



**UNIVERSITI PUTRA MALAYSIA**

***PUBLIC ATTITUDE TOWARDS URBAN AGRICULTURE IN KANO  
STATE, NIGERIA***

**MOHAMMED LIMAN**

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**PUBLIC ATTITUDE TOWARDS URBAN AGRICULTURE IN KANO  
STATE, NIGERIA**

**By**

**MOHAMMED LIMAN**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra  
Malaysia, in Fulfilment of the Requirements for the Degree of Master of  
Science**

**May 2016**



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## DEDICATION

This paper is dedicated to my late father ALHAJI LIMAN MUSA and my mother HAJIYA FALMATA ALI, who have always stood by my side and supported me in any of my academic endeavour. I am proud to be your son.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

**PUBLIC ATTITUDE TOWARDS URBAN AGRICULTURE IN KANO STATE, NIGERIA**

By

**MOHAMMED LIMAN**

**May 2016**

**Chairman : Mad Nasir Shamsudin, PhD**  
**Faculty : Agriculture**

Urban settlement are planned and endowed with improved public amenities such as medical facilities, employments opportunities, education opportunities, improved households infrastructure, good roads network, electricity and many more. Based on this disparity, urban areas enjoy improved standard of living when compare to their rural counterparts which resulted to rural-urban migration usually in search of greener pasture. High concentration of people in the urban centre exerts untold pressure to the limited opportunities in the urban centres. As a result of that, despite these advantages enjoyed by the urban populace, when it comes to satisfying some basic household need such as food, the urban dwellers are at the disadvantage site. Food insecurity, unemployment and poverty have become the main feature of Kano state urban centres which is the largest State in Nigeria. Urban agriculture has proved to be a reliable solution to some of these problems in Kano state, however the extents to which the teeming populace are aware of health, social and economic benefits and the values of urban agriculture is not known.

The objective of this study is to investigate public attitude towards urban agriculture in Kano State, Nigeria. A survey was conducted in Kano State, Nigeria with Gwale local government area in Zone A, Danbatta in zone B and Wudil local government area in zone C chosen for data collection. These local governments were selected from each of the senatorial districts by taking into consideration the level their urbanisation and the extent to which urban agriculture is practice. Using systematic random sampling, 585 households' responds to 65 questions in structured questionnaire. Information on their knowledge and experience, personal norms, assigned values, held value and attitude were gathered. Assigned value model was applied in this study. Descriptive statistics, factor analysis and hierarchy regression were used to analysed the collected data. Descriptive statistics was employed to analysed age, gender, marital status, household size, education level and average income per-month of the respondents. Percentage, mean, standard deviation was used.

Factor analysis was used to find those factors that shape public attitude towards urban agriculture in Kano State and the result revealed experience and knowledge, personal norms, individual safety and security (assigned value), individual benefits (assigned value) and held value as the dimensions of Respondents' Attitude towards Urban Agriculture in Kano State. In addition, hierarchical regression was used to find the relationship between attitude and those factors shape it and also to look at moderating role of held value in that relationship, the results of the hierarchy regression show that experience and knowledge, Individual safety and security (assigned value) and individual benefits (assigned value) has significantly influence attitude towards urban agriculture in Kano State, Nigeria. Not only that held value has significantly moderate the relationship between Experience and knowledge, Individual safety and security (assigned value), individual benefits (assigned value) and attitude but does not moderate the relationship between personal norms and attitude. This shows the important role of held value as a moderator in the relationship between those factors and attitude.

Having positive attitude towards urban agriculture will leads to the expression of this attitude in good behaviour towards it which will leads to greater participation in urban agriculture.

With households having good knowledge and personal norms of urban agriculture, also having assigned both safety and economic values to this viable venture, it is recommended that Kano State government should change its current stand on urban agriculture which recognized only planting of trees to embrace other aspect of urban agriculture such ashorticulture and animal husbandry. By adopting it as policy option it will help in tackling the problems of food insecurity, unemployment and poverty in urban canters of Kano State which are the major problems confronting policy makers today.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**SIKAP AWAM TERHADAP BANDAR PERTANIAN DI NEGERI KANO,  
NIGERIA**

Oleh

**MOHAMMED LIMAN**

**Mei 2016**

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Penempatan bandar yang dirancang dengan diberikan kemudahan awam yang lebih baik seperti kemudahan perubatan, peluang pekerjaan, peluang pendidikan, infrastruktur isi rumah yang bertambah baik, rangkaian jalan raya yang baik, bekalan elektrik dan banyak lagi. Berdasarkan kelebihan ini, kawasan Bandar menikmati taraf hidup yang lebih baik berbanding dengan rakan-rakan mereka di kawasan luar bandar yang menyebabkan penghijrahan desa-bandar biasanya untuk mencari peluang untuk kehidupan yang lebih baik. Kepadatan penduduk yang berada di pusat bandar memberikan tekanan yang tinggi dan mengurangkan peluang kepada orang ramai kerana populasi yang sangat terhad di pusat-pusat bandar. Kesan daripada itu, ia akan memberikan kelebihan kepada penduduk luar bandar apabila mereka datang untuk memenuhi keperluan asas sesetengah isi rumah seperti makanan. Sebaliknya, peluang penduduk bandar akan terancam. Makanan yang tidak terjamin, pengangguran dan kemiskinan telah menjadi penyebab utama masalah di pusat bandar negeri Kano yang merupakan negeri yang terbesar di Nigeria. Bandar yang berkonsepkan pertanian telah terbukti boleh memberikan jalan penyelesaian kepada sebahagian daripada masalah-masalah besar di negeri Kano, walau bagaimanapun penduduknya masih belum sedar tentang faedah kesihatan, social dan ekonomi dan nilai bandar pertanian yang masih belum tidak diketahui.

Objektif kajian ini adalah untuk menyelidik sikap awam terhadap bandar pertanian di negeri Kano, Nigeria. Ujian kaji selidik telah dijalankan di negeri Kano, Nigeria dengan Gwale adalah kerajaan di kawasan zon A, Danbatta dalam zon B dan Wudil adalah kerajaan di kawasan zon C dipilih untuk pengumpulan data. Kerajaan tempatan ini telah dipilih dari setiap daerah senat dengan mengambil kira tahap perbandaran mereka dan sejauh mana Bandar pertanian menjadi amalan mereka. Menggunakan kaedah persampelan rawak bersistematik, 585 isi rumah telah menjawab 65 soalan dalam boring soal selidik berstruktur. Maklumat mengenai pengetahuan dan pengalaman, norma peribadi, penghayatan nilai,



memegang nilai, dan sikap telah dikumpul. Model pengamalan nilai yang diberikan telah digunakan dalam kajian ini. Statistik diskriptif, factor hierarki dan analisis regresi digunakan untuk menganalisis data yang telah dikumpul. Statistik deskriptif adalah digunakan untuk menganalisa umur, jantina, taraf perkahwinan, saiz isi rumah, peringkat pendidikan dan purata pendapatan setiap bulan daripada responden. Peratusan, min, sisihan piawai telah digunakan.

Hasil daripada analisis factor telah memberikan pengalaman dan pengetahuan, norma peribadi, keselamatan individu (diberikan nilai), manfaat individu (diberikan nilai) dan nilai yang dipegang sebagai dimensi sikap responden terhadap Bandar pertanian di Kano Negeri. Di samping itu, keputusan analisis regresi hierarki menunjukkan bahawa pengalaman dan pengetahuan, keselamatan individu (diperuntukkan nilai) dan faedah-faedah individu (diperuntukkan nilai) mempunyai pengaruh yang besar bagi sikap penduduk terhadap bandar pertanian di negeri Kano, Nigeria. Ia bukan sahaja dinilai dengan ketara tahap sederhana hubungan di antara pengalaman dan pengetahuan, Keselamatan individu (diperuntukkan nilai), faedah-faedah individu (diperuntukkan nilai) dengan sikap malah tidak sederhana hubungan antara sikap dan norma peribadi. Ini menunjukkan pentingnya peranan nilai diadakan sebagai moderator dalam hubungan antara sikap dan faktor-faktor tersebut.

Implikasi daripada sikap positif terhadap bandar yang berkonsepkan pertanian dengan penghayatan dan amalan mereka kepada sikap melalui ramai penduduk yang memberikan kerjasama. Ini akan menambahkan peluang pekerjaan dan pendapatan seterusnya menambah baik kesihatan dan taraf hidup penduduk.

Dengan isi rumah mempunyai pengetahuan yang mendalam dengan norma-norma peribadi terhadap bandar pertanian, ia juga telah menjamin keselamatan dan nilai-nilai ekonomi dalam usaha untuk berdaya maju, ini adalah disyorkan bahawa Kerajaan Negeri Kano seharusnya mengubah pendirian semasa dari pertanian bandar yang hanya menanam pokok kepada pertanian bandar yang berkonsepkan seperti hortikultur dan penternakan haiwan. Dengan menerapkan cadangan ini sebagai dasar pilihan, ia akan membantu dalam menangani masalah makanan yang tidak terjamin, pengangguran dan kemiskinan di tengah bandar negeri Kano yang menjadi penyebab utama masalah yang dihadapi para penggubal dasar pada hari ini.

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I certify that a Thesis Examination Committee has met on 17 May 2016 to conduct the final examination of Mohammed Liman on his thesis entitled "Public Attitude Towards Urban Agriculture in Kano State, Nigeria" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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## LIST OF ABBREVIATIONS

CBN	Central Bank of Nigeria
CIA	Central intelligence agency
FA	Factor analysis
GHI	Global Hunger Index
HND	Higher national diploma
KMO	Kaiser-Mayer-Olkin
LDCs	Less develop countries
NCE	National Certificates in Education
NDE	National Directorate of employment
NEEDS	National Economic Empowerment and Development Strategy
NFDP	National Fadama Development Project
NSPFS	National Special Programme on Food Security
NYSC	National Youth Service Corps
SAP	Structural adjustment program
SEEDS	State Economic Empowerment and Development Strategy
PCA	Principal Component analysis
RTEP	Root and Tuber Expansion Programme (RTEP)
UNDP	United Nations Development program
USEPA	United States Environmental protection Agency
USD	USD United State Dollar
WDI	World Development Indicators

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the Study

Depending on the level of the density of structures, human settlements are categorised as either urban or rural. Urban settlements are mostly planned that result in what is known as urbanisation. Urban centres are defined base on improved public amenities, education opportunities adequate transport, social and business interaction and better standard of living. Because of these improvements in the area of medical facilities, education, employment opportunities in the urban area as compare to the rural counterpart, urban areas enjoy improved standard of living when compare to the rural settings. This disparities in amenities between the urban and rural settlement usually resulted to urban-rural migration in search of greener pasture that lead to high concentration of people in the urban centres (Bakare, 2011) which in turn exert untold pressure to the limited opportunities in the urban setting. As a result of that, despite these advantages enjoyed by the urban populace, when it comes to satisfying some basic household need such as food, the urban dwellers are at the disadvantage site.

In Nigeria, as shown in Table1.1, statistics has revealed disparities between urban and rural settlers with respect to these core welfare indicators as a proxy for standard of living. For instance, as a result of availability of medical facilities in the urban areas more than the rural areas, accessibility of medical health services is more in the urban areas than in the rural area in that were as 70.9 percent of the urban population has access to health services, only 47.8 percent of their rural counterpart has access to it(NBS, 2011).Urban populace has more access to other medical services such as pre-natal care, anti-malaria measures among others.

**Table 1.1: Medical Services as Nigeria Core Welfare Indicator**

Medical Services	Rural (%)	Rural poor (%)	Urban (%)	Urban poor (%)
Health access	47.8	16.1	70.9	45.9
Need	8.1	9.3	8.3	9.3
Use	7.8	8.4	8.8	8.6
Satisfaction	62.7	59.1	75.1	59.5
Pre-natal care	64.4	54.9	90.1	74.3
Anti-malaria measures used	74.9	64.5	85.1	70.0
Person has physical/mental challenge	0.8	1.1	0.7	1.2

Source: National Bureau Of Statistics Annual Abstract Of Statistics , 2011

Not only medical service, there is more accesses to education in the urban centres of Nigeria than in the rural centres as a result of availability of education facilities such as primary, secondary and tertiary institutes which are mostly concentrated in the urban centres than in the rural areas(NBS, 2011). As shown in Table 1.2, 86.7 percent of urban dwellers have access to primary school as compare to 71.9 percent of rural dwellers. Also 69.3 percent of urban dwellers have access to secondary schools as compare to 37.5 percent of the rural settlers. Hence Net Enrolment in both primary and secondary schools are higher in urban canterers than in rural canterers.

**Table 1.2: Education as Nigeria Core Welfare Indicator**

<b>Education</b>	<b>Rural (%)</b>	<b>Rural Poor (%)</b>	<b>Urban (%)</b>	<b>Urban Poor (%)</b>
Access to Primary school	71.9	41.2	86.7	68.4
Primary Net Enrolment	56.6	49.9	74.6	64.3
Access to Secondary school	37.5	9.9	69.3	42.1
Secondary Net Enrolment	39.6	29.4	59.3	44.8

Source: National Bureau Of Statistics Annual Abstract Of Statistics , 2011

These disparities is also glaring in the area of employment in that employment opportunities are more in the urban area than rural areas which is largely due to availability of government and private industries in the urban centres(NBS, 2011). In Nigeria, federal, state and local government ministries and private enterprises are mostly located in the state or local government capital which are urban areas thus providing a better opportunity for formal employment to the urban settlers than their rural counter parts. As depicted in Table 1.3, federal government has provided employment to 4.4 percent of urban dwellers as compared to only 1.2 percent of the rural dweller. State government employment opportunities are more available to urban settlers in that 6.6 percent are employed when compare to 3.0 percent of their rural counterpart.

The disparities cut across both public and private enterprises, for instance 4.2 percent of urban dwellers has access of employment by large private enterprises as compare to only 1.2 percent of the rural dwellers. This is as a result of concentration of most of these enterprises in the urban canterers. International organisations employment is also more available to the urban dwellers that the rural settlers as show in the Table 1.3 below.

**Table 1.3: Employment as Nigeria Core Welfare Indicator**

<b>Employment</b>	<b>Rural (%)</b>	<b>Rural Poor (%)</b>	<b>Urban (%)</b>	<b>Urban Poor (%)</b>
Federal government	1.2	0.3	4.4	1.2
State government	3.0	0.9	6.6	2.7
Local government	2.5	0.9	3.1	1.8
Parastatal	0.2	0	0.8	0.2
Large private enterprise	1.2	0.4	4.2	1.3
Small private enterprise	18.4	15.2	20.0	19.2
Private person or household	73.4	82.2	60.0	73.4
International organization	0.1	0.1	0.2	0.1

Source: National Bureau Of Statistics Annual Abstract Of Statistics , 2011

Household infrastructure is another yardstick used in measuring standard of living. Access to portable drinking water, sanitation and energy is very vital for good standard of living, all of these are more available in urban than rural areas of Nigeria(NBS, 2011).Water sources such as boreholes and tap water are more concentrated in the urban areas. The use of wells and pond are frequently seen in the rural areas. As shown in Table 1.4, 73.4 percent of urban dwellers has safe water source as compare to 40.0 percent of the rural settlers and 86.6 percent of the urban populace has electricity when compare to only 38.9 percent of the rural dwellers.

Table 1.4 has also indicated that urban populace has save sanitation in that 77.0 percent of urban dwellers has good sanitation when compare to 47.6 percent of the rural settlers and 37.9 percent of urban populace has Improved waste disposal were as only 4.8 percent of the rural populace has improved waste disposal (NBS 2011).

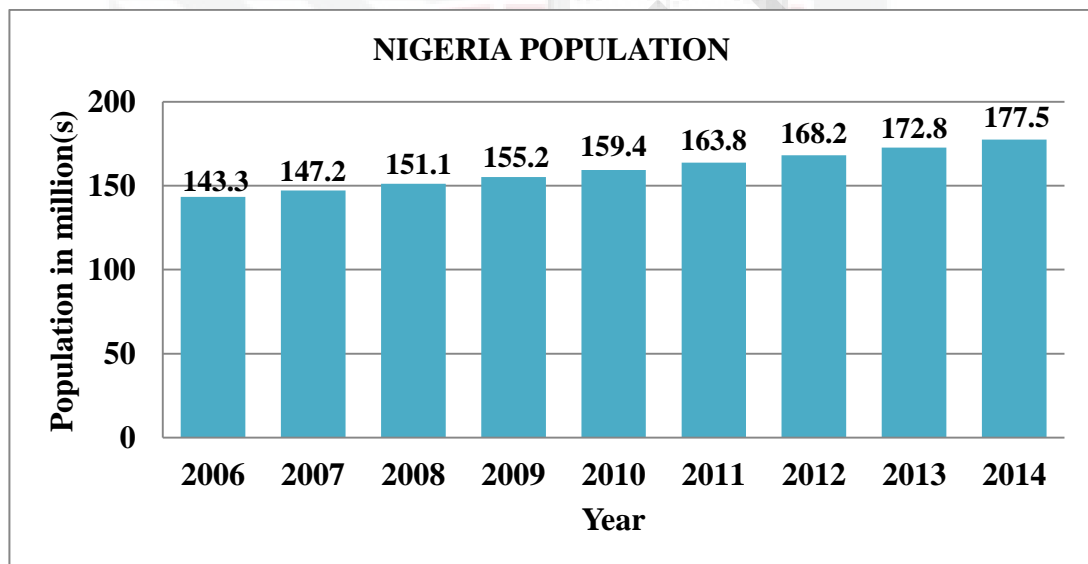
**Table 1.4: Household Infrastructure as Nigeria Core Welfare Indicator**

<b>Household Infrastructure</b>	<b>Rural (%)</b>	<b>Rural Poor (%)</b>	<b>Urban (%)</b>	<b>Urban poor (%)</b>
Secure housing tenure	54.9	41.0	73.5	56.9
Access to water	80.9	63.6	93.6	81.2
Safe water source	40.0	19.2	73.4	53.4
Year- round water source	42.9	30.9	45.5	36.5
Water treated before drinking	9.7	6.6	14.5	6.9
Safe sanitation	47.6	21.9	77.0	49.2
Improved waste disposal	4.8	1.6	37.9	14.0
Non-wood fuel used for cooking	11.3	1.9	56.3	24.6
Has electricity	38.9	12.6	86.6	60.5

Source:National Bureau Of Statistics Annual Abstract Of Statistics , 2011

As can be seen from the above statistics, urban population has advantages with respect to medical services, education, employment and household infrastructure just to mention but few over their rural counterparts. The advantages associated with urban centres lead to high urban-rural migration which resulted in continue increase in urban population(Babanyara et al. 2010).

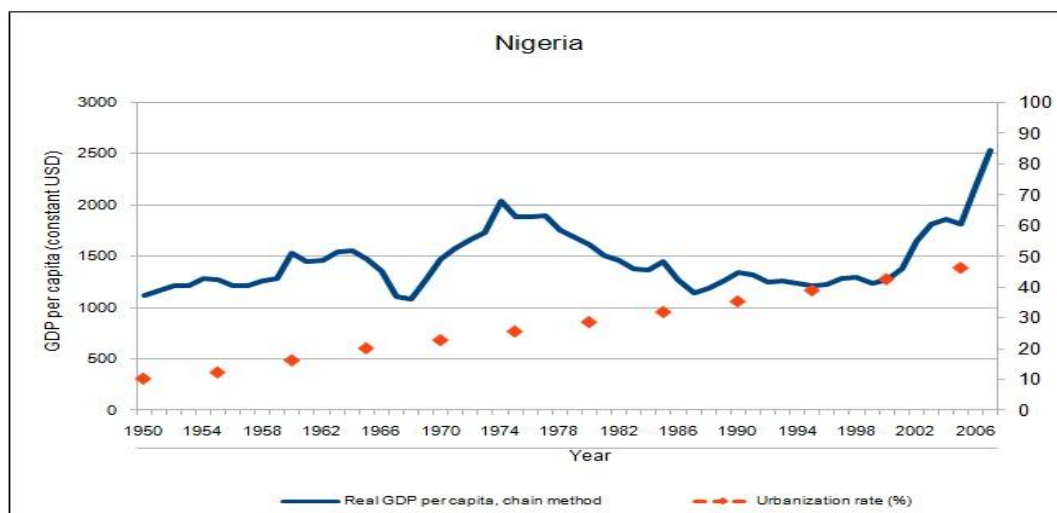
Nigeria population was estimated at 88.9 million people in 1991 national population census exercise (NPC, 1997) and only 37 percent of the people were then living in the urban centres. By the year 2000, 43.5 percent of the population were in the urban areas(Agbola & Agunbiade 2009). Nigerian national population census exercise of 2006 estimated the population at 140.3 million people (NPC 2006).Figure 1.1 has depicted continues trend of increase in Nigeria population. By 2006, the population were approximately 140.3 million people and this number has increased to 168.3 million people in 2012 and by the year 2014 the population was estimated at 177.5 million people.



**Figure 1.1: Nigeria population**  
Source:WorldDevelopment Indicators (WDI) 2014

As Nigeria population grows, so also the numbers of people living in the urban areas also grow. In 2011, 49.6 per cent of the people live in urban centres and this figure increased to 50 per cent in 2014. Therefor as of now, half of Nigerians constitute the urban population with an estimated annual rate of growth of 3.75 per cent from 2010 to 2015 (CIA, 2014).

The above is justified by available statistic. Figure 1.2 has shown the trends of continues increase in the number of people living in Nigeria urban canters in that less than 20 percent constitutes the urban population in 1960's, this number has increased steadily through the subsequent years reaching up to 50 percent of the total population



**Figure 1.2: Percentage of Nigerians living in urban areas**

Source: <http://www.tradingeconomics.com/nigeria/population>

With continues increase in urban population, pressure has increased on the limited available food and other agricultural products which make it more difficult for the urban populace especially the urban poor in satisfying household needs such as their food requirement. Statistics has shown that 23.4 percent of urban poor find it difficult to acquire the necessary food item as compared to 14.6 percent of rural dwellers as shown in Table 1.5

**Table 1.5: Difficulties of satisfying household needs in Nigeria**

	Rural (%)	Rural poor (%)	Urban (%)	Urban poor (%)
Food	14.6	23.0	19.9	23.4
School fees	12.1	18.4	12.3	21.4
House rent	2.1	3.5	6.3	9.6
Utility bills	6.8	8.2	12.5	18.6
Health care	16.9	27.4	11.2	23.6

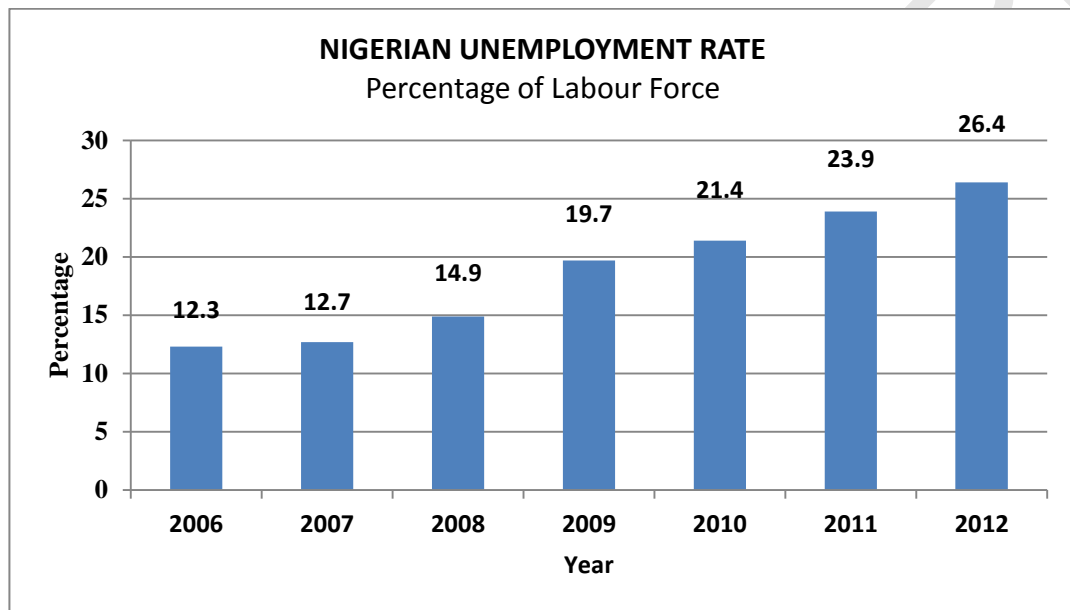
Source: National Bureau Of Statistics Annual Abstract Of Statistics 2011

Not only are they faced with the issue of food security, issues like payment of school fees, house rent, utility bills and healthcare has become a mirage to them as indicated in Table 1.5. For instance 21.4 percent of urban poor find it difficult to settle their children school fees as compare to 12.1 percent of the rural poor's and 9.6 percent of urban poor's face difficulties in settling their house rent when compare to 2.1 percent of the rural populace. This is because of low income and the problem has become worse in 2015 because of economic downturn as a result of global fall in price of crude oil which is one of the major sources of Nigeria foreign exchange. Now many state governments cannot pay their salary of their employees.

Although there is paucity of data regarding the current food price in Kano in particular, Nigeria in general has being recording continuous hike in prices of food items.



Another problem associated with Nigeria urbanisation is the problem of unemployment and poverty. It is belief that unemployment in the urban area is regarded as the most pressing challenging economic issue facing Nigerian economy policy makers today (Bakare, 2011). Unemployment translates into poverty and depression leading to frustration, suspiciousness and hostility which ultimately culminate into criminal activities leading to insecurity of property and lives of people (Ayinde, 2008). Nigeria unemployment rate is shown in Figure 1.3. As indicated the unemployment rate has increased from 12.7 percent in 2007 to 26 percent in 2012.



**Figure 1.3: Nigeria unemployment rate**  
Source: World Development Indicators (WDI) 2012

The problem of unemployment is very wide especially among new graduates in some9 key urbanized area. Indeed it has reach up to 50 per cent (World Bank & DFID, 2005). For instance, from 1990, poverty as a result of unemployment and other economic issues have continues to remain a major problem and very wide spread and has increased in some localities throughout 1990s. It has been estimated that about 70 per cent of the entire population live in less than 1.25 US dollar per day, Global Hunger Index put Nigeria number 40 out of 79 in 2012 ranking (GHI, 2012). Nigeria was ranked number 156<sup>th</sup> out of 187 countries by United Nations Development program index for human development in 2011 (UNDP, 2011). Indeed poverty is everywhere and 80 per cent of the citizens are below the poverty line (IFAD, 2012). In Kano, poverty has escalate from 2012 as a result of security measures taking by the state government after January 2012 insurgence attacked of metropolitan city of Kano which lead to closure of many small scale economic activities (Balarabe, 2014). This has compounded the already existing problems. Table 1.6 show the relative poverty headcount with poverty incident increasing from 27.2 percent to 69.0 percent from 1980 to 2010 respectively.

**Table 1.6: Nigeria relative poverty headcount 1980-2010**

<b>Year</b>	<b>Poverty Incidence %</b>	<b>Estimated population (mn)</b>	<b>Population in poverty (mn)</b>
1980	27.2	65.0	17.1
1985	46.3	75.0	34.7
1992	42.7	91.5	39.2
1996	65.6	102.3	67.1
2004	54.4	126.3	68.7
2010	69.0	163.0	112.47

Source: Nigeria National Bureau of Statistics, 2010

The problem of unemployment in Kano state has reached an alarming stage. For instance in 2007 according to National Directorate of Employment, Kano state has the highest registered unemployed. This force the then director general Mr Samuel Adelodun to propose the conversion of one year compulsory National Youth Service Corps (NYSC) to two years simply to reduce the rate of unemployment (NDE, 2007). In 2012, the central bank governor (CBN) lamented that Kano has unemployment of 67 per cent (Sanusi, 2012).

Other problems associated with increased in urban population include environmental issues like increase heat and pollution. The confluence of urban population explosion and environmental changes has raise questions regarding sanitation and health care and this has the potential of creating environmental and humanitarian problems (Auber & Tamer, 2013).

For a smooth and sustainable urbanization to be archived, it has become very important to incorporate urbanization with urban agriculture considering the diverse benefits associated with urban agriculture in tackling problems associated with urbanization such food insecurity and rising unemployment (Peters, 2010). Urban agriculture is define as “an activity that produces, processes, and markets food and other products, on land and water in urban and peri-urban areas, applying intensive production methods, and (re)using natural resources and urban wastes, to yield a diversity of crops and livestock”(UNDP, 1996). It include many activities such as urban beekeeping, animal husbandry, horticulture, agroforestry and aquaculture (Hampwaye et al. 2013).

There are lots of benefits that can be achieve by practicing urban agriculture, apart from its traditional roles of producing, dawn to consumption of food, it is associated with other diverse benefits which include economic advancements, leisure and recreation, environmental restoration, enhance community and individual state of health and well-being, business skill (entrepreneurship) and beautification of the landscape (Butler & Moronek, 2002). Forestry which is an aspect of urban agriculture has been identified with diverse benefits such as control of storm, control of erosion, regulation of flood and moderation of the climate if grown within the urban centres (Aiberti & Marzluff, 2004). Apart from beautifying the street, trees also regulate extreme environmental temperatures by serving as a

buffer between low and high temperature by almost 5° C and when removed, there is tendency for ground temperature to increase by approximately 4° C and humidity will reduced by 12% at 2 meters above earth surface and it also improves the quality of soil (Henk DeZeeuw, 2011).

Nigerian economy has been classified into three major sectors, they are primary sector which is made up of agriculture and natural resources, the secondary sector which comprises of processing and manufacturing and finally tertiary sector which is the services sectors(Sanusi 2010).

Agriculture is the most important sector of Nigeria's economy in terms employment in that it employed about 70% of the labor force. Farming holdings in Nigeria are generally small and scattered and are subsistence in nature which is characterized by the use of simple tools and shifting cultivation. These small farms produce about 80 percent of the total food requirement of the country. The Contribution of Agriculture to gross domestic product (GDP) in Nigeria has decrease and start to appreciate over the years. For instance from Table 1.7 the average contribution of the sector to GDP from the year 1960 to 1970 was 55.8 percent, 1971 to 1980 was 28.4, 1981 to 1990 was 32.3, 1991 to 2000 was 34.2 and 2001 to 2009 was 40.3

**Table I.7: Sectoral Contributions to GDP**

<b>Activity Sector</b>	<b>1960-1970</b>	<b>1971-1980</b>	<b>1981-1990</b>	<b>1991-2000</b>	<b>2001-2009</b>
Agriculture	55.8	28.4	32.3	34.2	40.3
Industry	11.3	29.1	41.0	38.6	28.4
Service	15.3	16.5	9.8	11.5	15.5
Wholesale & Retail Trade	12.8	17.6	14.5	13.8	14.0
Manufacturing	6.6	7.3	6.1	4.9	3.9
Building & Construction	4.8	8.3	2.3	1.8	1.8
<b>TOTAL Value Added</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: National Bureau of Statistics, 2010

The importance of agriculture to Nigerian economy lead to the formulation of many policies to enhance the sector, for instance After SAP of 1986 there are many agricultural policies that were established by the government with the aim of bursting agricultural production. In 1990, the National Fadama Development Project (NFDP) was designed to provide simple, less cost and enhanced irrigation technology which was finance by World Bank. Among the objectives of NFDP was to provide opportunities for the farmers (Fadama users) to increase their income through expanding their farms. The programs under NFDP was designed to archives Nigeria goal of poverty reduction and enhance private sector role in Nigeria development strategy (Iwuchukwu & Gbokwe 2012).

In the year 1999, the National Economic Empowerment and Development Strategy (NEEDS) was introduced by President Olusegun Obasanjo with many objectives which include employment generation, poverty reduction, value reorientation and wealth creation through agriculture. NEEDS is set with a target of 6 percent annual growth in agricultural GDP and also to ensure that agricultural sector provides the nation with 95 percent self-sufficiency in food. The program provides farmers with different crop varieties (improved seeds), machineries and improved irrigation which are aimed at boosting agricultural productivity in order to reduce poverty since majority of Nigerian poor are engaged in farming. The programme was drawn in line with its state counterpart that is known as State Economic Empowerment and Development Strategy (SEEDS). NEEDS and SEEDS are to provide economic empowerment to the rural farmers and this strategy would help to implement integrated rural development programme to halt rural-urban migration (Iwuchukwu & Gbokwe 2012).

By January 2002, another programme tag National Special Programme on Food Security (NSPFS) was launched in all the thirty six states of the federation. The broad objective of the program was also to reduce poverty and to increase food production. The specific objectives of the programme include helping farmers to increase their output and income, encourage more research on agriculture and also provide extension service and training on farm management for effective utilisation of resources, to support government effort which was aimed at promoting the use of simple technologies for self-sufficiency among others (Iwuchukwu & Gbokwe 2012).

In the year 2003, another programme was launched which was named Root and Tuber Expansion Programme (RTEP). RTEP was designed to address the issue of rural poverty and food production. The programme was aimed at helping the poor and vulnerable groups to have more access to social services. It has been observed by Iwuchukwu and Gbokwe (2012) that almost all agricultural programmes and policies in Nigeria hope to achieve similar objectives but come with different names and organisational networks. The central objectives are always to provide food security to the country and to promote export of agricultural products as a means of diversifying the economy, to provide rural farmers with agricultural support through extension services and to ensure the success of rural development strategies in order to halt rural-urban migration. However, despite these laudable programmes, Nigeria is yet to achieve food self-sufficiency and the desired food security. Nigeria's physical planning law has not recognised urban agriculture, as a result of that, cultivation of crops and livestock rearing within the urban setting are banned by the law (section 43, Land Use Act of 1978, FRN) only trees preservation and planting of new ones by abiding on the necessary conditions is allowed in section 72 of Nigerian Urban and Regional Planning Decree of 1992 (FRN, 1992). Therefore there are no established agricultural policies towards urban agriculture.

Agriculture in Nigeria was a rural activity. Urban dwellers were forced to embrace agriculture within the urban setting as a remedy for increasing food shortage and

rising level of unemployment thereby filling the gap that exist between their food requirement and food supply from the rural canters and also as a mean of generating income to other household's requirements (Kareem & Raheem, 2012). Nigeria economy restructuring program of 1986 otherwise known as structural adjustment program (SAP) has brought more popularity to urban agriculture because SAP lead to inflation in the Nigeria economy as well as increased in the level of unemployment, the resulting inflation as a result of depreciation of the value of naira leads to decrease in real income of urban and rural settlers (Kareem & Raheem, 2012). This decrease in real income in the presence of urbanization and high level of poverty, private and public sector retrenchments of workers together with the rising unemployment has reduces the ability of middle class and urban poor to acquire the necessary food items, this is from the fact that in Nigeria, weak urban families spend as much as 80 per cent of remunerations on food (NBS, 2005).

In Kano state of Nigeria, urban agriculture has been identify to play a positive role in the area of employment generation as well as enhancing nutrition in the cities and that it also improves the environment (Lynch et al., 2001). Fruits and vegetables were mainly produce in and around the city of Kano with few of the sides devoted entirely to fruit and the remaining larger sides devoted to the production of vegetable (Lynch et al., 2001). In Katsina metropolis, the situation is almost the same, about 97 per cent of the urban farmers are engage mainly in the production of vegetables such as cabbage, lettuce, onion, sweet peppers, carrots, spinach, okra, tomatoes, sweet potato, peppers and garden egg. Three (3) per cent of the farmers were engage in cereals production like guinea corn and maize. However, some handfuls of other fruits like guava, pawpaw, pineapple, orange, banana, mango and cashew are also grown in few areas mostly for household direct consumption (Ruma & Sheikh, 2010).

## **1.2 Problem Statement**

Nigeria urban population is growing rapidly in that in 1991, the population was 88.9 million people with 37 per cent living in the urban centres (NPC, 1997). By 2000, 43 per cent of the populations were in the urban centres, from 1991 National population census exercise to 2006 national population census, Nigeria population increased from 88.9 million people to 140 million people (NPC, 2006). This indicated an increase of 57.4 per cent of the entire population in just 15 years. And as of 2011, 49.6 per cent of the total population was in the urban centres. The central intelligence agency in their 2014 world factbook maintain that currently 50 per cent of Nigeria total population are in the urban centres and they estimate the growth rate of the population at 3.7 per cent between 2010 to 2015. The population was projected to reach 168.2 million people by 2020 and 97.9 million people are estimated to be the urban dwellers (Adeyemo & Kuhlmann, 2009). Going by the CIA worldfact report of 2014, half of the entire populations of Nigeria are currently in the urban areas and considering the rate of urbanization from 1991 to 2014, the percentage of people living in the urban area has increased from 37 per cent to 50 per cent respectively.

Continuous increase in Nigeria urban populations has exerted untold pressure on the limited available opportunities in the urban centres especially urban poor are facing many problems with regard to issue of food security and other household need (NBS, 2011). Inflation which accompanied Nigeria economic structural adjustment program (SAP) of 1986 has compounded the problem in that it makes it very difficult for middle class and urban poor to acquire the necessary food items, this is from the fact that in Nigeria, weak urban families spend as much as 80 per cent of remunerations on food (NBS, 2005). As a result of these problems, poverty and unemployment has become a major characteristic of urban Nigerian urban centres.

Kano state in general and the metropolis is also suffering from serious pollution mainly due to high traffic emission. This is more glaring in the afternoon. The level of the emission is above USEPA stipulated air quality index and this is considered hazardous to public health (Okunola et al., 2012).

Many problems are associated with Kano urbanisation as mentioned above whose some of the solutions will be found by participating in urban agriculture as for example urban agriculture has played a positive role in the area of employment as well as enhancing nutrition in the cities and it also improves the environment (Lynch et al., 2001). The issue is whether the people are aware of the health, social and economic benefits and the values of urban agriculture, and also if knowing the values of urban agriculture will shape their attitude. Therefore it is necessary to measure the level of public awareness and different values they place on urban agriculture and the extent to which their knowledge and values shape their attitude towards urban agriculture as Lynch et al., (2001) has looked at Land Security as a threat to urban agriculture in Kano and Adedayo & Tunde, (2013) looked at inadequate farm inputs as constrained to urban agriculture while Adedeji et al., (2012) study Attitudes of Women Farmers towards Urban Agriculture in Somolu Local Government Area of Lagos State, in southern Nigeria.

### **1.3 Research Questions**

The objectives of this research are centred on finding the influence of experience and knowledge, assigned value and personal norms on attitude towards urban agriculture in Kano state and the moderating role of held value to those relationships. In line with these goals, the following research questions are put forward as a guide to the research and efforts will be made to provide answers to these questions.

1. What are the latent factors that may influence public attitude towards urban agriculture in Kano state, Nigeria?
2. What is the relationship between experience and knowledge, assigned value, personal norms and public attitude towards urban agriculture in Kano state, Nigeria?

3. Does held value moderates the relationship between experience and knowledge, assigned value, personal norms and public attitude towards urban agriculture in Kano state, Nigeria?

#### **1.4 Objectives of the Study**

The general objective of the study is to determine public attitude towards urban agriculture in Kano. Nigeria. The specific objectives are:

- a. To explore the factors that may influence public attitude towards urban agriculture;
- b. To determine the relationship between experience and knowledge, personal norms, assigned value sand public attitude towards urban agriculture; and
- c. To analyse the impact of held value as a moderator variable on the relationship between experience and knowledge, personal norms, assigned values and public attitude toward urban agriculture.

#### **1.5 Significance of the Study**

This study has practical and theoretical significance. Practically the study will unfold the general public attitude towards urban agriculture in Kano state which may serves as means of convincing government to include urban agriculture as a policy option for tackling the problem of acute food shortage in urban areas of Kano state. The study will also unfold the importance of urban agriculture as a means of creating much needed employment to the ever growing urban population thereby serving as a means of cubing poverty in the state.

Knowing public attitude in urban agriculture will revealed the extent to which the general public are willing to participate in it and this will serve as a guide to the government and other non-governmental organisations to quantify assistance to be giving to the sector.

It will also serve as a guide as to the extent to which the general public are aware of other silent potentially economic activities surrounding them which can be tab by government to address other problems associated with urbanisation.

The finding of the research will also be beneficial to neighbouring states like Jigawa state whose people are having the same culture and attitude with Kano state having been once the same state before they are later separated.

Theoretically, the study will add to current existing literature on urban agriculture in Kano State thereby assisting in adaptation and application of related theories and knowledge aiming at improving urban agriculture.

## **1.6 Definitions of Operational Terms**

**Urban agriculture:** Urban Agriculture (UA) is an activity that produces, processes, and markets food and other products, on land and water in urban and peri-urban areas, applying intensive production methods, and (re)using natural resources and urban wastes, to yield a diversity of crops and livestock (UNDP, 1996). It includes many activities such as urban beekeeping, animal husbandry, horticulture, agroforestry and aquaculture (Hampway et al., 2013).

**Assigned values:** this is the value public placed on urban agriculture as a result of direct benefits they individually receive from urban agriculture as an environmental activity. In other words, it is a value developed by individual while performing environmental activities like engaging in urban agriculture (Djets et al. 2005; Winter 2005). In nutshell, assigned value is the benefits of urban agriculture to individual.

**Held value:** these are priorities that are generally developed in practicing environmental activities like urban agriculture. It is the outcome of behaviour (Djets et al. 2005; Winter 2005). It is the value generally placed on urban agriculture in respect to economic, social and health disposition of the community.

**Knowledge:** prior knowledge is the previous information one has and kept in his memory. Knowledge is there for stored information which is based on familiarity and experience (Chen & Li, 2007).

**Attitude** is defined as a learned predisposition to behave in a consistent evaluative manner toward a person, a group of people, an object, or group of objects (Morgan et al., 1979). This is a product of association between attitudinal factors.

## **1.7 Organization of the Thesis**

This research is divided into five main chapters, chapter one is made of the background of the study and the statement of the problem, the research question and research objective are also discussed. The significance of the study and explanation of some terms are also included in this chapter. In Chapter two relevant literature concerning urban agriculture such as its benefits and constraints were reviewed. The second part of chapter two looks at issues relating to the determinants of attitude towards urban agriculture and how attitudes towards urban



agriculture are measured. Chapter three explain the methodology of the research and the statistical tools employed in data analysis, the data collecting procedure is discussed and the variables and determinants in the study were theoretically discussed. In Chapter four, data analysis and findings of the study were presented and finally in chapter five summery/conclusion, implication of the research and recommendations were made.



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