemen.

These examples present a window into possible ways the issues of corruption, access to funds and access to markets can be addressed. However, a deeper understanding of the experiences of Nigeria's small rural household farmers and the nature of the environment at large must first be examined.

Chapter Three

Methodology

The third chapter discusses the research methodologies adopted to pursue the objectives of this research project. To reiterate, this study aims at understanding how a desirable environment can be realised for rural household farmers in Nigeria and simultaneously how agriculture can be made into a more effective tool for addressing poverty in Nigeria. The chapter begins with a review of qualitative and quantitative research and proceeds to detail the rationale of the research methods used in this study. The processes involved in the utilisation of each method are described along with a discussion of each method's specific objective concerning the project's topic, the limitations experienced with the use of each method, and how these limitations were mitigated. The chapter concludes by discussing the approaches adopted in the analysis of the generated dataset and the limitations experienced during the research project.

Qualitative research approaches refer to methodologies utilised for the analysis of data that cannot easily be represented in quantified formats, i.e. reduced to

numbers (Palmisano, 2001). Creswell (2014, p. 4) extended this definition, describing qualitative research as “an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem”. On the opposite side, Shelley (2014) described quantitative research as ascribing numbers to social concepts and then utilising these ascribed numbers as a means to measure these concepts. Researchers in quantitative studies acquire facts and analyse the relationships that exist between one set of facts and another through the use of methods that yield quantified data and conclusions, which if possible, can be generalised (Bell, 2005). The purpose of this study is to understand how a desirable environment can be created for rural household farmers in Nigeria while making agriculture a more effective tool for addressing poverty in Nigeria. The related research question has been explored through three sub-questions. First, what challenges limit the effectiveness of agriculture as a tool for reducing poverty amongst Nigerian rural household farmers? Second, what crucial areas require attention to have an immediate impact on the livelihoods of rural Nigerian household farmers? Third, what actions need to be taken to make agriculture in Nigeria a more effective tool for reducing rural poverty?

Both quantitative and qualitative approaches had the potential to individually address the research question posed in this study. As a result, a mixed-methods approach was adopted. The choice of a mixed-methods approach was influenced by the project's aims and the ability of each selected method to provide the required data (Bell, 2005; Creswell, 2014). Such an approach "focuses on collecting, analysing, and mixing both quantitative and qualitative data in a single study" (Creswell & Clark, 2007, p. 5). Creswell and Clark (2007) further noted that a combination of both quantitative and qualitative approaches provides a greater degree of understanding of research problems than either method individually. The project aimed to build an understanding of the experiences of rural household farmers as a first step towards answering the research question posed in this study. It was believed that this would be achieved to a greater extent through the use of qualitative methods. Additionally, the need for the experiences of Nigerian rural farmers to be understood in greater depth further informed the choice of the selected qualitative methods. The study also intended to acquire knowledge about the broader agricultural system, creating an understanding that could be

generalised regarding the buying habits of Nigerian consumers. As such, quantitative methods presented a more suitable means for realising this outcome. Creswell and Clark (2007) stated that in a situation where a single approach (quantitative or qualitative) is unable to address a research problem adequately, a mixed-methods approach is preferable.

The choice of a mixed-methods approach was further motivated by participant accessibility, as the participants included rural farmers, who represent the focal point of this research project and are experts providing a window into the broader system, as well as household consumers, who are crucial to understanding the system as a whole. Access to these individuals enabled the current agricultural ecosystem to be sufficiently understood. This need served as an added criterion in the method selection process, as the adopted methods had to be accessible by the participants. The study started with a broad range of ideas about the factors that affect rural farming in Nigeria. However, as the study advanced and as the literature review provided a better understanding of the issue and built on established knowledge, the scope became more focused. The selected methods were thus those that could provide the most insights and lead

to the eventual answering of the research project's overarching question. As such, the quantitative and qualitative methods adopted in this study included Online surveys, experience mapping and interviews (experts).

The use of an online survey served as a first step to understand the broader environment, that included the Nigeria consumer public and identify if it presented any challenges or connections to the current state of rural farming and agriculture in Nigeria. The second step made use of the experience map as a means to achieve a more focused view on the focal point of this study: Nigerian rural farmers and develop a better understanding of their current experiences, which included the challenges and limitations they encountered. As a final step, the interviews with experts presented a holistic view on the research topic of this current study, the implications of the data obtained from both the online survey and experience. It also added an extra layer of understanding to the obtained dataset. The design and detailed explanation of the methods are discussed below.

Research Methods

Online Survey

According to Sapsford (2006), a survey describes and provides quantified details of a population. Grey (2014) further noted that surveys involve the collection of data through the use of questionnaires, interviews or observations in a systematic way. The administration of the survey through an online channel was influenced by its ability to reach a wider audience and allow for a high level of anonymity (Tolstikova & Chartier, 2010). The method enables the acquisition of knowledge about the attitudes, values, behaviours and opinions of the participants, as described by Rasinski (2005). Another advantage presented by the use of the online survey is its time and cost-effectiveness (Wright, 2005). Moreover, the use of the method was further informed by the extensive use of mobile internet in Nigeria and the method's ability to maximise diversity in participants with regard to ethnicity, age and gender. The purpose of carrying out the online survey was to understand the attitudes, sentiments and motivations that shaped the purchasing habits of Nigerian consumers regarding locally sourced products. This was critical to the research project, as it facilitated

the questioning of the possible effects such habits may have on small Nigerian household farmers. For example, in negative terms, could the purchasing habits of Nigerians be hindering agriculture in Nigeria from having positive effects on household farmers? Alternatively, could they have a positive effect, providing an enabling environment for agriculture and rural household farmers alike?

Research Design: Online Survey

The first step involved with carrying out the online survey entailed identifying what geographic location in Nigeria would best represent Nigeria's buying population. As such, the survey was administered via an online survey platform to a diverse group of participants in Lagos, located in the western part of Nigeria. Lagos represented the ideal location for this type of infield research, as it is the most populated state in Nigeria (Adebajo et al., 2003). It is referred to as the commercial capital of the country (Ogu, 2000) and has a high level of ethnic diversity. Participants of the online survey were selected by random selection. The use of random selection ensured the sample provided a typical example of the population (Keppel & Wickens, 2003). The second stage involved designing the survey. No demographic criteria were used, as the survey aimed to acquire

data creating a general understanding while achieving a fair representation of all sexes within the sampled group of respondents. A structured questionnaire format was used that included six close-ended questions and three open-ended questions. The questions within the survey were directed towards better understanding Nigerian consumer behaviours and identifying any possible connections with rural farmers and their current experiences. Although the targeted number of participants was originally fixed at 100, only 78 responses were obtained.

The use of an online survey proved integral to the success of the project. However, it was not without its drawbacks. Kittleson (1995) highlighted that the use of the survey method requires follow-ups and reminders to increase responses. This limitation was experienced during the course of the project and to an extent was unavoidable. However, to reduce the need for sending out reminders, the online survey was designed to be easy to complete and required very little time to finish. The completion time of the survey was estimated to be 10 minutes. This was communicated in the invitation email, which included a link that directly led to the survey. Furthermore, when sending out the invitation to

participants to participate in the online survey, a date that fell on the weekend was selected based on the assumption that fewer participants would be engaged with activities at work or school. As a result, participants were available to immediately answer the survey, drastically reducing the need for follow-ups and reminders. Another limitation with the use of online surveys stems from the need for respondents to be able to navigate technology and have access to a computer or a means to connect to the internet (Lefever et al., 2007; Ritter & Sue, 2007). This limitation was taken into consideration early in the research planning and the survey design process. Hence, the survey was optimised for mobile phones, taking full advantage of the high penetration of mobile internet use in Nigeria. (see Appendix A for online survey questions.)

Experience Mapping

Experience mapping “is the process of capturing and communicating complex interactions in order to illuminate the complete experience a person may have with a product or service” (Adaptive Path, 2013). It is an ethnographic research method that focuses on tracing an individual’s experience (Liedtka & Ogilvie, 2010), enables the identification of new courses of action (Brandon et al., 2013)

and allows for greater service provision (Fichter & Wisniewski, 2015). It is a method commonly used in service design that places the user at the centre. As a tool, it allows for a better understanding of emotions (Fichter & Wisniewski, 2015), particularly emotional highs and lows (Liedtka & Ogilvie, 2010). This was important, as the project aimed for a better understanding of the experiences of rural household farmers within the Nigerian agricultural ecosystem as well as the challenges, barriers and limitations that exist. Additionally, in using the method, experiences are represented using flowcharts or other visual formats (Ogilvie & Liedtka, 2011), which allowed the obtained data to be presented in a way that was not only simple but also easy to follow.

Research Design: Experience Mapping

Semi-structured interviews were at the core of the experience mapping and were used to elicit personal stories, experiences and information from the participants. The data obtained during the interview sessions provided the details used to create a map of the participants' journeys. With this, the researcher was able to identify the main pain points and establish possible areas where improvements could be made. The mapping exercise was also useful as it allowed for the

research project's expert contributors to comfortably interact with the project's infield data; this played a significant role in the project's interview sessions with experts.

The experience mapping interview sessions were guided by a series of semi-structured questions, including 12 open-ended questions that led to further in-depth discussions. The project's participants were sourced from household farming communities in Nigeria's western states of Ogun and Oyo, representing different forms of agricultural practices. The participants for the experience mapping were selected by purposeful sampling. This form of sampling involves identifying and selecting individuals with the highest tendency to help the researcher comprehend the research question (Creswell, 2014; Grey 2014). The experience mapping session engaged participants from small household farming communities in Nigeria, which the researcher believed had in-depth knowledge and personal experiences of farming in Nigeria at the smallholder level. Each interview session used an interview guide to capture comparable information from various participants. The sessions were conducted in locations the participants found preferable, as the project aimed to achieve the highest

degree of comfort for all participants; this was critical in the research design. However, some interviews were conducted over the phone due to the unavailability of participants for face-to-face interviews. There were 10 total participants, and each session averaged 30 to 45 minutes in length. (see Appendix B for the interview guide.)

Interviews (Experts)

Experts play a critical role in any research project, as they can provide a unique source of 'inside' information (Dorussen, Lenz, & Blavoukos, 2005). To access this 'inside' information, the project employed interviews with expert contributors. Gray (2013, p. 382) defined an interview as "a verbal exchange in which one person, the interviewer, attempts to acquire information from and gain an understanding of another person, the interviewee." A set of guiding semi-structured questions was used in the interviews of persons who were identified as experts in the project's topic area. This enabled current gaps and challenges in the system, areas for further research, insights and points of possible intervention to be identified. To allow for even richer and more practical insights to be obtained from the project's expert contributors, a case study approach

was added to the expert interview sessions. The expert contributors were introduced to data from the project's in field research (experience mapping and online survey) as case studies, allowing them to analyse and interact with the data to elicit their views, opinions, and suggestions. "A case study is a research approach that is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context" (Crowe et al., 2011, p. 1). The introduction of the case study approach to the interview sessions allowed the contributors to present issues not previously evident during the course of the research project and tap into the vast knowledge, ideas and experiences possessed by the experts. Furthermore, case studies allow for the examination of various themes or subjects, from a focused range of people (Grey, 2013) and are useful when an extensive analysis of an issue or phenomenon of interest in its natural, real-life setting is required (Crowe et al., 2011, p. 1).

As both the experience mapping and the expert interviews employed interviews in generating datasets from the participants, both methods faced the limitation created by the presence of the researcher. Creswell (2014) noted that when using interviews to elicit data from participants, the presence of the researcher

may affect the participants' responses, described by Bryman et al. (2012) as the "interviewer effect." In order to reduce the possibility of the interviewer effect during the interview sessions, the proceedings of the session were guided as described by Bryman et al. (2012). First, the interview sessions were conducted with a high degree of professionalism. In addition, during the interviews, the participants were informed that any answers they provided were acceptable, that is, that there were no wrong or right answers. In addition, some interviews were conducted over the phone, this drastically reduced the interviewer effect and allowed responses from the in person interviews and those done over the phone to be compared. The use of both methods in conducting the interviews reduced the chances of the interviewer effect drastically affecting the findings of this study.

Research Design: Interview (Experts)

A semi-structured interview format that included nine open-ended questions was designed for the expert interview sessions. The sessions drew contributors from Nigerian educational institutions, government establishments and other players in the country's private sector.

Table 5. List of Expert Contributors.

Expert Number	Title
Expert 1	Seasoned Agriculture Insurance Practitioner
Expert 2	Executive at a Commercial Bank
Expert 3	Established Nigerian Farmer
Expert 4	University Professor

The choice of what sectors to draw contributors from was based on the ability of these thought leaders to provide unique information in terms of factors affecting smallholder farmers and the agricultural system in general. The interview with experts also provided insights regarding critical areas to look at and possible next steps in proposing future solutions. A set of pre-listed questions served as guides for the one-on-one interview sessions, with each session averaging 30 to 45 minutes in length. (see Appendix C for expert interview pre-listed questions).

Data Analysis

Preliminary Data Analysis

Following the completion of the infield research, which resulted in a sizable dataset, the next apparent stage was to identify what new insights or understandings the collected dataset provided regarding the experiences of small household farmers in Nigeria's agricultural sector. In addition, the question that this research project is centred on needed to be answered: How might we reposition agriculture in Nigeria to become a more effective tool for reducing rural poverty? To accomplish this, the data obtained from the participants of the online survey, experience mapping and contributors of the expert interview sessions were analysed using thematic analysis. Thematic analysis is described by Braun and Clarke (2006) as a method for the analysis and identification of themes present in qualitative data. Gray (2014) noted that themes do not only capture items of significance but also present meaning within the data. A deductive approach was adopted in the use of thematic analysis for the preliminary analysis of the study's dataset. This is a method where the analysis is driven by the researcher's analytical interests (Braun & Clarke, 2006).

Four stages described in the study of Lambert and O'Halloran (2008) were adopted in the use of the deductive thematic approach to analyse the dataset. The first stage involved transcribing data, with a detailed reading of the data where initial concepts were identified and highlighted. The second stage involved a re-reading of the dataset several times, where the researcher identified statements, expressions and insights provided by the participants that related to or had ties to the factors reviewed in the previous chapter. These included corruption, access to credit and access to markets, which were as the researcher's areas of analytical interest. In the third stage, the data were re-examined and refined into clusters, and in the final stage these clusters were categorised based on their relationship to corruption, access to credit and access to markets. Furthermore, the generated insights were cross-examined to determine the frequency of themes and any connections within the themes across the dataset. Critically questioning and iteratively reflecting on the established themes helped bring meaning to the generated insights. This is discussed further in the next chapter.

Primary Data Analysis

To analyse the dataset provided by the project's infield research in greater depth, a descriptive statistics approach was adopted when analysing the data obtained from the online survey. The use of descriptive statistics to analyse quantitative data involves "the creation of a summary picture of a sample of population in terms of key variables being researched" (Gray, 2013, p. 463). To create this summary, the frequency distribution technique was adopted. According to Gray (2013), frequency distribution is a commonly used method for analysing quantitative data, in particular survey data, with a focus on the number of instances in a sample. (See Appendix D for survey results)

Additionally, data obtained from the experience mapping exercise and the resulting information it provided was further analysed using another form of thematic analysis at the primary stage of analysis, inductive thematic analysis. Braun and Clarke (2006) described inductive thematic analysis as an approach in which the themes surface from the data and are guided by the research's data. Grey (2014) recognised that a theme becomes relevant when it presents something of significance in connection to the research question. The stages

involved in the use of the inductive thematic analysis were informed by Vaismoradi et al. (2013) and Braun and Clarke (2006) and are presented in Table 5 below.

Table 6. Stages of conducting an inductive thematic analysis.

Familiarising with data – Transcribing data, reading and rereading the data, noting initial ideas.

Generating initial codes – Coding interesting features of the data systematically across the entire dataset, collating data relevant to each code.

Searching for themes – Collating codes into potential themes, gathering all data relevant to each potential theme.

Reviewing themes – Checking if the themes work in relation to the coded extracts and the entire dataset, generating a thematic map.

Defining and naming themes – Ongoing analysis for refining the specifics of each theme and the overall story that the analysis tells, generating clear definitions and names for each theme.

Producing the report – The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a report of the analysis.

Sources: Vaismoradi et al. (2013); Braun & Clarke (2006, p. 87)

Using the themes and information generated from both the deductive and inductive thematic analysis of the study's dataset, a user persona approach was adopted to reflect on the established themes, identify pain points, key elements of the experiences of the participants and provide a second degree of reflection on this study's recommendation: HomeGrown. Personas present realistic

depictions of users, and although fabricated, allow for the details about users to be communicated (Pruitt & Adlin, 2006).

The generated personas created an understanding of the experiences and challenges faced by Nigerian rural farmers, allowing for an even deeper understanding of their encounters. In constructing the persona data from the experience mapping interviews, findings of the online survey, insights and information provided by the research project's expert contributors were utilised. This involved a series of sorting, mapping and grouping exercises in an iterative process that aimed to combine the data to form meaningful insights. The personas embody the key identified pain points, which "generally reflect specific aspects of the user experience that result in reduced value or benefits to the user (or opportunities for increased value), reflecting stated or latent needs that are relatively important to solve" (Luchs et al., 2015, p. 50). Three personas were constructed that capture key experiences of household farmers within Nigeria's agricultural sector, depicting some important variations, key opportunities unique to their experiences and illustrates how this study's concluding recommendation can have positive effects. (see pages 100-105 for personas.)

Research Limitations

In conducting the research project, a couple of downsides were experienced. First, the project lacked the preferred number of participants to contribute to the research process. Ideally, the research project would have had a larger number of participants, as this would have provided a bigger dataset with increased diversity. Although the project's focus is on rural farming, it would have been beneficial to have farmers from a greater number of locations and producing a wider range of agricultural products to participate in the research process because farming in different areas is characterised by varying advantages and disadvantages. This would have helped in identifying other less obvious challenges.

Second, in addition to the methods used in executing this research project, the researcher intended to engage in participatory observation, personally going through the farming process and acquiring a personal understanding of a farmer's experience in Nigeria's agricultural system. This was not possible due to time and resource limitations. However, conducting a participatory observation would have been an invaluable addition to the richness of the data and insights

obtained and would have helped to create an even deeper understanding of Nigeria's agricultural system and landscape. In acquiring the information needed to create the experience map from Nigerian rural farmers, the project faced the limitation of accessing participants due to distance. To mitigate this limitation, a secondary researcher in Nigeria was used who holds a Master of Business Administration and a Bachelors degree in Mass Communication. The secondary researcher works in the customer experience unit of a company operating in Nigeria's financial sector. Her educational background and experience working in roles that afforded her the opportunity to deal directly with rural farmers in the western part of Nigeria were sufficient to carry out the primary research. The research project would have benefited greatly from having direct contact with Nigerian farmers, as this would have allowed for an in-depth understanding of their experiences.

Nevertheless, the research process made it possible to gain a clear understanding of current farmer experiences in Nigeria's agricultural sector. The insights gained, lessons learnt and the experiences garnered in the course of the infield research allowed for the identification of connections between the

reviewed literature and the issues most pressing to farmers. It also provided insights into which factors shape the agricultural ecosystem and served as building blocks on which the concluding chapters of this research project are built.

Chapter 4

Discussion

Chapter Four discusses the results and key findings of this study. It builds on the preceding chapters of this study with the aim of answering the research question posed in this study. It will answer the three sub-questions through which this study's research question was explored. First, what challenges limit the effectiveness of agriculture as a tool for reducing poverty amongst Nigerian rural household farmers? Second, what crucial areas require attention to have an immediate impact on the livelihoods of Nigerian rural household farmers? Third, what actions need to be taken to make agriculture in Nigeria a more effective tool for reducing rural poverty?

What challenges limit the effectiveness of agriculture as a tool for reducing poverty amongst Nigerian rural household farmers?

Poverty has been discussed across various sectors and levels within and outside governments. However, a definitive answer on what the concept of poverty encompasses remains elusive (Illemez, 2001). The concept of poverty in Nigeria has been expressed as being multidimensional and not limited to monetary income. This was made evident by Nigeria's National Bureau of Statistics inclusion of "inadequate access to government utilities and services, environmental issues, poor infrastructure, illiteracy and ignorance, poor health, insecurity, social and political exclusion" (Nigeria Poverty Profile 2010, p. 13) in its effort to define poverty. Nigeria has fallen short over the years in achieving its poverty reduction goals, which has been attributed to a lack of coordination and integration among programmes, instability in government and politics, inadequate funding, mismanagement and corruption (Ogwumike, 1998; Oladeji & Abiola, 2000). Although Nigeria's efforts over the years to tackle poverty can be described as unsuccessful and ineffective, agriculture has been singled out to

have the greatest potential for improving the situation. This to a certain extent is due to the large number of Nigerians employed in the agricultural sector.

Agriculture in Nigeria is faced with several challenges that limit its effectiveness as a tool for reducing poverty, including corruption, access to credit and access to markets among the most significant (Badiru, 2010; Bourguignon et al., 2008; Fakayode et al., 2008; Manyong, 2005; Nchuchuwe et al., 2012; Oculi, 1979; Ogen, 2007; Oluwasola, 2010). A thematic approach was adopted to analyse this study's research data to develop an understanding of how corruption, access to credit and access to markets were represented in the dataset. By developing an understanding of how these challenges currently affect agriculture in Nigeria, a broader understanding could be developed regarding why agriculture over the years has failed to become an effective tool for poverty reduction in Nigeria.

Corruption

Corruption, as discussed in numerous publications and explored in the literature review chapter of this study, has been extensively examined. Several

recommendations have been proposed to limit its practice, especially in regard to its adverse and crippling effects. However, evidence indicates that corrupt practices in Nigeria are not perceived by a number of its citizens to have reduced (Pring, 2015). The analysis of the responses obtained in this study's online survey and conversations with experts found several references to support the view that corruption continues to present a significant challenge. Furthermore, the limitations presented by corruption not only limit the potential of agriculture to be a powerful tool for poverty reduction but also the growth of Nigeria as a country. In the study carried out by Li et al. (2000) introduced earlier in this study, the author showed that corruption tended to impact growth negatively. Salisu (2006) corroborated this finding, stressing the adverse effects corruption has on the growth and development of Nigeria in particular. The following extracts support the findings of both studies and present a firm opinion that corruption continues to significantly limit the ability of rural farmers in Nigeria to use agriculture as a means to escape the crippling hold of poverty. Furthermore, the effects of corruption are not limited to the subject area of this study but were identified to have negative impacts on almost every sector in Nigeria.

“If you look closely at the problems trailing agriculture in Nigeria, the footprint of corruption can always be found”

- Expert Contributor 1 (Expert Generative Session)

“It is common knowledge that Nigeria has over the years fallen short of her potentials, and we can attribute this to incessant corruption in the country”

- Expert Contributor 2 (Expert Generative Session)

Dike (2005) argued that corruption has destructive effects on government structures and also its capacity. This study revealed that collective knowledge existed among Nigerians regarding the distracting effects created by practices of corruption. Furthermore, the findings of this study indicate that corruption distracts government from executing its duties and requires immediate attention.

“I do not think the government gives enough help or support to the local farmers; neither do they encourage people,

particularly youths, enough that they would want to go into farming”

- Online Survey Participant

“There is a general lack of proper monitoring and maintenance of Government sectors that are meant to improve rural farming”

- Online Survey Participant

“It appears the government is more interested in outsourcing than investing inwards”

- Online Survey Participant

“Government is not sincere about their interests in the welfare of citizens”

- Online Survey Participant

Other responses indicated that corruption was Nigeria’s most pressing challenge, stressing that if an effective and efficient method for tackling corruption could be established, the country would experience positive developments.

"I feel corruption is Nigeria's core issue"

- *Online Survey Participant*

"Remove bribery and corruption; Nigeria's major sectors will thrive"

- *Online Survey Participant*

It becomes apparent that corruption is not only a critical issue that requires immediate attention; it is a foundational issue that will need to be resolved to achieve any real progress. However, to build a better understanding of how corruption directly affects rural farming in Nigeria, the sub-theme **Infrastructure** was identified in the data. Infrastructure has been established in this study as an essential enabler not only for Nigeria's agricultural sector but also for all sectors in the country, as improved infrastructures (e.g. roads, electricity, water supply) were indicated to have direct impacts on the ease of doing business in the country. In particular, transport infrastructure was identified and discussed in several reviewed studies as an important factor that enables rural farmers to move agricultural produce from their farms to markets. Furthermore, the reviewed literature indicated a relationship between the presence of corruption

in Nigeria and the state of the country's available infrastructure. The responses obtained in the current study on the prevailing state of Nigeria's transport infrastructure describe it to be in a deplorable and inhibiting state. This creates a major barrier for rural farmers and provides an understanding of how corruption directly affects agriculture in Nigeria. The data support the findings of Csaba (2003), who indicated that rural areas face limited access to infrastructures. In addition, the data also presented similar results to the study carried out by Inoni et al. (2009), who showed that good transportation (road) infrastructure has positive effects on agricultural output and the incomes of rural households.

"We need to first get our infrastructure right; good roads, electricity, at least get the basics right. If we look at any developed country, infrastructure was foundational in them achieving the title of first world countries"

- Expert Contributor 1 (Expert Generative Session)

"You do not need to be an expert to know infrastructure in Nigeria affects every business, home, individual; when we talk about farmers imagine the high costs created by the state of Nigerian roads"

- Expert Contributor 3 (Expert Generative Session)

Kherallah et al. (2000), recognised the vital position infrastructure occupies for further progress to be made in agriculture. This point is validated in the current research, as improved infrastructure is indicated to have the potential to positively impact both the production and cost of doing business in Nigeria.

"To create an enabling environment to help producers produce at lower costs, improve the condition of Nigerian roads"

- Online Survey Participant

"The business climate in Nigeria makes it very difficult to see goods at reasonable prices. No good infrastructures, roads are not maintained, so overhead costs are very high, transferring to the consumers through price"

- Online Survey Participant

Emeasobe et al. (2013) established the high dependency Nigerian farmers have on the country's road infrastructure for moving goods. The data revealed the indirect impact corruption has on rural farming in Nigeria, based on the current limited access to infrastructure in rural areas. This limited availability of infrastructure, especially road networks, presents rural farmers with significant challenges in accessing markets. In some cases, it causes the farmers to experience monetary losses, and in other situations it results in opportunity losses due to the inability to transport products to markets.

"It is common knowledge the deplorable state of infrastructure in Nigeria limits every sector; our rural farmers need road networks to transport their produce to markets"

- Expert Contributor 2 (Expert Generative Session)

"What is important for me would be have access to water for the chickens as well as good road network. I have to transport eggs, and I have instances where some of the eggs are cracked and I cannot sell them, which is a loss for me"

- Farmer 1

"The condition of the roads makes it expensive to transport my produce to the bigger markets in the city"

- Farmer 2

"The retailers who come around to buy from me always complain about the bad roads, claiming that it is part of the reason they cannot pay as much"

- Farmer 5

Access to Credit

Access to credit was identified to play a prominent role in the challenges faced in Nigeria's agricultural sector, as the conversations with participating farmers confirmed the high dependency on informal sources of credit. This affirms the position of Adebayo and Adeola (2008), who recognised that rural farmers in Nigeria were forced to turn to informal sources of credit.

"When I was starting out, I had help from my family, most especially with raising funds for my farm"

- Farmer 8

"Most of us belong to associations but a lot came from my savings and loans I took from people in my neighbourhood"

- Farmer 6

"All I had were family and friends; even that wasn't enough"

- Farmer 1

"I got tired of asking people for help"

- Farmer 2

"It was very difficult, and the current state of the economy made it even harder"

- Farmer 3

"I needed a lot of capital starting up, and I could not go to the bank because I know they always ask for collateral"

- Farmer 10

The data also agreed with the findings of Alabi et al. (2016), as it demonstrated the significance of access to credit to agriculture in Nigeria. The data further

reiterated the difficulties rural farmers face in accessing credit, in particular formal sources of credit, as this was acknowledged by participants of the online survey and the project's expert contributors. Furthermore, the high dependency of rural farmers on informal sources of credits also confirms the continued presence of barriers to the ability of rural farmers to access formal sources of credit.

"Funding in Nigeria needs a lot of work"

- Online Survey Participant

"Financial institutions need to be paid attention to; you will find that some of the factors limiting the agricultural sector include funding; there is little focus on the sector"

- Online Survey Participant

"I would recommend that the Government should assist the local farmers with grants and loans"

- Online Survey Participant

“Nigeria’s commercial banks will need to reposition themselves to become more accessible, not just accessible but accessible to those who critically need this access: rural farmers”

- Expert Contributor 3 (Expert Generative Session)

During the interview process, none of the participating farming households had indicated utilising any formal sources of credit in their agricultural endeavours. The interview sessions, in addition to reviewed literature, identified **Awareness & Understanding** as two important sub-themes that played crucial roles in farmers’ access to formal sources of credit. Furthermore, interviews with Nigerian farmers provided additional reasons for the high dependency on informal sources of credit by farmers over formal sources. The discussions with participating farmers during the infield research revealed that farmers were unaware of various measures that have been put in place by government to make formal sources of credit more readily and easily accessible to farmers. An example of such efforts include the Agricultural Credit Guarantee Scheme Fund, which allows farmers to access loans of up to N20,000 without the need of collateral and up to N100,000 to N500,000 for individuals with collateral (Olaitan, 2006). Even with such

measures already implemented, the interviewed farmers described formal sources of credit as being difficult and challenging to access. There exists a clear need for improved awareness of the measures that have been put in place to make formal credit more accessible to farmers. However, being better informed is not enough to improve farmers' access to formal credit.

Alongside awareness, the sub-theme understanding occurred repeatedly within the dataset, almost as frequently as awareness. The farmers who participated in the current study attributed limited understanding of the necessary steps and requirements involved with accessing formal credit as some of the main factors that caused them to turn to informal sources of credit. In addition, the interviewed farmers had a shared belief that collateral was required to access any form of formal credit. Agnet (2004) opined that small-scale farmers are faced with a limitation with regard to understanding the complex mechanisms of commercial banking, which in turn limits their access. The findings of this current study support Agnet's (2004) opinion and acknowledge the limitation that inadequate understanding represents to Nigerian household farmers.

Access to Markets

Another key challenge that limits agriculture's role in reducing rural poverty was identified as access to markets. Markets provide farmers with a platform to generate income and are a catalyst for increasing production quantity and quality (Herman et al., 2012). However, it has been established that the current level of infrastructure in Nigeria limits its rural smallholder farmers from easily accessing markets (Okelle, 1979; Oluwemimo, 2009). This limitation is confirmed in the current study. In addition, the current study reveals that the poor state of Nigeria's infrastructure causes farmers to experience losses and higher costs. In addition, previous studies established that rural farmers in Nigeria are sometimes unable to deal directly with customers and this creates an avenue for middlemen to short-change farmers (Nweke, 2016; Okelle, 1979; Oluwemimo, 2009). This can also be attributed to the infrastructural challenges present in Nigeria, particularly with regard to its transport infrastructure.

"The condition of the roads makes it expensive to transport my produce to the bigger markets"

- Farmer 3

“Traders come and buy from us; we do not sell in the markets in the city, except the local market”

- Farmer 10

“Sometimes I have excess and have to sell at giveaway prices, to buyers that come around”

- Farmer 8

The sub-theme **Consumer Perception** is another factor that was identified in the reviewed literature as a limitation affecting access to markets. The reviewed literature established a negative relationship between Nigerian consumers and products made in Nigeria, as consumers had higher preferences for imported products (Agbonifoh et al., 1999; Jaffe et al., 2001; Okechuku et al., 1999). The study carried out by Agbonifoh et al. (1999) established that, over the years, successive Nigerian governments have made efforts to improve patronage of locally sourced goods among Nigerians, but the results have been unsatisfactory. It was thus important in the current study to understand how Nigerians viewed government efforts to improve the relationship between

Nigerian consumers and products made in Nigeria. In addition, it was relevant to attempt to discover what major factors have prompted this low patronage. To do this, the survey utilised in this study presented the respondents with the following open-ended question:

In recent times, the federal government of Nigeria, with support from individuals and some private organisations, has been campaigning and implementing various initiatives for the increased patronage of products made or sourced in Nigeria. What factors affect your patronage of products made in Nigeria?

The answers provided by the respondents suggest that consumers might have had negative experiences when using or interacting with products made in Nigeria, as a high number of responses pointed to the low quality of goods made in Nigeria playing an influential role. This finding supports the study of Agbonifoh et al. (1999), who found that the negative view Nigerians have of locally made products is related to the poor quality of production. The survey probed further to identify whether the respondents felt that the Nigerian

government's efforts to increase patronage for products made in Nigeria had been successful. Fully 90% of the respondents felt that the government's efforts have not been successful. This finding supports Agbonifoh et al. (1999), who described government efforts as ineffective. The responses offered by the participants regarding why they felt the Nigerian government has been unsuccessful reiterated some of the established challenges limiting agriculture as an effective tool for poverty alleviation, with many respondents attributing this to corruption in government.

Second, the study aimed to identify whether the negative perception Nigerian consumers have of locally made products also include the country's agricultural products. In addition, the factors behind people's buying decisions were examined to discover whether Nigerians prefer locally made products over imported alternatives—or if the reverse is true—and to identify the core influencing factors. It was important to identify any relationships that existed between consumer behaviours and the state of Nigeria's agricultural sector, with the aim of identifying key areas for improvement going forward. The findings of this study showed that a large number of respondents carried out their shopping

for food products in local markets. A total of 76.92% of the polled respondents shopped more frequently at local markets than at larger department stores. The survey also identified price and quality as the major factors that influenced the respondents' choice of where to shop.

In regards to a preference for a particular source of food products, the findings identified that more respondents opted for locally sourced food products. A total of 67.95% of the respondents preferred buying locally sourced food products, with 32.05% preferring imported food products. It was established that personal experience played the most influential role in which source of food commodities consumers purchased. It was surprising that a higher number of respondents had a preference for locally sourced food products, as this contradicted previous research by Okechuku et al. (1999) and Agbonifoh et al. (1999), who both identified a strong preference among Nigerians for foreign-made products. However, it is important to note that these previous studies looked at preferences in regard to cars/spare parts, electronics and products in general. The current result presents a new view on the negative perception

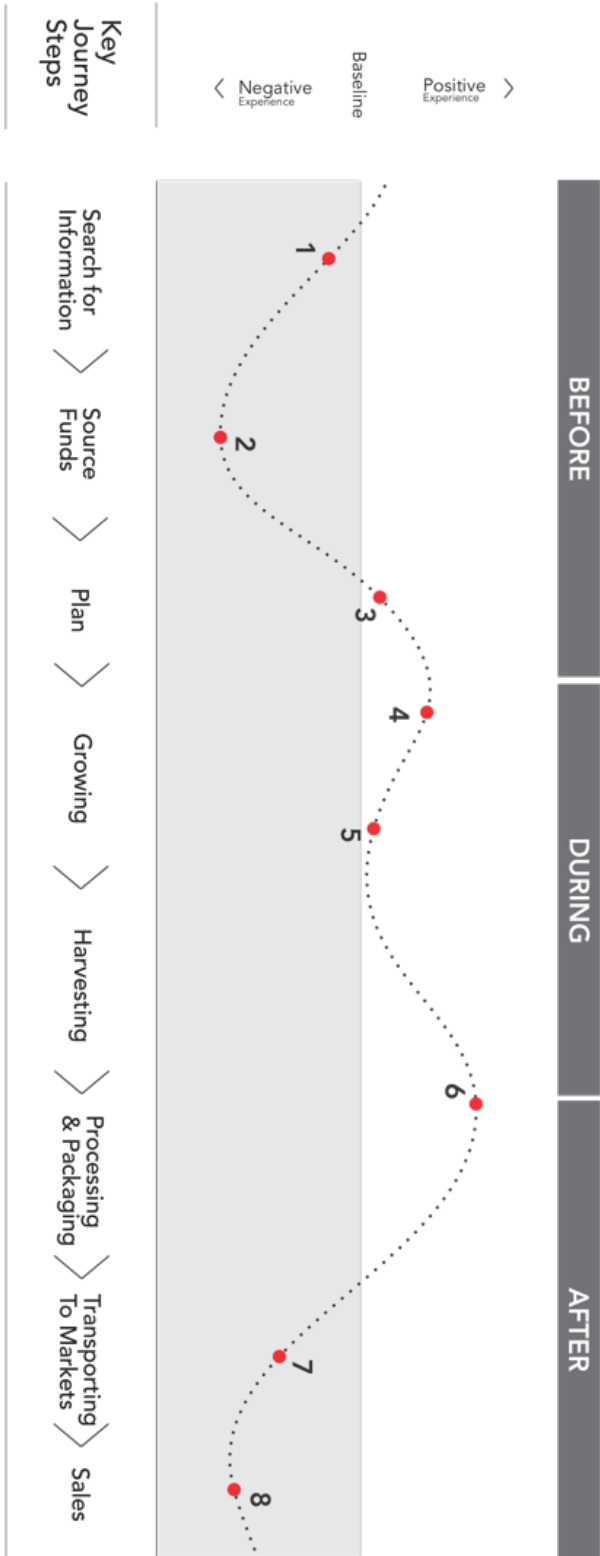
Nigerians' have towards locally made products, as it shows that the preference for foreign-made products is not consistent across all product types.

A Nigerian Rural Farmer's Journey.

Through this study's first hand research, an experience map was created. The experience map captured the key steps representative of the situations and circumstances a rural farmer in Nigeria would experience. The map was created based on the accounts of 10 Nigerian rural farmers who participated in this research project. Each interviewed farmer had a distinct experience, nevertheless, they shared similar challenges. By developing the experience map, the challenges and barriers prevalent in Nigeria's agricultural system was identified, in addition, the struggles which Nigerian rural farmers face could be better understood. The use of the experience map allowed those important steps that created considerable negative experiences to be identified. It also enabled the most pressing needs to be uncovered, and the identification of potential opportunities – a potential that could mitigate the given pain point.

A prominent commonality that was noticed through the use of the experience map among farmers was limited access to funds and a lack of knowledge on how to navigate funding systems. However, the issues identified covered a number of other areas: infrastructure, lack of reliable information, high costs, and more, pain points also emerged around heightened expectations not always achieved and uncertainties. The pain point that interviewed farmers identified and alluded to as most impacting are highlighted in the table below, each having a connection to accessing funds and accessing markets.

Table 7: Experience Map.



Key Journey Steps	Pain Points	Opportunities
<p>Search for Information</p>	<ul style="list-style-type: none"> - Varying sources of information. - High level of uncertainty. 	<ul style="list-style-type: none"> - Is there a way to streamline and sort information making it more accessible for farmers. - Developing a platform that connects farmers to reliable information
<p>Source Funds</p>	<p>- Limited access to funds and lack of knowledge on how to navigate funding systems.</p>	<ul style="list-style-type: none"> - A program that educates farmers on accessing loans, helping them understand the requirements. - Can funding structures be simplified in such a way it becomes more accessible to farmers
<p>Plan</p>	<ul style="list-style-type: none"> - Costs of trainings. - Uncertainty of the credibility of information acquired. 	<ul style="list-style-type: none"> - Partnering with NGOs to connect farmers with useful training programs. - An accreditation program for training outfits.

Growing/Cultivation	<ul style="list-style-type: none"> - Lack of information on farming techniques and pest control. - Costs associated with accessing needed information. 	<ul style="list-style-type: none"> - Private sector investment in extension workers, to improve efficiency.
Harvesting	<ul style="list-style-type: none"> - Heightened expectations not always achieved. 	<ul style="list-style-type: none"> - Improve farmer sales
Processing & Packaging	<ul style="list-style-type: none"> - High costs involved in processing - Heightened expectations not attained 	<ul style="list-style-type: none"> - Increase farmers' revenue - Improve farmer sales to maintain expectations.
Transporting To Markets	<ul style="list-style-type: none"> - High costs of transportation. - Poor transport infrastructure. 	<ul style="list-style-type: none"> - Initiatives that pressure political powers to invest in infrastructure.
Sales	<ul style="list-style-type: none"> - Limited access to markets. - Limited knowledge on the subject of marketing. 	<ul style="list-style-type: none"> - Developing a platform that connects farmers to markets. - Training programs that also educate farmers on marketing

What crucial areas require attention to have an immediate impact on the livelihoods of Nigerian rural household farmers?

The key challenges that significantly affect the ability of agriculture to effectively impact the livelihoods of Nigerian rural household farmers have been established above. However, to answer the question posed in this present study, it was crucial to identify what key challenge required urgent attention to achieve immediate positive impacts on the livelihoods of rural households. By interweaving insights from the interview sessions, and experience mapping, access to credit and access to markets were revealed as the most urgent challenges. First, in the interviews conducted with Nigerian household farmers, the limitation created by limited access to credit was common among all interviewed farmers. In addition, the interviewed farmers were of the shared opinion that access to credit presented the most critical challenge that placed them in a disadvantageous position. Furthermore, the theme access to credit reoccurred the most across the entire dataset, with the participants of the online survey and expert interviews alluding to the urgent need for improved access to credit for rural farmers. However, an alternative understanding of access to credit

that played an important role in defining the research project's solution direction emerged from the interviews with expert contributors. During the expert interview sessions, it became apparent that a reframing of how the project viewed "access to credit" was necessary.

The project's expert contributor identified that the currently accessible sources of credit available to farmers should encompass other sources of funds and should not be limited to credit. Consequently, a review of the responses obtained from the participants was performed. The funding streams emphasised by the farmers and respondents of the survey were "loans and government funding." The project's expert contributor identified that there was one critical funding stream that was even more important than loans and government funding: the incomes farmers generated from the sale of their products. Moreover, the expert contributor identified that increasing the revenue farmers generate from sales would radically affect farmers' access to funds. Further, this would allow farmers to access a funding stream they could control and which does not require technical knowledge or collateral like bank loans. Consequently, with this new reframing, the responses related to how farmers

accessed markets and the fund exchange were examined more closely. During the conversations with the participating farmers, all interviewed households described resorting to or needing to access additional credit to finance their farming activities. The respondents attributed this to limited funds generated from sales, with some associating this to a lack of direct dealings with consumers and the activities of middlemen (intermediaries).

The infrastructural challenges that exist in Nigeria that can be connected to corruption further create an environment in which smallholder farmers cannot easily access markets, leaving avenues for middlemen (intermediaries) to short-change farmers, further reducing the ability of farmers to generate funds through sales. The research project's findings from the interviews with Nigerian farmers confirmed the income gap created by middlemen (intermediary), corroborating the points raised by Oculi (1979) and Oluwemimo (2009). This made it apparent that to answer the project's research question, the proposed solution would need to critically consider solving the income gap created by the middleman (intermediaries). This is because solutions that could improve this limitation have the potential to immediately impact the livelihoods of rural Nigerian household

farmers, including direct effects on the ability of agriculture to be an effective tool to reduce poverty.

What actions need to be taken to make agriculture in Nigeria a more effective tool for reducing rural poverty?

Undertaking this study has revealed the following directions for solutions that enable agriculture to more effectively reduce poverty. These core ideas have been identified through the research process and will serve as foundations for the recommendations that follow.

1. An integrated approach to address corruption.
2. Strategies that consider the farmer-market relationship that currently exists.
3. Farmers' need to access funds they can control, for example: revenue.

4. A support system that takes into consideration the current challenges and limitations encountered by rural farmers.
5. Drivers of change that build on the positive reception recorded among Nigerians for locally sourced food products.
6. Positive impact on the broader agricultural system.

The project's solution builds on this six core ideas and is presented in the depiction of the following personas. The presented personas draw from the interviews of real Nigeria rural farmers, combined with insights generated from the literature review, online survey and expert interviews. The developed persona relied substantially on the findings and insights uncovered during this study as models for its construction.

To reiterate, personas present realistic depictions of users, and although fabricated, allow for the details about users to be communicated (Pruitt & Adlin, 2006). The personas are presented in two positions. First, each persona is

introduced as they face the challenges that currently affect Nigerian rural farmers. Second, the personas are illustrated in an alternative scenario, a “what-if” scenario, where the personas had come in contact with this study’s recommendation. It presents a snapshot of the significant role this study’s recommendation: HomeGrown could play in the lives of Nigerian rural farmers if actualized.

Personas

Shola – The Single Mother

“I grew up in a family where the men farm
and the women sold in the local market,
but in my case, I have to do both.”

Shola is currently in her late 40’s and has spent the last 3 years growing fish. She spends most of her days working her fishery while keeping an eye on her two little girls who help out in their own little ways. She has to combine managing a home, raising her kids, and running her fish farm business. For her starting out

three years ago could only be described in one word: rough. Her biggest challenge was raising funds to build the ponds and purchase her fingerlings, she had to resort to her family and friends for help. A lot of the knowledge and pieces of training on how to run her fish farm, she had to pay for, as this to a certain level guaranteed that she was getting helpful information. She was one of the lucky ones as she used a portion of her late father's land to run her business, saving her the high cost involved in securing a land.

Though her business is still relatively small, she has big dreams. Most of her customers are those she sells to at the local market and restaurants. Most times she makes barely enough but still has to keep at it for her children. Some days she makes enough sales, but other days she has a poor turnout of customers. On some of her really bad days, when she is left with no choice, she has to sell to traders who come to the community at a giveaway even though she knows she could be getting more. Weeks go by when she has a lot to sell but few traders come around to buy, she and her family members end up making a feast off what she could have sold but what choice does she have. It has been hard maintaining her family on what she earns from farming and sometimes she

considers looking for another means of generating income and giving up on her farm.

Possibilities

During the early stages of Shola starting out her fish farm, she got introduced to HomeGrown by one of the members of her community who she had approached about the idea of starting a small fish farm business. She got the opportunity to meet with a representative of HomeGrown who worked with her on the idea she had about starting her small agricultural venture. She got information on how to access loans and had a clear understanding of the various funding options available to someone in her situation and what she would need to access them. She also got advice on the most suitable option for her.

Shola was able to start up her fish farm business with less stress as she had help understanding the funding systems available to small-scale farmers. Two years into her fish farming venture she has been going strong with her partnership with HomeGrown who regularly makes available to her information on how she can make her farming venture more successful. In addition, HomeGrown buys her

fish products at a premium compared to other establishments, and makes the transaction process transparent and easy for her to understand. HomeGrown and Shola have worked together to see her business continually grow, building a relationship that puts Shola and her business first.

John – The Established Poultry Farmer

“Sometimes I consider going back to my security job at least I was sure of getting paid at the end of every month.”

John is a 48-year-old established farmer. He has been going strong for the past 15years. Starting out for him was very challenging, he had no background in agriculture, and he used to work as a security guard in the town. The early days of him starting his farming journey were filled with challenges, two in particular; he found it very difficult to find information on how to start and he had no orientation on what he needed to do.

He resorted to the information he got from a friend, other farmers who came to town hall meetings and the others he learnt by doing. On some occasions, he

had met with some extension workers who came around to introduce farmers to some new information, but he noticed they did not come around that often. To raise the money to start off he was able to secure a loan from one of his senior colleagues at his previous workplace, and the rest came from the money he had saved up. He noted that working on the farm was more of a family effort, his two sons and wife help out every way they can and they have been going strong.

The journey has not been smooth for John and his family as they had issues of infections with their livestock on a couple of occasions and the cost of inputs are sometimes higher than the funds earned from sales. He noted that he is not on any social media (kids today talk about it a lot), though this might help with sales he is not good with technology. Most of the sales John and his family make are through word of mouth at the market nearby; he wishes he could sell his products at the bigger markets in the cities, but the high cost of transportation due to the bad roads would reduce his earnings. There are days he has a lot to sell and the traders at the market are willing to pay less than he bargained for, a lot of the time he has no choice than to sell for those low prices because he has no means to store his produce.

Possibilities

John attends one of HomeGrown's community outreaches when he decided he wanted to start his poultry farm. John shares with a facilitator from HomeGrown that he has no prior knowledge about farming or what he needed to do, in order to start his poultry farm. He is introduced to materials and information that help him to understand all that he needed to know and do. Through his newly established relationship with HomeGrown he was able to access the information he needed to start his farming business and he was sure the information he was getting was reliable.

John's relationship with HomeGrown continued over the years, with representatives of HomeGrown regularly keeping in touch with him to know how he was faring. His relationship with HomeGrown went beyond just connecting him to the information he needed, HomeGrown connected helped him access markets he ordinarily would not be able to access by buying his agricultural products and selling them in urban markets in Nigeria. John has been able to earn favorably from his relationship with HomeGrown, in addition, this relationship has presented John with an invaluable support system.

Chapter 5

Recommendation

Chapter five presents the recommendation that answers the question this study focused on: How might we reposition agriculture in Nigeria to become a more effective tool for reducing rural poverty?

In addressing the challenges experienced by farmers in Nigeria's agricultural sector, it is important that the proposed solution does not thrust its targeted farmers into a future state they are ill-equipped to handle. Rather, it is crucial to design a solution that considers the issues of today while keeping its focus on tomorrow. The recommended solution will be illustrated through the envisioned business enterprise: HomeGrown.

The Proposed Solution - HomeGrown

HomeGrown: a connecting platform through which farmers in Nigeria's rural areas can access the nation's urban markets. HomeGrown will primarily focus on Nigerian rural farmers at the smallholder level, reducing the barriers usually faced by rural household farmers in accessing urban markets. The design of HomeGrown utilizes the already established structure that exists in Nigeria's agricultural sector: the farmer-middleman structure. However, HomeGrown presents a twist to this already established structure. The current state of the farmer-middleman relationship has been established in this current study to in most cases have farmers earning less or being cheated by middle-men. The concept of "HomeGrown" is a redefinition of the role the middleman plays in the farmer-market relationship, one that does not feed off farmers but instead is positioned to support the growth of Nigerian rural farmers.

HomeGrown is designed to put the interest of Nigerian rural farmers first and reduce the challenges identified in this current study. It will achieve this by providing a support system that achieves three important objectives. First, it will

provide a platform on which rural household farmers can access urban markets, and in addition, provide an avenue for farmers to earn more. HomeGrown will adopt a sharing model that has the farmers benefiting more (earning premium) and the business only earning a fair percentage for minimum revenue, to cover transportation cost, transaction fees and other managerial costs. Second, reviewed literature identified two sources of credit available to farmers: formal and informal sources (Alabi et al., 2016). This was corroborated by the responses obtained from the interviewed farmers. The research project's findings further demonstrated that Nigeria's rural farmers used more informal sources of credit compared to formal sources. This confirmed the points raised by Alabi et al. (2016), Oluwasola (2010) and Adebayo and Adeola (2008), who identified low levels of education, a lack of collateral security and a high volume of procedures and requirements as reasons that led rural farmers to turn from formal to informal sources of credit. In addition, a lack of understanding and awareness among rural farmers on various funding networks they could easily access was identified in this current study as additional limiting factors. In light of these, HomeGrown will work closely with farmers, providing them with education and information on how to access different funding streams that cater to each

farmer's individual need and position. For example, HomeGrown could provide farmers with information on accessing credit from commercial banks, microfinance banks or government loans, not limited to that HomeGrown will work closely with farmers while going through the application process and even after the process has been completed.

Thirdly, in addition to providing access to urban markets, HomeGrown will also provide farmers with information on consumer needs and growing trends. It will work closely with farmers to constantly cater to the growing needs of Nigerian consumers. HomeGrown's business model is built with the farmer as its core customer, with local retailers and the consumers as secondary customers. HomeGrown will be positioned to provide Nigerian consumers with food products that the farmers behind its production get paid fairly and above market norms. With a key value proposition to champion the interest of Nigerian rural farmers, by driving the needed change in the Nigerian agricultural system.

Implementing The Proposed Solution

HomeGrown in the early stage will minimise operating costs and capital expenditures by starting small. It will begin with a few urban market distributors, and a small number of signed on farmers while carrying out trial runs. Most of the costs the business will incur while starting out are the costs involved with transporting products from farm to markets, where necessary, and carrying out its introductory/awareness campaign that is crucial to the success of the business and standing by its mantra of championing the interest of Nigerian rural farmers. HomeGrown's introductory/awareness campaign: "*WHAT GOES INTO IT?*" will be designed to achieve three objectives: engage, educate, and inspire Nigerian consumers. The findings of the research project and reviewed literature identified access to market as one of the major issues faced by farmers. However, the data from the study revealed a positive reception to locally sourced food products. In addition, the project's generative interview sessions uncovered a vital funding stream available to farmers: revenue from product sales. The session identified revenue as an area with the potential to have the widest reach, thus requiring attention.

"WHAT GOES INTO IT?" (HomeGrown's introductory/awareness campaign) is designed to target one of the critical barriers that limit farmers from accessing increased revenue and markets: the middleman (intermediaries). Change is needed in the farmer–middleman (intermediaries) exchange which has seen farmers receive less compared to what the middlemen earn at the end of the transaction - when the product reaches the final consumer. *"WHAT GOES INTO IT?"* will focus on the sensitisation of consumers to some of the negative practices that currently exists. It will open avenues for increased farmer revenue generation, and utilise the positive feedback from consumers to create the needed change in the farmer–middleman relationship. It will achieve this through a three-step approach: engage, educate, and inspire.

Engage

"WHAT GOES INTO IT?" will begin the campaign by asking Nigerian consumers if they know what goes into, for example, a tomato. This question will be communicated through the use of social media, prints, pop up stands in busy urban markets and a call in session on popular radio stations in Nigeria. The aim

of this is to stir up conversations about what truly goes into producing agricultural products and make people question if they truly know what it entails. The final answer to this question will be revealed at an interactive session held in one of Nigeria's busy malls, which will lead to the next step.

Educate

The second step involves the reveal which would answer the question of what truly goes into producing agricultural foodstuff. It will reveal the efforts and the work Nigerian rural farmers have to put into producing something as simple as a tomato. It will create an avenue for consumers to be educated on what farmers truly experience, and in the end, inform consumers on what farmers earn from the transaction of a consumer buying agricultural products in local markets. The aim of creating this, is to offer consumers a window into understanding what happens to farmers in the Nigerian agricultural system, especially smallholder farmers, who are always hit the hardest. It is also aimed at creating empathy in consumers for farmers, by educating them on the middleman-farmer transaction, which often results in the farmer receiving less. The awareness drive aims to create a new generation of Nigerian consumers who question where

their food comes from, the circumstances under which it was sold and whether the farmer that produced it was fairly paid.

Inspire

The concluding step involves inspiring consumers to take a pledge to buy from sources that ensure farmers are well paid. This will be done at the end of the campaign session. A signing wall will be set up where people can sign the wall and acknowledge why they took the pledge. This will also be taken online through social media channels, for example, Facebook, Instagram, and Snapchat. These sites have the potential to reach a great number of Nigerians, and an opportunity to present video documentaries of farmers, their experiences, and what they ultimately earn. The use of social media platforms has the potential to spread the conversation to an even wider audience.

A campaign of this nature has the potential to create a much-needed change in the consumer market that can push large-scale consumer stores to patronise socially responsible suppliers. The campaign will also enlighten consumers that they do not only have the purchasing power but also the power to create

change in the Nigerian agricultural system. Creating this shift in the consuming public has the potential to create a more enabling environment for the growth and development of more socially responsible businesses, providing the necessary conditions for them to thrive. In addition, a measure of this nature has the capacity to cause the already-existing middlemen (intermediaries) to become more socially responsible. Ultimately, this campaign will serve as a stage to introduce HomeGrown to Nigerian consumers as an alternative source to buy their food products as a brand that puts the farmers first.

Chapter 6

Conclusion

This chapter brings this study to an end. It will reiterate the research question, the purpose of the study and provide a recap of the key findings. In addition, the researcher's reflections on the research process are presented along with recommendations for future studies.

The aim of this study was to explore how agriculture in Nigeria could be refined into a more effective tool to address poverty, particularly among rural household dwellers, and simultaneously identify how a desirable environment could be realised for Nigeria's rural farmers. Furthermore, the study sought to understand why agriculture in Nigeria has been ineffective as a tool for addressing the widespread incidence of poverty in the country. The project aimed to explore what has been done, what strategies have been implemented, and to identify the challenges, limitations and barriers that currently exist within Nigeria's agricultural system, highlighting those that are most pressing. The study also

sought to make valid contributions to studies aimed at improving the livelihoods of rural household farmers by employing a 'farmer-centred' approach.

The study was designed to primarily focus on agriculture and the factors limiting it as an effective tool for reducing poverty. As such, the project looked at agriculture in Nigeria from two important viewpoints: those of the Nigerian consumer (Nigeria's agricultural sector's primary consumer) and the rural household farmer. A mixed-methods approach was adopted to achieve this goal and to develop a deeper understanding of the research question posed in this study. An online survey, interviews and experience mapping were utilised. These methods allowed the experiences of Nigerian rural farmers and the buying habits of Nigerian consumers to be better understood. To develop the recommendations presented in this study, a combination of thematic analysis, personas, and descriptive statistics were adopted in the analysis of the generated data.

To restate, the research question this study aimed to answer was as follows: How might we reposition agriculture in Nigeria to become a more effective tool for

reducing rural poverty? Agriculture has great significance in Nigeria, with a substantial number of the nation's rural dwellers engaged in some agricultural activity. The study established that agriculture has the potential to be an effective tool for reducing poverty in Nigeria. However, this study also identified significant factors that continue to limit agriculture in Nigeria and its effects on poverty, including corruption, access to credit and access to markets. The present study established that these factors restrain the ability of agriculture to effectively combat poverty and place rural farmers in precarious positions. First, this study identified a shared opinion that corruption continues to present challenges in Nigeria's development as a whole and can be linked to the failure of successive governments in terms of reducing poverty. Furthermore, with respect to agriculture in Nigeria, a connection between corruption and the country's infrastructural gap was identified, providing a window to better understand how the presence of corruption affects agriculture in the country.

The limited access to funds experienced by rural Nigerian farmers was identified to be fuelled by a limited understanding and awareness of how to access such formal sources of credit. In addition, it was identified as rural Nigerian farmers'

most pressing challenge. This study also established a direct connection between access to funds and farmers' access to markets. It established that if the limitation created by access to funds, driven by access to markets, could be mitigated, the positive impacts it would create would be immediately felt among Nigeria's rural farmers. However, the study did reveal a key insight on which some of the recommendations presented in this study were leveraged. A positive consumer perception was identified regarding agricultural products locally sourced, contradicting previous studies, which had identified a generally negative perception of locally sourced goods in Nigeria.

The recommendations proposed to address these limitations and position agriculture to be a more effective tool for reducing poverty are focused primarily on creating support system. However, the damaging effects corruption has on Nigeria's growth, infrastructure, and the continued presence of poverty will need to be addressed with a multifaceted approach aimed at reducing or limiting corruption and its effects. To realistically begin to develop or implement strategies that mitigate the difficult situation created by corruption, Nigeria's government will have to champion the fight on corruption by first displaying the

political will to address poverty. To achieve this, it should redirect its attention to good governance and adopt the UNDP's five principles of good governance, introduced earlier in this study (refer to Table 3), as a blueprint for the development of a more responsive and effective government. It is the responsibility of policymakers and government officials to make certain that these principles are without restriction internalised at every level, aspect and function of governance in Nigeria.

In addition, Jain (2017) presented a diverse list of strategies for tackling corruption which can be applied in Nigeria (refer to Table 4). Using his list as a guide, the Nigerian government can implement strategies aimed at creating competitive markets and transparency of bureaucratic decisions, as this will serve as a deterrent to those wishing to engage in corrupt practices, reduce the number of areas government officials can abuse to obtain economic rents and restrict the avenues through which public officials can obtain bribes. In addition, executing strategies that ensure information on government contracts and government procurements remains open, competitive, and available to the public would create an environment in which engaging in corrupt practices

becomes difficult and easily detectable. Furthermore, refinement in the law-making processes that make it more open and public would make favouritism in government less possible. This could help to ensure that laws and regulations do not benefit particular groups of people, who may have gained preferred status through political contributions to policymakers. In addition, strategies that align with public disclosure of political contributions and lobbying efforts should be instituted. This would ensure that the activities of policymakers can be monitored and scrutinised to further curb biases in government activities.

Challenging corruption and its effects will be a long and tedious journey due to how deep rooted corruption is in Nigeria. Nevertheless, HomeGrown is an example of a solution that can provide the much needed support for rural farmers in Nigeria. A business of this nature can exist within the already established Nigerian agricultural system, at the same time be a driving force of change within it. The sensitisation campaign proposed to expose the negative practices affecting Nigerian rural farmers has the potential to create the much needed shift by increasing empathy, raise public awareness, and increase the conversation on the farmers' experiences within Nigeria's agricultural sector. It

has the potential to steer the course of how middle-men (intermediaries) operate in Nigeria's agricultural system.

In reflection, it is important to acknowledge that this study was iterative, as the focus of the research project, which was initially motivated by the researcher's personal experience, changed and continually evolved, expanding and contracting as the research project progressed based on different insights and new data. Through the reframing of the project's research question, it became apparent that the research project needed to focus on the areas that had significant effects on Nigeria's agriculture system, particularly its rural household farmers. In light of this, the original project focus, which centred on corruption, infrastructure, access to markets, modern farming techniques, access to credit and consumers, was reduced to corruption, access to credit, and access to markets. This reduced scope allowed the project to focus on the most pressing issues that presented the most critical challenges. Moreover, further probes identified the connection that existed between some of the areas identified during the research. For example, the reviewed literature identified a strong correlation between the presence of corruption in Nigeria and the current state

of Nigeria's public infrastructure (see Ogbuagu et al., 2014; Omenka, 2005). It is important to state that other areas of focus not covered in this study have effects to varying degrees on agriculture in Nigeria and its ability to be an effective means through which poverty can be challenged. However, corruption, access to credit, and access to markets were the challenges the researcher viewed as being the most pressing.

Re-envisioning agriculture in Nigeria to make it a more effective tool for reducing rural poverty is a goal that can be achieved. As it is now, small household farmers face many significant challenges. Inadequate infrastructures, particularly functional road networks, continue to hamper easy connection between rural and urban areas. In addition, corruption in government has continued to hinder Nigeria from achieving its economic potential. The problems that face Nigeria can be viewed as complex, filled with uncertainty and very challenging, but change is possible. Despite the many barriers that continue to limit Nigeria's growth, innovation can still occur. The recommendations presented in this research project are examples of many possible solutions and provide a window into the many practicable ways agriculture in Nigeria could be

positioned to become a more effective tool for challenging poverty and improving the livelihoods of Nigeria's rural population.

Future Prospects

This section intends to discuss the implications of this study for future research endeavours. Guided by the insights this study unravelled as it progressed, the research project focused on some of the barriers that proved critical to the usefulness of agriculture as a tool for poverty alleviation. Although this stage of the study has been concluded, it is important to admit that the results presented in this study will require additional research to uncover other limitations and barriers that may support the findings or provide new perspectives on rural farming in Nigeria. Further, it would be valuable for future studies to investigate the other factors previously mentioned but not covered in this body of work.

Following this, it is expected that future studies will include an assessment of governance in Nigeria. Such studies might provide other options for repositioning governance in Nigeria to become more responsive to the effects of corruption, redefining how it functions to make anti-corruption an inherent

aspect of its operation. Similarly, future studies will likely involve further exploration of alternative methods for bridging the gap between rural farmers and formal credit. For example, rural farmers could be connected to formal credit through simple forms of technology, one of which could be text-based banking services, which utilise the functionality of feature phones and do not require internet access. Furthermore, to increase understanding and identify new insights, it would be useful to replicate this study in other countries with more advanced agricultural sectors and compare and contrast the results with those from Nigeria. Exploring how corruption, access to credit, and access to markets are approached in these different environments could lead to the conceptualisation of richer and better recommendations to achieve innovation. It is important to note that this research process continued to evolve as the project progressed, with the adopted methods continually changing to better suit the situations presented during the course of the study. As such, should this project be extended, it would be beneficial for the project's research participants to come from a larger pool set with an adequate mix of diversity. That is, sources of participants other than the research network should be utilised to ensure depth.

Finally, various research methods should be combined. This would not only enhance the project's outcomes but also afford richer and more refined insights.

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Appendix A – Online Survey Questions

1. What market or store do you shop at most often for food products?

- Major Supermarkets (e.g. Shoprite)
- Local Market
- Others: _____

2. What are (is) your reasons for patronising this store or market?

Variety

Quality

Price

Closeness to home

Service of retailers

Others: _____

3. While shopping which source of food products do you generally buy?

Imported food products

Locally Sourced food products

4. In making the decision on which food products to buy (Imported or locally sourced), rank from 5 (most) to 1 (least) important reasons for selecting that particular source of food products?

Tastes Better

Better Quality

Cheaper

Availability

Makes you feel unique

Improves the local economy

Others: _____

5. In making decisions on which food products to buy (Imported or locally sourced) rate what has been a major influence on your buying decisions (5 (most influential) to 1 (least influential)).

Advertising

Packaging

Reviews from family and friends

Recommendations from retailers

Personal experience of using such food products

In recent times, the federal government of Nigeria with support from individuals and some private organisation, has been campaigning and implementing various initiatives for the increased patronage of products made or sourced in Nigeria.

6. What factors affect your patronage of products made in Nigeria.

7. Do you feel Government efforts have been successful in achieving this goal?

Yes

No

8. If you answered "No" to question 6, what are some factors limiting its success?

9. If you had the opportunity to make recommendations on increasing patronage of products made or sourced in Nigeria, what would you recommend and who would it be directed towards. For example; The Federal Government of Nigeria, organizations producing these products in Nigeria, etc. (Please specify).

Appendix B - Experience Mapping Session Guide & Questions

Introduction

I would first like to say thank you for taking time out to be a part of this project. My name is _____ and today we will be talking about what your experience has been like being a farmer. We hope to understand what the journey has been like for you to gain learnings that can be useful in building future interventions. Just as a reminder the question this research project aims to answer is; "How might we redefine the ecosystem of rural farming in Nigeria with solutions that deliver on a sustainable future for small household farmers?",

The exercise should take approximately an hour. I will be taking notes during our discussions and will also be recording the session, so as not to miss out on any aspects of your story. It would be helpful if you could speak as clearly as you can, so we can get all your comments.

I also want to remind you that it is not compulsory you answer every question and you may stop participating at any point in time during the session. We want you to be as comfortable as possible, so if there are any questions you do not want to answer, or you feel uncomfortable discussing, please inform me and we will skip that question and move to the next.

All your responses will be kept confidential. During the final report writing, any comments or answers you make or give during this exercise will not identify you as the respondent. I would like to remind you once again that your participation is voluntary and you do not have to answer every question.

(We have not received your signed consent form and would like you to go through it before we can proceed)

Do you have any questions?

Experience Mapping Session Questions

1. What agricultural products do you grow?
2. For how many years have you been a farmer?
3. What was it like starting out?
4. Did you get any help starting out? (Government assistance, bank loan, family and friends or it was just you?)
5. What would you say were some of the challenges you faced starting out and which were the most challenging?
6. How were you able to overcome the challenges you listed out?
7. In your day to day activities as a farmer what strategies, interventions or tools would you consider to be key to your business? Please explain why.
8. Are there any programs you feel are most beneficial to your farm? Please explain.
9. Could you describe the process and activities, prior to a typical planting season to harvest down to sales, describing key activities or partnerships that you would not want to be without?
 - a. What were some aspects you found challenging?
 - b. How did you overcome them?
 - c. What role would you say technology plays?
10. How do you get your products out to your final consumers? Could you describe the process?
 - a. Are there any aspects you find challenging?
 - b. If any, how would you advise they be improved?
11. Let's take for instance you got approached by a friend who wants to go into farming.
 - a. Where would you advise the person to start out and why?
 - b. What advice would you have for the person going forward?
 - c. What aspects would you advise he/she looks out for?
 - d. Are there any key partnerships or associations that you would say are vital and why?
12. Looking back on your journey as a farmer, if you could go back to any point in time to make changes, what period would that be and what would you do differently?
 - a. Is there any knowledge you have now that you wish you had then?

Session Probes

- Could you give other examples?
- Can you elaborate on what you just described?
- Would you explain that further?
- Are there any other aspects?

Hints

- Would you say accessing funds affected it? How?
- Would better farming techniques have improved on it? How?
- Do you feel access to markets played a role? How?
- Would you say Food storage had effects? How?

Closing -

Is there anything more you would like to add or suggestions you would like to make in regards to the projects research topic?

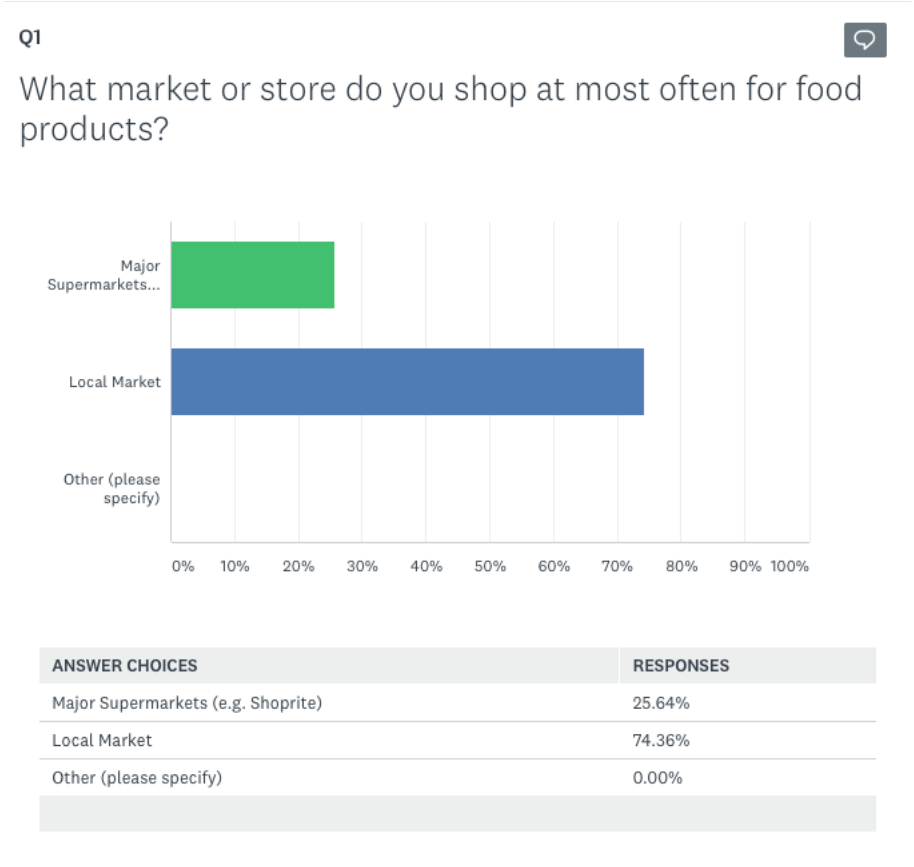
I'll be analyzing the information you have given today and that of other participants, creating a combined experience map and submitting a draft report to my school in one month. I'll be happy to send you a copy of the draft to review, if you are interested.

Thank you so much for your time.

Appendix C - Expert Generative Interview Session Questions

1. Describe your experience relating to rural farming.
2. In your experience with this subject, what do you think is not properly understood or needs better understanding, and why?
 - b. How do you suggest such misunderstanding(s) or misconception(s), if any, be corrected?
3. What persistent challenges or issues do you feel are important concerning this project's subject matter?
4. Would you say there are any human factors affecting this project's subject matter? And what can be done to limit such factors?
5. What are your thoughts on the perception or attitude of the general public towards this subject?
 - a. What is being done to discourage any negative attitude towards this subject at the moment?
 - b. In your opinion, what should be done to improve on them?
6. What do you think would be possible solutions to my research question? What areas do you think are most important and need to be looked into in regards to this topic? (Or what key areas should be visited urgently to make Nigerian rural farming viable in the nearest future?)
7. We have some data from our field research which we would like you to go through. It is a journey map facilitated by the project's interaction with a household family in a rural community. Do you have any comments on this and how this experience could have been made better?
8. If you were in an advisory role to make reforms on this subject, who would you advice and what would your advice to them be?
9. In your opinion, what would you say is the reason agriculture went from being one of Nigeria's competitive advantages to now being relegated to the side and what are the challenges hindering agriculture from retaking its position as a great source of revenue?

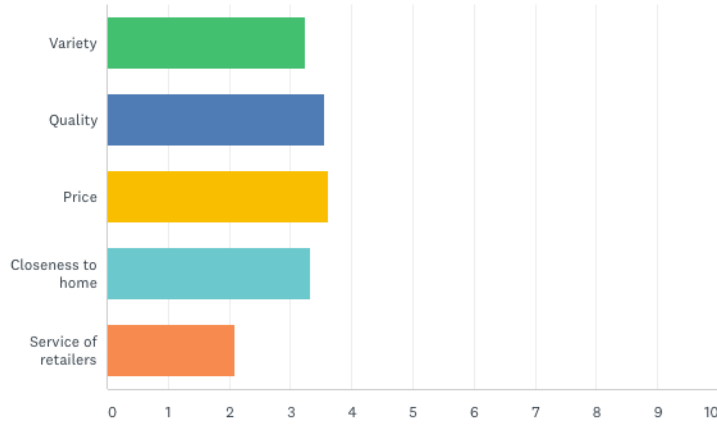
Appendix D – Online Survey Results



Q2



What are (is) your reasons for patronizing this store or market?

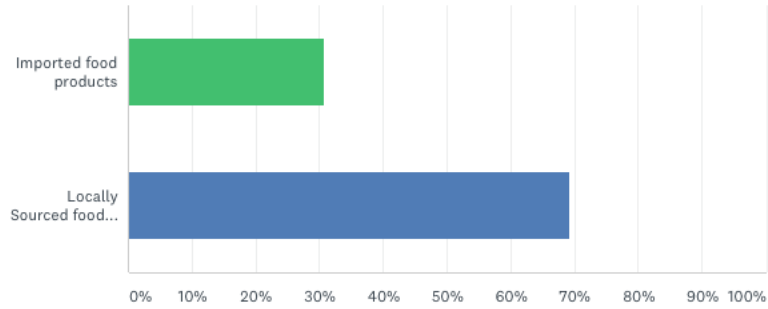


	1	2	3	4	5		WEIGHTED AVERAGE
Variety	16.00%	16.00%	12.00%	40.00%	16.00%		3.24
Quality	4.55%	4.55%	36.36%	40.91%	13.64%		3.55
Price	10.34%	10.34%	24.14%	17.24%	37.93%		3.62
Closeness to home	8.33%	33.33%	12.50%	8.33%	37.50%		3.33
Service of retailers	50.00%	22.73%	9.09%	4.55%	13.64%		2.09

Q3



While shopping which source of food products do you generally buy?

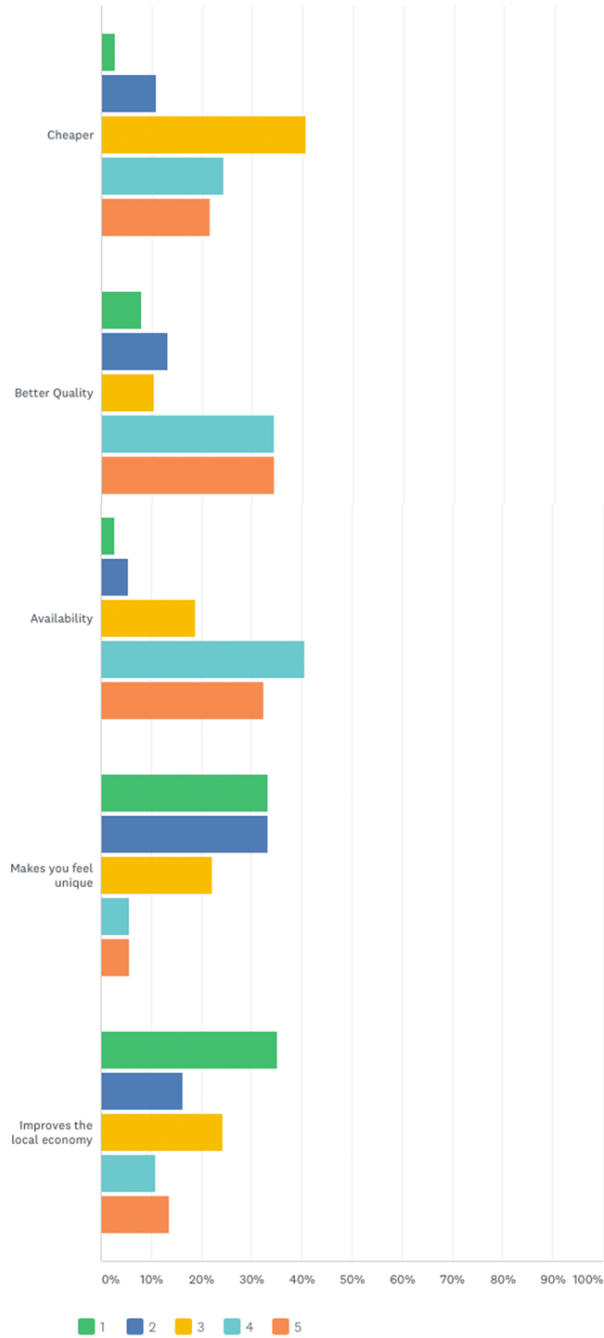


ANSWER CHOICES	RESPONSES
Imported food products	30.77%
Locally Sourced food products	69.23%

Q4



In making the decision on which food products to buy (Imported or locally sourced), rank from 5 (most) to 1 (least) important reasons for selecting that particular source of food products?



	1	2	3	4	5
Cheaper	2.70%	10.81%	40.54%	24.32%	21.62%
Better Quality	7.89%	13.16%	10.53%	34.21%	34.21%
Availability	2.70%	5.41%	18.92%	40.54%	32.43%
Makes you feel unique	33.33%	33.33%	22.22%	5.56%	5.56%
Improves the local economy	35.14%	16.22%	24.32%	10.81%	13.51%