

Climate Change and Population Dynamics in Southwest Nigeria

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Abstract—Gradual change in climate had not only heightened the movement southwards in Nigeria, it has also increase the rate of communal and tribal conflicts. More people are moving southwards owing to change in climate that is worsening their living conditions. It is established that north-south migration is influenced by environmental changes, particularly climate. The study employed survey research designs. A multi stage sampling procedure was adopted in the selection of 24 randomly selected focused groups and 1025 structured questionnaire was randomly administered to selected migrants in rural and urban local government areas of three states (Ekiti ,Ogun, and Oyo) because Lagos, Ondo and Osun states had been identified as known destination and origin of migrants from the north. The variation of changing patterns of migrants showed north-south movements with Oyo ($\bar{x}=1.347$), Ekiti ($\bar{x}=2.323$) and Ogun ($\bar{x}=2.703$) which is insignificant ($F_{1016}^8 = 0.712, p < 0.01$). The study recommends holistic approach to solving climate driven migration in Nigeria.

Keywords—Climate change, population dynamics, Southwest Nigeria

I. Introduction

Population change occasioned by migration in and out of environmentally favorable places to unfriendly areas is linked to the quality of climate. One of the environmental factors influencing the movement of population is the climate (UN, 2016). There are various reasons for embarking on migration depending on the situation that brought about the decision. Migration is a selective process affecting individuals or families with certain economic, social, educational and demographic characteristics (Adewale, 2005). Migration occurs as a response to economic development as well as social, cultural, environmental and political factors. It has both positive and negative impacts on areas of origin as well as destination. People tend to move away from a place owing to the need to escape violence resulting from political instability, natural disasters, economic recessions, and suspected or real persecution. As posited by Adewale (2005), adverse environmental conditions such as flood, landslide, erosion, earthquake, insects and pests, soil infertility may contribute largely to the reasons why people leave one environment for another. For instance, an

increasing rate of global warming resulting into climate change has particularly taken place over the last 25 years and 11 of the 12 warmest years on record have occurred in the past 12 years. This has contributed to movement of persons as coastal areas, biodiversity and desert expansion and encroachment have displaced people. Gay (2015) asserts that the phenomenon of migration having an important place through human history differs both as regards causes of emergence and its effects and also its types.

Migration (both international and internal) has become a major aspect of international economic relations and an important component of a globalized world. International migration is the movement of persons across international boundaries, which include the crossing from one country to the other or a change of residence from the jurisdiction of a nation into that of another nation. In 2010, the International Labour Organization (2009) gave an estimation of 215 million persons living outside their country of birth or citizenship and by 2013 the figure has moved up to about 232 million (ILO, 2015), and over 20 million Africans live outside their countries of birth of citizenship. This figure has continued to increase as there are 244 million people around the world that have embarked on international migration (UN, 2016). Further estimates indicate that in 2009, over 5 million Nigerians lived abroad, well over half of them in sub-Saharan Africa, and primarily in West Africa. On the other hand, the oil boom led to the economic growth that began in 1975. Nigeria became a country of immigration and by 2006, well over 600, 000 foreigners were resident in Nigeria, 97 percent of whom originated from other West Africa countries (ECOWAS, 2006; Afolayan and IOM, 2010).

The worsening impacts of climate change in three densely populated regions of the world could see over 140 million people move within their countries' borders by 2050, creating a looming human crisis and threatening the development process in sub-Saharan Africa (World Bank, 2017). This study investigated the impact of climate change on population dynamics occasioned by migration in southwest Nigeria. This becomes relatively important because migration generally is a redistributive factor which changes the population of places and ascribe a new outlook to both the origin and the destination.

The Concept of migration

Migration is the act or an instance of migrating [William Collins, 2012]. It involves a change of location

or residence for a specified period, although the time is still a subject of debate. Once movement is embarked upon, the next point of concern is the length of time spent at the destination by the person to either be qualified as migrant or only involved in circulatory movement. Bilborrow [1992] suggested a time frame of between 10 days and 3 months for the movement to be classified as migration. Migration could be across international boundary [international migration] or within a national boundary [internal migration].

As observed by Onokerhoraye (1985), Africa's rural-urban migration became significant during the early 1960's when most African countries became independent, social development; especially expanding educational opportunities resulted in substantial rural-urban migration in the continent. Several authors have attributed rural-urban migration to several factors ranging from economic, social, and cultural to political reasons. For instance, Prothero (1965) identified the following as factors influencing the decision to move. They are economic reasons such as rural poverty, population pressure on land, and the attraction of urban wage level; social and psychological reasons such as the desire to break away from traditional organization and obligations and the desire to enjoy social freedom at the cities. Another study in support of this was that of Prothero (1977) who was of the opinion that physical factors such as flood and drought influence people decision to move. Similarly, Bogue (1959), gave about 25 factors stimulating migration, 15 of which stimulated migration while the remaining 10 retard mobility among migrants.

Summarizing the above factors, Todaro (1980) was of the view that rural-urban migration arises from three main factors namely: disparities in urban-rural development opportunities, urban job creation and educational expansion. He further added that the prevalence of equality between the urban and rural real income would help in minimizing rural-urban drift. Rural-urban migration became noticeable between 1960 and 1975; it triggered the problems of urban unemployment in the third world countries as well as leading to an explosion of the demand for social services (Olayide, 1976). He also acknowledged that rural-urban movement has necessitated the diversion of funds from productive investment to unproductive investment like the provision of social amenities.

While not disputing the impact of other factors on migration volume, writers such as Byerlee and Eicher (1972) and Gerald (1976) emphasized the importance of economic factors as major factors influencing the decision to move. A research carried out by Udo (1976) on 1,200 migrants in Nigeria, revealed that 70% of the migrants migrated as a result of the desire to better themselves in material respect. However, Olatubosun (1975) attributed rural-urban migration to the deplorable conditions of the rural sector in Nigeria.

The conceptual framework recognized the interrelationship between rural-urban linkages and migration dynamics as systems and processes respectively. The concepts of "systems" and "processes" are different in the model and it is necessary to distinguish between the two. A clear definition of the concepts was provided by Lakshmanam (1982), in which case a system is a set of parts coordinated to accomplish a set of goals. The system is the structure that facilitates the process, in this case, rural-urban linkages. The processes are the outcomes of the systems. In this study, rural-urban linkages serve as the structure or the environment that give rise to the processes. The systems are dynamic and can be modified to fit desired process. The process is, therefore, the dependent outcome or goal of the system (Fig. 1)

The systems model considers exogenous and endogenous/intervening variables as independent variables on which people's decision to migrate are based, the dependent variable. At a later time, the outcome of the migration process may impact on the structure, the rural urban linkages, bringing about a change that may either reinforce or deter migration out or into the areas. The model includes among its independent variables demographic and economic settings, socio-cultural context and political system and environmental conditions that operate in both sending and receiving areas. These are influenced directly or indirectly by intervening variables, of traditional and non-traditional organizations, world economic/ political order, community/family system, society/community needs, and by other intermediaries, such as, hometown associations or town unions.

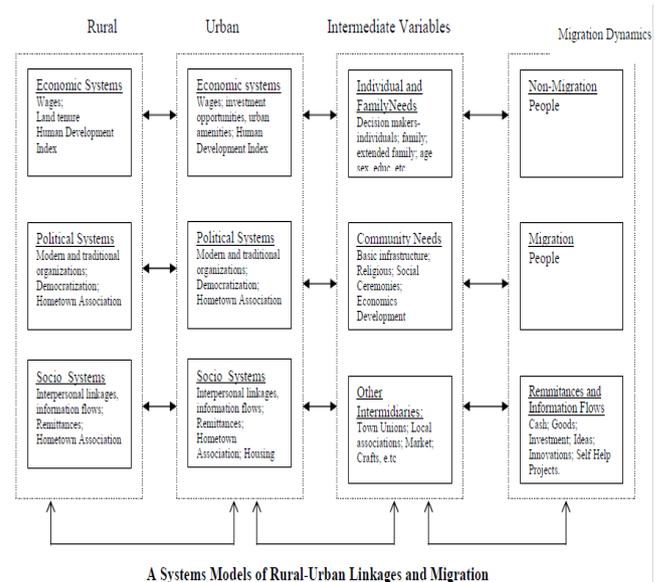


Fig. 1: Conceptual Framework for Migration Dynamics and Changing Rural-Urban Linkages in Nigeria

Climate change and migration interface

Change in climate has contributed to change in residence from rural to urban where the effects of this change have been greatly felt. The Sahel belt, which is at the centre of European Union efforts to combat illegal migration in Africa, is a useful case study in this regard. Here, environmental and demographic changes combine with devastating effects. Greenhouse emissions are on the rise, temperatures are increasing and, as a result, the intensity and frequency of catastrophic events is rising dramatically (Torelli, 2017). Northern Nigeria, Chad, Niger and Mali are among the most affected countries. In 2012 alone, more than 6 million people in North-Eastern Nigeria were forcibly displaced due to floods and more than 500,000 people were displaced in Chad (Torelli, 2017). Lake Chad (which borders Chad, Niger, Nigeria and Cameroon) has shrunk by 90% since the 1960s (Fig. 2). Around 25 million people in the region depend on the lake for their livelihoods in agriculture, fisheries and livestock (Zieba et al., 2017). The dramatic reduction in water levels means that almost 7 million people are currently food insecure (Okonkwo, and Demoz, 2014). Thousands of fishermen and farmers became unemployed in recent years. This has clearly contributed to forced movement, with 2.5 million people already displaced from the region (Yusuf, et al., 2014). More will surely follow.

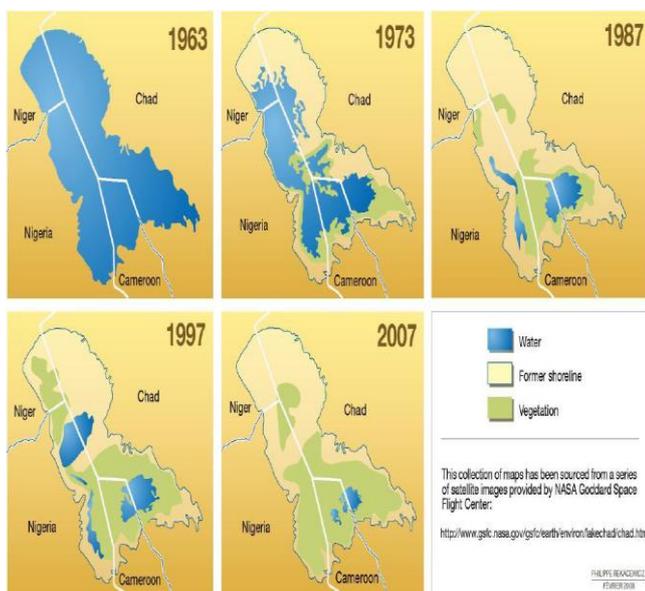


Fig. 2: Spatial reduction of Lake Chad (1963-2007)

Source: Torelli, 2017

These environmental factors are exacerbated by demographic trends, creating a potentially explosive situation. The total population of Africa will grow from the current 1.2 billion to 2.5 billion by 2050 (UN, 2017). Niger, with the highest fertility rate in the world - 7.3 children per woman - will see its population multiply from 20 million to almost 70 million people in this timeframe (UN, 2017). By contrast, Germany and Italy will see their populations decline from 81 to 79

million and from 60 to 55 million people respectively over the same period (UN, 2107). Currently, the proportion of people living below the poverty line (\$3.10/day) is estimated at more than 80% in Niger and Burkina Faso, 77% in Mali, 64% in Chad and 60% in Nigeria (Gao, 2018). These countries are also the most dependent on agriculture in the world. Agriculture is in turn heavily dependent on climate conditions. If we consider that about 60% of the population along the Sahel area is employed by rain-fed agriculture, it is easy to understand the potential devastating effects of environmental changes on the region.

Climate change is affecting stability and security, too. There are plenty of analyses demonstrating the effect of climate change – namely the severe droughts and desertification that affected eastern Syria in 2008 – on the civil unrests that finally led to the war in Syria. This is not to say that climate change caused the Syrian war, but it appears to have been a contributing factor. The same dynamics apply to the Sahel: in some areas, migration-related population pressure can increase conflict over scarce resources. Equally, in contexts that are already experiencing conflict, climate change has the potential to act as a threat multiplier. This is why the Sahel is particularly vulnerable: displacement usually does not lead to conflict in the absence of other contributing factors, but many parts of the Sahel are already extremely fragile. The combination of poverty, dependence on agriculture, environmental degradation, and population growth are creating a vicious circle, which can be expected to translate into increasing forced migration into urban environment.

Urban places provide better opportunities for all the lacks in the rural areas especially from the two angles of adaptation and mitigation. The Nigerian experience is not different except that in the recent times, the form of such movements have been re ordered to change from the common rural urban to other forms significantly to be studied. Internal migration appears as a massive phenomenon, exceeding international migration as there are around the world 740 million internal migrant as compared to 214 million international migrants (UNDP, 2009). Further search into the literature did not give specific data on internal migration in Nigeria as there is a general lack of reliable and comparable data on internal migration which does not allow for useful analysis of its effects and consequences at an appreciable manner (Afolayan, 2009). Gazanfer (2015) investigated the determinants of internal migration and its effect in Turkey and concluded that the main cause of internal migration is the changes that occurred in rural areas, which provided opportunities for people to earn more and the few others to migrate having being empowered. United Nations (2004) reported that half of the global population lives in cities and estimated that this will rise to sixty percent by 2030. In Nigeria and other developing countries, population in cities is projected to increase from 1.9 billion in 2000 to 3.9

billion in 2030. This is principally due to migration from rural to urban areas which is consequent upon the dichotomous planning and development which many developing countries adopted especially after independence.

This subsequently results in the rural deprived and the urban endowed that translates into improved amenities and economic opportunities in the urban centres than the rural areas (Abdullahi *et al.*, 2009). Although, the essence of mobility to the survival of any nation is well documented (Filani, 2005), but the unpreparedness by prospective migrant recipients to adjust to consequent change in structure is the main source of burden, which readily manifest in distorted social equilibrium. The effects of disequilibrium are short-lived in some cases while in others are long lasting or permanent. Interestingly, this is true picture of what is happening in Nigeria at present. Nigeria is practicing a non-regulatory system which allows for uncontrolled internal migration as well as nationals migrating to other countries; people are left to decide on their own to emigrate to escape economic hardship. Hence, the decision to out-migrate to urban centers is not usually agonizing as a result of the perceived advantages of so doing. Perhaps, this very easy mental process, more than unavailability of infrastructures, explains mass movement of migration from one place to another place perceived to be better.

Many migrate in risky and unsafe travelling conditions and, on arrival they discovered that, often can they obtain only low-skill, low-paying jobs and realized that the perceived infrastructures in so called better places in Nigeria are mere camouflages, hardly able to improve human conditions governing entry, work and residence, skills required, cultural issues, as well as their rights and obligations in destination countries or states as the case may be. It is important to study the process, activities and importance of internal migration in Nigeria so as to suggest a policy framework that will create an even development strategy to stem the tides of problems resulting from uncontrolled internal migration and to benefit from the process especially the contribution to socio economic development.

The southwest Nigeria

The south western part of Nigeria comprises of Lagos, Ogun, Oyo, Osun, Ondo and Ekiti states [see figure 2]. The region experiences two climates which are the sub-equatorial climate with high rainfall (1000 – 1500mm) for 5-7 months with an average temperature of 27°C and the tropical continental

climate with low rainfall (500 – 1000mm) which give rise to savanna type of vegetation. South Western Nigeria with a land mass of 76,852 square kilometres and population of 25.2 million today owns and/or control 60% of the nation's industrial capacity, 44% of banking assets, 67% of insurance assets and is house to the nation's three deep sea ports of Apapa, Tin Can Island and Roro; the busiest international airport of Ikeja, three thermal stations of Egbin, Papalanto and Omotosho.

Methodology

Random sampling technique was used in selecting two urban and two rural Local Government Areas (LGAs) in each state in southwest Nigeria (Table 2); where questionnaire was administered and focus group discussions took place. The randomly selected urban Local Government Areas in Ekiti State Were Ado-Ekiti and Ido-Osi; that of Ogun State were Abeokuta North and Ijebu-Ode, while Atiba and Oyo West were selected in Oyo State. For the rural LGAs, EfonAlaye and Irepodun/ Ifelodun were selected in Ekiti State, Yewa and Ijebu-North in Ogun State, and Afijio and Iseyin in Oyo State. Urban and rural localities in the selected LGAs were identified with the aid of National Population Commission. A total of 2,050 migrants were identified, while 1, 025 (50.0%) were sampled. Data were analysed using descriptive statistics such as frequencies, tables, bar charts, percentages and graphs.

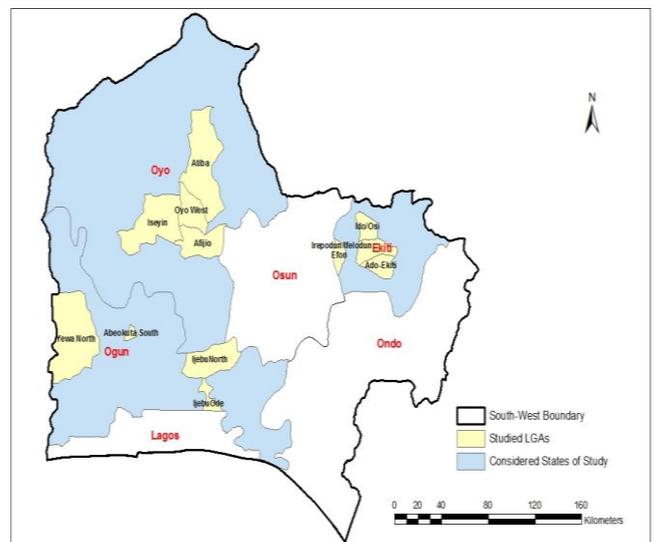


Figure 3: South-west Nigeria

Source: Diva GIS and Authors Modification (2016)

Table 1: Local government areas, sampling frame and size

State	Urban	No. of Migrant	No. Selected	Rural	No. of Migrant	No. Selected
Ekiti	1. Ado Ekiti	237	119	1. Efon Alaye	132	66
	2. Ido-Osi	226	113	2. Irepodun/ Ifelodun	101	51
Ogun	1. Abeokuta North	245	123	1. Yewa	102	51
	2. Ijebu-Ode	208	104	2. Ijebu-North	126	63
Oyo	1. Atiba	231	116	1. Afijio	119	60
	2. Oyo west	198	99	2. Iseyin	125	63
Total		1345	673		705	352

Source: Authors Fieldwork, 2016

II. Results And Discussions

Socio-economic Dynamics of Internal Migrants

The study found that, in line with existing literature (reference), male sex 650 (63.4%) involve in internal migration than their female 375 (36.6%) counterparts. However, this study captured a remarkably increase in the number and proportion of female sex involving in movement from one settlement to another within Nigeria for a period that is more than six months (reference). This is obvious as more women engaged in both formal and informal pay employment in rural, sub-urban and urban settlements across the country. Another change worthy of notice in this study is the involvement of unmarried females in rural-urban migration, while married women involved more in urban-rural migration in south-west Nigeria. The involvement of unmarried females in rural-urban migration is a departure from traditional sedentary lifestyles of female folks. Similarly, the age group involved mostly in internal migration in south-west Nigeria captured in this study was 30-39 years [701 (68.45%)]. This corroborated earlier studies that opined that able bodies were involved in internal movement. This study also observed that socio-economic factors (education, skill, income, age, employment, marital status, gender) played significant roles in rural-urban migration, while urban-rural migration in Nigeria is not dependent on socio-economic variables, as both the educated and uneducated, the skilled and unskilled, married and unmarried, male and female migrate.

The study revealed that movement from rural to urban settlements in south-western Nigeria better the lots of migrants in terms of educational attainment, employment status, and income and also improves their contributions to home towns. The year of initial migration (1956) also revealed that migrants have been involving in movement before industrial revolution and oil boom in Nigeria, this is against some studies that opined that industrialization and oil boom were responsible for rural-urban migration in Nigeria. As presented in Figure 3, southwest is the major destination regions in Nigeria. Majority (73.9%) of the respondents indicated that they moved to the region owing to favorable climatic conditions and employment opportunities.

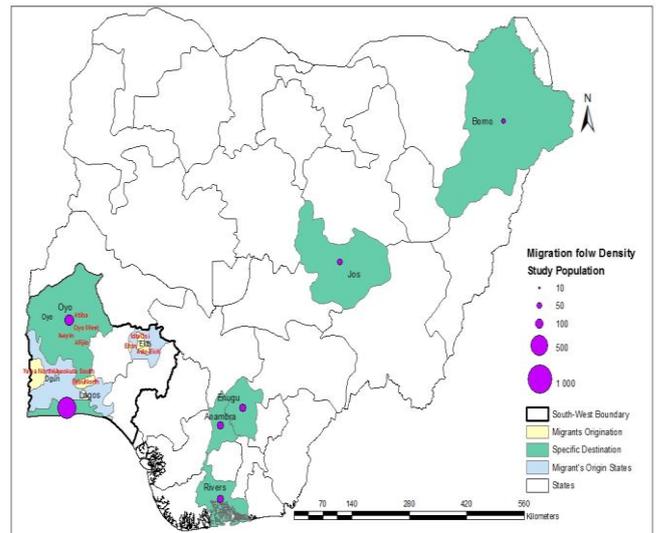


Figure 4: Dynamics of Internal Migration

Source: Authors Field Work 2016

Traveling as well as migration cut across various ages and sex, in terms of gender distribution, Education presented only 2 males and 1 female migrant which is the lowest causes of internal migration observed in the study areas. Moreover, 30.5% male and 20.6% female responded to Economic Reasons as means of causing their internal migration. This has been identified as the most common causes of internal migration between the gender groups as against education. The statement of Mr Ade from Ogun state in Abeokuta South LGA during the FGD corroborate this assertion that “many of us have to leave our place of origin to another better place to work and get money to take care of our relatives and family, if we don’t go outside our place to another area we may not be able to cope with life and may not have better opportunity”.

Domestic Conflicts in males 7.9% relatively higher than the female counterpart 3.8% has caused internal migration to be more common among men than women as the study revealed despite the fact that female are expected to be more prone to kinds of domestic conflicts. The quest for social infrastructures by the masses has necessitated migrants to relocate from one area to another which has always been the main reason contributing to rural urban migration that is why many rural and less developed communities are shrinking in population size when majority

abandoned their origin to the better location with ample facilities they tend to desire. Mr Godwin from Ido-Osi in Ekiti State during the FGD

“confirmed that truly, we have to look for an area with more facilities to make our live enjoyable and not to suffer for ever, look at most of our native lands, we have nothing in those places, no light, no roads, no hospitals even medicine stores we don't have, you can see life is more difficult in that situation that is part of the purpose of moving and relocating to a better place”.

Marriage over time was one of the factors responsible for internal migration, due to the interrelationship that exists between and within group as a result of sociocultural inter-relationship that exists in the Nigerian culture and tradition. Marriage as a tradition has unite 2 or more people together within and between spaces over time, thus it has accounted for 0.8% among males and 1.2% among females, meaning that internal migration is not peculiar to the female gender, but also affects the male gender as well. Skill acquisition was found to be high and common among the male 14.1% than the female, and it is quite understandable that males are more in search of new skills. Change in weather resulting in loss of farmland and crops is one of the reasons adduced to movement where 18.90% of the people moved because of that reason.

The study revealed that movement from rural to urban settlements in south-western Nigeria better the lots of migrants in terms of educational attainment, employment status, and income and also improves their contributions to home towns. The year of initial migration (1956) also revealed that migrants have been involving in movement before industrial revolution and oil boom in Nigeria, this is against some studies that opined that industrialization and oil boom were responsible for rural-urban migration in Nigeria. A number of reasons were attributed to rural-urban migration; the prominent among them was economic. This finding is similar to previous studies conducted by (references). It showed that rural people abandoned their homes mostly for economic reasons. Other push factors in order of significance owed to lack of opportunity to acquire skills in the rural areas, poor social infrastructure, rife domestic conflict and low opportunity for educational advancement. Most of the respondents were also recipient of primary school education. This is in line with the studies of

(reference) that reported that rural-urban migrants were uneducated, unskilled, and economically deprived.

Conversely, movement from urban to rural communities showed that migrants surveyed have improved educationally and ready to improve the educational aspirations of the residents of their home towns. This is deduced from the fact that majority of the returnee were part of one social group or the other. The social groups have assisted them to pull resources together to be able to provide infrastructural facilities such as hospitals, roads, schools, and financial assistance to the needy among others in their respective origin. The contributions of urban-rural migrants have reported by (references). On returning homes, migrants have been able to acquire property at origin.

Pull and push factors of internal migration

Reasons for travel compared to the age of respondents at the point of return to origin shows that only 0.1% of respondents from age group 20-29, 30-39 and 60 and above migrate due to change in climatic condition, while respondents within the age group 30-39 engaged on internal migration due to Economic reasons probably for business, trades, marketing or due to shortfall of economic condition in his/her current location. Highest migrant with domestic conflicts were found within the same age group 30-39 with 6.60%, while 9% of the same age group above have been found to migrate based on infrastructural facilities that is lacking in its location and or that have attracted the migrant in the city centre. Marriage with 0.9% within the age group 20-29 migrates due to getting married, the age group really confirms the age at which marriage is usually observed and conducted. Skill acquisitions at 16.40% were active among age group 30-39 across the study areas. Hence it could be seen that 30-39 age group was found to be the most active age at which different causes of migration occurred, other age group that also responds to various form of causes of migration are not underestimated rather were considered to play a contributive role in the event that brings about migration across different age group in the South-West geopolitical zone. From the (Internal Migration Survey 2010), it could be deduced that most internal migrants are between ages 20 and 34 and these age range constituted over 46 per cent of internal migrants in Nigeria.

Table 2: Reasons for Initial Travel and Age of Respondents

Reasons for Travel	Age of Respondents (Years)							Total
		< 20	20-29	30-39	40-49	50-59	60 &>	
Climate change	Freq.	0	1	1	0	0	1	3
	%	0.00%	0.10%	0.10%	0.00%	0.00%	0.10%	0.30%
Economic reasons	Freq.	20	36	370	71	18	9	524
	%	2.00%	3.50%	36.10%	6.90%	1.80%	0.90%	51.10%
Domestic conflicts	Freq.	0	2	68	39	6	5	120
	%	0.00%	0.20%	6.60%	3.80%	0.60%	0.50%	11.70%
Social Infrastructure	Freq.	0	16	92	45	18	1	172
	%	0.00%	1.60%	9.00%	4.40%	1.80%	0.10%	16.80%
Marriage	Freq.	0	9	2	1	0	0	12
	%	0.00%	0.90%	0.20%	0.10%	0.00%	0.00%	1.20%
Skill Acquisitions	Freq.	0	14	168	12	0	0	194
	%	0.00%	1.40%	16.40%	1.20%	0.00%	0.00%	18.90%
Total	Freq.	20	78	701	168	42	16	1025
	%	2.00%	7.60%	68.40%	16.40%	4.10%	1.60%	100.00%

Source: Authors Fieldwork, 2015

Traveling as well as migration cut across various ages and sex, in terms of gender distribution, Education presented only 2 males and 1 female migrant which is the lowest causes of internal migration observed in the study areas. Moreover, 30.5% male and 20.6% female responded to Economic Reasons as means of causing their internal migration. This has been identified as the most common causes of internal migration between the gender groups as against education. The statement of Mr Ade from Ogun state in Abeokuta South LGA during the FGD corroborate this assertion that

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Table 3: Reasons for Initial Travel by Sex of Respondents

Reasons for Initial Travel		Sex of Respondents		Total
		Male	Female	
Education	Freq.	2	1	3
	%	0.2%	0.1%	0.3%
Economic reasons	Freq.	313	211	524
	%	30.5%	20.6%	51.1%
Domestic conflicts	Freq.	81	39	120
	%	7.9%	3.8%	11.7%
Social infrastructure	Freq.	97	75	172
	%	9.5%	7.3%	16.8%
Marriage	Freq.	8	12	12
	%	0.8%	1.2%	1.2%
Skill acquisitions	Freq.	137	49	194
	%	14.1%	4.8%	18.9%
Total	Freq.	638	387	1025
	%	62.2%	37.8%	100.0%

Source: Authors Fieldwork, 2015

Dynamics of rural-urban and urban-rural Migration in South-West Nigeria

The study revealed, that migrants from rural areas move to urban centres in both the north and eastern parts of the countries across Nigeria unhindered, as movements were recorded for Onitsha, Port Harcourt, Enugu, Jos, and Maiduguri (Figure 4). Expectedly, out of all the states in south-west Nigeria, Lagos attracts more migrants than others, this has been the case since the issue of internal migration becomes significant in Nigeria. A number of reasons were attributed to rural-urban migration; the prominent among them was economic. This finding is similar to previous studies conducted by (Ajaero & Onokala, 2013; Opafunsho, 2013). It showed that rural people abandoned their homes mostly for economic reasons. Other push factors in order of significance owed to lack of opportunity to acquire skills in the rural areas, poor social infrastructure, rife domestic conflict and low opportunity for educational advancement. Most of the respondents were also recipient of primary school education. This is in line with the studies of (Olatubosun, 1975) that reported that rural-urban migrants were uneducated, unskilled, and economically deprived.

Conversely, movement from urban to rural communities showed that migrants surveyed have improved educationally and ready to improve the educational aspirations of the residents of their home towns. This is deduced from the fact that majority of the returnee were part of one social group or the other. The social groups have assisted them to pull resources together to be able to provide infrastructural facilities such as hospitals, roads, schools, and financial assistance to the needy among others in their respective origin. The contributions of urban-rural migrants have reported by (references). On returning homes, migrants have been able to acquire property at origin.

Urban-urban and rural-rural migration were also recorded in this study. Prior to returning to origin,

migrants have also migrated to secondary destinations. These were recorded for Maiduguri – Lagos, Onitsha-Port Harcourt, Port Harcourt-Jos, Enugu-Lagos, and Lagos-Kano. For returning back to place of origin. Conflicts, retirement, loss of livelihoods, poor environment, chieftaincy, title, trading and family landed property have been observed as the major determining factor responsible for destination-origin movement in south-west Nigeria.

In the foregoing, it is safe to add that the Democratic experience in Nigeria from 1999 till date has opened up a new but important nature of migration. Chief of this is the ability of the returnee to mobilize the people for vigorous participation in politics, an agenda that further reinforces the position of Mcool (2003). The returnee finances, organizes and provides framework for agitation in the inclusion for democratic development. Captains of industry especially banking and oil industries have emerged at one time or the other as Governors of states, members of Federal houses (Legislature) and Chairman of Local Governments and Councillors. The opportunities provided by this interaction opens up another stream of migration which encourages young natives born outside of the communities to trace their steps back and claim rights to contest thereby reaffirming the consequence of return migration. This new regime of migration provides two opportunities for both the origin and destination.

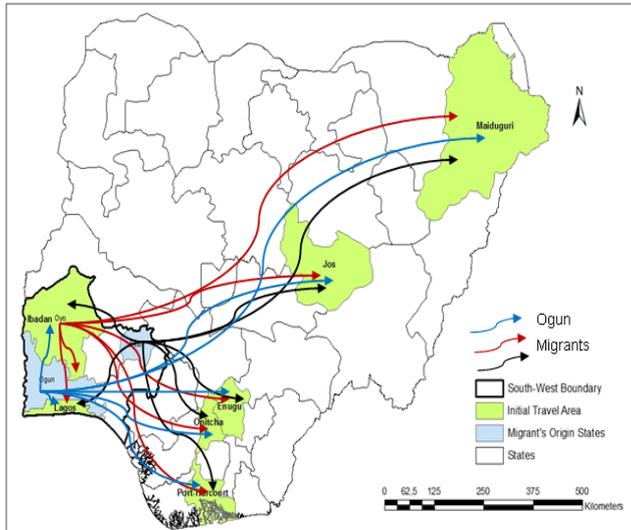


Figure 5: Pattern of Migration within the South-West
Source: Authors Field Work 2016

Firstly, it has contributed to self-help development of infrastructures in a way of cajoling the electorate by aspirants. It is common place to find that future contestants begin to attend community rural meetings, providing infrastructures such as bore holes, repair of damaged roads, construction of drainages, payment of stipends to the aged and establishment of cottage industries to employ youth that would support the ambition in the later time. In effect, the potential migrants at home stay back and coordinate affairs with the expectation of better position in the cabinet of the contestant. Those that have left to improve their educational qualifications begin to look back as a result of such promises and hope. This, in the long run repopulate the rural area, increases the propensity to stay back and improve infrastructural facilities.

During this period, (1999 till date), the communication accessibility has improved tremendously making it possible for people to manage and supervise businesses owned in the urban area while at the village or rural source. Through the DSTV, GOTV, Startimes and other digital television systems, the rural people have been connected to the activities of the urban places by way of information technology wherein migration can only take place after success must have been achieved by the rural inhabitant. That is the incidence of migration could be a result of determination based on the capability to survive without winding up on relatives and friends.

The nexus of climate change and population dynamics

The study revealed that the southwestern part of Nigeria was the migrant destinations in Nigeria (Fig.4). It showed that majority of migrants moved in the direction of cities in southwest Nigeria. This increased the population in this part of the country and led to the growth of cities. Population growth is one of the factors, along with changes in production and

consumption patterns, which has driven the growth of greenhouse gases in the atmosphere. The Intergovernmental Panel on Climate Change's Fourth Assessment Report states that "gross domestic product per capita and population growth were the main drivers of the increase in global emissions during the last three decades of the 20th century. However, simplistic assessments of population size and growth cannot provide the full picture in determining how population dynamics relate to the growth of greenhouse gases. It is important to note that climate change has largely been driven by production and consumption patterns of affluent, industrialized countries. Regions with large populations and current high rates of population growth have, in general, low per capita greenhouse gas emissions (Figure 5), so ongoing population growth in those regions contributes relatively little to the growth of greenhouse gas emissions. However, as development proceeds in these regions, per capita energy use will increase. This underlines the importance of swift action for the development and transfer of clean energy technologies so that developing countries can avoid the polluting development pathways that gave rise to the current climate crisis.

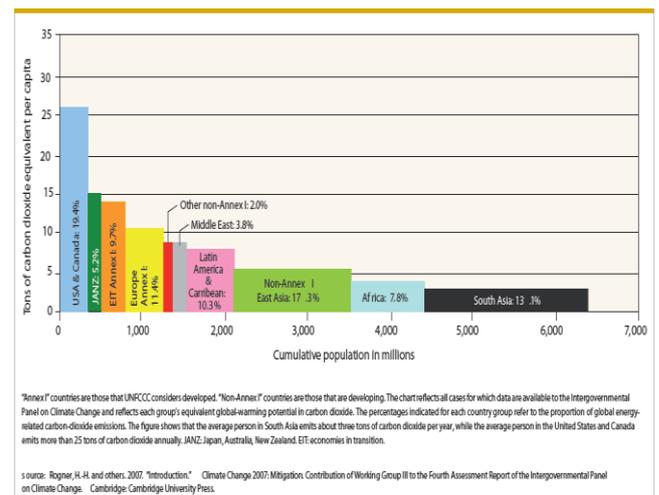


Fig. 6: Per Capita Greenhouse Gas Emissions and Cumulative Population of Regions

Source: State of World Population 2009, UNFPA

In observing the energy use differences between industrialized and developing countries, it becomes clear that where people live and how they live is critical in understanding their access to and use of energy and other resources that contribute to greenhouse gas emissions. For example, urbanization is a trend that is associated with climate change, with cities contributing up to 80% of greenhouse emissions worldwide. In countries that are rapidly urbanizing, the growth of urban populations could accompany shifts in the labor force toward greater industrial activity, leading to increased greenhouse gas emissions. The shifts in occupational and income trends that accompany urbanization, rather than the process of urbanization itself, are largely responsible for the accompanying growth in greenhouse gas emissions.

At the same time, the compactness of cities can be beneficial for mitigation efforts, as higher density can reduce per capita energy use, create economies of scale, contribute to more efficient distribution and use of natural resources, foster more effective access to services, and minimize pressure on surrounding land and ecosystems. Proper and sustainable urban planning that includes attention to land use, form, size and density can serve as an important tool for mitigating greenhouse gas emissions.

III. Conclusion

Migration in South Western Nigeria as studied here provides a basic categorization of the sequence, extent and benefits of migration as it affects the spatial development of the region. Quite often, migration studies establish the economic reasons for the incidence of the development without necessarily establishing that other factors are becoming more prominent especially as applicable in places of the world. This research has established that although economic reason as both push and pull have contributed to the incidence of migration, the case of South West has been so different in terms of its effect and application. Search for educational qualification, marital status and marriage, political opportunities and the issue of ownership of land and other properties have created an inertia in the incidence of migration. Established family in any area hardly migrate but could encourage the second order migrant to move by supporting or financing such journey and survival in the new area.

Migrant returnees are the political leaders or at other instances, the preferred candidates for both local chieftdom, kingdom and political offices. Migrants are resources at source and destinations. Resources such as economic in the area of the provision of alternatives to income earning and opening of ideas to earn more by the locals. The study concludes this section by emphasizing that an experience outside of the place of birth or native contributes to the skill of an individual. In the alternative, a constant visit by the non-migrants to the next urban places to enjoy urban activities and services have been helpful to the migrants who are on temporary visits. This gave them the opportunities to compare notes and establish a new lease of life. Migration has impacted on the composition and size of family as returned migrants have interacted with options available on family planning thereby impacting on the general population situation of the South Western Nigeria.

The rural places incidentally produce more people who end up in the urban cities. This research has been able to confirm that the effects of more political units creating avenues for the establishment of basic education has stemmed the tides of rural-urban migration. In essence, it could be concluded that migration has brought a new regime of reasoning to spatial development by recognizing the establishment of educational institution on a development project that brings in both the population and the economy

into the rural areas. This genuinely reduces the migration trend and volume. The impact of democratization of the country and the leadership position enjoyed by the migrants have encouraged many of them to either stay back at their places or encouraged others in the diaspora to return home for better opportunities. In most places where this research focused, hotels are built by migrants thereby creating opportunity for jobs and encouraging tourism. Migration is simply a resource that should be properly managed for its sustainability.

IV. Policy Recommendation

Internal migration is difficult to measure, identify and control. The benefits of international migration, its dimension and spread is much easier to identify than internal migration. However, it contributes largely to the spatial development of places in the world of which the South West is not an exception. On the basis of its developmental benefits, it is recommended that the issue of the ownership of land, identity, access to political offices, tax regime, infrastructural provisions especially road and health care system be vigorously addressed to tap their benefits.

As a matter of urgency, the government should relax the procedure for acquiring landed properties to enable interested people to own land and manage it. A form of control on the use of such land be specifically spelt out. Rural land for agriculture and cottage industry, land for grazing separated from land for agriculture. Intensive animal husbandry as against free range rearing of animal be pursued. The rural place be given tax freedom on producers of agricultural items while those in the cottage industry be highly taxed. Massive rural development strategy and the location of higher institutions in the rural places be encouraged. Political office holders who are not from the rural areas should not be allowed access to constituency allowance. The rural administration that is local government areas be empowered to carry out its responsibility.

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