

AFRICAN DEVELOPMENT CHARTER SERIES

In strengthening collaborative research, The African Research Council on Sustainable Development adopts a flexible approach to improve technical skills of researchers by allowing for regional determination of research priorities. This strengthens closer ties among researchers, government institutions and other agencies who work within the purview of reviewing development policies and challenges in order to advance alternative strategies for sustainability.

Most issues presented here were first discussed at International Policy Research Summits and Conferences. The African Development Charter Series (ACDS) is not just a research document, but a strategic and well coordinated policy framework, featuring broad-based and integrated strategies towards transforming the social and economic landscape of developing economies of the World and Africa in particular. It does not claim to capture the complexity of development issues in Africa but provides useful insights and new directions based on the expertise of respective authors that shed light on the challenges within, newly emerging development concepts, and opportunities that arise for sustainability.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Infrastructure, Economic Development and Poverty Reduction in Africa

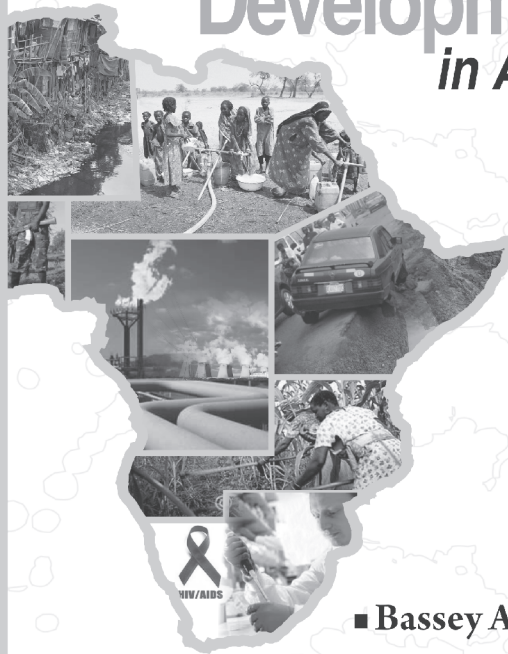
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AFRICAN DEVELOPMENT CHARTER SERIES

Rethinking **Sustainable Development** *in Africa*



■ Bassey Anam

RETHINKING SUSTAINABLE DEVELOPMENT IN AFRICA



Bassey Anam

AFRICAN DEVELOPMENT CHARTER SERIES 2

INFRASTRUCTURE, ECONOMIC DEVELOPMENT AND POVERTY REDUCTION IN AFRICA

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Dedication

Dedicated to the International Institute for Policy Review & Development Strategies for providing a platform and supporting Institutional and Collaborative Research on Sustainable Development.

Acknowledgement

Conferees and contributors are greatly acknowledge for supporting the agenda towards achieving sustainable development in developing economies of the world, especially in Africa.

Comments

Issue 1

The Bright light of development is beaming into the African Economy 8

Renny Etta

Editor, MOFINews, Ministry of Finance Cross River State

Issue 2

Infrastructure for sustainable national development 9

Mrs. Cecilia Udoesien

Head of Civil Service, Akwa Ibom State

Issue 3

Economic Infrastructure and Sustainable National development 11

Dr. E.I. Ejere

*Head, Department of Political Science and Public Administration
University of Uyo*

Issue 4

Infrastructure and Sustainable Development for the women 13

Dr. (Mrs.) Glory Emmanuel Edet

Commissioner for Women Affairs and Social Welfare, Akwa Ibom State

Issue 5

Redirecting Aid for Improved Infrastructure and Health Care
Delivery System in Africa 15

Iniobong Bassey Anam

Ebonyi State University

Issue 6

Partnering for development in Africa 19

Dr. Okpo Ojah

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Comments

Issue 7	
The Strategic Role of the Civil Service in The Sustainability Of The African Economy	25
Edward Pius Ombe	
<i>Deputy Provost-Academics, Federal Training Centre, Calabar</i>	
<hr/>	
Issue 8	
Why Infrastructure Development In Africa Matters	28
Dr. Ibrahim Mayaki	
<i>Chief Executive Officer , New Partnership for Africa's Development</i>	
<hr/>	
Issue 9	
The Importance of Infrastructure to Our Economic And Social Development	31
Tully Cornick	
<i>Head of Corporate Finance, KPMG in the Caymans Islands</i>	
<hr/>	
Issue 10	
Better Infrastructure Brings Economic Growth	34
Katherine Lewis	
<i>Special Correspondent, Illinios, US Embassy</i>	
<hr/>	
Issue 11	
Infrastructure and Economic Development: East Africa	36
Klaus Findt	
<i>Chief Operating Officer of GIPG Africa</i>	
<hr/>	
Issue 12	
Developing African Infrastructure for the Continent's Structural Transformation	38
Chiponda Chimbelu	
<i>Greg Wiser</i>	

Contents

Dedication	iii
Acknowledgement	iv
Introduction	1
Comments	8
Chapter 1	
Infrastructure, Economic Growth and Poverty Reduction in Africa	43
<i>Afeikhena Jerome</i>	
Chapter 2	
Economics of Infrastructure on Sustainable National Development	104
In Developing Countries	
<i>Jonathan E. Oghenekohwo, PhD & Irene U. Berezi, PhD</i>	
Chapter 3	
The Estimation of the Impact of Rural Road Investments on	117
Socio-economic Development	
<i>P Lombard and L Coetzer</i>	
Chapter 4	
Towards Sustainable Poverty Alleviation in Nigeria	131
<i>Ogunleye, Olusesan Sola</i>	
Chapter 5	
Poverty, Unemployment and Growth in Nigeria	139
<i>Abiodun Edward Adelegan</i>	
Chapter 6	
An Empirical Analysis of the Impact of Foreign Exchange Management	151
and External Reserve on the Nigerian Economy	
<i>Roseline Oluitan PhD and Bada Olanrewaju</i>	
Chapter 7	
Re-engineering The Agricultural Sector: A Panacea for Economic Growth	161
and Industrial Development in North-eastern Nigeria	
<i>Adamu Saidu</i>	

Contents

Chapter 8	
The Agricultural Sector and Labour Output in the Niger Delta	179
<i>Dr. Love O. Arugu</i>	
Chapter 9	
Tourism Infrastructure and Support Services: Issues and Challenges for the African Economy	189
<i>Bassey Anam</i>	
Chapter 10	
Creating a Sense of Place using the Concept of Critical Regionalism For a Sustainable Recreational and Amusement Park Design in Nigeria	200
<i>Etudaiye, Engworo Abdulwahab</i>	
Chapter 11	
Managing Corporate Transformation of the Commercial Banking Sector in the Fast Growing Nigerian Economy: Challenges and Strategies	218
<i>D. G. E. Mbaegbu PhD</i>	
Chapter 12	
Understanding Entrepreneurship and Business Plan	230
<i>John Nma Aliu</i>	
Chapter 13	
An Investigation into the Availability and Utilization of Resources ion Teaching Physics at the Secondary School Level	247
<i>Babajide, Veronica Folasade Titilayo, PhD & Olanrewaju Bukola Oluwatobi</i>	
Chapter 14	
Rural Empowerment and Microfinance as a Strategic Tool for Sustainable Development: (Case of Ezinihitte Local Government Area Imo State)	265
<i>Dr. Kabuoh, Margret Nma, Ogbuanu, Basil K, Chiezie, Anthony I.</i>	
Chapter 15	
Constituency Projects in Nigeria: Lessons and Implications for Sustainable Community Development	281
<i>Diji, C. J.</i>	

INTRODUCTION

AFRICAN ECONOMY: POVERTY CHALLENGES, DIRGE OF INFRASTRUCTURE AND FRAMEWORK FOR POLICY ACTIONS

Bassey Anam & Antai, A. S.

Research Coordinators

Over the last 30 years, worldwide absolute poverty has fallen sharply (from about 40% to under 20%). But in African countries the percentage has barely fallen. Still today, over 40% of people living in sub-Saharan Africa live in absolute poverty. Poverty is sometimes more about how society shares money out than how much money there is overall. Some African countries are very poor, but others are wealthier (often from oil) with extreme inequalities between their citizens.

Some people take an unsympathetic view of poverty and starvation in Africa. Others suggest that more political initiative is needed. In fact, the situation is very complicated. Each African country has a unique history, and today faces unique challenges. Development efforts require many different parts of society working together towards the same goals. In reality, this is hard to achieve.

¹Despite its natural resources, Africa is the world's poorest continent, and every third African does not have enough food. Many African countries are affected by a precipitation change with alternating floods and recurring draughts; especially in northern and southern Africa the rain does not fall in the way it used to, and the crops do not grow the way they used to. Climate changes continually make it more and more difficult to feed the continent's 900 million inhabitants.

Throughout the 1990s AIDS became Africa's most severe hindrance to development. In some countries, nearly half of the citizens of working age were infected, and it threatened all positive social development. After a 30 year long fight against the disease, in many countries the number of people who become infected is now dropping; nevertheless, information about modes of transmission and protection is still needed. Women still do not have authority over their own lives and millions of people who live with HIV in their bodies do not have access to the life-sustaining ARV medication.

¹Figures and comments are abstracted with permission from "Our Africa."
<http://www.our-africa.org/Africa>

These years, several African governments are making it gradually more difficult for the NGOs to do their job by introducing new laws that forbid NGOs to inform people about their rights. On the entire continent, corruption is a significant problem, the system of justice is not impartial, and oppression and assaults on women are widespread. The majority of the world's civil wars take place on the African continent. But when the wars are over, landmines and unexploded ammunition are left behind and make it extremely dangerous to move about, and the consequent fear of cultivating the land prevents tens of thousands from taking the first steps to creating a sustainable future for themselves and their children.

²Poverty in Africa Facts

How bad is poverty in Africa? The situation is improving, but Africa remains the poorest continent on Earth. But what many people may not know are the effects of poverty in Africa—including hunger, disease and a lack of basic necessities. Packtor (2014) highlighted the following facts,

1. Seventy-five percent of the world's poorest countries are located in Africa, including Zimbabwe, Liberia and Ethiopia. For the past two years, the Democratic Republic of Congo, Africa's second largest country, has also been ranked the poorest in the world with a Gross Domestic Product (based on purchasing-power-parity) of \$394.25 in 2013.
2. According to Gallup World, in 2013, the 10 countries with the highest proportion of residents living in extreme poverty were all in sub-Saharan Africa. Extreme poverty is defined as living on \$1.25 or less a day. In 2010, 414 million people were living in extreme poverty across sub-Saharan Africa. According to the World Bank, those living on \$1.25-a-day accounted for 48.5 percent of the population in that region in 2010.
3. Approximately one in three people living in sub-Saharan Africa are undernourished. The Food and Agriculture Organization (FAO) of the United Nations estimated that 239 million people (around 30 percent of the population) in sub-Saharan Africa were hungry in 2010. This is the highest percentage of any region in the world. In addition, the U.N. Millennium Project reported that over 40 percent of all Africans are unable to regularly obtain sufficient food.

²Poverty in Africa Facts adapted from THE BORGAN PROJECT. The Borgen Project is an incredible non profit organisation that is addressing poverty and hunger and working towards ending them in Africa.

AFRICAN DEVELOPMENT CHARTER SERIES 2

4. In sub-Saharan Africa, 589 million people live without electricity. As a result, a staggering 80 percent of the population relies on biomass products such as wood, charcoal and dung in order to cook.
5. Of the 738 million people globally who lack access to clean water, 37 percent are living in sub-Saharan Africa. Poverty in Africa results in over 500 million people suffering from waterborne diseases. According to the U.N. Millennium Project, more than 50 percent of Africans have a water-related illness like cholera.
6. Every year, sub-Saharan Africa loses \$28.4 billion to water and sanitation problems. This amount accounts for approximately five percent of the region's gross domestic product (GDP)—exceeding the total amount of foreign aid sent to sub-Saharan Africa in 2003.
7. Thirty-eight percent of the world's refugees are located in Africa. Due to continuing violence, conflict and widespread human rights abuses, the United Nations High Commissioner for Refugees (UNHCR) reports that 11 million people, including stateless people and returnees, exist in Africa.
8. Fewer than 20 percent of African women have access to education. Uneducated African women are twice as likely to contract AIDS and 50 percent less likely to immunize their children. Meanwhile, the children of African women with at least five years of schooling have a 40 percent higher chance of survival.
9. Women in sub-Saharan Africa are over 230 times more likely to die during childbirth or pregnancy than women in North America. Approximately one in 16 women living in sub-Saharan Africa will die during childbirth or pregnancy. Only one in 4,000 women in North America will.
10. More than one million people, mostly children under the age of five, die every year from malaria. Malarial deaths in Africa alone account for 90 percent of all malaria deaths worldwide. Eighty percent of these victims are African children. The U.N. Millennium Project has calculated that a child in Africa dies from malaria every 30 seconds, or about 3,000 each day.

However, recent studies show that there is growth and development progress however slow. Stable government and democracy, which are generally critical to eliminating poverty, are slowly developing across much of the continent. Many countries have seen gains in health, education and living standards as their economies grow. But at the same time many of the countries have been struggling with the legacy of colonial rule, and war has been common as systems of government have developed.

³Experience and lessons from the China economy reveals that both rural and urban infrastructure is key elements in developing growth paths that pull poor women and men out of poverty by increasing their productivity and generating positive rural-urban economic interaction and migration. Massive poverty reduction happens this way and requires a huge increase in infrastructure provision within a 2 to 3 decade time frame. Other keys lessons are as follows,

1. Basic rural infrastructure can be generated by community efforts using local labour at low cost, which is an important form of capital investment. But larger on-going efforts require on-going planning and funding processes that provide national impetus and incentives for local authorities to build implementation capacities and to perform.
2. Growth drives infrastructure demand and generates public revenues that can finance public investment in infrastructure – moving to this virtuous circle is key. Growth-driven infrastructure demand also creates the environment for cost-recovery systems that provide the basis for a high degree of self financing.
3. Export-led growth requires high-performance infrastructure services on timelines linked to strategic planning of export activities and adapted to the needs and rhythms of a diversifying range of exports. Management and maintenance systems that can assure such high performance are thus essential.
4. Infrastructure development in China has also enabled the integration of the Chinese economy across a wide span of industries and locations, itself a major vector of economic growth.
5. The infrastructure planning, construction and management processes require a high degree of professional policy analysis combined with effective

³ Experience and lessons from the China economy adapted with permission from:
<http://www.oecd.org/china/50011051>

political processes for decision making and implementation – decision-making and implementation have required extensive deliberative and co-ordination processes in China, there has been no short cut.

6. Thus building the professions, institutions, processes and analytical and management tools for infrastructure development has been a complex process. China's achievement on these fronts embodies much learning from the participation of OECD countries and multilateral institutions in China's infrastructure development.
7. China still faces major challenges in the financing and management of infrastructure, ensuring their integrity, correcting inequities and disparities such as land rights and transfers, which have been a major source of financing for urban infrastructure, and investing in infrastructure that will help eliminate areas of persisting poverty. Infrastructure for a green economy with an increasing urban population in large cities is a further challenge of relevance to Africa.

Key Directions for Africa and its Development Partners

The following are the key directions for African government and her development partners,

1. Africa has a major deficit in infrastructure provision which must be overcome as an essential part of the process of generating growth that creates jobs and pulls the masses of poor women and men out of poverty.
2. The acceleration of growth in Africa since the mid-1990s is providing a basis for demand-led infrastructure development. A “big push” on African infrastructure would signal that Africa has now become a growth-oriented continent with a domestic market that is growing fast and with new production potential.
3. There is a new architecture for a systematic approach to infrastructure development in Africa, the Partnership for Infrastructure Development in Africa (PIDA), which will draw on the ICA (Infrastructure Consortium for Africa) and the detailed country-based picture of unmet demands prepared by the African Infrastructure Country Diagnostic (AICD).
4. Given the key importance of regional integration to African growth processes, both in terms of export development and diversification and in terms of “joining up” Africa, cross-border infrastructure is a critical frontier for Africa.

Transport corridors, regional power pools and broadband communications are showing the way – complex issues of financing, organisation and management are involved and behind that are the more basic challenges of political co-operation and peace and stability in the short and long terms. Regional infrastructure schemes could be an integral part of the solutions to remaining areas of civil conflict in Africa.

5. Africa's development partners can play key roles here, crowding in private sector investors too. With its large surplus of investible funds and a target for converting a share of these funds into real assets, China could play a leading role in generating more holistic approaches to infrastructure and manufacturing development across a wider range of countries, using its experimental techniques to test out such holistic approaches in a selection of country contexts. Several bilateral and multilateral donors are also usefully now leveraging up their infrastructure support.
6. Local rural infrastructure remains a key development vector in Africa, particularly roads that allow subsistence farmers to participate in markets and join in dynamic processes of increasing productivity, economic modernisation and urbanisation.
7. As in China, the infrastructure development process will both require and help to generate a new level of expertise and policy analysis, and growth in the relevant professions, along with sub-national, national and regional political and institutional processes for financing, decision making, management and maintenance. Developing these capacities will be a major contribution to Africa's emergence as a pro-active participant in the global economy.

This outlook leaves much to be desired. Infrastructure plays a key role in promoting growth, development and reducing poverty. Against this background, this volume provides three essential generic issues in framing and assessing policies and performance; ensuring sustainability – including financing, maintenance and environmental impact, achieving efficiency – including planning, resource allocation and public-private partnerships and increasing impact – on growth and poverty reduction, including procurement approaches, local economy linkages and participatory decision-making processes for involving poor people.

Issues and discussions are organised in sectors, policies and performance. Volume 2 of the African Development Charter Series is a timely and classic literature for researchers and stakeholders in redesigning policy framework and strategies for infrastructural provision and sustainable development in Africa.

**INFRASTRUCTURE,
ECONOMIC DEVELOPMENT
AND POVERTY REDUCTION IN AFRICA**

**CUTTING EDGE COMPLEXITIES
AND POLICY ISSUES**

ISSUE 1

THE BRIGHT LIGHT OF DEVELOPMENT IS BEAMING INTO THE AFRICAN ECONOMY

Renny Etta

Editor, MOFINews

Ministry of Finance Cross River State

That the African economy remains a virgin ground with ample opportunities to tap from it is not in contest. However, at what point and how the African economy will give birth to these opportunities in order to turn around the fortunes of this great but promising continent, occupy our attention most. In the course of seeking solution to tapping these opportunities in the past, organizers appear to have engaged more in rhetorical presentations than adopting a practical and systematic approach that pools ideals from a broad spectrum of policy players based on the platform of the continent's peer review mechanism.

Whereas the African economy has been classified as backward or underdeveloped in comparison to the global economy, it is incontestable that virtually all the advanced economies of the world owe their successes to the abundant but thoroughly uncoordinated wealth of the African economy they ruthlessly exploited during the Scramble for Africa.

Though this is not an occasion to point accusing fingers or call names, suffice it to say that the potential of this great continent-from Cape Verde to Cairo and from Mauritania to the Horn of Africa-is not only massive but also crying for attention. This makes the conference theme, strategies for Diversification and Sustainability of the African Economy, apt and timely.

As keen followers of the activities of organizers of this important conference, the International Institute for Policy Review and Development Strategies (IIPRDS), we at MOFINews are proud of your achievements and hereby urge you not to rest on your oars. Africa is our fatherland. It is our great heritage and we owe ourselves and generations yet unborn a duty to harness its economic endowments for the benefits of all.

The bright light of development is beaming into the African economy. Let us rise with one mind and one purpose, as individuals and as a group, to search out and pick up ideas that will improve the fortunes of our great continent.

ISSUE 2

INFRASTRUCTURE FOR SUSTAINABLE NATIONAL DEVELOPMENT

Mrs. Cecilia Udoesien
Head of Civil Service
Akwa Ibom State

Over the years, we have suffered from insufficient infrastructure access, quality and reliability. This had adversely affected our competitive ability as a Nation, slowed down our achievements in health, education and other sectors and thus, grossly impoverished our people. Agreed that infrastructure investment is quite an expensive venture, the absence of adequate data to monitor what is being spend, how effective the investment is or the state of the infrastructure at a given time accounts for the seeming decay in our infrastructure facilities.

Therefore, as you continue to brainstorm at this conference, may I appeal to you to explore the possibility of drawing up to a blue print that would ensure that our Nation evolves an infrastructure development policy that will sustain National growth, create wealth, reduce poverty and increase our Gross Domestic Product (GDP). For me, I would suggest that we need to create an enabling climate that would attract public private partnership investment in infrastructural development.

In doing this, we must be ready to encourage collaborative efforts in data collection and information sharing on infrastructural investments and its impacts, develop an action plan for increasing public and private financing of infrastructure as well as improving its efficiency. There is also the need to evolve an action plan for attracting increased technical and financial assistance from the developed economies in our efforts to improve infrastructure efficiency, enhance investment climate and integrate environmental with economic concerns.

Permit me, distinguished ladies and gentlemen to say that while I may be expecting that my humble suggestions would be appreciated and perhaps consider for implementation to further improve the state of our economic infrastructure, it becomes appropriate to note that so far, our State and indeed the Federal Government are making concerted efforts to address the problem of infrastructural

decay in the Country. For instance, in Akwa Ibom, a number of roads have been constructed, the Ibom power plant has equally been completed and put to use, and well over ninety percent of communities in the State have been linked to the national grid. Furthermore, a number of health institutions in the State have been rehabilitated in addition to three new General Hospital that have been constructed and equipped, in addition to numerous other infrastructural facilities aimed at improving the wellbeing of the people of the state.

On her part, the Federal Government is revamping rail transportation, rehabilitating our airports, constructing and rehabilitating some trunk "A" roads, intervening in the health sector and most recently, intensifying efforts at ensuring that private investors in the power sector deliver on their mandate. As we would agree, an uninterrupted supply of electricity and the presence of improved transportation infrastructure, for example, will bring down the cost of production and generally raise the living standard of the citizenry. It therefore follows that there is the need for governments at all levels to develop a strong infrastructural base that will support sustainable National development.

ISSUE 3

ECONOMIC INFRASTRUCTURE AND SUSTAINABLE NATIONAL DEVELOPMENT

Dr. E.I. Ejere

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The topic for discussion is “Economic Infrastructure and Sustainable National Development”. As it is structured, the topic leads itself to a number of approaches. One of them is historical and would be based on the assumption that the nation has a system that has put economic infrastructure in place for sustainable national development. In that case, the discussion would simply lay out the pattern of economic infrastructure used by the country to attain sustainable national development. Another way to look at the topic is prescriptive. A discussion of this nature would assume that national sustainable development has not yet been achieved. It would, then, prescribe the pattern of economic infrastructure the nation should develop which would result in sustainable nation development. A third approach to the topic is empirical. The will examine the level of economic infrastructure in the country in its effort to bring about sustainable national development. In all the inference form the theme is that economic infrastructure and sustainable national development go hand in hand.

The modern world is faced with the challenge of global, shared responsibility for development tuned to the needs of people and of nature, as well as with the understanding that the planet Earth must be adequately preserved equally for the present and for the future generations. There are strong ethical reasons for the present generation to meet needs without compromising the development opportunities of the future generations. This reasoning is based on the fundamental principle of moral justice that all people have equal rights and broadest freedoms provided that they do not contradict freedom of others. The right of the present generation to use resources and to enjoy a healthy environment must not

compromise the same rights of future generations. Sustainable development is seen as targets-oriented, long-term (continuous), comprehensive and synergetic process with impacts on all aspects of life (economic, social, environmental and institutional) at all levels.

Sustainable development is focused on developing models which provide quality responses to social-economic needs and interest of citizens, and at the same time eliminating or significantly reducing impacts which are a threat or damage to the environment and natural resources. The long-term concept of sustainable development implies continued economic growth, but such growth that brings with it not only economic efficiency and technological progress, but also a higher share of cleaner technologies and innovation in the society as a whole and corporate social responsibility, enabling poverty reduction, long-term better use of resources, improved health and quality of life and pollution reduced to the carrying capacity of the environment, prevention of future pollution and preservation of bio-diversity. One of the most significant objectives of sustainable development is generating new employment and reducing unemployment rates, as well as reducing gender and other inequalities, promoting employment of the young and the disabled and persons from marginalized groups.

Sustainable development implies also the need to harmonize the difference aspects of development and the contradictory motifs included in individual and sectoral programmes. Effective resolution of such conflicts requires a certain level of political will and dedication. Key pre-requisites for the acceptance and adoption of concepts of sustainable economic and social development and their successful implementation include adequate leadership, broad political, social and media support, and a social consensus on the need to accept the concept. In this context, strong political will, dedication of the features of sustainable development is greater public participation in environmental decision-making. Adequate public participation means more than declarative will expressed by the government but also special incentives, above all prompt information and education so that the public is in a position objectively influence the outcomes that it is interested in achieving.

This can only take place if there is economic infrastructure. However, despite the fact that availability of economic infrastructure is a sine qua non for sustainable national development, it is unfortunate and disheartened to note that this basic requirement is not always available and where it is available it is scanty. It is our hope that this conference will give serious thought to the challenges of infrastructural development in the country. Such challenges include, fiscal constraints, corruption, conflict, vandalism, lack of maintenance culture, programme discontinuity etc.

Let me use this opportunity to restate the firm resolves of those of use in academic to continue to contribute our quota towards achievement of economic infrastructure and sustainable national development.

ISSUE 4

INFRASTRUCTURE AND SUSTAINABLE DEVELOPMENT FOR THE WOMEN

Dr. (Mrs.) Glory Emmanuel Edet
*Commissioner for Women Affairs
and Social Welfare
Akwa Ibom State*

Economic infrastructure can be the internal facilities of a nation that enable the effective and smooth running of commercial activities in order to ensure economic growth and productivity. This can be in the areas of communication, transformation, distribution networks, financial institutions/markets, and energy supply systems. These are generally the public goods and services that act as a switch and spurs economic activity. They help to accelerate economic growth, reduce poverty and unemployment, empower and make people to be self-reliant.

From as far back as we can remember, governments have been primarily engaged in providing the needed capital base for infrastructure development and maintenance. The economic reason for this that infrastructure investment requires large capital outlays, and has very long pay-off periods, which may make it difficult for private investors to engage in. For example, certain infrastructure assets, such as roads, tunnels and bridges require a level of capital commitment that will often prove prohibitive for a private entrepreneur, and will exhibit long and widely variable pay-off horizons. Also, investment in infrastructural development can have a profound multiplier effect, causing an increase in economic activities. A city with well-designed and well-paved roads, or a well-maintained port facility, attracts commerce.

Today, however, we have seen private entrepreneurs involving themselves in these activities (e.g. communication, energy), and we can also see the difference between when the government was handling this infrastructure will remain underdeveloped and dependent on other economies for its survival, and that good quality infrastructure is a major requirement for sustainable development, that every society needs efficient transport, sanitation, energy and communication system if they are to prosper and provide a decent standard of living for their population, our

dear Governor had decided to embark on the massive investment in roads, bridges, the energy sector, etc. that we see today.

What really is sustainable development?

Sustainable development can be seen being able to cause an improvement in the welfare of the present generation while ensuring the ability of future generation to meet their own need. Sustainable development ensures the overall well-being of the human being by integrating social development, economic development and environmental conservation and protection.

It is my belief and hope that this conference will be able to articulate the way forward to ensuring that the uncommon transformation we are witnessing can be transformed into sustainable development for our people, especially the women, who constitute a greater proportion of the population. If we can ensure sustainable development for the women, we can be sure that State and Country will experience same.

ISSUE 5

REDIRECTING AID FOR IMPROVED INFRASTRUCTURE AND HEALTH CARE DELIVERY SYSTEM IN AFRICA

Iniobong Bassey Anam
Ebonyi State University

It is rightly said that "the health of nation is the wealth of that nation". However, one cannot expect an effective health care delivery system without close attention to the availability and utilization of health infrastructure. When it comes to healthcare in Africa, the poor who usually are mostly in need of healthcare are sidelined (Castro - Leal, Dayton, Demery, & Mehra, 2000). Health systems are too weak to efficiently and equitably deliver those interventions to people who need them, when and where needed. This is as a result of several factors, among which includes lack of adequate infrastructures in the health sector, low capacity building and low motivation of health workers. The attributed result to this is health care drift to other parts of the world at the detriment of the African economy.

Roger England in his controversial argument professes that health aid should be redirected towards strengthening health systems in developing countries and that countries should be given the leeway to prioritise and allocate funding towards a sustainable plan that ensures that the money is spent where it is needed (England, 2007). Presently, a lot of aid comes into Africa. The developed countries have specific development aid funds which are specifically geared towards the third world countries, when it comes to health aid, some donors are particular about where and how they want the aid to be spent. For instance, a donor might want his health aid spent on malaria specifically. Others respond to disease outbreaks and as a result the funding goes directly towards that cause.

The following are a list of some diseases in Africa which have attracted specific donor funding:

1. **HIV AIDS**: this is one disease that has attracted so much worldwide concern and funding. UNAIDS was set up as the arm of the UN aimed with the responsibility of accelerating and coordinating the global response to HIV AIDS (UNAIDS, UNAIDS). In 2012, donor governments pumped in nearly 8 billion dollars to UNAIDS. Multilateral organisations such as the Global Fund also finance HIV AIDS prevention and treatment; the private

sector also provides funding for HIV AIDS programs ,The Bill and Melinda Gates foundation for instance specifically funds HIV AIDS related programs and projects .An estimated 491 million dollars was received by UNAIDS by US philanthropies alone (UNAIDS ,UNAIDS Financing ,2013) Finally ,domestic resources have also fattened the HIV AIDS fund 'Countries were cajoled to set up National AIDS committees and 15% of government spending was geared towards HIV AIDS programmes (Flint 2011)This brief can only give a glimpse of how much money goes into HIV AIDS .Perhaps diverting such aid into strengthening healthcare systems just like England advocates may be the miracle Africa has been praying for in terms of health .

- 2 . **Malaria** : while some countries have completely and successfully done away with malaria ,some countries especially in West Africa are still fighting a battle with malaria .In 2013 ,over 500 000 deaths in sub Saharan Africa were caused by malaria (WHO ,World Health Organisation 2015)The Global fund also has malaria and tuberculosis in its agenda .The WHO also affirms that 90% of malaria deaths in 2013 occurred in the African region ,it is not surprising that this is the region where weak healthcare systems are the norm .In 1998 a campaign tagged Roll Back Malaria (RBM)was formed with the aim of halving malaria deaths by 2010 .A lot of money has been spent on this campaign .It is really important to understand that most of the people who die of malaria are people who are poor and have no access to good healthcare (Bate 2008) for the purpose of this paper ,this cannot be over emphasized .In 2013 , international and domestic funding for malaria totalled a whopping 2.7 billion dollars (WHO ,World Malaria Report 2014) .
- 3 . Tuberculosis :the association between HIV AIDS and Tuberculosis (commonly known as TB)has scaled up the level of funding for TB specific interventions .
- 4 . Ebola Virus Disease : During outbreaks ,the mortality rate is very high .Since 1976 ,there have been 26 confirmed outbreaks of the disease (Mohajan 2014) . There have been outbreaks in Nigeria ,Guinea ,Democratic Republic of Congo , Sudan and Uganda to name a few .Over 2 billion dollars was raised during the last Ebola surge in West Africa (FTS 2015)The response to the disease was so poor in countries like Liberia and Sierra Leone where the existing health systems could not contain the disease (Azuine ,Ekejiuba ,Singh ,& Azuine , 2015) .

Other scholars especially in response to Roger England have argued that for diseases like HIV/AIDS spending is not even nearly enough (de Lay, Greener, & Izazola, 2007) considering the potential risk it poses to human security. Well, Yes. But in order for these interventions to be sustainable and effective, healthcare systems need to be strengthened. It is no coincidence that these diseases are better managed in countries with stronger and better healthcare systems.

The vital elements needed for health systems to function (Harries, Jensen, Zachariah, Rusen, & Enarson, 2009) are listed as follows,

1. Skilled human resources (in good numbers)
2. Physical infrastructure
3. Excellent financial management
4. Timely monitoring and evaluation
5. Efficient procurement and distribution of necessary facilities and drugs
6. Good leadership and stewardship

Nigeria continues to export health care professionals to the developed world. For example, 432 nurses legally emigrated to work in Britain between April 2001 and March 2002. About 20,000 health professionals are estimated to emigrate from Africa annually (Raufu, 2010). Many factors contribute to the brain drain in the 21st century. Some of these factors include lack of adequate infrastructure and proper motivation.

The existing infrastructure in most teaching and general hospitals is not capable of supporting the routine use of laboratory tests and contributes to a failure to use the few existing laboratory resources. An assessment of district hospitals in Kenya found that, despite the availability of hematological tests, hemoglobin levels were not measured in 15% of children with a clinical history compatible with anemia or malaria (Esamai and Wasunna, 2004).

In the same study, review of data for 46 children who presented with fever and stiff neck or with fever and an altered level of consciousness (e.g., seizures, lethargy or irritability) found that no lumbar punctures were performed (Esamai and Wasunna, 2004). The inability to collect patient samples results in missed opportunities to perform laboratory tests as an integral part of clinical care. Lack of consumables (e.g., blood vacutainers, lumbar puncture materials, and sterile urine specimen containers), scarcity of trained personnel, and extreme staff shortages all impact specimen procurement.

¹This paper is not about whether or not the specific interventions recorded minimal or maximum success. Rather, it affirms that the health situation in Africa will be a different story if healthcare systems are strengthened.

A central hospital in Kampala ,Uganda ,generally supports an average of 2 blood culture bottles per ward each week ,and EDTA blood collection tubes are reused . Lumbar punctures are sometimes not performed unless the patient or caretaker is willing to purchase the kit materials (authors 'personal observations) Staff shortages in which health care workers are often responsible for an overwhelming number of acutely ill patients afford little time to obtain clinical specimens for laboratory testing . In fact ,there is a lack of skilled health care professionals at every level ,and current efforts in education and training are inadequate (Narasimhan ,Brown & Pablos - Mendez 2004) .

Of 693 technical staff working in 205 Ghanaian laboratories ,only 26% were professionally qualified (Bates ,Bekoe and Asamoah Adu 2004) In many regions of sub Saharan Africa ,attrition of human capital is common and is frequently attributed to death (Cohen 2002) or emigration to better working conditions locally or internationally . Finally ,even when laboratory testing and services are available , physicians often perceive them as unreliable and unhelpful ,such that they remain underutilized and undervalued (Esamai and Wasunna 2004) On numerous occasions in Zambia ,Uganda ,and Ghana ,we observed clinical decision making that occurred in the absence of laboratory confirmation ,even when tests were available . Conversely , when tests were performed ,clinicians de emphasized seemingly contradictory laboratory results and elected to proceed with treatment based on clinical judgment alone (authors 'personal observations (Bates ,Bekoe and Asamoah Adu 2004) .

Also ,majority of communities in Africa lack essential living amenities such as safe drinking water ,sewage ,or disposal system ,good housing ,an adequate power supply and good roads .Without directing efforts to improve these ,attainment of good health will be unrealizable (Abiodun & Kolade ,2005) Kaseje (2006) noted that 50 percent of the African population lack access to modern health facilities ,and consequently ,have high levels of maternal ,infant ,and child mortality ,and as well as low rates of immunization .

A major step to improving health outcomes and health care delivery system in Africa begins with improving the living conditions of the people through the provision of the basic necessities of life ,providing adequate medical facilities in hospitals , providing capacity building for health workers with improved motivation .

ISSUE 6

PARTNERING FOR DEVELOPMENT IN AFRICA

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The concept and indeed the imperative of partnering for development cannot be overemphasized in the context of sustainable development in a given society. This is more from the perspective of Nigeria, nay Africa as the last frontier in need of sustainable development.

This is more so when we look at the concept or phenomenon of development as comprehensively defined by Charles P. Kindleberger and Bruce Herrick (1977:1) in their book, *Economic Development*. According to them "Development or economic development to be specific, is generally defined to include improvements in material welfare, especially for persons with the lowest incomes; the eradication of mass poverty with its correlates of illiteracy, disease and early death; changes in the composition of inputs and outputs that generally include shifts in the underlying structure or production away from agricultural towards industrial activities; the organization of the economy in such a way that productive employment is general among the working age population rather than the situation of a privileged minority; and the correspondingly greater participation broadly based groups in making decisions about the directions, economic and otherwise, in which they should move to improve their welfare"

Analytically, we all may agree that this conceptual definition, so to say, is very practically concerned with a relevant to the Nigerian, nay African condition for as it is today, we Africans now in the Fourth World, according to the United Nations' recent categorization of development index, are still in the lowest income bracket where an average African feeds with less than one dollar per day, still struggling to reduce our ever-growing literacy rate, mortality rate, unemployment rate and still struggling to reach the W.W. Rosstow take-off stage in the development paradigm. This is in spite of the competent and those in Diaspora.

THE PARADOX OF AFRICAN SITUATION

The poor African situation is summed in the six shocking paradoxes still existing in the continent. For such a diagnosis will give us the challenge from today to partner not only for development but for sustainable development.

Thus according to Professor Ali Maizu, an eminent African scholar of global repute, the first paradox is that of habitation which asserts that Africa is the earliest habitat of man, the (homosapien), but in a sense today is the last to become truly habitable. The second is the paradox of humiliation which holds that Africans are not necessarily the most brutalized people, but they are almost certainly the most humiliated in modern history. The Third paradox concerns acculturation which observes that African societies are not the closest culturally to the Western world, but they have been undergoing the most rapid pace of cultural westernization to the point of obsession. The fourth which is the paradox of fragmentation says African is by no means the smallest or largest of the continents physically, but it is almost definitely the most fragmented politically.

The paradox of retardation as the fifth emphasizes that Africa is not the poorest of the regions of the world. But after Antarctica, it may well be technically the most retarded and least developed: And in terms of paradox of location as the sixth in the series, it is observed that Africa is the most centrally located of all continents on the globe physically, but again after Antarctica, it is probably the most peripheral politically. Those paradoxes of African predicament have no doubt continued to make the continent, her peoples and their development efforts mere appendages to alien ideas and systems ranging from religious too political, economic technological, social, philosophical and cultural perspective. This very unfortunate trend where dependency syndrome and unequal exchange have been entrenched in our development process is not unconnected with the intellectual inability of both the educated and political classes of the African nationals to creatively in an independent manner rethink and interpret some relevant alien ideas and development systems in the context of African cultural needs but also because of the overzealous enthusiasm shown by them, the intellectual and political classes, towards everything western.

PARTNERING FOR DEVELOPMENT

Perhaps, the preceding empirical situation is the more reason why our long history of partnering for development especially with the Western nations has not yielded positive results till date as every partnership initiative in that context always suggests and demonstrates unequal level.

But let us not that concept or idea of partnering for development is of African origin. Thus in days gone by where there was no cash economy of sorts, difference individuals and groups or a whole community in Africa used to help one another to achieve a development goal. Take for example, someone who wanted to build a house

or clear bush for farming. It was then imperative for individuals or group of individuals to assist the potential owner of the house or bush farm to complete the house or clear the bush farm for individual within such a community was to benefit from the gesture. This culture of traditional partnering for continued till the end of the 1950s even though it still persists in some very traditional African societies till date.

But with the emergence of cash economy through theand imposition of the western economy perceived as superior to African traditional economy, the traditional partnering for development in Africa was replaced by that of Western tradition. Thus apart from the League of Nations which was later succeeded by the present United Nations in which African countries including Nigeria in terms of partnering for international development, there have been other organizations in which Nigeria and other African countries have continued to partner with for both internal and international development. These include Summit of the United Nations like the World Bank and the International Monetary Fund (IMF) UNESCO, UNICEF, WORLD HEALTH ORGANISATION, International Labour Organization (ILO) and World Trade Organization and other organization of sub regional or national setting through which Nigeria and other countries have been partnering for development include ECOWAS initiated by Nigeria, Commonwealth, African Union development bank and USAID.

Yet based on the importance of partnering for development, a concept which has just been replaced with cooperation in international relations is the recent revitalization of the organization of African Unity (OAU) though its replacement with African Union (AU) and the initiatives such as the Economic Community of West African States (ECOWAS), the South African development (NEPAD) which are macroeconomic and Micro political in objectives.

For example, NEPAD is a pledge by African leaders to eradicate poverty and raise the human development index of African States and to enhance good governance and authentic economic growth. The NEPAD is a clarion call for new relationship for partnership between Africa and the international community, especially the highly industrialized countries to overcome the development chasm or gap that has existed over centuries of unequal relations.

More significantly, the NEPAD is a new technique of political and economic development entirely conceived by African leaders. It is indeed designed to be a catalytic strategy in the African development process and it is time-bound. But one may not be quick to judge or assess the impact of the noble initiative like one would do with ECOWAS or African Union which with all modesty, I will describe as old wine in new bottle. For even in the case of ECOWAS established since 1975, its Socio-cultural, economic and political impact in terms of partnering for development among member countries is yet to be felt in its objective manifestations.

However, beyond the preceding international partnership initiative for development is the emergence of myriad of Non-governmental organizations at the domestic level. And hence we have the Cross River State Civil Service Society coalition which consists of a number of viable Non-Governmental Organizations across the state and beyond. There is no doubt that the various NGOs have their headquarters here in Cross River State and other parts of Nigeria beyond. But the fact that the various NGOs have gone into partnership concedes to the fact that the achievement of their development target(s) is not in doubt.

PROBLEMS & PROSPECTS OF PARTNERING FOR DEVELOPMENT

However, agreeing to partner for development does not guarantee a free ride to achieve a collective development goal. For example, it is on record that the newest African development initiative boldly reflected in the establishment of the New Partnership for African development NEPAD is not first of its kind floated by African nations. There was the Lagos plan of Action in 1980s which was highly commended by the Western World and the United Nations.

There was also the signing of the July 1991 Abuja Treaty creating the African economic Community. These are part from other sub-regional initiatives which we had earlier identified like the ECOWAS and the Abuja successor to OAU. But like we observed, these partnership development initiatives are yet to improve the development fortunes of the African nations particularly in the context of our earlier definition of development by Kindleberger and Herrick in their book, *Economic Development*.

The question therefore is why has development, under our working definition, continued to elude African nations till date. No doubt, Professor Alex Czirui has exposed the development paradoxes. But more poignant verdict of the continued under-development of African nations including Nigeria and Cross River State as microcosm of Nigeria, nay, Africa is that which has long been stated by Paul A. Baran in his article titled *A Morphology of Backwardness* in a book, *Introduction to the sociology of Developing Societies* and edited of Hannza Alavi & Teodoro Shanin 1982: 195)

According to Baran, "the forces that have moulded the fate of the backward world still exercise a powerful impact on the condition prevailing at the present time. Their forms have changed their intensities are different today; their origin and direction have remained unaltered. They control now as they have controlled in the past the destinies of the under—developed capitalist countries, and it is the speed with which and the process by which they will be overcome that will determine these countries future economic and social development. This is so because, as we have noted before, the way in which the so called western capitalism broke into the smooth historical development of the now under-developed countries now euphemistically

called developing countries, precluded the materialization of what we term “classical” conditions for growth without development as the capitalist order in African countries in particular has continued to serve as a framework for economic stagnation in spite of human and material resources.

Accordingly, one of the major problems confronting our initiative in terms of partnering for development is not unconnected with the fact that most of our sub-regional grouping and NGOs including those under the Cross River State Civil Society Coalition are under the subtle or overt control of the such a dependency trend as noted before cannot augur well for the attainment of desired objectives particularly in terms of sustainable development.

Another problem is that of the background of the operators of NGOs in the State and Nigeria in general. Some without the requisite academic/cum educational knowledge in the areas of their social service and some without adequate funds to back up their outfits soon turn such NGOs into money-making for selfish ends. This is why in an article titled feeding fat on a pandemic that is talking about HIV/AIDS, it was said “Expectedly, Nigerians have turned the large heart of these international donors into a meal ticket. The number of NGOs having programmes on HIV/AIDS keep on running by the day. In Lagos State alone, there are more than 500 NGOs all claiming to be running one programme or another for HIV/AIDS victims out their activities wouldn't have elicited much concern from the authority but for the frivolous and sometime bogus survey said to have been carried out in order to access funds from some of the international donor organizations. This is indeed a sad commentary.

Yet the other problem in terms of partnering for development is the attitude of government towards most local NGOs. In this regard, government looks at them as intruders in the development process of the society. Accordingly, there is usually no linkage effect in terms of target realization of perceived or identified programmes or projects in the interest of the people. This is perhaps why the level of development, in the context of our operational definition, is nothing to write home about.

But are there prospects for effective partnering for development among the NGOs one hand and with the government on the other especially in Cross River State and South/South in particular as well as in Nigeria in general? Yes, the prospects are there if such variables as honesty of purpose, commitment, tolerance or consensus, deconstruction of our colonial mentality, clear identification of projects and projects and programmes as well as depersonalization of NGOs and effective funding of people-oriented programmes and projects by the government mainstreamed into the development matrix.

In fact, the issue of colonial mentality deconstruction must be emphasized here. For too long till date, we have continued to rely on European constructs of reality which to us as a research is predicated on the framework inferiority complex fashioned by Nigerians or Africans themselves to the fact that everything European is

superior to that of the black. As a matter of fact, our undoing in partnering for development is that we have for too long seen our contributions to world civilization by the standard of the Western cultures, a situation that has led us to believing unfortunately that our only claim to fame excellence is in imitation. But can be no sustainable development in a given society without a sound and solid indigenous cultural foundation. And that is why UNESCO has emphasized the need for Africans to look inward for self reliance and self-sufficiency.

For as it is, certain facts need to be made clearer about foreign aid. Aid is not a function of altruism. Aid is not as charitable as it appears. In another sense, it is not out of sheer generosity that advanced nations extend aid to needy nation. It is because these advanced nations so-called are more mindful of certain political, economic technical and military interests.

Against such a backdrop, we Nigerians, nay Africans in our own interest must shed our colonial mentality and embrace whole-heartedly the Chinese and Japanese economic models and industrial revolution predicated on very articulate and effective partnering for development with little or no western connections. For after all, china and Japan were never actually colonized like Nigeria and other African countries. But today both countries have the most fast-growing economies in the world, a situation that Nigeria will attain in 10 years as predicted by the then C. B. N. Governor Prof. Soludo.

ISSUE 7

THE STRATEGIC ROLE OF THE CIVIL SERVICE IN THE SUSTAINABILITY OF THE AFRICAN ECONOMY

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Let me start by giving a brief definition of the Civil Service. The public Service Rules handbook (2006) defines the Civil service as a body or organ which enjoys continuity of existence. It essentially covers Ministries and extra-ministerial offices. The Civil Service has emerged over the years as the most critical and crucial part of national development and democratic stability. As a vehicle and machinery of public policy formulation and implementation, the service acts as a catalyst for crystallizing the shared goals of the citizenry (Anam 2014)

Without an effective and efficient civil service, the goals of stability, growth and stability could be easily compromised. Any dedicated civil service must at all times identify with service delivery and development. Adebayo (2000) said political leaders make policy, the civil servant executes it and if the civil servant lack the capacity to implement the policies of the political leadership, those policies however, well intended will not be implemented in effective manner.

The role of productivity in boosting the economy of Nigeria has been a force re-echo due to slow rise in standard of living of people, and especially the oil resources which had dictated the pace of development of the Nigerian economy in the last decade is now fizzling out. The question now is how can the civil service increase productivity through a productive drive that would result in national consciousness and the need to increase efficiency in the available resources.

One major critical area to be strengthened for the development of the economy by the civil service is on adequate power supply. The less than 500mw currently generated nationwide is not sufficient for higher productivity. The civil service must be on the alert to come with enabling laws to assisting in actualizing this. Secondly is the development of trained and skilled manpower through entrepreneurship skills. This is to define enterprise in narrow and wider contexts. Classify them into private versus public, profit versus non-profit, formal versus

informal and above all understand the role entrepreneurs play in economic development of a country.

Thirdly, agriculture is one of the critical sectors targeted to drive Nigeria's diversification programme. The Nigeria government in particular has made efforts to diversify the economy with focus on this sector. In another vein, is the training/retraining of civil servants. According to Adebayo (2000), it is not sufficient to send an official for training only once in his career and leave him for the rest to his own devices", Civil servants must undergo training and re-training is to enable them better equipped to handle issues affecting offices for better growth.

We are in a knowledge economy and any worker who is not regularly updated either by his/her employer or him/herself or both will soon be obsolete and irrelevant/unproductive in the scheme of things (Essien 2013).

Also, is the issue of professional and technical departments; hitherto in Nigeria, leadership in the civil service has been provided chiefly by a small body of amateur administrators with not particular specialized training and who relied on the art of learning on the job without any acquisition of techniques. Public service rule should constitute a system of career interviews. The object of such an exercise is to plan the general direction of a man's career in such a way as to development his potential to the full and male the maximum use of his abilities.

Over the years, corruption had risen to a very high level with some African countries rated corrupt by Transparency International. Dr. Olaniyan (2014) has this to say "Education, health, development, basic freedom to information, association and life, fair trails and private property rights languish in the hands of governance structure laced with corruption. Just as in human rights abuse discourse, the socially and economically vulnerable suffer the most. The state is entrusted to operate for the benefit of security of the people, and not take what it will from the people coffers.

African institutions, including the Public Service lost motivation and were seen as hindrances to rather than facilitators in development. There were reforms especially by the Gen. Olusegun Obasanjo's civilian Administration to restructuring the economy by divesting in government interests in key organizations and parastatals and the deregulation of other sectors of the economy by re-engineering of social order a new value system of honesty, probity and respect for the nations diversity. The formation of new partnership of African Development (NEPAD) namely, the eradication of poverty, economic growth and the strengthening of African capacity to harness the gains of globalization are in line so as to halt her marginalization in growth. Therefore, there should be increase collaboration with international development partners e.g World Bank and Department for International Development (DFID) in the implementation of the World bank assisted Economic reforms and governance project with the full involvement of the public service.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Finally, the need for communication in all organizations is dictated by the existence of the organization structure, which defines the relationship and in fact, specify the flow of communication among the various segments of the organization and of course, positive. As true like this, the only viable institution whose integrity remained intact was the Civil Service.

ISSUE 8

WHY INFRASTRUCTURE DEVELOPMENT IN AFRICA MATTERS

Dr. Ibrahim Mayaki

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New Partnership for Africa's Development

The story of Africa's development is changing. Six of the world's fastest growing economies are in Africa! Democratic governance has been strengthened over the past five decades, enabling a platform for stable growth and prosperity in most parts of the continent. The New Partnership for Africa's Development (NEPAD) is happy to be part of this upward transformation process, through the implementation of its programmes.

But while we boast of having some of the fastest growing economies, what we don't generally say is that we also have seven of the ten most unequal economies in the world. If we look at the GINI coefficients, an index which measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution, Africa is the most unequal continent in the world. Added to that specificity is the fact that 75% of Africa's population is under the age of 25.

This growing youth population, most of which has access to modern and rapid communications systems, and requires instant results, could impact adversely on the African countries if social inequality and the current systems of government are not revised. Inclusive policies are an absolute pre-requisite for political stability.

By 'inclusive' I mean creating jobs for the youth and facilitating access to public services. The equation of the most unequal yet youngest continent is one that could explode. Tunisia is an interesting model that failed. The North African country was praised for its good transport system, highest penetration of information and communication technology (ICT) on the continent, good ports, relatively good airports, fairly good agricultural production, highest literacy rate of girls...but the country imploded.

Fundamentally, the majority of the population did not perceive the level of inclusion of the youth as satisfactory. This is why whatever we do in agriculture, infrastructure, ICT, if we do not resolve the key issue of inclusiveness, we are carrying very fragile systems that at one moment or another will implode. So, inclusiveness is very fundamental. But for real development in every sphere to happen, we need to improve our infrastructure. At NEPAD, we believe that infrastructural development is the key to all aspects of social and economic transformation.

Antonio Estache and Grégoire Garsous, both experts in infrastructure investment in Africa, state in their literal notes on “The impact of infrastructure on growth in developing countries” that there is, indeed, a plethora of anecdotal and more technical evidence that better quantity and quality of infrastructure can directly raise the productivity of human and physical capital and hence growth. For example, transport access can improve education and markets for farmers' outputs and others by cutting costs, facilitating private investment, improving jobs and income levels for many.

Despite the gains registered in improving regional infrastructure connectivity across the continent since the establishment of the African Union along with NEPAD, Africa still faces serious infrastructure shortcomings across all sectors, both in terms of access and quality. For instance, only 38% of the African population has access to electricity, the penetration rate for internet is less than 10% while only a quarter of Africa's road network is paved. Studies have shown that poor road, rail and port facilities add 30% to 40% to the costs of goods traded among African countries, thus adversely affecting the private sector development and the flow of foreign direct investment (FDI).

Furthermore, a recent World Bank study found that the poor state of infrastructure in many parts of Africa reduced national economic growth by two percentage points every year and cut business productivity by as much as 40%, making Africa – in spite of its enormous mineral and other natural resources – the region with the lowest productivity levels in the world. In order to boost intra-African trade, we need to improve infrastructure. That's why we designed PIDA (Programme for Infrastructure Development in Africa), a 30-year strategy by NEPAD, the African Union and African Development Bank (AfDB), focusing on regional trans-boundary projects. The good thing about PIDA is that it was designed from the bottom up. The priorities are consensual. Given our global context, some of the minimal conditions for structural economic transformation require a less top-down approach in our planning processes.

The 4,500-kilometre highway from Algiers in Algeria to Lagos in Nigeria, for example, would not have been possible without the political and technical support of each of the affected countries. Ten years ago a private sector operator who wanted to discuss a regional project with two governments would be lacking a rational

framework. PIDA is that rational framework. Jointly coordinated by the African Union Commission, NEPAD, the regional economic communities and AfDB, PIDA provides the strategic framework for priority projects to transform Africa through the construction of modern infrastructure into an interconnected and integrated continent that is competitive domestically and in the global economy. PIDA also forms the basis for the Dakar Financing Summit for Africa's Infrastructure, which took place in Senegal in June 2014. Hosted by President Macky Sall, who is also Chairperson of the NEPAD Heads of State and Government Orientation Committee, the summit's aim was to accelerate the mobilisation of both domestic and international financial support for the implementation of the high impact regional infrastructure projects in Africa.

We have picked 16 out of 51 largely programme-based PIDA projects that were discussed at the Summit. The objective of this summit was to create a dialogue between policy makers, heads of government and private sector operators. Financing will develop from public-private partnerships. The 51 projects require an estimated \$68 billion for their implementation to 2020 whilst an additional \$300 billion is envisaged as requirement for the PIDA projects to be implemented through to 2040. With such quantum resource requirements in the long term, there exists a huge financing gap which needs to be addressed for the successful realization of PIDA projects.

When high level politicians, business entrepreneurs, industry experts and researchers met in Dakar, it was not be just another talk-shop on Africa's development. The summit was about producing results in terms of new approaches to project preparation that will lead to an increased level of funding being directed to PIDA projects within a shorter timeframe. Dakar summit highlighted the need to scale-up Africa's domestic financial resource mobilisation and provided a unique high-level platform to convene and engage African leaders, business-persons, regulators and policy makers on specific aspects that have hampered the roll out of transformative regional projects across the continent.

Working closely with the private sector, the summit produced tangible outputs that will, over time, contribute to regional transformation. The summit marked the beginning of a strong collaboration between public and private capital, based on effective project risk mitigation and project structuring to match different investor groups with a range of investment securities. The significant outcomes of the summit, which was a nouvelle approach to tackling the changing landscape of Africa's shifting development paradigm, will be an opportunity for NEPAD to be key point for investment in Africa.

ISSUE 9

THE IMPORTANCE OF INFRASTRUCTURE TO OUR ECONOMIC AND SOCIAL DEVELOPMENT

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KPMG in the Caymans Islands

The importance that infrastructure plays in people's everyday lives is often taken for granted though it is one of the biggest issues that governments across the globe need to address in their public policies. Infrastructure investment in the development of communications, IT, roads, schools, ports and hospitals is important to both economic development and quality of life. Failure to invest means a failure to sustain and develop our social and economic wellbeing.

Delmon, an infrastructure specialist with the World Bank, wrote the following: "Poor infrastructure impedes a nation's economic growth and international competitiveness (The World Bank 2006). Insufficient infrastructure also represents a major cause of loss of quality of life, illness and death (Willoughby 2004). This raises [the importance of] infrastructure services from [a] good investment to a moral and economic imperative." The above statement highlights that, as well as being a necessity, in many respects; infrastructure has a bearing on a country's attractiveness to foreign investors and on its ability to compete with other jurisdictions. It includes the basic services and facilities required for businesses to compete and grow. Business requires infrastructure; therefore, business growth can be limited by poor infrastructure development. Surveys by The World Bank reveal investors citing reliable infrastructure as an important consideration in their investment decisions.

Infrastructure is a key measure of a country's position on the global stage; it is the second pillar that is assessed by the World Economic Forum when determining the competitiveness of a nation (institutions, being the first). Imagine the competitive positioning of Cayman in the financial services sector if, for example, communications with the rest of the world were unreliable. The same could be said for tourism if access to, between and around the Islands was restricted by inefficient ports and airports and substandard road networks. A critical issue facing many governments today is the limited funding available to embark on infrastructure

projects. Cayman is no exception. With governments under budgetary pressure, infrastructure investment is often cut back or shelved for a later date. Interestingly, various studies have shown that infrastructure investment has a clear link to increased economic activity and productivity, so cutting back can be counterproductive.

Infrastructure investments can be funded by the public or private sectors, or a combination of the two. This is determined, to an extent, by the type of investment or infrastructure being considered. Governments can influence this by putting in place the appropriate measures to promote private sector investment, such as setting out a long-term vision in terms of planning, fostering political and regulatory certainty, and supporting the vision with financial concessions. Private investors will require comfort on the Government's plans over the next 30 plus years if they are to invest in long-term assets. In Cayman, examples of private sector involvement are evident in proposed projects involving the landfill site, the sewerage network, the port and the establishment of medical tourism and a Special Economic Zone.

The way that Cayman tackles infrastructure will impact its residents for generations to come. The challenge to develop our infrastructure can be facilitated by a review and a subsequent plan to establish and identify the investments that are needed, and how to prioritise them. A good plan would provide information on the state of Cayman's existing infrastructure. It should also act as a framework for the infrastructure requirements of Cayman going forward and facilitate their development and maintenance. Infrastructure projects have economic, social and environmental impacts that need to be taken into consideration when evaluating whether they should be pursued. Some projects will contribute more to the economy and/or to society than others. Cayman, in looking at the potential infrastructure options that are considered to be worthwhile or necessary, needs to determine what investments should be prioritised – this is more of a policy issue and should be in line with the long-term strategy of the Islands.

The US Department of the Treasury with the Council of Economic Advisers released a paper at the end of last year stating the following: "Research has shown that well designed infrastructure investments can raise economic growth, productivity and land values, while also providing significant positive spillover to areas such as economic development, energy efficiency, public health..." It goes without saying that poorly planned, non-strategic, infrastructure investments are not only a waste of resources, but can negatively impact future economic growth. With limited funding available, it is important to select investments that will provide the greatest return, be it economic or social.

It is important to assess the costs versus the expected benefit of an infrastructure project. There is a risk of overinvestment in a project, or pursuing investments with lower returns than others when funds are limited. It is important to

keep in mind that continued investment in certain areas will reach a point of diminishing return. Overinvestment equates to unnecessary increases in taxes or fees that are ultimately passed back to the general public or to those that use the infrastructure.

Investment in infrastructure is an ongoing process. Changes in technology, the business environment and the economy will drive new needs and with the passing of time existing infrastructure assets will need to be maintained, updated or replaced. The government, in consultation with the public that it serves, needs to continue to examine the infrastructure needs and opportunities in Cayman and evaluate how these projects fit with the mid to long-term strategy for Cayman's growth and development. With this, a plan can be developed to address Cayman's existing and future infrastructure requirements in the most socially and economically efficient manner.

ISSUE 10

BETTER INFRASTRUCTURE BRINGS ECONOMIC GROWTH

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Washington — As developing countries aim to boost economic growth, infrastructure investment plays an important role in stimulating commerce, according to business experts. "In completely underdeveloped countries, infrastructure investments have enormously important returns over time," said Martin Wachs, professor emeritus of transportation planning and policy at the University of California, Berkeley, and senior principal researcher at the Rand Corporation. "Those of us who study infrastructure see the returns coming from longer-term reductions in the cost of doing business and of traversing space."

In the history of the United States, the key transportation infrastructure projects include an era of canal building in the early 1800s, transcontinental railroads in the late 1800s and the national highway system in the 1900s. Every move reduced the cost and time for shipping goods and people around the country, from horse-drawn vehicles to inland waterways, then railroads and finally trucks and cars. While no single project can be responsible for America's success, each new technology stimulated growth that cumulatively turned a nearly 10 million-square-kilometer rural expanse into the world's dominant economy.

In modern-day areas of the world marked by unpaved roads, no electrical grid, limited sewage and an unsafe water supply, an improvement in any of those areas holds the potential to boost economic growth and begin to create an environment that attracts business investment and supports local firms. "Infrastructure is ... probably the single most important need for Africa to develop," said Stephen Hayes, president of the Corporate Council on Africa, the major U.S. business organization linking the United States and Africa. The council represents 180 countries and 85 percent of private investment in Africa. "There's not a single country in Africa that's meeting its current power needs," Hayes said. For business to thrive among African countries, the variety of road and rail systems, not to mention inconsistent customs

and regulations, must be addressed. The reason the AGOA (African Growth and Opportunity Act) trade agreement hasn't been as successful as hoped, Hayes said, is that you can't bring products to international markets if you can't even get them to the port in your region easily.

In general, roads would be the first thing one would turn to in order to help, according to Rand's Wachs. "They're so flexible. They provide access to so many things: education, health care, jobs and markets." One solution is for African governments to work together to harmonize everything from railway gauges to tax and regulatory treatment of imports and exports. "The whole concept of regionalization is absolutely essential," Wachs said, because it allows local businesses and foreign investors to easily reach larger markets. The proposed Inga Dam project in the Democratic Republic of the Congo has the potential to supply much of sub-Saharan Africa with reliable power, one of the primary ingredients in a solid infrastructure for the continent. To be sure, not all infrastructure investment is equal. Projects should be prioritized and undertaken only if they would remove an obvious roadblock to business or appreciably improve access along trade, labor and economic routes. Transportation investment is going to have an effect on economic development to the extent that it adds accessibility. In underdeveloped and undeveloped areas, the difference between no accessibility and some modest increase in accessibility could be huge and could make a real difference.

ISSUE 11

INFRASTRUCTURE AND ECONOMIC DEVELOPMENT: EAST AFRICA

Klaus Findt

Chief Operating Officer of GIPG Africa

WEF Africa 2013 – While many regions around the world are now experiencing slow or stagnant economic growth, Africa stands out as a land of significant untapped opportunity. The continent boasts the highest levels of resource reserves in the world, GDP is growing at around 5 percent per year and populations are set to double by 2050. At the same time, the continent is quickly burying some of the ghosts of its past. Across most of Africa, state-owned enterprises have been privatised or are planning privatisation, trade borders have been opened, corporate taxes have been lowered, and regulatory and legal systems have been strengthened.

The cost of poor infrastructure

Outside of South Africa, the continent is being held back from reaching its full potential by a lack of adequate infrastructure. Transport prices are estimated to be anywhere from 50 to 175 percent higher in Africa than global averages and eats up more than 20 percent of foreign export earnings. Ports and rail links are overcrowded and, in some countries, roads are impassable. Overall, the lack of adequate infrastructure is estimated to cut productivity across the continent by as much as 40 percent. That said, there have been a number of rather exciting infrastructure opportunities coming to the market, particularly in East Africa, many of which hold a strong promise of curing some of the ills that plague the region.

Opportunities abound

Take, for example, the Lamu Port project in Kenya, which aims to exponentially increase regional trade and export potential for Kenya, South Sudan and Ethiopia. The project brings together a range of infrastructure developments, including a 32-berth deep-water port, 1,300 kilometers of crude oil pipelines, more than 1,700 kilometers of new highways and almost as many kilometers of new railway, new

airports and an oil refinery. The project, which is expected to take about two decades to complete, will require some US\$25 billion in project funding, representing more than 80 percent of Kenya's annual GDP.

At the same time, the Kenya Electricity Generating Company Limited (KenGen) is seeking US\$5 billion in project funding to increase power capacity by some 3,000 megawatts (MW) by 2018. KenGen already boasts an installed capacity of 1,183 MW (64 percent of which is derived from hydropower) and provides 74 percent of the national capacity. But with demand growth currently estimated at 8 percent per annum, the additional capacity will be sorely needed to ensure the country can maintain its economic growth trajectory.

South Sudan, the world's newest sovereign nation, offers another strong case in point. With almost all of the fledgling country's GDP coming from its abundant oil reserves (some 385,000 barrels per day), it is particularly dependent on pipelines to ensure continued political and economic stability. But with little commercial agriculture and no real manufacturing operations to speak of, the landlocked country also relies on overland transport from ports in Kenya which often adds upwards of US\$9 000 in transportation costs for a single standard container. In response, a number of innovative initiatives are now underway to improve overland connections and create new pipeline routes to more efficiently bring goods into and out of the country.

Facing the challenge ahead

While East Africa clearly has no lack of viable and effective infrastructure strategies, progress has been depressingly slow on many fronts. Part of the challenge, of course, relates to funding. Many East Africa nations are largely dependent on development aid for capital investments, but donations are either insufficient or too overly restrictive to close the infrastructure gap.

What is needed is greater cooperation between national governments, donors, regional trade associations and the private sector. Yet in most cases, activity has been undertaken on a unilateral basis, with little coordination even within the region itself. This is a shame. The reality is that East Africa offers the potential for strong and stable returns for infrastructure investors and – if properly planned and executed – will almost certainly create new opportunities for investment across the region. Indeed, investors would be well advised to take a long and hard look at the bevy of new opportunities now emerging from the region. The returns – both economic and social – could be significant.

ISSUE 12

AFRICAN DEVELOPMENT BANK'S STRATEGY FOR 2013-2022

Developing African Infrastructure for the Continent's Structural Transformation

Chiponda Chimbelu

Greg Wiser

Africa Development Bank

Across Africa, investments in physical and social infrastructure have failed to keep pace with growth and demand, creating a serious infrastructure deficit that slows investment, the achievement of broad-based and inclusive growth, and poverty reduction. The figures are revealing. More than half of the countries in Africa suffer chronic power outages, stifling industrialization and other economic progress. The continent's transport infrastructure remains fickle, hampering trade and economic growth. Indeed, high transportation costs, due to inadequate road and rail networks and insufficient port facilities, often add up 75 per cent to the price of Africa's exports, undermining their competitiveness on the global markets. Meanwhile, inadequate water and sanitation infrastructure costs Africa the equivalent of some five per cent of its GDP.

Poor infrastructure also hampers intra-regional trade and integration. This is despite the widespread agreement that the expansion of hard cross-border infrastructure in transport, energy and telecommunications sectors is critical to Africa's economic advancement. Indeed, inadequate infrastructure is often cited as the single largest obstacle to doing business on the continent.

Without major investments in infrastructure, one thing is clear: Africa's economic and social development will continue to seriously lag behind that of the rest of the world. The "structural transformation" that the AfDB and its partners are determined to achieve will not materialize. Yet Africa's infrastructure deficit can be redressed.

Building on the successes of the last decade, the AfDB believes, Africa can meet its vital infrastructure needs. According to the African Development Bank's Strategy for 2013-2022: At the Center of Africa's Transformation, Africa has become the world's second fastest-growing continent and is now laying the ground for a major "structural transformation", including that of its infrastructure.

Convinced that infrastructure development will be a critical catalyst for Africa's structural transformation, the AfDB has made it one of the cornerstones of its 2013-2022 strategy. Coupled with sound policies, the Bank says, better infrastructure will drive Africa's transformation by enhancing regional integration, private sector development, investment, entrepreneurship and micro, small and medium enterprises. It will also enhance African productivity and competitiveness that should aid the continent's structural transformation.

In implementing this strategy, the Bank will dedicate a substantial proportion of its new commitments to the improvement of transport and logistics chains, increasing energy output, enhancing the development of water resources, and expanding broadband telecommunications. It will also support the management of urban growth and the development of sustainable urban infrastructure systems, particularly urban transport and urban water, sanitation and waste management. Further, the Bank will support policy, institutional and regulatory reforms to promote private participation and enhance the efficiency and sustainability of infrastructure investments. It will also strive to maintain its leadership role in continental infrastructure initiatives, including the New Partnership for Africa's Development (NEPAD) and the Infrastructure Consortium for Africa; it will expand its analytical and advisory capabilities in infrastructure.

Already, the Bank has embarked on a number of creative approaches designed to accelerate the development of Africa's infrastructure. It is actively promoting confidence in African infrastructure projects financed through Public-Private Partnership Investments (PPPIs) to lenders who may otherwise be reluctant to invest on the continent. With a clear mandate from the African Union, the Bank it is helping to lead the continent-wide Programme for Infrastructure Development in Africa (PIDA). Adopted by the African Heads of States in January 2012, PIDA galvanizes the continent's efforts to develop key regional infrastructure.

The Bank also continues to actively support the development of African infrastructure through the NEPAD Infrastructure Project Preparation Facility, the African Water Facility, the Rural Water Supply and Sanitation Initiative, and the Multi-Donor Water Partnership Program for Africa. Yet Bank funding alone will not suffice and financing will remain a major challenge. It is estimated that Africa will have to invest US \$93 billion annually, until 2020, to close its infrastructure deficit. The investment cannot be met by the resources currently available to African governments. Even the scaling up of infrastructure financing from the traditional sources, including taxes, government borrowing and aid, will not suffice.

Home to more than 200 million people, with as many as 80 per cent surviving on subsistence agriculture and more than 50 per cent living on less than US \$1.25 a day, and legacies of protracted conflict, Africa's fragile states face particular problems. Poor infrastructure depresses their productivity by an estimated 40 per

cent. Their limited social cohesion, weak governance institutions, high unemployment, poverty and inequality, a high propensity for political instability, and a low capacity to absorb development funds, all weaken their ability to raise funding through more traditional means and markets.

Africa, it is clear, will need new and innovative sources of finance to clear its infrastructure deficit. The continent's fragile states will require tailor-made solutions and special tools to address their urgent development challenges. According to its 2013-2022 strategy, the Bank stands ready to lead the way. With a proven track record and expertise in issuing bonds in international capital markets, it will advise African governments seeking access to international debt markets to finance infrastructure projects.

Its African Financial Markets Initiative will help Africa raise the much sought-after funding. "The goal is to help African financial markets build the capacity to raise long-term finance for infrastructure development and the private sector efficiently and effectively," the strategy says. Green bonds recently issued by the Bank could set the stage for attracting a new class of investors, including those in infrastructure. As South-South investment grows, the Bank will develop innovative capital market instruments, including infrastructure bonds for Africa. For the decade to come, the AfDB is certain to be Africa's premier infrastructure development partner.

Poor infrastructure is key obstacle to development in Africa

Africa's poor infrastructure is slowing its economic development, says a recent UN report. Foreign investment, however, is helping fill in some of the gaps. African countries need to promote industrial development to spur economic progress and reduce poverty, according to a recent report by the United Nations Conference on Trade and Development (UNCTAD). Africa's share of global manufacturing is drastically disproportionate to its population. While 15 percent of the world's population lives in Africa, only about one percent of global manufacturing takes place there. That is largely due to poor transport, communications and energy infrastructures, says UNCTAD's latest Economic Development in Africa Report.

The poor state of Africa's infrastructure becomes obvious when travelling 1,800 kilometres (1,118 miles) by train from Dar-es-Salaam in Tanzania to Kapiri Mposhi in Zambia. Disused wagons are a common sight and the train makes several unexplained stops. Disused and abandoned train wagons are often seen along the route. Tanzania-Zambia Railways (Tazara), one of the region's biggest post-independence infrastructure projects, is still plagued by derailments and breakdowns after almost four decades in operation.

Less than two percent of the rail line's cargo capacity is being used, according to a Tazara regional director who spoke to the Zambian daily Lusaka Times. Heavy goods have to be transported by other, more expensive means. Still, transport

infrastructure is not even the region's biggest problem, keeping the lights on is. "The majority of countries in sub-Saharan Africa still experience regular power-outages, which of course contribute to a low productivity of many firms," said German Development Cooperation economist Matthias Grossmann. Power is Africa's biggest infrastructure weak point, with as many as 30 countries facing regular power outages, according to a 2010 report by the World Bank and France's development agency. Companies operating in most African countries where power supply is unreliable have resorted to purchasing diesel-operated power generators, which increases operating costs drastically, said Jens Schleuniger, Africa Portfolio Manager at VCH Asset Management in Frankfurt.

Unstable power supplies are often an impediment for African businesses. Experts estimate electricity produced by diesel can cost twice as much as energy from coal or hydropower-based power systems. High energy costs combined with other infrastructure deficits, such as rail and road problems, have lowered productivity rates at African companies by as much as 40 percent, according to UN estimates. "It is an entry barrier for others because you know that you face these huge infrastructure barriers," Schleuniger told Deutsche Welle. Last year, foreign direct investment to Africa fell by nine percent from 2009 to \$55 billion, according to UNCTAD.

Foreigners to the rescue

Despite the rather disappointing figures, there are some positive signs, such as the first toll road in sub-Saharan Africa which opened earlier this year, funded by the African Development Bank and Standard Bank. "For me it was a very important sign that projects like this can be realized," Schleuniger said.

Better roads, possibly supported by tolls, could be a move in the right direction. South Sudan's first power plant, which was funded by the United States Aid for International Development (USAID) was inaugurated in February. Meanwhile, the German Development Cooperation has focused on renewable energy projects. It has helped install solar energy systems at 70 remote public health centers in Ethiopia and supported the distribution of renewable energy technologies in Uganda. However, China is the biggest financier of infrastructure projects in Africa, according to the World Bank.

"China is adding infrastructure capacity to link resources in countries as diverse as Mauretania, Sudan, Nigeria, DRC (Democratic Republic of the Congo), Gabon, Angola and Zambia," George Fang, China head of mining and metals at Standard Bank, told Finance Asia magazine. Earlier this year, the Chinese government gave a soft loan to the Tanzania-Zambia Railways Authority for locomotives and wagons. As of 2010, it was investing in energy projects in Zambia, Ethiopia, Nigeria, and five other countries, according to Standard Bank.

**INFRASTRUCTURE,
ECONOMIC DEVELOPMENT
AND POVERTY REDUCTION IN AFRICA**

**EMPIRICAL RESEARCH AND
POLICY RECOMMENDATIONS**

CHAPTER 1

Infrastructure, Economic Growth and Poverty Reduction in Africa

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ABSTRACT

The relationship between infrastructure, economic growth and poverty reduction in Africa is relatively unexplored in the literature. This paper covers this lacuna. It appraises the role of infrastructure in economic growth and poverty alleviation in Africa. The relevance of infrastructure to growth and poverty is empirically robust in the macroeconomic and microeconomic literature as well as in the rapidly evolving randomized field evaluations studies. Despite the perceived role of efficient infrastructure as a critical element for economic growth, poverty reduction and the attainment of the Millennium Development Goals (MDGs), there is abundant evidence that Africa's infrastructure is still much below international standards in terms of quantity and quality. In addition to overt neglect of the sector by African governments since attaining independence, there has been a 'policy mistake' founded on the dogma of the 1980s/90s that infrastructure would be financed by the private sector. This has not materialized and the results have been rather disappointing, especially in water and transport, two extremely important sectors. Access, affordability and quality of service continue to be key issues in all infrastructure sectors. Poverty was also not carefully addressed as part of the

regulatory and other reform packages implemented during the 1990s. Not surprisingly, the infrastructure needs of the poor the majority of who reside in rural and peri-urban areas has not been met. They continue to rely on unsafe, unreliable and often overpriced alternatives to compensate for the policy failures. There is now a significant base of experience during much of the last 25 years from which useful lessons have been learnt. Unlike the reforms of the 1990s which were shaped by ideological cleavages and blame game, a lot of pragmatism is currently being exhibited by key actors and policy makers in the sector. There is gradually a coalescing of opinions on the reform agenda in the 21st century. The choice is no longer between a segregation of public and private provision but mutual collaboration between both actors. The public sector is now expected to play a much more important role in financing infrastructure than previously acknowledged, while the private sector should assist in meeting the significant needs associated with infrastructure construction, operation, and, to some extent, financing in sectors such as telecommunications, energy generation, and transport services in which commercial and political risks are much lower. Small-scale operators, who have played a generally underestimated role in catering to the needs of the populations not met by the higher visibility actors, must also be brought on board.

Key words: *Infrastructure, Economic Development, Poverty and Africa*

JEL Classifications: F3, L3, L9, N17, O55 3

INTRODUCTION

The adequate supply of infrastructure services has long been viewed as sine qua non for economic development and poverty reduction, both in the policy and academic realms. Over the last two decades, considerable efforts have been devoted to theoretical and empirical evaluation of the contribution of infrastructure to growth and economic development. More recently, increasing attention has also been shifting to the impact of infrastructure on poverty and inequality (Ariyo and Jerome, 2004; Calderon, 2008; Estache and Wodon, 2010; Ogun, 2010). While the extant literature on these two topics is far from unanimous, on the whole, a consensus has emerged that, under the right conditions, infrastructure development can play a major role in promoting growth and equity – and, through both channels, help to reduce poverty.

Paradoxically, in spite of this universally acknowledged attributes and importance, sub-Saharan Africa (SSA2) trails behind other regions in infrastructure service delivery and quality, with the gap widening over time. This is poignantly demonstrated in the energy sector. With about 800 million citizens, the 48 SSA countries produce collectively about as much power as Spain, which has only a fraction (1/18th) of the population (AICD, 2009). Despite its great potential in clean

energy resources, such as hydropower, solar, wind and geothermal, investment in new facilities in SSA has been woefully inadequate, creating a chronic supply imbalance. Investment in maintaining existing infrastructure has also lagged behind, leaving many African countries with degraded and inefficient infrastructure services; poor quality roads, railways, and ports and an inadequate ICT backbone. From rural roads, railways and harbours, to irrigation systems, telecommunications, clean water, sanitation, energy and such basic social infrastructure as health, education, banking and commercial services, hundreds of millions of Africans lack even the most fundamental amenities. This is particularly true in rural areas, where the majority of the people live. The burden also falls most heavily on women, who often must spend hours collecting wood for cooking and heating in the absence of electricity.

The lack of modern infrastructure is an impediment to Africa's economic development and a major constraint on poverty reduction, as well as the attainment of the Millennium Development Goals (MDGs). Available evidence shows that lives and livelihoods are suffering from the fragile state of infrastructure in SSA. The lack of adequate transport, power, communication networks, water, sanitation and other infrastructure put severe constraints on economic growth and poverty reduction across the region. Taken as a whole, these infrastructure constraints erode Africa's competitiveness and make bringing African goods and services to the world marketplace a challenge. According to the World Bank's 2009 Doing Business, most sub-Saharan African countries, with few exceptions, rank in the bottom 40 percent of all countries in the trading across borders indicator. The needs for infrastructure in SSA are enormous, hence the resurgence of interest in the region's infrastructure. Although, the damaging economic and social impacts of Africa's infrastructure deficiencies were widely recognized, investment in African infrastructure declined relative to other priorities during the 1990s. In part, there was an incorrect assumption that private investors would step in to finance the much needed infrastructure. However, the private sector has not produced the massive investments and dramatically improved technical performance hoped for (Jerome, 2009). Notable successes notwithstanding, overall outcomes have fallen short of expectations. The results have been disappointing, particularly in relation to water and electricity needs, two areas critical to the rapid economic development of Africa. Available evidence shows that there has been limited mobilization of private financing; a number of concessions have run into problems; in many countries, the

¹ An earlier version of this Report was prepared for UN-HABITAT, Nairobi. I owe a debt of gratitude to Professor Antonio Estache, not only for his inspirational writing that has shaped the field, but for also availing to me his recent works on infrastructure in Africa.

² Due to the way data on infrastructure stocks are structured, there is overt reference to Sub-Saharan Africa rather than Africa. Many of the indicators for North Africa are lumped with the Middle East.

cost of infrastructure services has not diminished, and increases in quality and access rates have not occurred as anticipated.

The investment needs in Africa's infrastructure are quite substantial. The Africa Infrastructure Country Diagnostic Study (AICD) estimates the cost of addressing Africa's infrastructure at about \$93 billion a year, about 15 percent of GDP, one-third of which is for maintenance. The region's track record of investment flows suggest that the private sector by itself is unlikely to provide the kind of near-term funding needed to address these shortcomings.

With Africa's low levels of infrastructure investment in the face of rapidly growing needs, the private sector appears capable of supplying only a fraction of the investment needs. The global economic and financial crisis of 2007-09 posed a new threat to the role of the private sector in financing infrastructure development in Africa. The effects of the crisis are already apparent as seen in greater delays in financial closures, more cancellations, and higher financing costs for private sector infrastructure projects, despite the stimulus package introduced in response to the financial crisis in several countries, often targeted at infrastructure.

This report evaluates the role of infrastructure in promoting economic growth and poverty reduction in Africa. It is devoted to the study of the complementary physical infrastructure - telecommunications, power, transport (roads, railways, ports and airports), and water supply. It is structured in five sections. Chapter Two appraises the relationship between infrastructure and development; Section three examines Africa's infrastructure endowment; and section four the infrastructure/development and poverty nexus in Africa. Section five concludes.

2 INFRASTRUCTURE, ECONOMIC GROWTH AND POVERTY REDUCTION

2.1 INFRASTRUCTURE AND THE MILLENNIUM DEVELOPMENT GOALS

At the United Nations (UN) Millennium Summit of September 2000, 189 nations adopted the Millennium Declaration,¹ out of which grew a set of eight goals, eighteen numerical targets and forty-eight quantifiable indicators to be achieved over the 25-year period from 1990-2015. The Millennium Development Goals (MDGs) commit the international community to an expanded vision of poverty reduction and pro-poor growth and vigorously place human development at the centre of social and economic progress in all countries. They seek to reduce the number of poor in the world and specifically target the worst aspects of poverty.

Economic infrastructure – essentially, transport, energy, information and communications technology, water, sanitation and irrigation – is specifically identified in the MDGs, only in respect of water and sanitation, telephones, personal computers and internet users. The transport sector has been largely ignored in the MDGs discourse; hence it is widely referred to as the 'omitted MDG'.

In many ways, infrastructure investments underpin virtually all the MDGs, including halving poverty in the world by 2015 as shown in Table 1. It is widely acknowledged that the contribution of infrastructure to halving income poverty or MDG 1 is more significant than the other goals (Willoughby, 2004). Infrastructure also affects non-income aspects of poverty, contributing to improvements in health, nutrition, education and social cohesion. For example, roads contribute significantly to lowering 5 transaction costs (MDG I), raising girls' school attendance (MDG II/III), improving access to hospitals and medication (MDG IV/V/VI), and fostering international connectivity (MDG VIII).

Table 1: Infrastructure's Contribution to the Millennium Development Goals

MDGs =>	I Poverty	II Education	III Gender	IV Mortality.	V Mat. Health	VI HIV	VII Environment	VIII Partnership
Infrastructure:								
Transport (local)	+++	++	++	+	+		+	+
Transport (regional)	+++	+	+	++	+	+	--	+++
Modern energy	+++	+	+	++	+	+	++	+
Telecom	++	+	+	+	+	+	+	++
Water (private use)	++	++	+	+++	+	+	+++	+
Sanitation	+	+	++	+	+	+	++	+
Water management	+++		+	+			++	

Source: Willoughby 2004

2.3. THE CONCEPT OF POVERTY AND THE POOR

The MDGs are focusing international attention more sharply on poverty reduction. The international target proposed by the MDGs has been widely adopted, namely, to reduce by half in 2015 the proportion of people living in extreme poverty. But what this target might mean is obscured by the bewildering ambiguity with which the term 'poverty' is used, and by the pecuniary indicators proposed to monitor it like the international poverty line of \$US 1 per day.

Poverty often appears as an elusive concept, especially from the perspectives of researchers and policy makers in developing countries. The best definition of poverty remains a matter of considerable academic argument. Perhaps the only point of general agreement is that people who live in poverty must be in a state of deprivation; that is, a state in which their standard of living falls below minimum acceptable standard.

The concepts of poverty have developed rapidly over the last four decades. From an analytical perspective, serious concern or thinking about poverty can be traced back to Rowntree's (1901) study. In the 1960s, the main focus was on the level of income, reflected in macro-economic indicators like Gross National Product

(GNP) per head. This was associated with an emphasis on growth, for example in the work of the Pearson Commission – Partners in Development (1969). In the 1970s, concern about poverty became more prominent, notably as a result of Robert McNamara's celebrated speech to the World Bank Board of Governors in Nairobi in 1973 on basic needs, and the subsequent publication of *Redistribution with Growth* (Adelman, 1974).

According to the World Bank (2001), 'poverty is pronounced deprivation in well-being', where well-being can be measured by an individual's possession of income, health, nutrition, education, assets, housing, and certain rights in a society, such as freedom of speech. Poverty is also viewed as a lack of opportunities, powerlessness, and vulnerability. This broadens the definition of poverty to include hunger, lack of shelter, being sick and not being able to see a doctor, not being able to go to school and not knowing how to read, not having job, fear for the future, living one day at a time and losing a child to illness brought by unclean water. Poverty further entails lack of representation and freedom. Indeed, the poor themselves see powerlessness and being voiceless as key aspects of their poverty (Narayan et al., 2000).

In general, poverty is a condition that is experienced over time and is the outcome of a process. While many are born into poverty and remain in it, others experience the condition at one or more stages of their life and move in and out of it. Fundamentally, poverty is a negative term denoting absence or lack of material wealth. Such absence, however, is seldom absolute and the term is usually employed to describe the much more frequent situation of insufficiency either in the possession of wealth or in the flow of income (Green, 2008).

As Green (2008) suggests, poverty is often embedded in social structures that exclude the poor. Social exclusion can be understood as those processes of discrimination that deprive people of their human rights and result in inequitable and fragmented societies. Gender discrimination is the most common form of discrimination worldwide. The Human Development Report (2001) notes that 70 percent of the world's poor are female on average and that women's share of GDP in developing countries is less than 50 percent of men's. Institutionalised racism, as in South Africa, is also responsible for extreme inequality in income and land ownership (DFID, 2002).

Seen from this perspective, poverty is a multi-dimensional phenomenon and experiences of poverty are conceptually specific to geographical areas and groups. Many factors converge to make poverty an interlocking multi-dimensional phenomenon. These come out clearly in the criteria used to differentiate between categories of rich, average and poor. The 2000/2001 World Development Report (World Bank 2001) identifies three broad dimensions of poverty relating to lack of income, insecurity and lack of political voice.

In defining and measuring poverty, a distinction, thus needs to be made between the traditional uni-dimensional and more recent multidimensional approaches. Whereas the traditional approach refers only to one variable such as income or consumption, multidimensional approaches, such as Sen's capability theory or studies derived from the concept of fuzzy sets, extend the number of dimensions along which poverty is measured.

The Oxford Poverty and Human Development Initiative recently unveiled an innovative new 'multidimensional' measure of people living in poverty known as the Multidimensional Poverty Index or MPI. The MPI features three deprivation dimensions - health, education and standard of living. Using the Alkire Foster method, outcomes of individuals or households are measured against multiple criteria (ten in all) from each of the three dimensions thus providing a detailed picture of not just who is poor, but in what way they are poor.

Taken in this context, infrastructure makes valuable contributions to all the MDGs (Willoughby, 2004).

2.2. INFRASTRUCTURE AND ECONOMIC DEVELOPMENT

In general, the evidence on the impact of infrastructure on poverty comes from two types of studies. The first focuses on the absolute impact of infrastructure on macroeconomic (production-related) indicators, the second is the microeconomic evidence both at the household and firm levels. A recent development in the microeconomic literature is the increasing use of randomized evaluation to demonstrate impact as well as focus on the dynamic and stochastic nature of poverty. This derives from the realization that 7 policy analyses based on static poverty can yield substantial inefficiencies in policy interventions (Jalan and Ravallion, 2003).

2.2.1 MACROECONOMIC EVIDENCE

A considerable effort has been devoted at the macroeconomic level to assessing the effects of infrastructure on broad aggregates such as output, growth and productivity, using a variety of data, empirical methodologies and infrastructure measures. Literarily, hundreds of papers have been written on this subject since the seminal work of Aschauer (1989), and the literature has blossomed over the last two decades. The most popular approaches include the estimation of an aggregate production function (or its dual, the cost function), and empirical growth regressions. Infrastructure is variously measured in terms of physical stocks, spending flows, or capital stocks. Estache (2006), Romp and de Haan (2007) and Straub (2007) offer comprehensive surveys of this literature. Admittedly, more of these studies are based on the experience of developed economies.

A majority of this literature observes a positive long-run effect of infrastructure on output, productivity, or their growth rate. More specifically, this is the case with almost all of the studies using physical indicators of infrastructure stocks. But the results are more mixed among the growth studies using measures of public capital stocks or infrastructure spending flows than those that do not (Straub 2007).

Romp and de Haan (2005) note that 32 of 39 studies of OECD countries found a positive effect of infrastructure on some combination of output, efficiency, productivity, private investment and employment. (Of the rest, three had inconclusive results and four found a negligible or negative impact of infrastructure). They also review 12 studies that featured developing countries. Of these, nine find a significant positive impact. The three that find no impact rely on public spending data which is a notoriously imprecise measure, especially for cross-country analysis. Other meta-analysis also shows a dominance of studies that point to a generally significant impact of infrastructure particularly in developing countries. Calderon and Servén (2004) report that 16 out of 17 studies of developing countries find a positive impact as do 21 of 29 studies of high income countries. Briceño et al (2004) carry out a similar review of about 102 papers and reach similar conclusions.

A strand of the literature has focused on the development impact of infrastructure in Africa. Ayogu (2007) provides a survey of the empirical literature. Most of the studies deal with the growth and productivity effects of infrastructure development. For example, Estache, Speciale and Veredas (2006) present pooled OLS (in full) growth regressions based on an augmented Solow model, including a variety of infrastructure indicators. Their main conclusion is that roads, power and telecommunications infrastructure with the exception of water and sanitation contribute significantly to long-run growth in Africa.

Perkins, Fedderke and Luiz (2005) use a detailed database on infrastructure investment and capital stocks, spanning as long as a hundred years, to test for the existence of a long-run relation between different infrastructure measures and GDP. Their results suggest a bi-directional relation in most cases.

Several broad generalizations can be deduced from the literature. First, there is increasing consensus on the notion that infrastructure generally matters for growth and production costs, although its impact seems higher at lower levels of income. Nevertheless, the findings remain tremendously varied, particularly in relation to the magnitude of the effect, with studies reporting widely varying returns and elasticity. Overall, the literature supports the view that infrastructure matters but does not unequivocally argue in favour of more or less infrastructure investments.⁸

Second, the literature has been plagued by numerous methodological issues that have often clouded the robustness of the conclusions³. Estimating the impact of infrastructure on growth is a complicated endeavour, and papers vary in how

carefully they navigate the empirical and econometric pitfalls posed by network effects, endogeneity, heterogeneity and very poor quality data.

In general, most critiques of Aschauer's (1989) pioneering work with its findings of implausibly high rates of return focus on a failure to appropriately correct for the possibility that an omitted variable is driving the results. Indeed, later studies (see Gramlich 1994 for an overview of this literature) attempted to correct this by introducing country (or region) fixed-effects and found much lower rates of return. However, the fixed-effect approach precludes looking at the impact of other slow moving variables hence a number of authors prefer not to use it (e.g. Estache, Speciale and Veredas 2006). Even when studies have been technically sound, they have suffered from other limitations such as the nature of data. Infrastructure capital stocks are inadequate proxies to the growing private nature of infrastructure services, while physical indicators are still too coarse to really capture the flow of services to households and firms, and optimal stocks are unlikely to be ever identifiable at the aggregation level of regions or countries. This is reflected in the wide variety of findings in the now abundant empirical literature on infrastructure and growth or productivity.

2.2.2 MICROECONOMIC EVIDENCE

Infrastructure, no doubt, has major implications for a variety of development outcomes, both at the household level (health, education and social mobility), at the firm level (productivity, industrial development) and at the global level (climate change). The microeconomic literature on infrastructure is, however, still evolving and far from robust but with divergent results similar to the macroeconomic evidence.

In the microeconomic literature, considerable attention has been devoted to roads because of the perception that they will ineluctably lead to poverty reduction and income generation, especially in rural areas. Gibson and Rozelle (2003), for example, appraise the effect of access to road in Papua New Guinea on poverty at the household level. They demonstrate that reducing access time to less than three hours where it was above this threshold, leads to a fall of 5.3 percent in the head count poverty index. Using Tanzanian household survey data, Fan, Nyange and Rao (2005) look at the impact of public investment and roads on household level income and poverty and find very positive effects, with a ratio of 1 to 9 in the case of public capital investment. Bakht, Khandker and Koolwal (2009) estimate the impact of two roads projects in Bangladesh on seven household outcomes by household fixed-effects method. For the two projects under consideration, road development significantly

³See for example Estache and Fay (2007), Briceño-Garmendia and Klytchnikova (2006) and Briceño-Garmendia, Estache and Shafik (2004) for more elaboration on the methodological challenges in the study of infrastructure.

reduced the price of fertilizer. Transport costs also decreased significantly. Going beyond mere access, Gachassin, et. al (2010) use the second Cameroonian national household survey (*Enquête Camerounaise Auprès des Ménages II*, 2001) to address the impact of road access on poverty. They report that it is not road availability per se that helps to reduce poverty, but the opportunities opened by roads, more specifically labour opportunities.

Another group of studies examines firm-level data. Reinikka and Svensson (2002) use unique microeconomic evidence to show the effects of poor infrastructure services on private investment in Uganda. They surveyed Ugandan firms to analyze how entrepreneurs cope with deficient public capital. Their findings show that faced with unavailable and unpredictable services, many firms invest in substitutes such as electricity generators. According to Reinikka and Svensson, poor public capital, proxied by an unreliable and inadequate power supply, significantly reduces productive private investment. As a result, poor public capital crowds out private investment. Their findings are similar to those from investment climate assessments, such as Anas, Lee and Murray (1996) and Lee, Anas and Oh (1996) on Indonesia, Nigeria and Thailand, and Alby and Straub (2007) on eight Latin American countries. The rapid adoption of mobile phones has generated a great deal of studies on its effect on economic development and poverty eradication. Although, the evidence on Africa is quite recent, an emerging body of literature identifies the effect of mobile phones on development outcomes, using mainly panel data and the quasi-experimental nature of the rollout of mobile phone service. These studies primarily focus on the relationship between mobile phone coverage and specific outcomes, such as price dispersion across markets (Aker and Mbiti, 2010), market agents' behavior (Aker, 2008; Muto and Yamano, 2009) and producer and consumer welfare (Aker, 2008).

Aker (2008) examines the impact of mobile phones on grain markets in Niger. He finds that the introduction of mobile phones is associated with increased consumer welfare through a reduction in the intra-annual coefficient of variation, thereby subjecting consumers to less intra-annual price risk. Mobile phones also increased traders' welfare, primarily by increasing their sales prices, as they were able to take advantage of spatial arbitrage opportunities. The net effect of these changes was an increase in average daily profits, equivalent to a 29 percent increase per year.

Aker and Mbiti (2010) also find that the introduction of mobile phones reduces dispersion of grain prices across markets by 10 percent. The effect is stronger for those market pairs with higher transport costs, namely, those that are farther apart and linked by poor quality roads. The effect is also stronger over time, suggesting that there are networks effects. The primary mechanism through which mobile phones improve market efficiency is a change in traders' (middlemen)

marketing behaviour: grain traders operating in mobile phone markets search over a greater number of markets, sell in more markets and have more market contacts as compared with their non-mobile phone counterparts.

Muto and Yamano (2009) estimate the impact of mobile phones on agricultural markets in Uganda, focusing on farmers' market participation rather than market efficiency. Using a panel dataset on farm households between 2003 and 2005, they find that mobile phone coverage is associated with a 10 percent increase in farmers' probability of market participation for bananas, although not maize, thereby suggesting that mobile phones are more useful for perishable crops. This effect was greater for farmers located in communities farther away from district centres. The authors suggest that improved access to price information reduced marketing costs, increased farm-gate prices and productive efficiency though they did not empirically explore the specific mechanisms driving the results.

Without any doubt, drawbacks of the microeconomic approach exist. The main one being that since the contributions are by nature focused on specific cases and contexts, they may not always provide lessons that can be generalized.

2.3 POVERTY AND INEQUALITY

The studies reviewed in the preceding section all look at infrastructure's contribution to economic growth rather than specifically poverty and inequality. While there is considerable evidence that infrastructure development is correlated with economic growth, there is less evidence to support a positive impact on poverty. Some evidence suggests that certain types of infrastructure service provision, such as roads and transport, have a potential contribution to agricultural output, and that infrastructure improvements (in electricity supply, transport and telecommunications) in small towns contribute significantly to industrial growth and employment. At a community or individual level, benefits can accrue to the poor if labour-intensive methods of construction are used rather than capital-intensive methods (Sida 1996).

Datt and Ravallion (1998) analyze state-level poverty data from India for the period 1957–1991 and conclude that state-level differences in poverty reduction can be attributed to differences in initial conditions, particularly irrigation infrastructure and human resources. Similarly, van de Walle (1996) uses the Vietnam Living Standards Survey of 1992–1993 and estimated the poverty reduction effect of irrigation infrastructure. With regard to the impact of water supply projects on poverty, Jalan and Ravallion (2003) proved that the water supply system had a stronger economic effect among poor households than it did among non-poor households. Lokshin and Yemtsov (2004, 2005) estimate the poverty reduction effect of community-level infrastructure improvement projects on water supply systems that were implemented between 1998 and 2001 in Georgia. Jalan and Ravallion (2003)

investigate the role of water supply and public health systems. Moreover, the role of irrigation and water related infrastructure in poverty reduction has been well documented in the literature.

A strand of the empirical literature focuses on the poverty effects of specific infrastructure projects, using matching techniques that combine samples of beneficiaries with samples drawn from regular household surveys. On the whole, the evidence shows that public investment on infrastructure, especially on the rehabilitation of rural roads, improves local community and market development. For example, rehabilitation of rural roads raises male agricultural wages and aggregate crop indices in poor villages of Bangladesh (Khandker et al., 2006). Likewise in Vietnam, public investment on infrastructure has resulted in an increase in the availability of food, the completion rates of primary school and the wages of agricultural workers (Mu and van de Walle, 2007). In the same vein, other studies elsewhere find that access to new and improved roads in rural areas enhances opportunities in non-agricultural activities in Peru (Escobal and Ponce, 2002) and in non-farm activities among women in Georgia (Lokshin and Yemtsov, 2005).

Given the controversy surrounding both the theoretical and empirical literature on the determinants of poverty, Jalilian and Weiss (2004) explore the nexus between infrastructure, growth and poverty using samples of countries from Africa, Asia and Latin America. Applying different theoretical and empirical techniques, they obtain results from the estimation of the 'ad hoc model' showing that on average, a 1.0 percent increase in infrastructure stock per capita, holding human capital constant, is associated with a 0.35 percent reduction in the poverty ratio, when poverty is measured by US\$1/day poverty headcount, or 0.52 percent when it is measured by US\$2/day poverty headcount. This study suggests that, while infrastructure investment in general has a role to play in poverty reduction, physical infrastructure investment needs to be very substantial and must be supported by factors such as improvement in social infrastructure so as to promote rapid reductions in poverty.

However, relatively few empirical studies have tackled directly the inequality impact of infrastructure at the macroeconomic level. López (2004) and Calderón and Servén (2008) are perhaps the two well known studies and they both use cross-country panel data. López uses telephone density as proxy for infrastructure, while Calderón and Servén employ synthetic indices of infrastructure quantity and quality. In both cases, the finding is that, other things being equal, infrastructure development is associated with reduced income inequality. Indeed, for infrastructure development to reduce income inequality, it must help expand access by the poor, as a key ingredient. Combined with another finding that infrastructure appears to raise growth rates, the implication would, therefore, be that with the right conditions, infrastructure development can be a powerful tool for poverty reduction.

The empirical literature suggests that the link between infrastructure and poverty reduction is not linear. While the picture is broadly positive, experience suggests that there is a complex set of variables that need attention if the development of infrastructure services is to contribute to pro-poor growth. While 'elephant' infrastructure projects are far from unknown, while a variety of barriers may prevent poor people from access to economic opportunities created. In particular, it should be noted that an inadequate focus on governance and institutional frameworks has resulted in outcomes that are often less than anticipated. High levels of personal and political corruption, facilitated by weak systems, have hindered a demand-led approach, distorted public investment choices, diverted benefits from the poor, encouraged neglect of maintenance and hindered the contribution to growth. Too often, there have been negative rather than positive consequences for poor people, including environmental damage to which the poor are most vulnerable.

2.4 RANDOMIZED FIELD EXPERIMENTS AND IMPACT EVALUATION

The last decade has witnessed an explosion in the use of randomized field experiments of the Bannerjee-Duflo type (the same approach used by the medical industry to determine if a drug or treatment does what it was designed to do) to poverty interventions to identify whether or not a program is effective. The explosion has resulted from a convergence of several forces - the increasing demand for accountability and results by key stakeholders including bilateral and multilateral donors, availability of high quality data, refinement in the field and interest by academics amid some sceptics.

Experimental designs, also known as randomization, are generally considered the most robust of the evaluation methodologies. By randomly allocating the intervention among eligible beneficiaries, the assignment process itself creates comparable treatment and control groups that are statistically equivalent to one another, given appropriate sample sizes. The outcome is very powerful because, in theory, the control groups generated through random assignment serve as a perfect counterfactual, free from the troublesome selection bias issues that exist in all evaluations. Quasi-experimental (non-random) methods are also used to carry out an evaluation when it is not possible to construct treatment and comparison groups through experimental design. These techniques generate comparison groups that resemble the treatment group, at least in observed characteristics through econometric methodologies, which include matching methods, double difference methods, instrumental variables methods, and reflexive comparisons. The main benefit of quasi-experimental designs is that they can draw on existing data sources and are, thus, often quicker and cheaper to implement, and they can be performed after a program has been implemented, given sufficient existing data. The principal disadvantages of quasi-experimental techniques are that (a) the reliability of the

results is often reduced as the methodology is less robust statistically; (b) the methods can be statistically complex; and (c) there is a problem of selection bias.

While there is growing coverage of economic infrastructure in evaluation efforts, published evaluations are still few as compared to health or education. Estache (2010) presents an excellent review of the literature on impact evaluations on infrastructure derived mainly from experimental and quasi-experimental techniques and other methodologies when these techniques cannot be used. The review takes stock of the lessons of recent impact evaluations in energy, water and sanitation so far covered by evaluations based on randomized experiments as well as the various transport subsectors (ports, railways, rural roads and highways).

In all, modern evaluation techniques are delivering on their promise to identify poverty related and distributional issues with many of the interventions considered in infrastructure activities, whether projects, programs or policies. Whatever the form of evaluation, the research and practice of the last few years has provided many insights on why not all apparently comparable interventions have sometimes generated dissimilar impacts across locations. Differences in institutions, legal or social incentives and norms, access to and sources of financial resources, technological preferences and choices or in initial conditions can all explain quite convincingly differences in impact. In what follows, we succinctly appraise developments in three infrastructure sectors where the methodology is reasonably advanced.

2.4.1 WATER AND SANITATION

There are several recent evaluations conducted in water and sanitation, including the World Bank Dime initiative (Poulos et al., (2006), the World Bank Evaluation Department, (IEG,2008) and a new think tank (3ie) focusing on impact evaluations (Snilstveit and Waddington, 2009). Snilstveit and Waddington (2009), for example, which is the most recent, is a synthetic review of impact evaluations examining effectiveness of water, sanitation and hygiene (WSH) interventions in reducing childhood diarrhoea. The survey was limited to rigorous impact evaluation techniques, using experimental (randomised assignment) and quasi-experimental methods, which evaluated the impact of water, sanitation and/or hygiene interventions on diarrhoea morbidity among children in low- and middle-income countries. It identified 65 studies for quantitative synthesis, covering 71 distinct interventions assessed across 130,000 children in 35 developing countries during the past three decades

According to the survey, studies typically vary from 6 to 19 months in duration for the collection of water related disease data, with their average sample sizes varying from 327 for point of use treatment to almost 6000 for water supply. All studies found some impact for each intervention type but there was significant diversity of

efforts across studies. The results, however, call into question some received wisdom, particularly with regard to the sustainability of water quality interventions and more limited effectiveness of sanitation.

The main consensus in water and sanitation are:

Water and sanitation are associated with other desirable MDG goals, namely, health, education, nutritional, employment and income outcomes. There are some variances in the effectiveness of the interventions aimed at reaching the MDGs. For instance, unless all connections come from piped water, water supply interventions tend to be less effective in terms of health (although they can help save time), than water treatment at point of use interventions or many sanitation and hygiene interventions. Assessments thus need to reflect quality of water and quality of service and not just the quantity resulting from the intervention;

1. Social norms are quite relevant in maximizing the efforts to improve hygiene and in ensuring the cooperation needed to guarantee the sustainability of interventions in the sector; and,
2. The policy and institutional context in which the evaluation is conducted is extremely important. For example, educating water users can have high payoffs as well, but that the form of education matters a lot more than many field workers sometimes recognize. The effects can be very different if the knowledge comes from peers or if it comes from common formal training, for instance. There is however no clear ranking of approaches.

2.4.2 TRANSPORT

Transport does pose special challenges that limit the possibility to assume randomness. While many small scale or rural transport projects can be evaluated using real or quasi trials, large projects such as highways, ports, airports and railways are not easily amenable to experimental and quasi-experimental techniques. For example, to perform a purely randomized experimental approach, one would need two or more similar areas in terms of their geography and economic situation. Investments are sometimes based on demand forecasts with 20-30 years lead time. The payoffs for many infrastructure interventions tend to be slow to show up. Estache (2010), thus recommends the use of other feasible approximations such as general equilibrium and other structural models to obtain an evaluation (propensity scores) but they are not simple either.

Van de Walle (2009) offers a very thorough overview of the technical dimensions of impact evaluations of rural road projects. She observes that very few of the many aid-financed rural road projects in developing countries have been subjected to evaluations. The reason being that they are simply hard to do using

(quasi-)randomized evaluation techniques. The most challenging characteristic of road projects in terms of the techniques approximating random trials is that they have no natural comparison group. It is indeed, hard to find two similar regions in all the relevant characteristics such as the initial conditions in the composition and level of production activities, composition and levels of workers skills, the number of users, access to other transport modes, access to schools or any variable that may influence the evolution of the derived demand for the road, and hence the comparability of the evolution of regions with and without the road project. In addition, evaluators have a hard time addressing all relevant spill over effects as well as time dimensions associated with many road PPPs. This is why it is still common to see assessments of the impact of rural roads interventions conducted through general equilibrium modeling (Estache, 2010). Despite the challenges, there are a few well known top quality evaluation. Banerjee, Duflo and Qian (2009) for China, Jacoby (2001) on Nepal, van de Walle and Mu (2007) on Vietnam, Gibson and Rozelle (2003) on Papua New-Guinea), Khandaker et al. (2006) on Bangladesh and Dercon et al. (2007) on Ethiopia.

Banerjee, Duflo and Qian (2009), for example, estimate the effect of access to transportation networks on regional demographic and economic outcomes across counties in China during 1986-2003. They go beyond the trade related impacts and assess the effects of greater factor mobility, better access to education, health care and finance, and other effects of diffusion of ideas, technologies, etc. Their results, while preliminary are somewhat surprising. They do not find a significant effect on GDP levels, population, or the composition of population. However, with a few important caveats, they find a distributional impact across space from distance to railways. On average, increasing distance from railroads by 1.0 percent decreases annual GDP growth by 0.12-0.28 percent across sectors.

The conclusion and overall policy message of these papers is quite robust. Rural roads provide substantial benefits to households in low-income countries, especially the poorest. But not all roads beneficiaries get the same benefits. There is a wide range of outcomes, including situations in which a specific outcome is present in one project and not in another one within the same country. Moreover, they also show that rural roads are not a panacea for poverty alleviation and the mechanics of poverty alleviation can vary quite a lot across projects.

2.4.3 POWER

There are very few publications on the impact of electricity interventions as in the case of water and roads, impact evaluations tend to focus a lot more on rural populations. Estache (2010), however, indicates that there are several ongoing evaluations (in Afghanistan, Bangladesh, El Salvador, Ethiopia, Mozambique, Pakistan, Peru, Tanzania, and Vietnam) but it is too early to draw major conclusions from these projects.

Using Chinese data from 1970-97, Fan et al. (2002) show that, for every 10,000 yuan spent on electricity development, 2.3 persons are brought out of poverty. Balisacan et al. (2002) did a similar analysis for Indonesia in 1990 and concluded that a 10 percent improvement in access to a composite technology measure (including electricity in a village) raised the income of the poor by roughly 2 percent. Taylor (2005) and Escobal and Torero (2005) also conducted similar assessments for Guatemala and Peru and drew very similar positive conclusions on the gains from electrification. Balisacan and Pernia (2002) use Filipino data from 1985-1997 to argue that the rich tend to benefit more from increased access to electricity.

However, the above studies suffer from a major econometric deficiency, the inability to fully address the causality between the intervention and the impact. They also do not account for the fact that electricity is often installed first in areas with the greatest potential for economic growth (Estache, 2010).

Dinkelman (2008) provides insights into the impact of rural electrification on cooking technologies and employment. These effects are identified by exploiting variation in electricity project placement and timing from South Africa's mass roll-out of rural household electricity. She finds that within five years, treated areas substitute sharply towards electricity in cooking. She also finds a 13.5 percent increase in women employment but no effect on male employment. This employment effect is driven by the switch to electricity from cooking wood that is usually collected by women.

3. AFRICA'S INFRASTRUCTURE ENDOWMENT

By any conceivable measure, Africa lags considerably behind other regions of the developing world, both in terms of infrastructure service quality and quantity. This observation holds sway across a wide range of indicators, including the density of road networks and paved roads, per capita capacity to generate electricity, and household access to electricity, water, and sanitation. Moreover, there is abundant evidence to show that many countries are not keeping up with the rapid demographic growth, including rapid urbanization and if the current trends prevail, the gap is likely to widen even further.

The dismal infrastructure picture in Africa is poignantly painted in Table 2 which presents the continent's endowment relative to other regions of the world. As indicated in the table, the data though not recent in some sectors, suggests that electricity is accessible to as low as 18 percent of sub-Saharan Africa's (SSA) population, relative to 44 percent in South Asia, the next-lowest region. Access to an improved water source is 58 percent in SSA compared to 87 percent for South Asia and East Asia and the Pacific respectively. Access to improved sanitation, at 31 percent, is comparable to that in South Asia at 33 percent, but well below the 66 percent reported for East Asia and the Pacific. Moreover, access to a flush toilet

(connecting to a sewer or septic tank) is only 6 percent in SSA.

These aggregate figures, however, mask considerable country variations and the rural /urban dichotomy. Coverage rates in urban areas are much higher than in rural areas. To some extent, Africa's low overall access rates are partly explained by negligible service coverage in rural areas, where the bulk of the population still resides. When broader measures of improved water and sanitation are considered, the discrepancies are still large and stark. About 63 percent of the urban population has access to an improved water source, compared with about 14 percent of the rural population. Similarly, about 42 percent of the urban population has access to improved sanitation versus about 7 percent of the rural population, and only 12 percent of rural households have access to electricity.

Post-conflict countries also suffer disproportionately from lack of basic infrastructure. During war, a country's physical infrastructure is likely to have been significantly damaged or disassembled. Frequently, the neglect of basic maintenance is an even greater problem than destruction and vandalism. During a lengthy conflict, a cumulative lack of maintenance results in infrastructure that must be reconstructed because it is beyond salvaging.

Africa's 15 landlocked countries, home to about 40 of the region's overall population, also face special challenges. Being landlocked would on average, add four days to land distribution of exports and nine days to imports compared with equivalent distances within the seaport country. The geographic disadvantages results in high transport costs which hamper intra and inter-regional trade, as variously shown by Elbadawi, Mengistae and Zeufack (2006), and Behar and Manners (2008). Reduced openness to trade emerges as the main factor behind the robust empirical finding that – other things equal – landlocked countries tend to grow more slowly than the rest.

Table 3 provides estimates of trends in access rates to basic infrastructure services in SSA by households at the national level. It includes piped water, flush toilets, electricity, and landline phones obtained from Demographic and Household Surveys (DHS). A cursory examination of the table indicates that access is generally low for all the countries. Only South Africa (piped water and electricity) and Gabon (electricity) have an access rate that is greater than 50 percent at any point. Further, there is clearly a discernable relationship between access rates and economic development. In relatively poor countries such as Burkina Faso, Burundi, Chad, Ethiopia, Kenya, Madagascar, Malawi, Mozambique, Niger, Rwanda, Sierra Leone, Tanzania, and Uganda, less than 20 percent of the population have access to any modern infrastructure service at any time. On the other extreme is middle income Gabon where only 15 percent of the households do not have electricity. The two richest countries (South Africa and Gabon) have the highest access rates to piped water and electricity. South Africa also has the highest coverage rate for flush toilets

and landline phones.

The average Africa-wide annual growth rates in coverage for the different services in the countries in the sample is 5.0 percent for electricity, 1.4 percent for piped water, 7.0 percent for flush toilet, and 12 percent for landline telephones during the period 1996-2005. It is striking that for piped water and flush toilets, around a quarter of the countries in the sample actually show evidence of negative growth rates in coverage, while another third report only modest growth rates of 0-4 percent per year. Furthermore, beyond broad averages, a large number of countries are failing to ensure that service expansion keeps pace with population growth. For piped water and flush toilet, close to half of the countries are expanding too slowly to keep pace with demographic growth. In the case of electricity and landline telephones, around 80 percent of the countries are managing to expand coverage faster than they are expanding population. But even for these countries, under a continuation of current trends, it would take perhaps 2050 to reach universal access for water and beyond 2050 for other services.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table2 : Africa's Infrastructure Endowment Relative to other Regions

	Sub-Sahara African	South Asia	East Asia and Pacific	Europe and Central Asia	Latin America and Caribbean	Middle East and North Africa
<i>Population (2007)</i>	561	312	800	1,522	1'912	446
<i>GNP Per capita (2007)</i>	952	880	2,180	-	5,540	-
Sector and measure						
<i>Transport</i>						
Paved roads (% of Total 2006)	11.9	56.9	11.4	n.a	22	81.0
<i>Information and communication technology</i>						
Fixed Line and Mobile Subscribers per people (2007)	25	26	67	121	85	68
PCs per 1000 people (2007)	1.8	3.3	5.6	10.6	11.3	6.3
<i>Energy</i>						
Electricity Consumption (per , 2005 KWh capita)	542	432	1,492		1,715	1,337
Access to electricity (% of households with access, 2004)	18	44	57	—	79	88
<i>Water and sanitation</i>						
Water (% of population with no improved water source, 2006)	58	87	87	95	91	89
Sanitation (% of population with access to improved sanitation facilities, 2006)	31	33	66	89	78	77

Sources: 2009 World Development Indicators, World Bank, April 20, 2009; except for energy which is sourced from AICDs and Energy Information Agency, U.S. Department of Energy.

There is still lack of objective data on the technical quality of Africa's infrastructure, such as chemical quality of water delivered. Table 3, thus, presents some rough indicators of the quality of Africa's infrastructure benchmarked against the performance of low, middle and high income countries. Over all, the service quality for Africa is poor across all infrastructure sectors but compares favourably with what is obtainable in low income countries (LICs). While Africa is at par with other LICs in water, it seems to be slightly technically better in electricity and telecommunications. This, however, should be interpreted with caution in view of the limitation of the indicators utilized. For example, in transport and communication, the data covers only 6 countries. On perceptions, Africa fared relatively worse off in all the indicators except for mobile phones and this should be a concern to policy makers.

Table 4: Quality Ratings of the Main Infrastructure Services in Africa (2002 Data)

	Average (sample sizes in parenthesis)			
	Africa	Low income	Lower-Middle income	Upper-middle income
Electricity				
Technical				
Transmission and distribution loss (% of total output)	22 (17)	24 (33)	15 (31)	14 (23)
Perceived (1 = worst, 7 = best)				
Commercial perception of electric services	4.3 (6)	2.8 (9)	4.2 (25)	5.2 (20)
Commercial perception of public agency electricity provider	4.3 (16)	4.0 (27)	5.0 (27)	5.3 (17)
Water and sanitation				
Technical				
Piped to other sources of drinking water ratio ^(c)	0.34 (25)	0.34 (34)	0.71 (21)	0.73 (1)
Perceived (1 = worst, 7 = best)				
Commercial perception of water service ^(e)	4.2 (16)	4.0 (27)	4.8 (24)	5.0 (18)
Telecom				
Technical				
Phone faults (reported faults per 100 mainlines) ^(d)	63 (40)	67 (49)	32 (39)	22 (27)
Perceived (1 = worst, 7 = best)				
Commercial perception of telephone/fax infrastructure	4.3 (6)	3.4 (9)	4.9 (25)	5.6 (20)
Commercial perception of available mobile	5.7 (6)	5.0 (9)	5.8(25)	6.0 (20)
Commercial perception of internet access in schools	2.8 (6)	2.1 (9)	3.0 (25)	3.8 (20)
Commercial perception of postal efficiency	3.7 (6)	3.1 (9)	3.5 (25)	4.4 (20)
Transport				
Technical				
Paved roads (% of total road network) ^(c)	25 (44)	29 (61)	48 (7)	55 (33)
Perceived (1 = worst, 7 = best)				
Commercial perception of service delivered by road department ^(b)	3.7 (16)	3.4 (27)	4.2 (24)	4.1 (18)
Commercial perception of port facilities	3.8 (6)	2.6 (9)	3.5 (25)	3.8 (20)
Commercial perception of railway services	3.2 (6)	2.7 (9)	2.6 (25)	2.9 (20)
Commercial perception of air transport services	4.5 (6)	3.6 (9)	4.2 (25)	4.5 (20)

Source: Estache and Goicoechea (2005).

Table 3 : Evolution of Access to Network Infrastructure, National Level (%)

Country	Piped Water				Flush Toilet				Electricity				Landline Telephones			
	1990-95	1996-00	2001-05	1990-95	1996-00	2001-05	1990-95	1996-00	1996-00	2001-05	1996-00	2001-05	1990-95	1996-00	2001-05	2001-05
Benin		23.15	28.74			2.39			14.39	21.96				1.79	4.38	3.72
Burkina Faso	5.64	3.62	5.89	0.89	0.58	1.86	6.23	6.06		10.16						
CAR	2.65			1.11			5.04						1.49			
Cameroon	12.07	11.34	12.95	6.56	6.41	8.07	31.28	41.52		45.76				2.55	2.33	
Chad		3.36	4.45		0.24	1.83		2.76		4.33				0.45	0.88	
Comoros		22.67			2.93			30.47						3.20		
Congo (Brazzaville)			25.81			5.33				34.86					1.27	
Cote d'Ivoire	23.98	27.93			14.03	12.45		38.59		49.74				6.55		
Ethiopia		4.21	5.98		0.34	2.13		11.28		12.04				1.56	4.41	
Gabon		43.03			24.50			75.18						15.26		
Ghana	13.65	15.38	15.08	5.94	7.57	10.28	27.85	39.36		44.26				2.40	7.50	
Guinea		9.62	9.13	-	2.65	2.62		17.41		20.93				2.42	7.17	
Kenya	16.04	19.54	17.94	7.99	9.75	8.97	8.81	11.79		13.10				2.70	12.29	
Lesotho		11.03	10.74			1.61				5.70					1686	
Madagascar	5.29	5.90	5.30	2.54	2.26	1.88	9.24	11.13		18.82				0.58	4.90	
Malawi	6.11	7.74	6.49	2.62	3.30	3.58	3.69	5.59		7.48				5.99		
Mauritania			17.41			1.77				23.36					3.56	
Mozambique		6.55	6.86		3.22	2.88		10.00		11.02				1.35	2.13	
Namibia	30.53	37.29		26.65	30.56		20.31	31.68						17.40		
Niger		5.39	6.09	1.25	1.05		5.67	7.90						0.92		
Nigeria	10.58	10.28	6.88	8.46	11.90	13.12	26.08	44.85		51.26				2.32	5.10	
Rwanda	1.77	6.28	2.95	1.05	1.47	1.16	2.35	7.35		5.42				1.57	1.08	
Senegal	26.60	31.10	43.36	10.62	9.07	36.04	25.29	32.18		46.41				-	19.84	
South Africa		59.18			46.37			63.42						27.07		
Tanzania	10.23	13.78	7.36	1.41	1.66	2.75	6.36	7.27		10.57					9.72	
Togo		17.75						14.91								
Uganda	1.80		1.99	1.59		1.73	6.95			8.41			0.59		3.14	
Zambia	31.41	21.03	18.32	27.13	20.69	18.09	23.25	20.28		20.07					4.34	
Zimbabwe	26.68	32.75		26.25	31.45		23.28	33.86						6.91		
DRC	21.00		15.03	2		1										
Sudan		21.12			6											

Source: Estache and Wodon (2010) using AICD DHS/MICS Survey Database, 2007.

Africa's infrastructure networks are not only deficient in coverage and quality, but the price of the services provided, also exceptionally high by global standards, as revealed by AICD (Table 5). Whether for power, water, road freight, mobile telephones, or Internet services, the tariffs paid in Africa are several multiples of those paid in other parts of the developing world. The explanation for this state is sometimes due to genuine higher costs, and other times due to high profit margins. For example, Nigeria's leading mobile provider, MTN Nigeria, spends in excess of \$5.55m on diesels to power its 6000 generator plants across the country monthly. Zain (Airtel) Nigeria also runs back up power generators in the bulk of its 3,600 base stations in the country due to continual national electricity supply problems. The power sector, however, provides the clearest example of infrastructure of genuine higher costs in Africa than elsewhere. Many smaller countries have national power systems below the 500-megawatt threshold and therefore often rely on small diesel generation that can cost up to \$0.35 per kilowatt-hour to run (AICD, 2008).

Table 5: Africa's High Cost Infrastructure

	Sub-Saharan Africa	Other developing regions
Power tariffs (US\$ kWh)	0.02–0.46	0.05–0.1
Water tariffs (US\$) / m ³	0.86–6.56	0.03–0.6
Road freight tariffs (US\$/ton/km)	0.04–0.14	0.01–0.04
Mobile telephony (US\$/basket/mo)	2.6–21.0	9.9
International telephony (US\$/ 3 min. call to US)	0.44–12.5	2.0
Internet dial up service (US\$/mo)	6.7–148.0	11

Note: Ranges reflects prices in different countries and various consumption levels. Prices for telephony and internet represent all developing regions, including Africa.

Source: Africa Infrastructure Country Diagnostics, 2008

Africa's largest infrastructure deficiency is more pronounced in the energy sector, whether measured in terms of energy consumption, generation capacity or security of supply. The energy sector in most parts of Africa is characterized by a lack of access (especially in rural areas), low purchasing power, low energy efficiency and over-dependence on traditional biomass for meeting basic energy needs. Biomass accounts for as much as two-thirds of total African final energy consumption. In comparison, biomass accounts for about 3 percent of final energy consumption in OECD countries. Wood, including charcoal, is the most common and the most environmentally detrimental biomass energy source in SSA. Firewood accounts for about 65 percent of biomass use, and charcoal accounts for about 3.0 percent. Health impairment and an unacceptable high rate of mortality in the order of 400,000

deaths from respiratory diseases per year are linked to exposure to indoor pollution from 'dirty fuels' in poorly ventilated dwellings (African Development Bank, 2008). A large segment of the continent's population, thus lives in conditions of acute 'energy poverty'.

As indicated in Table 6, total electricity generation for the whole of Africa stood at only 546.79 billion kilowatt-hours in 2006, which is less than 594.6 for Canada and slightly more than 411.74 for Brazil. Average electricity consumption per capita in Africa is about 480 billion kilowatt-hours in 2006. This is far less than 529.95 billion kilowatt-hours consumed by Canada and slightly higher than Brazil's 382.36 billion kilowatt-hours.

In 2007 alone, nearly two-thirds of the region's countries experienced an acute energy crisis with frequent and extended electricity outages. Although, conflict and drought triggered several of these crises, in most cases electricity supplies failure could not keep pace with growth in demand. Even South Africa, which accounts for Infrastructure, Economic Growth and Poverty Reduction in Africa more than half the electricity production in the region, faces periodic rounds of rolling power cuts because supply has stagnated in recent years.

Table6: World Electricity Generation and Consumption in 2006
(Billion Kilowatt / hour)

<i>Region</i>	<i>Electricity Generat</i>	<i>Electricity Consumption</i>
North America	4903.27	4543.66
Central and South America	951.01	801.67
Europe	3554.38	3293.57
Eurasia	1330.06	1196.44
Middle East	641.44	558.40
Africa	546.79	480.00
Asia and Oceania	6040.71	5501.88
World	18, 014.67	16,378.62
<i>Selected Countries</i>		
Canada	594.6	529.95
United States of America	4071.26	3816.85
Brazil	411.74	382.36
France	542.4	447.27
India	703.32	517.21
China	2717.50	2527.95
South Africa	227.74	201.88

Source: United States Energy Information Administration.

Africa is richly endowed with renewable energy potential, especially hydro-power, geothermal energy, solar and wind power, and more efficient utilisation of biomass - which could easily cover all the continent's current energy needs. Unfortunately, this potential has remained untapped mainly due to the limited policy interest and investment levels.

The development of renewable energy options could be financed in part by more effective use of the 'cap and trade' mechanisms under the Kyoto Protocol, in particular the Clean Development Mechanism (CDM). So far, only South Africa, Mauritius and the five North African countries have considerable expertise in structuring clean development projects for CDM certification. Most sub Saharan African countries are yet to take advantage of the CDM-facilitated international carbon trade opportunities. Capacity building is needed to enable these countries to prepare CDM-eligible projects and to negotiate carbon emissions credit.

4. IMPACT OF INFRASTRUCTURE ON ECONOMIC GROWTH AND POVERTY REDUCTION IN AFRICA

4.1 AFRICA'S GROWTH PERFORMANCE

After what has been tagged as the 'lost decade' for Africa in the 1980s, the continent's political and economic landscape has recorded notable progress in recent years. Economic growth in several African countries improved significantly in the last decade. While performance varied across countries, the region as a whole saw average annual real GDP growth rates of around 5.0 percent between 1995 and 2007, or annual increases in per capita GDP of over 2.0 percent as a result of improved macroeconomic policies, favourable commodity prices, and significant increases in aid, capital flows and remittances. These growth rates brought Africa in line with the trends for other developing countries (World Bank, 2009).

This improved performance cuts across patterns of resource endowments and geography. For instance, while oil exporters such as Equatorial Guinea, Angola, Chad and Sudan had spectacular growth, other countries less endowed with mineral wealth, such as Mozambique, Cape Verde and Rwanda also sustained high growth rates over the period. The list of high-growth countries included both coastal countries, such as Ghana, as well as landlocked ones, including Burkina Faso.

Table 7: Africa GDP Growth Rates, 1997- 2007
(Cumulative annual average)

Slow Growing Countries 36% of Population		Moderate to Fast Growth 34% of Population		Oil Exporting Countries 30% of Population	
Zambia	3.9	Mozambique	10.3	Equatorial Guinea	26.4
Madagascar	3.7	Cape Verde*	9.0	Guinea*	10.3
Niger	3.7	Rwanda	6.9	Angola*	8.1
Mauritania	3.6	Sao Tome and Principe	6.9	Chad	7.4
South Africa*	3.6	Rwanda	6.8	Sudan	4.7
Kenya	3.4	Botswana*	6.5	Nigeria	4.0
Guinea	3.3	Burkina Faso	5.9	Cameroon	3.1
Lesotho*	3.0	Uganda	5.8	Congo, Rep	1.3
Malawi	2.9	Mali	5.7	Gabon*	
Togo	2.8	Tanzania	5.6		
Swaziland	2.6	Ethiopia	5.5		
Seychelles*	2.6	Sierra Leone	5.5		
Comoros	2.0	Ghana	5.0		
Burundi	1.9	The Gambia	4.7		
Central African Republic	1.8	Mauritius*	4.6		
Eritrea	1.4	Senegal	4.5		
Congo, Dem.Rep.	1.2	Benin	4.4		
Cote d'Ivoire	1.0	Namibia	4.1		
Guinea Bissau	0.0				
Zimbabwe	-3.9				
Simple Average	2.2		5.9		8.1

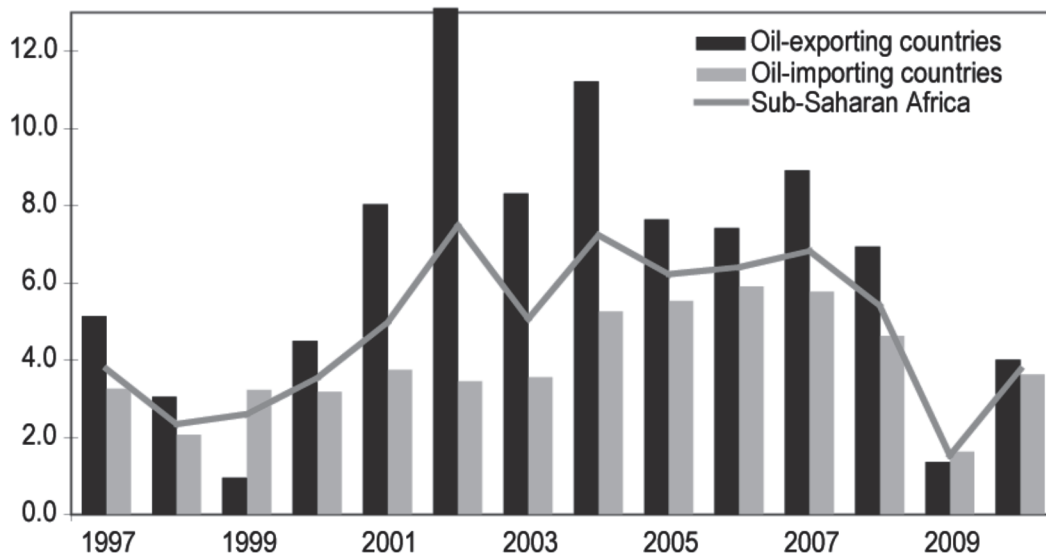
*Middle income country

Source: World Bank (2010).

Infrastructure, Economic Growth and Poverty Reduction in Africa

The decade-long, sustained and accelerating growth in Africa came to a grinding halt as a result of the global economic crisis of 2008-2009 (Figure 1). Improved policies in the face of the crisis have helped the continent get through the storm better than expected. GDP is projected to expand by around 4.2 percent in 2010 and 4.9 in 2011 - a faster turnaround than in previous crises. Per capita income, which fell by nearly 1.0 percent in 2009 – the first of such contraction in a decade – will also post an upward trend (World Bank, 2010).

Figure 1: Economic Growth in Africa (1997 to 2009)



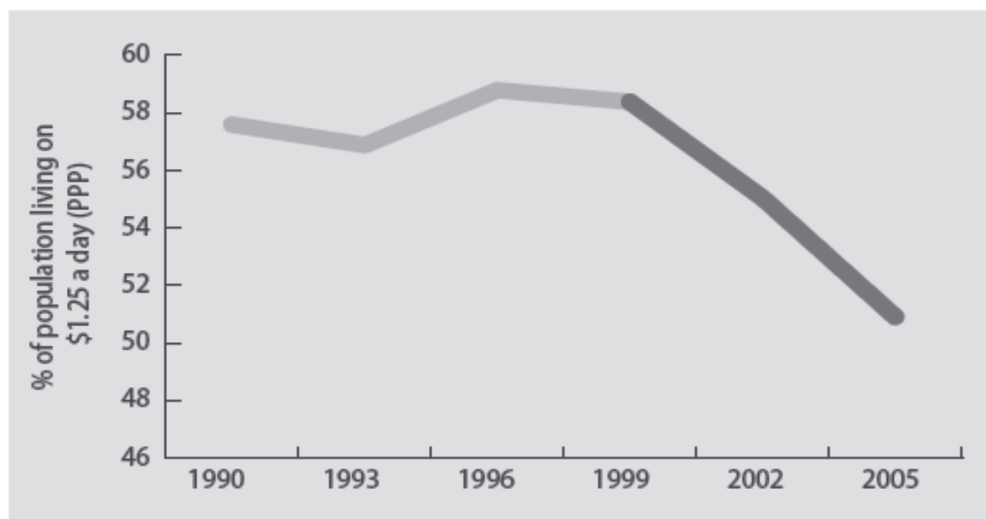
Note: Oil exporting countries are Angola, Cameroon, Chad, Republic of Congo, Equatorial Guinea, Gabon, and Nigeria. All other African countries are net oil importers.

Source: Arieff, Weiss and Jones (2010) using IMF Sub-Saharan Africa Regional Economic Outlook Database.

Economic growth is a key driver in reducing poverty and achieving other desired development outcomes. Africa's recent economic growth has been accompanied by a reduction in the proportion of Africans living on less than \$1.25 a day from 58 percent in 1995 to 51 percent in 2005 (Figure 2). Over the past decade, the region's poverty rate has been declining at about one percentage point a year. Nevertheless, the \$1.25-a-day poverty rate is at about 50 percent, the same rate as in 1980. Moreover, although the population share in extreme poverty is falling, as a result of population growth, the actual number of poor people—nearly 380 million—has been increasing. Despite the recent claim by some analysts, such as Sala-i-Martin and Pinkovskiy (2010), that African poverty is declining and rapidly, Sub-Saharan Africa is perhaps the only region, in the past 20 years, where the proportion of the poor has been rising and is relatively worse off than their counterparts in other parts of the world. Meanwhile, while some regions, notably Asia, have made significant progress in terms of poverty reduction over the last two decades, Africa has made less progress over this period. In some of the relatively few countries where evidence exists, poverty levels appear to have increased in the 1990s.

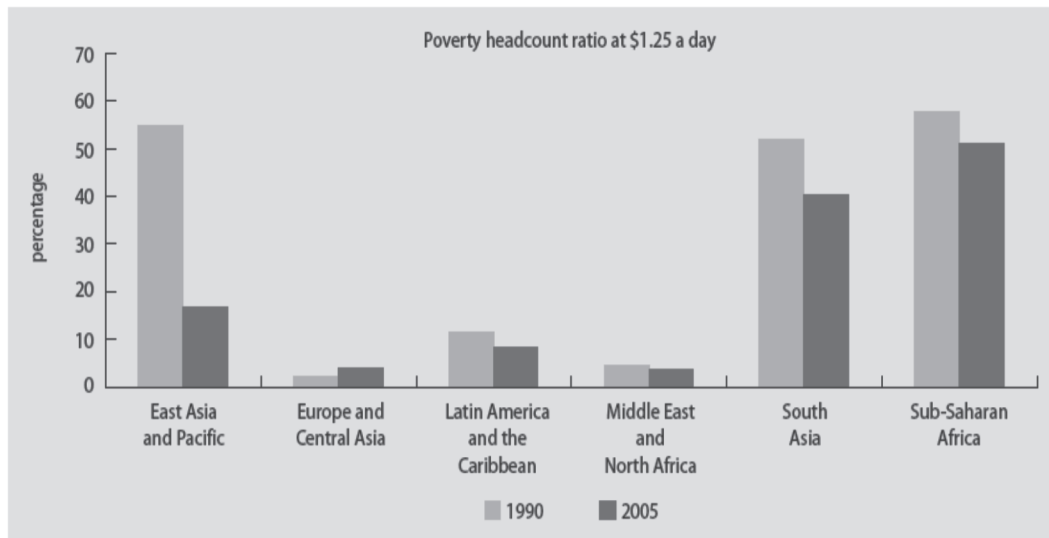
Five years from the deadline set by the international community for achieving the MDGs, none of the Sub-Saharan African countries is currently on track to attain all of the goals by 2015. In fact, several countries are 'off-track' as a result of the global financial crisis which has prompted an economic slowdown in Africa, a continent where most countries are already hit by the rise in the prices of food and energy. The ever-present risk of conflict and long-term climate change are also undermining the conditions for growth and attaining the MDGs.

Figure 2: Evolution of Poverty in Africa (1990 to 2005)



Source: World Bank (2010) The MDGs after the Crisis

Although some countries, such as Ghana, are close to halving absolute poverty by 2015, it is unlikely that Africa as a whole will achieve the first MDG – to reduce the 1990 poverty rate by half by 2015 – whereas every other region will. The poverty rate on current trends is now expected to fall to 38 percent by 2015, as opposed to the pre-crisis projected rate of 36 percent. This will leave an additional 20 million people in extreme poverty by 2015.

Figure 3: Poverty Headcount by Region

**Source: World Bank (2010) The MDGs after the Crisis
Infrastructure, Economic Growth and Poverty Reduction in Africa**

6.3 INFRASTRUCTURE AND GROWTH IN AFRICA

Infrastructure in Africa is very so central to the various efforts to support growth, reduce poverty and improve the overall quality of life of Africans. A common argument for the push for a large increase in public spending on infrastructure in Africa is that infrastructure services may have a strong growth-promoting effect, through their impact on the productivity of private inputs and the rate of return on capital – particularly when, to begin with, stocks of infrastructure assets are relatively low.

The role of infrastructure development in economic growth in Africa has been well documented in the literature. The unequivocal finding from this research is that there will be no growth and no significant poverty alleviation in Africa without a major improvement in the level and state of its infrastructure supporting the widely held consensus that the MDGs will not be achieved without at least a 7 percent annual growth rate for the region, and that this 7 percent target will not be achieved without a significant increase in infrastructure investment.

Estache et. al (2005) demonstrate that over the last 30 years, infrastructure investments accelerated the annual growth convergence rate by over 13 percent in Africa. The strongest impact comes from telecommunications, followed by roads and electricity. However, the evidence on the link of access to water or sanitation is more tenuous. This is probably because this sector has the highest correlation with health or education as well as with the other subsectors. The importance of the water and sanitation sector is particularly strong in Africa when it is considered in isolation from the effects of other sectors (Estache, 2010).

Calderon (2008) recently estimated that across Africa, infrastructure contributed 99 basis points to per capita economic growth over the period 1990 - 2005, compared with only 68 basis points for other structural policies. That contribution is almost entirely attributable to advances in the penetration of telecommunication services. The deterioration in the quantity and quality of power infrastructure over the same period has had a significant retarding effect on economic growth. If these deficiencies could be eliminated, the effect would be remarkable. Calderon's simulations suggest that if all African countries were to catch up with Mauritius in infrastructure, per capita economic growth in the region could increase by 2.2 percentage points.

Relying on an analytical approach proposed by Calderon and Serven (2004), Estache and Woodon (2010) calculated the increase in the average growth of GDP per capita that 21 African countries would have had if they had been able to rely on the infrastructure stocks and quality of South Korea during the period 1996-2000. Catching up with Korea's level would bring about economic growth per capita up to 1.1 percent per year as shown in Table 8. In a number of countries, including Ethiopia, Mali and Mauritania, the impact would be even larger. For instance, if Burkina Faso had enjoyed Korea's infrastructure quantity and quality, its per capita GDP growth rate would have been 2.18 percent (0.59 Actual+1.59 Potential point increase) instead of 0.59 percent.

Table 8: How much faster Africa would have grown if it had enjoyed South Korea's infrastructure stock and quality?

Country	Actual growth per capita (1996-2000)	% point increase in potential growth rate per capita assuming country enjoys South Korea's infrastructure quantity and quality	Potential growth rate per capita assuming country enjoys South Korea's infrastructure quantity and quality (1996-2000)
Botswana	5.32%	0.60	5.92%
Burkina Faso	0.59%	1.59	2.18%
Cote d'Ivoire	0.35%	0.64	0.99%
Ethiopia	0.47%	1.47	1.94%
Ghana	1.11%	0.65	1.76%
Guinea	0.07%	1.03	1.10%
Guinea-Bissau	1.19%	0.98	2.17%
Kenya	1.12%	0.91	2.03%
Madagascar	-0.99%	1.21	0.22%
Mali	-0.03%	1.79	1.76%
Mauritania	0.6%	1.57	2.17%
Mauritius	3.71%	0.34	4.05%
Niger	-1.55%	1.87	0.32%
Nigeria	-0.95%	1.01	0.06%
Rwanda	-0.12%	1.23	1.11%
Senegal	-0.28%	0.90	0.62%
Sierra Leone	0.08%	0.92	1.00%
Tanzania	0.58%	1.31	1.89%
Uganda	1.29%	1.16	2.45%
Zambia	-0.76	0.51	-0.25%
Zimbabwe	1.76%	0.18	1.94%
Sample average	0.065%	1.04	1.11%

Source: Estache and Woodon (2010).

5.2 INFRASTRUCTURE AND POVERTY REDUCTION IN AFRICA

There is very little strong cross-country analytical evidence for Africa on the impact of infrastructure on poverty. Anecdotal evidence on the importance of the sector for the poor is large and so is the evidence generated by donor agencies based on their project work. In a recent overview of the drivers of rural development in Africa, Mwabu and Thorbecke (2004) cover a wide range of country specific studies which add up to very convincing evidence on the relevance of access to infrastructure for the African rural poor. In the range of impacts covered, they include linkages through gender or human development concern, e.g. the significant positive impact of rural transport and water access on women's life and the evidence on the improved access to improved education or health. They also point to the impact of infrastructure on the poor through its increased access on self and wage-based employment opportunities. Infrastructure, Economic Growth and Poverty Reduction in Africa.

The microeconomic evidence is much more robust. Wooden (2006) and Estache and Wooden (2010) employ household survey data to assess the impact of policies promoting access to basic infrastructure services for the poor on poverty in some African countries. The poverty reduction impact of basic services is measured by estimating the gain in the implicit rental value of owner-occupied houses when access to a basic infrastructure service is provided. This gain is then added to the consumption of the household in order to have a rough measure of the impact on poverty of access. The gain in rental value due to access to basic services is then estimated from a model in which the rent paid is explained by the characteristics of the house and its location using hedonic semi-log rental regression.

Table 9 presents the coefficient estimates in the rental regressions for the access to electricity and water for a sample of African countries. The percentage increase in rent obtained with access to basic services varies between 20 and 70 percent of the rent paid by the tenant. If we consider poor those households in the bottom three quintiles, the value of access to electricity and water varies typically from 1 to 6 percent of per capita consumption, which is not negligible. The poverty reduction brought about through the provision of these services ranges from one to two percentage points. While such estimates are limited in magnitude in comparison to the high levels of poverty in African countries, they, nonetheless, do not take into account the dynamic effects for growth of infrastructure provision.

Table 9: Impact of Access to Water and Electricity on Poverty, Selected African Countries

	Electricity			Water		
	Mauritania	Rwanda	Sao Tome	Mauritania	Rwanda	Sao Tome
Percentage increase in rent	39.8%	56.26%	21.36%	31.1%	67.96%	21.40%
Percentage increase in consumption per capital						
Quintile 1	3.8%	5.16%	1.61%	2.3%	6.09%	1.17%
Quintile 2	2.2%	3.37%	0.70%	1.4%	3.97%	0.72%
Quintile 3	1.8%	2.80%	0.52%	1.3%	3.40%	0.74%
Quintile 4	1.5%	2.51%	0.30%	1.3%	3.09%	0.72%
Quintile 5	1.2%	1.83%	0.19%	1.4%	2.99%	0.52%
Change in extreme poverty (percentage points)						
All sample	NA	-1.56	-0.29	NA	-2.01	-0.11
Household without access	-1.2	-1.65	-0.62	-0.5	-0.27	-0.16
Change in poverty (percentage points)						
All sample	NA	-1.40	-0.49	NA	-1.63	-0.56
Household without access	-1.3	-1.48	-1.05	-0.7	-1.68	-0.78

Source: Wodon (2006) and Estache and Wodon (2010)

Analyses of the interface between poverty and infrastructure services in African countries indicate that the poor's access to basic infrastructure is extremely limited. Country level estimates provided in Table 10 are given by quintile of wealth of the household. Clearly, and as was to be expected, coverage is virtually inexistent[?] among the very poor in most countries, and in quite a few countries, coverage is also low even in the top quintile.

Table 10: Access to infrastructure services by quintile of wealth, National level (%)

	Year	Piped water supply		Flush to sewage or septic tank		Electricity		Landline	
		Quintile 1	Quintile 5	Quintile 1	Quintile 5	Quintile 1	Quintile 5	Quintile 1	Quintile 5
Benin	2001	0	89	0	11	0	82	0	18
Burkina Faso	2003	0	34	0	9	0	57	0	21
CAR	1995	0	13	0	5	0	25	0	7
Cameroon	2004	0	49	0	38	1	98	0	10
Chad	2004	0	22	0	8	0	21	0	4
Comoros	1996	0	46	0	14	4	84	0	15
Rep. Of Congo	2005	0	90	0	24	5	88	0	4
Cote d'Ivoire	1999	0	98	0	60	4	100	0	32
Ethiopia	2005	0	30	0	6	0	56	0	22
Gabon	2000	0	100	0	95	17	99	0	48
Ghana	2003	1	60	0	43	8	90	0	31
Guinea	2005	0	44	0	12	0	83	0	32
Kenya	2003	0	62	0	43	0	57	0	49
Lesotho	2005	0	50	0	8	0	27	0	57
Madagascar	2004	0	24	0	8	0	82	0	23
Malawi	2004	0	30	0	16	0	34	0	27
Mauritania	2001	0	57	0	8	0	81	0	16
Mozambique	2003	0	34	0	14	0	51	0	11
Namibia	2000	0	100	0	99	1	100	0	70
Niger	1998	0	26	0	3	0	36	0	4
Nigeria	2003	0	18	0	54	10	91	0	21
Rwanda	2005	0	13	0	5	0	25	0	5
Senegal	2005	1	96	1	78	4	94	0	51
Tanzania	2004	0	30	0	13	0	50	0	42
Togo	1998	1	100	0	0	0	62		
Uganda	2001	0	10	0	7	0	38	0	15
Zambia	2002	0	77	0	76	0	84	0	17
Zimbabwe	1999	0	100	0	99	0	97	0	23
DRC	2001	0	59	0	6				
Sudan	2000	0	77	0	31				

Source: Banerjee et al (2009).

Table 11 presents the evolution of access to water and electricity by income groups. The data imply the main beneficiaries of efforts to increase access tend to remain in the richest and second richest quintiles. The reforms implemented so far, especially in the 1990s, have failed to address the needs of the poor and in some cases even the middle class. Experience to date has demonstrated that private service companies have not shown eagerness to extend infrastructure to poor informal neighborhoods. While there may be successful examples, the majority of privatized water and sanitation companies tend to avoid the poor neighborhoods.

characteristics of the connection, financed through cross-subsidies or direct subsidies built into the tariff design); (b) by reducing the cost of services (by avoiding granting a monopoly when it is not necessary or by providing an incentive for operators to reduce costs and pass on the cost reductions to users); and (c) by facilitating the payment of bills (by allowing discriminatory administrative arrangements in favour of the permanently or temporarily poor).

While these recipes may seem obvious, they are not without controversy. Subsidies, particularly cross-subsidies, continue, to be seen as undesirable policy instruments in many circles, and that bad reputation has tended to spill over in infrastructure for the last 20 years or so. Yet, in spite of their bad reputation, most practitioners will argue that subsidies (direct or not) are needed in most countries, and they are not always as ineffective or distortionary as has been argued (Foster and Yepes, 2006; Estache and Wooden, 2010).

It does appear that majority of the poor in Africa would not be able to afford services if infrastructure cost are set at cost recovery. Banerjee et al. (2009) present empirical evidence that shows that most African households live on tight budgets, with more than half of total expenditures allocated to food. An average African household lives on \$180 per month or less, with spending ranging from around US\$50 per month in the lowest consumption quintile to \$400 per month in the top quintile. The average household monthly budget ranges from US\$57 in Ethiopia to \$539 in South Africa (in 2002 US\$). Given that on average, more than half of a household's budget is allocated to food, what is left for other goods, including basic infrastructure services, is limited. It also turns out that infrastructure spending absorbs, on average, 7.0 percent of the household budget, and it falls within the 5-15 percent range for most countries, although in rare cases spending on infrastructure exceeds 25 percent of the total budget.

6. CONCLUSION AND RECOMMENDATIONS

The heterogeneity of the infrastructure sectors makes it difficult to draw specific conclusions for any given subsector or country from an overview such as this one. However, some general conclusions can be drawn. In what follows, we chart the road for the major actors if Africa's huge infrastructure needs are to be met.

Over the last few years, Africa has witnessed some modest improvements in infrastructure development, especially in telecommunications. But, as indicated in several parts of the preceding chapters, Africa ranks at the bottom of all developing regions in most dimensions of infrastructure performance indicators. Not only does sub-Saharan Africa's existing infrastructure fall short of its needs, it lags well behind infrastructure development in other poor regions. Poor maintenance has left much of the existing infrastructure in decrepit state, further hindering economic growth and discouraging new investment.

Table 11: Evolution of Access Rates to Networked Water and Electricity across Income Classes

		Average access rates per Quintiles				
		First	Second	Third	Fourth	Fifth
Piped water	Early 1990s	0%	0%	0%	13%	53%
	Late 90s-early 00's	0%	0%	3%	10%	43%
Improved water	Early 1990s	35%	41%	51%	70%	88%
	Late 90s-early 00's	39%	53%	57%	70%	85%
Electricity	Early 1990s	0%	1%	4%	22%	68%
	Late 90s-early 00's	0%	4%	12%	32%	75%

Source: Echaste and Wodon (2010)

There are a host of factors explaining why existing infrastructure interventions fail to serve the poor. The two most obvious are: none availability of service and affordability problems. Perhaps the one that gets the most attention is the non availability of infrastructure. Poor households may not have access to the infrastructure services simply because they are too far from the services. This is especially the case for network utility services such as water and electricity. For many among the poor, even if the services were affordable, they would not be able to benefit because the services are not provided in the areas where the households are located. But there are also problems on the demand side, as the cost of being connected to the network, when the network is available, is often too high for the poor. The affordability problem is particularly acute for the poorest.

Subsidized provision of infrastructure is often proposed as a means of redistributing resources from higher income households to the poor. Yet its effectiveness depends on whether subsidies actually reach the poor. Arguments for the removal of subsidies typically draw on surveys illustrating the ways in which the poor are currently paying several times more for services than those connected to the formal system. Despite their unpopularity especially among Economists, the anecdotal and econometric evidence confirms that subsidies are hard to avoid. Estache and Wooden (2010) presents a feasible menu of action that can mitigate both accessibility and affordability problem of the poor. For access, there are three basic types of instruments: (a) instruments requiring operators to provide access (a service obligation to avoid unilateral exclusion by the provider); (b) instruments reducing connection costs (through cross-subsidies or direct subsidies built into the tariff design or through credit or discriminatory payment plans in favour of the poor); and (c) instruments increasing the range of suppliers (to give users choice, including the option of reducing costs by choosing lower-quality service providers).

For affordability, broadly, all instruments work in at least one of three ways (Estache, Foster, and Wodon 2002): (a) by reducing bills for poor households (through lifelines or means-tested subsidies based on socioeconomic characteristics or the

Poor infrastructure is stunting economic growth and undermining efforts to reduce poverty. In addition to overt neglect by African Governments, there has been a 'policy mistake' founded on the dogma of the 1980s/90s that infrastructure would be financed by the private sector. For various reasons, mainly involving investment climates and rates of return, private investment has been limited in terms of volume, sectors and countries. The result has been dashed hopes, insufficient improvement in public services, and a widespread backlash against privatization. Limited improvements on infrastructure have also meant less progress on reducing poverty and improving the living standards and economic opportunities of the poorest.

Clearly, the optimism of the early 1990s, which saw private finance entirely replacing public finance, was unfounded. Roughly only one third of the developing countries can count on private sector operators for the delivery of electricity, water, or railways services. The largest presence is in the fixed line telecoms business where about 60 percent of the countries rely on private operators. Overall, the private sector has roughly contributed to 20-25 percent of the investment realized in developing countries on average over the last 15 years or so. In Africa, it has probably contributed less than 10 percent of the needs. This is not to deny the presence of the private sector. In fact, where the state and the large private sector have failed to deliver the services, the small scale, generally local, private sector has filled the gap.

Regulatory weaknesses underscore most failed attempts at infrastructure reform and privatization. It has often been neglected outright or treated as an add-on after the reform process has been initiated. Even where regulation exists, it is fraught with weaknesses and uncertainties that hamper investor decision making. Governments across Africa, often at the prodding of investment bankers and financial advisers and multilateral institutions, have established or are establishing regulatory agencies for utilities. Under pressure from multilateral institutions, many of these countries hastily adopted regulatory templates from developed countries. Many of them have had little or no precedence to guide the design of regulatory mechanisms. The models are rarely adapted to the political and institutional features prevalent in these economies including lack of checks and balances, limited technical expertise, weak auditing, accounting and tax systems, and widespread corruption and regulatory capture. As a result, such efforts have had limited successes or failed woefully.

RECOMMENDATIONS

As identified elsewhere in this paper, the funding requirements of \$93 billion a year, translating into about 15 percent of Africa's GDP is quite substantial. This will require reforming the way in which business is conducted Infrastructure, Economic Growth and Poverty Reduction in Africa

in Africa's infrastructure. In forging ahead, there is a need for significant improvements in the management and operation of Africa's infrastructure. However, unlike the debates on the reforms of the 1990s which were shaped by ideological orientation and blame game, there is gradually a coalescing of opinions on the reform agenda in addressing Africa's infrastructure despite the wide variation and diversity in countries and regions. A lot of learning has taken place in the past two and a half decades and substantial efforts have been invested in data in recent years⁴. The choice is no longer simply on a dichotomy between public and private provision, but on how to forge mutual cooperation between these two sectors, defined by areas of competence. There is growing consensus that the public sector must retain a much more important role in financing than previously admitted, while the private sector is expected to help in meeting the significant needs associated with infrastructure construction, operation, and, to some extent, financing in sectors such as telecommunications, energy generation, and transport services in which commercial and political risks are much lower. Small-scale operators are also assuming an increasing, yet generally underestimated role in catering to the needs of the populations not supplied by the actors with higher visibility. Access, affordability and quality of service rendered by small providers are still not clearly understood and deserve more research and analysis.

In what follows, we chart the road for the major actors.

Governments

Governments remain at the heart of infrastructure service delivery. With or without private participation, governments remain responsible for infrastructure reform, for setting and enforcing the basic rules of the game, and for regulation. This includes managing the political economy of reform as infrastructure reforms are political processes, prone to backlash. Governments also remain responsible for much of infrastructure finance as well as social goals.

Better expenditure allocation is also needed. In particular, not enough is being spent on maintenance. Many countries lack a reliable source of funding to ensure the regular maintenance needed, notably in roads which are mostly, publicly funded and hence subject to the vagaries of the fiscal situation. New investments should aim to focus on strategic goals, such as completing networks. But tackling bottlenecks should not come at the expense of providing service to the poor, ?can be done at a relatively low cost.

⁴The most comprehensive effort is the Africa Infrastructure Country Diagnostic (AICD), a project designed to expand the world's knowledge of physical infrastructure in Africa. Financing for AICD is provided by a multi-donor trust fund to which the main contributors are the Department for International Development (United Kingdom), the Public Private Infrastructure Advisory Facility, Agence Française de Développement, and the European Commission.

Role of the Private Sector

Private investment is likely to remain an important component of infrastructure development in the years ahead, particularly as the available fiscal space in many countries remains limited. The important thing will be to channel private initiative where it has the greatest likelihood of being successful and to have realistic expectations as to what it can achieve.

Some of the problems experienced with private participation reflect basic errors in the design and implementation of such contracts. Private participation should be focused on those aspects of infrastructure that present the most appropriate risk-reward characteristics, accepting that public finance will remain necessary in other areas. Guarantees for infrastructure projects can be more carefully designed to avoid some of the large payouts experienced in the past.

Private participation in infrastructure is not only about financing, it is also, more importantly, about capacity building, transferring better technologies, innovations and removing capacity constraints to implementation. It requires fiscal reform and improvements in public sector management. It also requires careful attention to the basics of project design, including identifying and allocating risk and ensuring sound procurement practices. Developing successful projects require some things in short supply in the developing world—time, money, and sophisticated skills. Moreover, private participation does not always work well in every infrastructure sector or every developing country. Concretely, a better Public-Private Investment (PPI) framework entails improving award processes to ensure transparency and competitiveness. It also requires better concession design to clearly state events that would trigger renegotiations, as well as guidelines for the process. Contracts also need to specify information to be disclosed. This, combined with an adequate regulatory accounting framework, is critical for regulators to cope with the asymmetry of information inherent in any concession.

Some of the problems experienced in the last decade could be avoided through greater reliance on the local private sector. In the early days, PPI was synonymous with large multinational corporations. In many countries, however, the local private sector may have significant resources to invest and may be better equipped to deal with currency devaluation and political interference.

Alternative Sources of Finance

Improving the capacity of the local financial markets to mobilise resources would be an important part of a sustainable financing strategy. As in other regions, project sponsors in Africa have in recent years sought to increase local financial markets' contributions to the debt funding of infrastructure projects that generate mostly local currency revenues. These efforts have led to some local currency loans and bonds, mainly for tele-communications projects. But a larger share of local currency

financing would be desirable. Progress in financial sector reform could make this feasible, as local banks build capacity for project finance and capital markets become more liquid.

Appropriate Regulation

Lessons from the past decade indicate the importance of planning for credible and efficient regulation, including its economic content and institutional architecture prior to reform. There is growing consensus around the key design features for a modern regulatory agency. The main features of effective regulation of privatized utilities are coherence, independence, accountability, predictability, transparency and capacity (Noll, 2000 and Stern and Holder, 1999). Regulatory agencies should be strengthened and allowed to operate independently. Moreover, they need to be adapted to fit the country peculiarities.

Meeting the Rural Challenge

As indicated in several parts of this report, rural areas have persistent low access to electricity, water, telecoms or transport in SSA countries, and corresponding low consumption levels. In several cases, access rates to Infrastructure, Economic Growth and Poverty Reduction in Africa networks are still in single-digit figures. Clearly, their exclusion from the service obligations imposed on utilities have stimulated the creativity of suppliers and governments alike in Africa. The solutions adopted across the continent have varied. These include a significant effort to promote the role of alternative small-scale producers, particularly in East Africa, and the establishment of a regulatory framework encouraging private entry into the sectors and based on competitive tendering for rural licenses by independent suppliers. In other cases, explicit supply (least cost) subsidies for non-profitable extensions have also sometimes been agreed on between operators and the government, when these governments were viewed as credible debtors in the sector. All of these solutions have had minimal effect in increasing access rates and often quality of service. However, they have led to several new issues. Indeed, the fiscal costs of these solutions are often substantial. Rural infrastructure development often requires expensive investment in network extension, especially when locations are scattered. Indeed, the financial viability of infrastructure supply in rural areas is hard to guarantee, at least in the short to medium run, and some way to subsidize the new customers, at least for the initial connection cost, is necessary. These assessments are necessary if a major scaling up of efforts is to be realized.

Meeting the needs of the Urban Poor

In the face of the rapid urbanization in Africa, the issue of an exploding number of urban poor with no or very limited access to essential infrastructure services are some of the pressing challenges confronting policy makers. The problem of increased access rates for the urban poor appears smaller than the rural poverty issue, because possible solutions include the possibility of relying on the existing infrastructure and thus expanding at lower costs. In most cases, the main concern of the reforms is not the cost but how to generate the resources necessary to subsidize poor urban dwellers due to their inadequate ability to pay. The scale of the subsidy is, however, arguably less per new connection than in the rural case. A more serious problem to tackle may be the semi-legal or illegal condition of many dwellings in urban and peri-urban areas, which often precludes dwellers from getting connected to utility networks. Unfortunately, very few concrete assessments of current experiences in peri-urban interventions exist.

Regional Integration

Regional approaches to infrastructure development are probably more important than previously recognized. Regional integration holds the key to reducing infrastructure costs. Africa is highly fragmented with a large number of small economies, many of which are landlocked. Regional infrastructure offers the opportunity for cost reductions through economies of scale, making infrastructure more affordable. For example, about \$2bn could be saved each year by trading power across national borders. However, regional infrastructure projects are proving difficult to realize in part due to the size of financing requirements and the complexity of multi-country transactions. NEPAD in collaboration with the African Union and the African Development Bank is already acting as a catalyst in fast-tracking the implementation of regional project.

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DATA APENDICES

Table A1

Africa's Electricity Installed Capacity by Type, January 1, 2006

Country	Conventional		Geothermal		Total
	Thermal	Hydroelectric	Nuclear	Solar, Wind, Wood and Waste	
Algeria	6.190	0.280	0	0	6.470
Angola	0.333	0.498	0	0	0.830
Benin	0.058	0.001	0	0	0.059
Botswana	0.132	0	0	0	0.132
Burkina Faso	0.204	0.032	0	0	0.236
Burundi	0.001	0.032	0	0	0.033
Cameroon	0.070	0.805	0	0	0.875
Cape Verde	0.077	0	0	0	0.077
Central African Rep.	0.021	0.019	0	0	0.040
Chad	0.029	0	0	0	0.029
Comoros	0.004	0.001	0	0	0.005
Congo (Brazzaville)	0.029	0.092	0	0	0.121
Congo (Kinshasa)	0.033	2.410	0	0	2.443
Cote d'Ivoire	0.480	0.606	0	0	1.086
(Ivory Coast)					
Djibouti	0.118	0	0	0	0.118
Egypt	17.529	2.793	0	0.145	20.467
Equatorial Guinea	0.010	0.003	0	0	0.013
Eritrea	0.150	0	0	0	0.150
Ethiopia	0.138	0.669	0	0.007	0.814
Gabon	0.245	0.170	0	0	0.415
Gambia, The	0.030	0	0	0	0.030
Ghana	0.292	1.198	0	0	1.490
Guinea	0.145	0.129	0	0	0.274
Guinea Bissau	0.021	0	0	0	0.021
Kenya	0.409	0.677	0	0.129	1.215
Lesotho	0.000	0.076	0	0	0.076
Liberia	0.188	0	0	0	0.188
Libya	5.438	0	0	0	5.438
Madagascar	0.122	0.105	0	0	0.227
Malawi	0.025	0.285	0	0	0.310
Mali	0.125	0.155	0	0	0.280
Mauritania	0.075	0.097	0	0	0.172
Mauritius	0.629	0.059	0	0	0.688
Morocco	3.469	1.500	0	0.064	5.033

AFRICAN DEVELOPMENT CHARTER SERIES 2

Mozambique	0.204	2.179	0	0	2.383
Namibia	0.05	0.249	0	0	0.264
Niger	0.105	0	0	0	0.105
Nigeria	3.960	2.000	0	0	5.960
Reunion	0.315	0.125	0	0	0.440
Rwanda	0.004	0.035	0	0	0.039
Saint Helena	0.004	0	0	0	0.004
Sao Tome and Principe	0.003	0.006	0	0	0.009
Senegal	0.507	0	0	0	0.507
Seychelles	0.095	0	0	0	0.095
Sierra Leone	0.053	0.004	0	0	0.057
Somalia	0.060	0	0	0	0.060
South Africa	38.020	0.661	1.800	0.017	40.498
Sudan	0.777	0.337	0	0	1.114
Swaziland	0.087	0.041	0	0	0.128
Tanzania	0.340	0.579	0	0	0.919
Togo	0.018	0.067	0	0	0.085
Tunisia	3.235	0.066	0	0.019	3.320
Uganda	0.003	0.310	0	0	0.313
Western Sahara	0.058	0	0	0	0.058
Zambia	0.008	1.692	0	0	1.700
Zimbabwe	1.345	1.000	0	0	2.345
Africa	86.034	22.043	1.800	0.381	110.258

Source: Energy Information Administration

**Table A2: Africa's Total Net Electricity Generation 2003 to 2006
(Billion Kilowatthours)**

	2003	2004	2005	2006
Algeria	27.81	29.39	31.91	33.12
Angola	1.94	2.44	3.05	3.51
Benin	0.08	0.08	0.10	0.12
Botswana	1.05	0.93	0.91	0.98
Burkina Faso	0.44	0.47	0.52	0.55
Burundi	0.13	0.13	0.10	0.09
Cameroon	3.64	4.06	4.00	3.90
Cape Verde	0.04	0.04	0.05	0.05
Central African Republic	0.11	0.11	0.11	0.11
Chad	0.09	0.09	0.09	0.10
Comoros	0.02	0.02	0.02	0.02
Congo (Brazzaville)	0.40	0.46	0.43	0.44
Congo (Kinshasa)	6.38	6.78	7.34	7.24
Cote d'Ivoire (Ivory Coast)	4.87	5.17	5.31	5.27
Djibouti	0.19	0.20	0.24	0.25
Egypt	90.13	95.86	102.81	109.14
Equatorial Guinea	0.03	0.03	0.03	0.03
Eritrea	0.26	0.27	0.27	0.25
Ethiopia	2.30	2.53	2.85	3.27
Gabon	1.46	1.49	1.56	1.67
Gambia, The	0.14	0.14	0.15	0.15
Ghana	5.74	5.94	6.66	8.20
Guinea	0.78	0.78	0.78	0.80
Guinea-Bissau	0.06	0.06	0.06	0.06
Kenya	5.05	5.39	5.81	6.26
Lesotho	0.33	0.30	0.35	0.20
Liberia	0.30	0.31	0.32	0.32
Libya	17.81	18.99	21.10	22.55
Madagascar	0.88	0.96	1.01	0.98
Malawi	1.18	1.29	1.40	1.13
Mali	0.43	0.44	0.44	0.51
Mauritania	0.33	0.37	0.39	0.41
Mauritius	1.96	2.04	2.14	2.21
Morocco	17.10	18.24	21.17	21.88
Mozambique	10.79	11.58	13.17	14.62
Namibia	1.54	1.63	1.69	1.64

AFRICAN DEVELOPMENT CHARTER SERIES 2

Niger	0.23	0.23	0.24	0.24
Nigeria	19.35	23.17	22.52	22.11
Reunion	1.55	1.55	1.56	1.48
Rwanda	0.12	0.13	0.13	0.13
Saint Helena	0.01	0.01	0.01	0.01
Sao Tome and Principe	0.02	0.02	0.02	0.02
Senegal	1.90	1.99	2.27	2.28
Seychelles	0.21	0.21	0.21	0.21
Sierra Leone	0.24	0.24	0.25	0.25
Somalia	0.26	0.26	0.27	0.28
South Africa	215.98	227.29	228.33	227.74
Sudan	3.21	3.70	3.94	4.04
Swaziland	0.38	0.40	0.42	0.42
Tanzania	2.63	2.45	2.94	2.68
Togo	0.20	0.18	0.18	0.20
Tunisia	11.67	12.29	12.65	12.65
Uganda	1.76	1.89	1.84	1.16
Western Sahara	0.09	0.09	0.09	0.09
Zambia	8.22	8.42	8.85	9.29
Zimbabwe	8.54	9.41	9.95	9.47
Africa	482.33	512.94	534.96	546.79

Source: Energy Information Administration, International Energy Annual 2006, Updated 2009

Table A3: Progress on Sanitation in Africa (Percentage of Population)

Year	Progress on sanitation			Open Defecation
	1990	2000	2008	2008
Algeria	88	92	95	4
Angola	25	40	57	23
Benin	5	9	12	60
Botswana	36	50	60	16
Burkina Faso	6	8	11	64
Burundi	44	45	46	1
Cameroon	47	47	47	5
Cape Verde	-	45	54	42
Central Africa Republic	11	22	34	20
Chad	6	7	9	65
Congo	-	30	30	-
Cote d'Ivoire	20	22	23	27
Djibouti	66	63	56	8
Egypt	72	86	94	0
Equatorial Guinea	-	51	-	-
Eritrea	9	11	14	85
Ethiopia	4	8	12	60
Gabon	-	36	33	1
Gambia	-	63	67	4
Ghana	7	9	13	20
Guinea	6	9	11	22
Guinea-Bissau	-	7	9	31
Kenya	26	29	31	15
Lesotho	32	29	29	40
Liberia	11	14	17	49
Libyan Arab Jamahiriya	97	97	97	-
Malawi	42	50	56	9
Mali	26	32	36	16
Mauritania	16	21	26	53
Mauritius	91	91	91	0
Morocco	53	64	69	17
Mozambique	11	14	17	42
Namibia	25	29	33	53
Niger	5	7	9	79
Nigeria	37	34	32	22
Rwanda	23	40	54	3
Sao Tome And Principe	-	21	26	55
Senegal	38	45	51	19
Sierra Leone	-	11	13	24

AFRICAN DEVELOPMENT CHARTER SERIES 2

Somalia	-	22	23	54
South Africa	69	73	77	8
Sudan	34	34	34	41
Swaziland	-	49	55	16
Togo	13	12	12	55
Uganda	39	44	48	10
Tanzania	24	24	24	13
Zambia	46	47	49	18
Zimbabwe	43	44	44	25

Source: Author's Compilation from WHO/UNICEF (2010) Progress on Water and Sanitation: 2010 Update database.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table A4: Improved Water Source in Africa (Percentage of Population)

Year	1990	2000	2008
Algeria	94	89	83
Angola	36	41	50
Benin	56	66	75
Botswana	93	94	95
Burkina Faso	41	60	76
Burundi	70	72	72
Cameroon	50	64	74
Cape Verde	-	83	84
Central Africa Republic	58	63	67
Chad	38	45	50
Congo	-	70	71
Cote d'Ivoire	76	78	80
Djibouti	77	84	92
Egypt	90	96	99
Equatorial Guinea	-	43	-
Eritrea	43	54	61
Ethiopia	17	28	38
Gabon	-	85	87
Gambia	74	84	92
Ghana	54	71	82
Guinea	52	62	71
Guinea-Bissau	-	55	61
Kenya	43	52	59
Lesotho	61	74	85
Liberia	58	65	68
Libyan Arab Jamahiriya	54	54	-
Malawi	40	63	80
Mali	29	44	56
Mauritania	30	40	49
Mauritius	99	99	99
Morocco	74	78	81
Mozambique	36	42	47
Namibia	64	81	92
Niger	35	42	48
Nigeria	47	53	58
Rwanda	68	67	65
Sao Tome and Principe	-	79	89
Senegal	61	65	69
Sierra Leone	-	55	49
Somalia	-	23	30
South Africa	83	86	91
Sudan	65	61	57
Swaziland	-	55	69
Togo	49	55	60
Uganda	43	57	67
Tanzania	55	54	54
Zambia	49	54	60
Zimbabwe	78	80	82

Source: Author's Compilation WHO/UNICEF (2010) Progress on Water and Sanitation: 2010 Update database.

Table A5 : Main (fixed) telephone lines

		Main (fixed) telephone lines			Main (fixed) telephone lines per 100 inhabitants	
		(000s)		CAGR (%)		
		2003	2008	2003–2008	2003	2008
1	Angola	85.0	114.3	6.1	0.6	0.7
2	Benin	66.5	110.8	13.6	0.8	1.2
3	Botswana	131.4	142.3	1.0	7.4	7.5
4	Burkina Faso	66.6	121.8	16.3	0.5	0.8
5	Burundi	23.9	30.4	4.9	0.3	0.3
6	Cameroon	97.4	198.3	15.3	0.6	1.0
7	Cape Verde	71.7	72.0	0.1	14.8	13.3
8	Central African Republic	9.5	-	-	0.2	-
9	Chad	12.5	-	-	0.1	-
10	Congo	7.0	-	-	0.2	-
11	Congo (Democratic Republic)	9.7	37.3	30.8	0.0	0.1
12	Cote d'Ivoire	238.0	356.5	8.4	1.4	1.8
13	Equatorial Guinea	9.6	-	-	2.0	-
14	Eritrea	38.1	40.4	1.2	0.9	0.8
15	Ethiopia	404.8	908.9	17.6	0.5	1.1
16	Gabon	38.4	26.5	-8.9	2.9	2.0
17	Gambia	42.0	48.9	3.1	2.9	2.8
18	Ghana	291.0	143.9	-13.1	1.4	0.6
19	Guinea	26.2	50.0	17.6	0.3	0.5
20	Guinea-Bissau	10.6	4.6	-15.1	0.7	0.3
21	Kenya	328.4	252.3	-5.1	1.0	0.7
22	Lesotho	35.1	-	-	2.0	-
23	Liberia	6.9	2.0	-21.6	0.2	0.1
24	Madagascar	59.6	164.9	22.6	0.3	0.8
25	Malawi	85.0	175.2	19.8	0.7	1.3
26	Mali	60.9	82.8	6.3	0.5	0.7
27	Mauritius	348.2	364.5	0.9	28.5	28.7
28	Mozambique	77.6	78.3	0.2	0.4	0.4
29	Namibia	127.4	138.1	2.0	6.4	6.7
30	Niger	23.0	-	-	0.2	-

AFRICAN DEVELOPMENT CHARTER SERIES 2

31	Nigeria	888.5	1307.6	8.0	0.7	0.9
32	Rwanda	25.6	16.8	-8.1	0.3	0.2
33	Sao Tomé & Príncipe	7.0	7.7	2.4	4.7	4.9
34	Senegal	228.8	237.8	0.8	2.1	1.9
35	Seychelles	21.2	23.2	1.8	26.8	27.4
36	Sierra Leone	24.0	-	-	0.5	-
37	South Africa	4821.0	4532.0	-1.5	10.3	9.3
38	Swaziland	46.2	-	-	4.5	-
39	Tanzania	147.0	123.8	-3.4	0.4	0.3
40	Togo	61.1	99.5	13.0	1.0	1.5
41	Uganda	61.0	168.5	22.5	0.2	0.5
42	Zambia	88.4	90.6	0.5	0.8	0.7
43	Zimbabwe	300.9	344.5	3.4	2.3	2.6
Africa		9552.7	10617.0	2.5	14	1.5

↓ Figures are estimates or refer to years other than those specified

Source: ITU World Telecommunication/ICT indicators database

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table A6 : Mobile Cellular Subscriptions in Africa

		Mobile cellular subscriptions			Mobile cellular subscriptions per 100 inhabitants		
		(000s)		CAGR (%)			
		2003	2008	2003-2008	2003	2008	2003-2008
1	Angola	350.0	6773.4	80.9	2.3	38.7	75.5
2	Benin	236.2	3435.0	70.8	3.0	36.9	65.4
3	Botswana	445.0	1485.8	27.3	25.1	78.0	25.4
4	Burkina Faso	238.1	2553.0	60.7	1.9	16.8	54.3
5	Burundi	64.0	480.6	49.7	0.9	5.4	42.9
6	Cameroon	1077.0	6160.9	41.7	6.8	32.6	36.6
7	Cape Verde	53.3	277.7	39.1	11.0	51.2	35.9
8	Central African Republic	40.0	154.0	30.9	1.0	3.5	27.9
9	Chad	65.0	1809.0	94.5	0.7	16.3	87.1
10	Congo	330.0	1807.0	40.5	8.8	47.0	39.9
11	Congo (Democratic Republic)	1246.2	9262.9	49.9	2.3	14.3	44.2
12	Cote d'Ivoire	1280.7	10449.0	52.2	7.3	53.2	48.9
13	Equatorial Guinea	41.5	346.0	52.8	8.6	66.6	50.5
14	Eritrea	-	108.6	-	-	2.2	-
15	Ethiopia	51.3	3168.3	128.1	0.1	3.7	121.6
16	Gabon	300.0	1300.0	34.1	22.4	96.3	33.9
17	Gambia	149.3	1166.1	50.8	10.4	66.5	45.0
18	Ghana	795.5	11570.4	70.8	3.8	48.3	66.7
19	Guinea	111.5	2600.0	87.7	1.2	27.2	85.4
20	Guinea-Bissau	1.3	500.2	230.2	0.1	28.6	220.0
21	Kenya	1590.8	16233.8	59.1	4.9	42.1	54.0
22	Lesotho	126.0	581.0	35.8	7.0	28.8	32.7
23	Liberia	47.3	732.0	73.0	1.5	18.6	66.2
24	Madagascar	283.7	4835.2	76.3	1.6	23.9	71.6
25	Malawi	135.1	1781.0	67.5	1.1	12.5	62.6
26	Mali	247.2	3267.2	67.6	1.9	25.7	67.6
27	Mauritius	462.4	1033.3	17.4	37.9	81.3	16.5
28	Mozambique	435.8	4405.0	58.8	2.3	20.2	54.6
29	Namibia	223.7	1052.0	36.3	11.3	50.0	34.8
30	Niger	82.4	1677.0	82.7	0.6	11.4	78.3
31	Nigeria	3149.5	62988.5	82.1	2.5	41.6	75.4
32	Rwanda	130.7	1322.6	58.9	1.5	13.2	54.7
33	Sao Tomé & Príncipe	4.8	49.0	59.0	3.2	30.6	56.8
34	Senegal	782.4	5389.1	47.1	7.0	42.5	43.3
35	Seychelles	49.2	85.3	11.6	62.2	100.9	10.2
36	Sierra Leone	113.2	1008.8	54.9	2.2	16.9	50.2
37	South Africa	16860.0	45000.0	21.7	35.9	92.2	20.7
38	Swaziland	85.0	457.0	40.0	8.2	39.8	37.1
39	Tanzania	1942.0	13006.8	46.3	2.4	31.4	67.9
40	Togo	243.6	1547.0	44.7	4.2	22.9	40.5
41	Uganda	776.2	8554.9	61.6	2.9	26.8	56.1
42	Zambia	241.0	3539.0	71.1	2.1	29.1	68.6
43	Zimbabwe	363.7	1654.7	35.4	2.8	13.1	35.9
Africa		35251.4	245608.1	47.4	5.3	32.5	44.0

¹ Figures are estimates or refer to years other than those specified
Source: ITU World Telecommunication/ICT indicators database

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table A7 : Mobile cellular subscriptions (continuation)

		Mobile cellular subscriptions			Mobile cellular subscriptions per 100 inhabitants		
		Prepaid subscription (%)	Population coverage (%)	As % of total telephone subscribers	(000s)	Per 100 inhabitants	
		2008	2007	2008	2003	2008	2008
1	Angola	70.4	40.0	98.3	-	139.3	0.8
2	Benin	99.5	80.0	96.9	-	-	-
3	Botswana	97.9	99.0	91.3	-	-	-
4	Burkina Faso	99.2	61.1	95.4	-	-	-
5	Burundi	99.6	82.0	94.0	-	-	-
6	Cameroon	99.0	58.0	96.9	-	34.4	0.2
7	Cape Verde	99.5	87.0	79.4	-	4.9	0.9
8	Central African Republic	-	19.3	90.2	-	-	-
9	Chad	100.0	24.0	97.3	-	-	-
10	Congo	99.0	53.0	97.2	-	-	-
11	Congo (Democratic Republic)	99.6	50.0	99.6	-	-	-
12	Cote d'Ivoire	98.9	59.0	96.7	-	-	-
13	Equatorial Guinea	97.5	-	90.6	-	-	-
14	Eritrea	100.0	1.7	72.9	-	-	-
15	Ethiopia	87.2	10.0	77.7	-	-	-
16	Gabon	99.2	79.0	98.0	-	-	-
17	Gambia	100.0	85.0	96.0	-	-	-
18	Ghana	94.1	68.0	98.8	-	-	-
19	Guinea	95.0	80.0	98.1	-	-	-
20	Guinea-Bissau	100.0	65.0	99.1	-	-	-
21	Kenya	98.7	77.0	98.5	-	20.6	0.1
22	Lesotho	85.6	55.0	87.1	-	-	-
23	Liberia	-	-	99.7	-	-	-
24	Madagascar	98.2	23.0	96.7	-	4.3	-
25	Malawi	99.1	93.0	91.0	-	-	-
26	Mali	99.7	21.5	97.5	-	-	-
27	Mauritius	93.9	99.0	73.9	-	90.0	7.1
28	Mozambique	80.0	44.0	98.3	-	-	-
29	Namibia	87.6	95.0	88.4	-	-	-
30	Niger	92.4	45.0	93.1	-	-	-
31	Nigeria	99.0	60.0	98.0	-	3671.5	2.4
32	Rwanda	99.0	90.0	98.7	-	0.7	-
33	Sao Tomé & Príncipe	98.9	19.5	86.5	-	-	-
34	Senegal	99.3	85.0	95.8	-	-	-
35	Seychelles	76.9	98.0	78.6	-	0.1	0.1
36	Sierra Leone	-	70.0	-	-	-	-
37	South Africa	81.9	99.8	90.9	-	2471.3	5.1
38	Swaziland	95.0	90.0	85.0	-	-	-
39	Tanzania	96.7	65.0	99.1	-	175.6	0.4
40	Togo	99.8	85.0	94.0	-	-	-
41	Uganda	95.0	80.0	98.1	-	214.3	0.7
42	Zambia	99.6	50.0	97.5	-	-	-
43	Zimbabwe	79.1	75.0	83.7	-	-	-
Africa		94.8	58.5	95.6	-	6827.0	0.9

Note: for data compatibility and coverage, see the technical notes

† Figures are estimates or refer to years other than those specified

Source: ITU World Telecommunication/ICT indicators database

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table A8 : Internet Users

		Internet users			Internet users per 100 inhabitants		
		(000s)		CAGR (%)	CAGR (%)		
		2003	2008	2003-2008	2003	2008	2003-2008
1	Angola	58	550	56.8	0.4	3.1	52.1
2	Benin	70	160	18.0	0.9	1.7	14.2
3	Botswana	60	118	14.6	3.4	6.2	12.9
4	Burkina Faso	48	140	23.9	0.4	0.9	18.9
5	Burundi	14	65	35.9	0.2	0.7	29.8
6	Cameroon	100	548	53.0	0.6	3.0	47.4
7	Cape Verde	20	103	38.7	4.1	19.0	35.6
8	Central African Republic	6	19	25.9	0.2	0.4	23.0
9	Chad	30	130	34.1	0.3	1.2	29.0
10	Congo	15	155	59.5	0.4	4.0	58.9
11	Congo (Democratic Republic)	75	290	31.1	0.1	0.4	26.5
12	Cote d'Ivoire	140	660	36.4	0.8	3.4	33.4
13	Equatorial Guinea	3	12	32.0	0.6	2.3	29.9
14	Eritrea	30	150	38.0	0.7	3.0	32.3
15	Ethiopia	75	360	36.9	0.1	0.4	33.0
16	Gabon	35	90	20.8	2.6	6.7	20.6
17	Gambia	35	114	26.7	2.4	6.5	21.7
18	Ghana	250	997	31.9	1.2	4.2	28.7
19	Guinea	40	90	17.6	0.4	0.9	16.2
20	Guinea-Bissau	19	37	14.3	1.3	2.1	10.8
21	Kenya	1000	3360	27.4	3.1	8.7	23.3
22	Lesotho	30	73	19.6	1.7	3.6	16.8
23	Liberia	1	20	111.5	-	0.5	-
24	Madagascar	71	316	35.0	0.4	1.6	31.3
25	Malawi	36	316	54.4	0.3	2.2	50.0
26	Mali	35	125	29.0	0.3	1.0	29.0
27	Mauritius	150	380	20.4	12.3	29.9	19.5
28	Mozambique	83	350	33.4	0.4	1.6	29.8
29	Namibia	65	114	11.8	3.3	5.4	10.5
30	Niger	19	80	33.3	0.1	0.5	30.1
31	Nigeria	750	11000	71.1	0.6	7.3	64.9
32	Rwanda	31	300	57.5	0.4	3.0	53.3
33	Sao Tomé & Príncipe	15	25	10.6	10.0	15.5	9.1
34	Senegal	225	1020	35.3	2.0	8.0	31.8
35	Seychelles	12	32	21.7	15.2	37.8	20.1
36	Sierra Leone	9	14	9.1	0.2	0.2	5.8
37	South Africa	3283	4187	5.0	7.0	8.6	4.1
38	Swaziland	27	48	12.3	2.6	4.2	10.0
39	Tanzania	250	520	15.8	0.7	1.3	13.1
40	Togo	210	350	10.8	3.6	5.2	7.5
41	Uganda	125	2500	82.1	0.5	7.8	75.9
42	Zambia	110	700	44.8	1.0	5.8	42.7
43	Zimbabwe	800	1481	13.1	6.2	11.0	12.0
Africa		8460	32098	30.6	1.3	4.2	27.0

¹ Figures are estimates or refer to years other than those specified
Source: ITU World Telecommunication/ICT indicators database

Table A9: International Internet Bandwidth

		International internet bandwidth					
		Mbps		CAGR (%)	Bits/s per internet user		CAGR (%)
		2003	2008	2003-2008	2003	2008	2003-2008
1	Angola	7.0	290.0	153.7	121	582	48.2
2	Benin	47.0	155.0	34.8	671	1033	11.4
3	Botswana	23.0	81.0	37.0	383	810	20.6
4	Burkina Faso	12.0	215.0	78.1	250	1955	67.2
5	Burundi	4.0	15.5	31.1	286	238	-3.6
6	Cameroon	45.0	155.0	28.1	450	283	-8.9
7	Cape Verde	8.0	155.0	80.9	400	1508	30.4
8	Central African Republic	1.0	1.5	11.4	167	96	-12.9
9	Chad	0.5	6.0	85.0	17	67	40.6
10	Congo	0.6	1.0	15.4	38	10	-27.8
11	Congo (Democratic Republic)	5.0	10.0	14.9	67	34	-12.4
12	Cote d'Ivoire	40.5	310.0	66.4	289	689	24.2
13	Equatorial Guinea	1.0	16.8	102.5	333	1680	49.8
14	Eritrea	2.0	24.0	64.4	67	160	19.1
15	Ethiopia	10.0	245.0	122.5	133	842	58.5
16	Gabon	45.0	200.0	45.2	1286	2439	17.4
17	Gambia	2.1	62.0	134.5	59	618	80.3
18	Ghana	28.9	497.0	103.6	116	565	48.7
19	Guinea	2.0	2.0	-	50	27	-145
20	Guinea-Bissau	0.1	2.0	136.4	3	59	104.4
21	Kenya	26.0	1421.2	171.9	26	423	100.8
22	Lesotho	1.0	4.3	43.9	33	61	16.4
23	Liberia	0.3	-	-	-	-	-
24	Madagascar	20.0	162.0	51.9	284	512	12.6

AFRICAN DEVELOPMENT CHARTER SERIES 2

25	Malawi	3.5	67.0	109.5	97	480	49.3
26	Mali	6.0	213.0	144.1	171	1704	58.3
27	Mauritius	63.0	400.0	58.7	420	1053	20.2
28	Mozambique	18.5	72.0	40.5	223	360	12.7
29	Namibia	8.8	56.0	58.8	135	554	42.3
30	Niger	2.0	30.0	96.8	105	543	50.7
31	Nigeria	92.0	693.0	65.7	123	69	-13.3
32	Rwanda	10.0	267.0	127.3	323	890	28.9
33	Sao Tomé & Príncipe	2.0	8.0	41.4	133	348	27.1
34	Senegal	310.0	2900.0	56.4	1378	2843	15.6
35	Seychelles	6.0	74.0	65.3	500	2313	35.8
36	Sierra Leone	-	-	-	-	-	-
37	South Africa	625.5	3380.0	52.5	191	852	454
38	Swaziland	1.0	1.0	-	37	21	-13.0
39	Tanzania	16.0	100.0	58.1	64	250	40.6
40	Togo	14.3	28.5	18.9	68	84	5.3
41	Uganda	10.0	369.0	146.5	80	148	13.0
42	Zambia	12.0	100.0	69.9	109	143	5.5
43	Zimbabwe	-	57.0	-	-	42	-
Africa		1532.4	12846	52.9	203	433	16.3

↓ Figures are estimates or refer to years other than those specified
Source: ITU World Telecommunication/ICT indicators database

CHAPTER 2

Economics of Infrastructure On Sustainable National Development In Developing Countries

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ABSTRACT

The premise of sustainable national development is measured by the quantum of investment in national food security, sustenance of human capacity development and its' utilization, technological advancement and its' deployment in the production lines, socio-cultural advancement, peace and security that subsist in a nation. This premise, is perhaps well encapsulated in the United Nations Millennium Development Goals (MDGs), which of course, can be attained given the available economic infrastructure that can support poverty reduction, elimination of all forms of exclusion, enhanced and sustained national food security, health care delivery, advancement in the application of Industrial technologies, as well as attainment of self-sufficiency in all sectors of production. This scenario is possible when the requisite economic infrastructures that are relevant to, and consistent with the variables of national development are positively correlated. However, in developing economies, the likely positive correlation of these variables, determine to all extent, how sustainable national development can be attained, based on the economies of scale of the nations' economics infrastructure in the context of development.

Keywords: Economic Infrastructure: Sustainable Development: Investment: Economies of Scale: Exclusion

BACKGROUND TO THE STUDY

The premise of this paper is derived from the theme of a national conference on "Economic Infrastructure and Sustainable National Development: Multi-disciplinary Assessment". This is a multi disciplinary perspective, as it is strictly an economic type. Therefore, given the economic perspective, one is of the stance that, the demand for economic infrastructure and sustainable national development is a derived demand. This is because, in the analysis of type of demand, these are among others, autonomous and derived demand. According to Dwivedi (2002), while the autonomous demand/direct demand for a community is one that arises on its own, out of a natural desire to consume or possesses such a commodity, thus, it is independent of the demand for any other commodity, derived demand on the other hand, is a demand for a commodity that arises because of the demand for some other commodities called parent product, examples of such are Land, agricultural tools and infrastructure.

It must be recalled that economic infrastructure is critical to sustainable national development as it is measured by the quantum of investment in national food security, sustenance of human capacity development and its utilization, technological advancement and its' deployment in the production and services lines as well as the peace and stability that subsist in a country. These measures, according to Eboy, Okoye and Ayichi (1995) constitute the theoretical and empirical bulwark of sustainability in development, and they are defined by equity, stability, food security, co-evolutionary growth and participation. Thus, envisioning sustainable development in developing countries that takes the dimensions of economic, environmental, human capital, institutional, technological among others, must build on policy options focusing on;

1. investment in human capital formation/accumulation;
2. Protecting the environment;
3. Ensuring food security;
4. Creating growth, employment incentives and wealth; and
5. empowering/capacitating rural people

The above vision is realized only on the platform of a well established economic infrastructure. This by implication is that, without economic infrastructure, the premises on which sustainable development can take-off is baseless.

In a related development, the eight-point Millennium Development Goals (MDGs) can only be achieve given that the requisite economic infrastructure are in place. Recall that the MDGs focus on reduction of poverty, elimination of all forms of

exclusion, through the sustenance of gender equity, reduction of illiteracy rate by 50% within a timeframe among others. These goals have been achieved to certain extent in some developing countries of the south, but the sustenance of these goals is strictly dependent on infrastructure. In the Nigerian context, economic infrastructure is critical to the attainment of the MDGs, and transformation of all section of the national economy for sustainable development.

STATEMENT OF THE PROBLEM

Given that economic infrastructure, is widely recognized as a ingredient in a country's economic success, one is however worried, following up the series of questions that were raised by Henckel and McKibbin (2010) in a paper on "The Economics of Infrastructure in a Globalised World: Issues, Lessons and Future Challenges" Among other things, Henckel and McKibbin (2010) raised the following questions namely: What is the nature of infrastructure? What are its' salient features that distinguish it from other factors of production? What are the returns to infrastructural investment? How is infrastructure investment evaluated and delivered? How does infrastructure affect an economy's growth rate? How should infrastructure be provided? Should it be provided by the government? By the private sector under strict government regulations? By the private sector with little, if any, government regulation? Should infrastructure provision be affected by the stage of a country's economic development?

REVIEW OF LITERATURE

The Compact Oxford English Dictionary (2009) describes infrastructure as the basic "physical" and "organizational" structure needed for the operation of a society or enterprise. Sullivan and Steven (2003) defined infrastructure as the services and facilities necessary for an economy to function. It is thus, seen as the set of interconnected structural elements that provide a framework supporting an entire structure of development. Hence, Fulmer (2009) defined infrastructure as "the physical components of interrelated systems providing commodities and services essential to enable, sustain or enhance societal living condition".

Deductions from the concept are that, infrastructure facilitates:

1. production of goods and services;
2. Distribution of finished products to market; and
3. Distribution of basic social services such as schools and hospitals.

In another development, Ogunnowo and Oderinde (2012) noted that the concept of infrastructure has been viewed from different perspectives in recent times, but they were quick to provide that, infrastructural facilities refer to those basic services and structures without which primary secondary and tertiary productive activities cannot

function. It was concluded by Ogunnowo and Oderinde (2012) that, infrastructural facilities are elements in the package of basic needs, which community would like to procure for better living.

In Keynesian economics, the word infrastructure was exclusively used to describe public assets that facilitate production but not private assets of the same purpose. In post-Keynesians times, however, the term has grown in popularity, and it has been applied with increasing generality to suggest the internal framework discernible in any technology system or business organization.

Nature and Perspectives on Economic Infrastructure

They are two main types of infrastructure, but all are central to economic activities that are critical to the attainment of the social-well-being of a people. These are; hard and soft infrastructure (Stephen, 2008). Hard infrastructure refers to the large physical networks necessary for the functioning of a modern industrial nation, whereas, soft infrastructure refers to all the institutions which are required to maintain the economic, health, social, cultural, standards of a country, such as the financial system, education, health care system, system of government, and law enforcement, as well as emergency services (Stephen, 2008).

Economic infrastructure, while depending on the hard, or physical infrastructure, determine the attainment of sustainable development. Therefore, it is important to highlight four critical variants of the economic infrastructure that are central to sustainable national development. These include:

- a. financial system; including the banking system, financial institutions, the payment system, exchanges, the money supply, financial regulations, as well as accounting standards and regulations;
- b. business logistics facilities and systems, including warehouses as well as shipping management systems;
- c. manufacturing infrastructure including parks and special economic zones, mines and processing plants for basic materials used as inputs in industry, specialized energy, transportation and water infrastructure used by industry, plus the public safety, environmental laws and regulations that govern and limit industrial activities and standards organizations; and
- d. agricultural, forestry and fisheries infrastructure, including specialized food and livestock transportation and storage facilities, major feedlots, agricultural price support systems (including agricultural insurance), agricultural health standards, food inspection, experimental farms and agricultural research centres and schools, the system of licencing and quota management, enforcement systems against poaching forest wardens (guards) and fire fighting (Nicolas, Fizzli and Vincent, 2011).

ECONOMIES OF SCALE OF INFRASTRUCTURE ON SUSTAINABLE DEVELOPMENT

Sustainable development originated rather uniquely in the wake of strong criticisms of existing neo-classical development models and theories (Akintayo and Oghenekohwo, 2004). Among these criticisms are failure of neo-classical models to address key developmental issues such as poverty, human welfare and environmental health as well as failure of economic growth (neo-classically indexed by per capita gross national product) to translate into improved human welfare and healthier environments (Eboh, Okoye and Ayichi ,1995). Therefore, sustainable development becomes systematically ambiguous as a concept. This is on account that the economic definition focuses on optimal resource management, that is, maximizing the net benefits of economic development, while maintaining the services and quality of natural resources (Barrier, 1989). Elsewhere, the ecologist stresses using renewable natural resources in a manner that does not degrade or diminishes their renewable usefulness for future generation (Goodland and Lader, 1987). Nevertheless, there was a consensus reached on the concept of sustainable development as provided for by the Bruntland Commission (1987) that, sustainable development is the development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. It is against this world submission that Abumere (1997) referred to the concept to mean that, in our use of environmental resources to satisfy current demands; we must not inflict irreversible damage on the environment in such a way as to jeopardize the ability of future generation to meet their needs.

Sustainable national development must then take the dimensions of economic, environmental, human, institutional, technological and socio-cultural, with options not limited to;

1. Investing in human development;
2. Ensuring food security;
3. Creating growth and employment incentives;
4. Empowering rural people; and
5. Protecting environment

METHODOLOGY

The study adopted a content analytical research method which mainly relied on data collected through secondary sources some of which were documented empirical evidences. These data were subjected to content analysis in the discussion of results for this study.

FINDINGS

While responding to those questions raised by Henckel and McKibbin (2010), under the statement of the problem, it is important to note that, the first issue in question is pivotal to the other three questions. And in this discourse, the first issue is fully addressed in terms of the main characteristics of infrastructure that make it special to a country's sustainable economy, whether it is by scope, scale or longevity of different types of infrastructure development. The second issue raised is central to boosting overall productivity and to raising living standards. The third issue is central to the policy debate about infrastructure investment, with a long and growing list of open questions such as what is the most efficient way to finance infrastructure spending? What are the optimal infrastructure pricing, maintenance and investment policies? The final issue relates to developing countries, whose infrastructure is typically less sophisticated and extensive than developed countries' infrastructure and additionally often more poorly managed and less efficiently used. With focus on the economic infrastructure, it is evident that the last issue is very germane because, it is the stage of infrastructure development that determines the sustainable development of a country.

Economic infrastructure on the short and long run satisfy the returns to infrastructure as Henckel and McKibbin (2010), reported some deliverables associated with investment in economic infrastructure. Accordingly, it was noted by economists that infrastructure investment is necessary for a country to industrialise. From a sustainable development perspective, infrastructure offers two key benefits, namely; raises productivity and reduces the cost of private sector production. Besides, it has a disproportionate effect on the incomes and welfare of the poor, by reducing the costs to access markets, raising returns on existing assets, facilitate human capital accumulation and facilitating agglomeration economics as well as the dissemination of knowledge (Jones and Paul, 2010). Meanwhile, Calderain, Moral-Benito and Servein (2009) reported that a 10 percent in infrastructure assets directly increases GDP per capita by 0.7 to 1 percent. There is little evidence that output of the aggregate production functions filters across countries. In specific, the output elasticity of infrastructure does not seem to vary with countries level of per capita income of their infrastructure endowment, or the size of their population. To the extent that infrastructure is vital for a country's economic development, it is also crucial as a benefit, in improving the quality of life for the poor (Straub, 2010).

Infrastructure investment influences a country's absolute and comparative advantage by mitigating the constraints of factor endowments and promoting intra- and inter-regional integration. Thus, infrastructure determines the types or patterns of trade, vice versa. As a country develops, its' economy typically moves up the value claim. This process is reinforced by concrete infrastructure, a crucial factor in attracting overseas investment and thereby contributing to the knowledge transfer to developing countries (Calderon, Enrique and Luis, 2009).

Also, as the economy moves up the value chain, its' infrastructure needs to adapt to reflect the changes in production structures and the ever-changing patterns of movement of goods and people. Easterly and Levine (1998), Collier and O'Connell (2007) established that a 1 percent increase in neighbour's infrastructure growth increases a country's own growth rate by 0.4 to 0.7 percent. Similarly, findings exist in the United States where research suggests city-level spillovers from infrastructure investments.

In a similar perspective, the Canadian International Development Agency (CIDA) in 2008, provided a template for stimulating sustainable economic growth. Among the variables of focus in its sustainable economic growth strategy includes:

1. Effective policies and institutions with its attendant variants of rule of law, political stability, transparency, adequate and properly enforced laws, efficient fiscal management and resource allocation, appropriate regulatory systems, and sound public financial systems are all essential to stable economic growth.
2. Infrastructure, as, CIDA noted, is key component of an enabling environment for sustainable development.

Therefore, to achieve high rates of sustainable economic growth CIDA noted that essential elements needed in developing countries must include:

- a. accountable government – transparency
- b. open and effective markets – business
- c. environment that stimulates entrepreneurship, open to competition and market expansion, imports outside knowledge and maximizes investment opportunities
- d. infrastructure
- e. capable human capital
- f. equality of opportunity
- g. sound environmental management

Once these essential elements are in place, CIDA proposed that, sustainable economic growth will follow three pathways namely;

1. **Building economic foundations** – putting in place necessary legislative and regulatory business, industrial and financial framework (economic infrastructure) upon which sustainable growth can take place and develop;
2. **Growing businesses** – enhancing the financial viability (infrastructure), productivity and competitiveness in macro, small and medium – sized private

sector enterprises, leading to increasing engagement and participation in the economic sector; and

3. **Investing in people** – improve the employment potential of individuals to increase access to and benefit from, opportunities in the formal and informal business sectors.

INFRASTRUCTURE IN DEVELOPING COUNTRIES

With infrastructure as a key driver of economic growth, developing countries are particularly aware of their infrastructure needs. For low-income countries, infrastructure investments that provide access to energy, clean water and basic transport may mean the difference between life and death. Basic infrastructure helps alleviate poverty directly and provides the poor with the environment in which they can grow their way out of poverty. Not only is the stock of infrastructure capital in advanced countries much greater than in developing countries (by a factor of up to 50), but there also exist large disparities within the developing world. For example, whereas electricity consumption in 2005 was approximately 4,000 kWh per capita in East Asia, it was less than 200 kWh per capita in South Asia. (OECD countries) consumed on average more than 11,000kWh per capita in the same year (Lee, 2010).

The Asian Development Bank (ADB), one of Asia's main aid and development agencies, estimates that on average, Asia needs to invest about \$750 billion per year in infrastructure, especially energy and transport, during 2010-2020 to create the Bank's vision of a "Seamless Asia", a well-integrated, equitable and fast-growing economy. The ADB argues that the region's vast domestic savings can be the main source of financing for Asia's infrastructure with the private sector taking on a major role in funding and delivery. The experience of private sector participation, seen as a crucial path to help meet the growing investment needs in many countries, is mixed. This may be in part due to a lack of experience and expertise. For example, in 2003 private financing in water supply and sanitation accounted for less than 10 percent of total infrastructure investments in developing countries. And more than 70 percent of this financing was in the form of concessions (Gunatilake, 2010).

Benefits of private participation such as increased competition and greater productive efficiency are not always evident. According to studies conducted by the ADB, poor regulation tends to give private suppliers excessive monopoly power; markets are thin, offering incumbent firms ample opportunity to collude; and technology is not sufficiently varied to allow new entrants to shake up the market. Furthermore, at least in the water sector, there is no statistically significant difference between the efficiency of public and private operation in developing countries.

Developing countries face a host of challenges going forward. First, the public sector faces severe budget constraints and so, developing can only be

expected to fund a small proportion of investments. Second, the private sector in many developing countries is still not very resilient, it took 10 years for private sector infrastructure investment to recover from the 1997-98 Asian crisis. Third, public – private partnerships offer a promising solution to the financing needs, but there are considerable risks associated with inefficient procurement policies and inadequate contracting arrangement. Sound legal frameworks are vital, especially if developing countries wish to attract foreign investment. Fourth, donors and aid agencies need to provide better financial and technical support, with an improved understanding of investment priorities and local needs. Finally, many developing countries would benefit from greater cross-country coordination to fully capture the spillovers of infrastructure service, especially in transport (Gunatilake, 2010).

INCLUSIVE ECONOMY AND INFRASTRUCTURAL DEVELOPMENT

Having examined the benefits of infrastructure to sustainable development, it is critical to consider certain infrastructure matters that are germane to overall sustainable national economic development. For example, Fay and Toman (2010) in their submission on infrastructure and sustainable development “at the Korea-World Bank High Level Conference on Post-Crisis Growth and Development” noted three issues that relate to the elements of exclusion in the development of infrastructure.

Common sense, according to Fay and Toman (2010) suggests that, modern economies cannot function without infrastructure, which provides a variety of critical services in determining any country's production and consumption possibilities. Given the necessity of infrastructure for the functioning of modern economies, unfortunately, more infrastructures may not necessarily translate to more growth or sustainable development. The binding constraints may lie elsewhere than simply in the total quantity of infrastructure investment. These constraints are what we refer to in this paper as the exclusion variables in the translation of infrastructure to sustainable development. Such exclusion variables are, but not limited to:

1. Poor managerial incentives or externalities from missing markets;
2. Deliberate policy of non-investment in key economic infrastructure;
3. Sustenance of inequality in the infrastructure investment;
4. Poor maintenance and low value attachment to economic infrastructure;
5. Deficit in decision – making towards maintaining and adding value to infrastructure investment;
6. Infrastructure deficit also affects productivity and firms' ability to compete;
7. Significant increases in infrastructure require very large, often lumpy, upfront investment. Many governments, faced with competing priorities or difficult fiscal situations, simply do not or cannot chose to allocate the resources needed to reach desirable levels of access or quality infrastructure;

8. Infrastructure services are public goods and/or natural monopolies in many developing countries. As such, they are either run or regulated by public entities and so; suffer from some common inefficiencies of public services; and
9. Private participation in infrastructure has brought additional financing, and in many cases, has contributed to improvements in productivity. However, PPI is limited (excluded) by cost recovery potential and the quality of the regulatory framework.

Therefore, these exclusion factors in sustainable development are derived from costs, insufficiency, inefficiency, and poor maintenance of the available infrastructure, which can be effectively and efficiently managed if the private sector participation is encouraged by the public sector.

RECOMMENDATIONS

As noted elsewhere, and flowing from the way forward in Hay and Toman (2010) submission, the central focus of this paper as critical to infrastructure investment is that, more, better and clearer investment can be achieved. This is because, more infrastructure investment and better quality infrastructure services requires overcoming a number of obstacles related to cost and governance, as well as refining how public and private sector participation can be better enhanced. While these exclusion variables are real, so are the opportunities for reducing them, given the political will, and for developing economies, affordability can be improved. Some of the critical things to be done as way forward are derived from the views of Fay and Toman (2010) as regard the important follow-up actions.

Follow-up Actions

1. Promote collaborative efforts to greatly increase and improve collection and sharing of data on infrastructure investment and its impacts;
2. Develop an action plan for increasing public and private financing of infrastructure, as well as improving its efficiency. It involves three steps; and
 - a. assessing the potential for increasing fiscal space in developing countries
 - b. assessing the potential for increasing private investment and reducing its costs
 - c. assessing how to move cost-effectively and integrate environmental consideration into infrastructure investments

3. Develop an action plan for providing increased technical and financial assistance to developing countries in their efforts to improve infrastructure efficiency, enhance the investment climate, and integrate environmental factors with sustainable economic concerns.
4. Build economic foundations which reflect the right conditions and institutional frameworks as a foundation upon which to encourage investment, innovation and sustainable economic growth.
5. Growing businesses – Enhancing the productivity and competitiveness of enterprise to critical component of sustainable economic growth driven by investment in economic infrastructure.
6. investing in people – people are at the centre of sustainable development. Infrastructural development need to encourage the creation of economic opportunities that enable the reduction of poverty, provide jobs, sustain business ownership and investment. Success in economic infrastructure provides that, those individuals, especially women and youth, develop new skills and expand their knowledge to meet the challenges of exclusion from development opportunities.

CONCLUSION

Economic infrastructure is vital to the attainment of sustainable development. It has been established that four critical economic infrastructure significantly predict inclusive economic growth, which of course, enhance poverty reduction, eliminate all forms of exclusion, ensure and sustain national food security, by growing businesses and supporting economic foundations, health care systems, advancement in the application of industrial technologies and protection of the environment.

It is also established in this paper that investment in infrastructure is part of the capital accumulation required for sustainable economic development and, have impact on socio-economic measure of welfare (Ballesteros, 2010). The causality of infrastructure and economic growth has always been in discourse. In developing countries, expansion in economic infrastructure show marked growth in economic development. However, the relationship does not remain in advanced nations who witness more and more lower rates of return on such infrastructure investments. Nevertheless, economic infrastructure yields indirect benefits through the supply chain, land values, small business growth, consumer sales, and social benefits of community development and access to opportunity. Therefore, the demand for economic infrastructure is a derived demand for sustainable national development.

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CHAPTER 3

The Estimation of the Impact of Rural Road Investments On Socio-economic Development

P Lombard and L Coetzer

ABSTRACT

Socio-economic development and subsequent economic growth on the African continent is hampered by several limiting factors, including the lack of adequate roads infrastructure. Investment in transport infrastructure in Africa plays a significant role in stimulating development. Rural roads infrastructure in Africa is a specific area of concern, as the development of such infrastructure has been neglected to a large extent in the past, thereby imposing significant limitations on growth and development of rural communities. An increased interest in rural roads investment potential has developed in recent years. This is mainly due to the need for development of rural as well as the positive impact that road investment could generate on rural communities, should they have an adequate support roads infrastructure network that is sustained over the long term. It is however a complex task to establish the impact of especially rural road investments, as the benefits received through this investment are difficult to quantify. The impact of road investments on socio-economic development and economic growth is also an important indicator for the justification of the considerable costs involved. The aim of this paper is to discuss the impact of rural road investment on socio-economic

development. The paper also indicates the benefits of rural road investments as well as the type of mechanisms used in practice to estimate its impact.

Keywords: Rural Roads/Investment, Socio Economic Development, Poverty Alleviation, Economic Growth.

1. INTRODUCTION

Rural road investment is one of the main priorities of Governments in Africa as a mechanism towards reducing poverty. It is also an important aspect considered by the development community in the poverty alleviation process and the provision of more equitable opportunities for rural citizens. Currently several factors, including the lack of adequate road infrastructure, are hampering socio-economic development and subsequent economic growth on the African continent. Against this background it is appropriate to state that investment in rural transport infrastructure in Africa plays a significant role in socio-economic development and economic growth of the continent.

However, to be able to state that investment in rural transport infrastructure contributes to socio-economic development and economic growth, methodologies are required to estimate the extent of the impact of such investments on socio-economic development and economic growth. As this is not always an easy task, the main objective of this paper is to review the available methodologies for estimating to what extent investment in rural roads contributes to socio-economic development, and ultimately economic growth and development through poverty alleviation. This paper firstly provides a brief introduction to the relationship between poverty alleviation, road investment and economic growth in general, road investment in Africa and constraints of inadequate road investment. Secondly, the paper focus on the typical available methods used for the estimation of the impact of rural road investment on socioeconomic development as well as the benefits of rural road investments, through a brief review of some case studies in this regard. The paper lastly reaches conclusions with respect to the impact of rural road investments on socio-economic development.

2. ROAD INVESTMENT, RURAL TRANSPORT, POVERTY ALLEVIATION AND ECONOMIC GROWTH

Road Investment

Roads are the primary mode of transport in Africa for both freight and passengers. In the Southern Africa Development Community [SADC] region road transport carries over 80% of the region's goods and services [Pinard 2004]. However, the road network in Africa is characterized by several constraints that limit economic growth and

development within African countries. Work related to NEPAD [Food & Agriculture Organization (FAO) of the United Nations 2002] indicates that apart from North Africa, Africa's rural infrastructure is generally inadequate and underdeveloped, with the lowest density of paved roads of any of the regions in the rest of the world. For example, there are an estimated 1.8 million km of roads in Sub-Saharan Africa, of which only 284 000 km (approximately 16 %) are paved.

One of the major constraints is the availability of sufficient funds. This results in lack of capital funds to develop and expand the road network and also lack of funds for routine and periodic maintenance of existing roads. External investment in economic infrastructure¹ from 1990-1996 for Sub-Saharan Africa was in the region of US\$26.7 billion, compared to US\$ 41.4 billion for Latin America and the Caribbean and US\$ 101.9 for Asia [Food & Agriculture Organization (FAO) of the United Nations 2002].

Based on the above it is evident that the financing needs with respect to road network development in Africa is quite substantial. The challenge therefore first of all lies in the determination of road financing needs, through the execution of an accurate assessment of the nature and extent of a country's road network, i.e. the road asset value and road network condition, and secondly in the identification of financing sources and accordingly to attract sound and sustainable road investment.

Inadequate road investment results in road networks not being able to be developed and expanded and existing roads not being maintained. The consequence is deterioration of the road network that not only limits accessibility, mobility and regional connectivity of a country, but also results in increased production and transport costs. Deterioration of a road network therefore causes significant ripple effects, ultimately creating a negative impact on the overall macro-economy, and subsequently impeding on poverty alleviation, socio-economic development, and overall macro-economic growth and development. To avoid this, continuous road investment should form the basis of any country's actions in place to address road infrastructure deterioration, development and maintenance.

As an adequate road transport infrastructure network is an essential component for economic growth and development, continuous road investment is just as essential for the development and maintenance of the road network of a country. Frequent and continuous investment in transport infrastructure is required in all modes of transport to ensure an adequate transport infrastructure network that supports economic growth and development and subsequently contributes to poverty alleviation, thereby increasing the day-to-day living standard of communities.

Rural Transport

Rural transport depends on appropriate infrastructure, where rural infrastructure consists mainly of rural roads, tracks, trails and footpaths. These may vary in quality,

depending on weather, season, construction and maintenance. As rural households, and in particular women, spend a large amount of time and effort on transport activities to fulfill their basic needs, they are very often severely hampered by the lack of an adequate rural roads network. As a result of this significant limitations of growth and development of rural communities have been experienced in the past, and are also being experienced today. Poverty is very often far worse in rural areas than in urban centers, as a result of lack of integration with urban centers due to lack of adequate accessibility and mobility, and local roads and tracks are often impassable, thereby proving it very difficult and in some cases nearly impossible for rural families to have access to the local rural economy.

Because rural communities could potentially play a considerable role in the economic growth and development of a country, and also for purposes of own socio-economic growth and development, it is important that investment in rural roads be supported to provide sustainable rural roads infrastructure network over the long term.

Poverty Alleviation

Poverty alleviation is one of the major challenges of countries on the African continent. The World Bank states that in various studies evidence has been provided that there is a definitive link between areas with no or insufficient accessibility and poverty, indicating that transport infrastructure is an essential component of sustained poverty alleviation [World Bank 2001].

Road infrastructure provides accessibility and mobility, leading in turn to increased transport operations, economic activity, subsequent economic growth and ultimately a healthy and sound economy. An adequate road infrastructure network also provides an advantage to a country in terms of improved regional integration, which helps to promote regional and international trade and significantly enhances the economic growth and development of a country and consequently alleviates poverty.

Lack of adequate road infrastructure, especially in rural areas, results in significant limitations for communities. These limitations occur in terms of access to socio-economic and cultural centers such as schools, clinics, markets and other business centers. Limited access to schools hamper educational access for learners, lack of access to clinics hamper health development and limited access and mobility to markets and other business centers places limits on trade opportunities, and subsequently also limits the potential opportunity for earning an income and a subsequent improvement in the day-to-day living standard. The result is a poor socio-economic development standard.

Economic Growth

From the afore-mentioned it is evident that economic growth and development in any country can be linked to the road network of a country as transport improvements stimulate economic development. The existence of an adequate and efficient road infrastructure network is crucial and a prerequisite for the provision of accessibility and mobility to the citizens of a country. Rural roads infrastructure is essential and a prerequisite for economic growth and development in Africa.

3. ESTIMATION OF THE IMPACT OF RURAL ROAD INVESTMENT ON SOCIO-ECONOMIC DEVELOPMENT

To estimate the impact of road investments is a complex task, as all rural road investment benefits to rural communities cannot be measured in monetary terms. This impact of road investments on socio-economic development and economic growth is therefore an important indicator for the justification of the considerable costs involved in road infrastructure investment.

3.1 Estimated Impact of Rural Roads Investments in Non-Quantifiable Terms

Socio-economic aspects are a significant part of overall economic and human development. Rural roads play a major role in facilitating and enabling access to socioeconomic centers in rural areas and ultimately contribute to achieving equity in a country. Several studies have been carried out over time to estimate the impact of rural roads investments on socio-economic development. Although many studies in the past focused on the direct impact, through the application of relevant software tools, the estimation of the indirect impact on socio-economic development is becoming more and more prevalent.

Since measuring social benefits is difficult, this only needs to be done if transport cost savings and time savings approach does not provide enough justification in terms of the economic rate of return [ERR] estimates [World Bank 2000]. In most cases, the ERR estimates for rural low volumes roads will not be able to justify investments.

A socio-economic impact assessment was recently carried out regarding feeder road improvements in the Copperbelt of Zambia [Africon 2004]. The assessment focused on the current situation in the Copperbelt Province and the project areas, and investigated the impact that improvements to the feeder road network could have on the socio-economics. The socio-economic assessment also focused on labour-based construction and maintenance of the feeder road improvements, with the view on especially employing people living in the catchment areas. The study indicated that economic activities involve self employment among both men and women, and constitute a wide range of economic activities such as trading, logging, saw milling, carpentry, wood fuel selling, vending, beer brewing,

baking, sewing, knitting and vending in makeshift markets. Agriculture is seen as an alternative economic activity to mining, for economic growth. To enhance agricultural production, communities have also been encouraged to form co-operatives. The study indicated that many individual farmers organize their own transport to market places in the urban centers due to a lack of a mechanism such as an agricultural marketing board to coordinate collection and transportation of agricultural produce to the markets. Subsistence farmers usually transport their produce on bicycles. As they are not able to transport much on a bicycle, subsistence farmers are not able to make much profit on their produce. Areas without feeder roads or with poorly maintained roads and bridges make it difficult for farmers to transport their agricultural produce. Inability to take the produce to the market often leads to establishing markets by the road sides. From the study it was evident that transport plays a significant role in the daily lives of the communities and that they will benefit from the improvement of the feeder road network.

Parallel work [World Bank 2001] indicated that a significant improvement in socioeconomic living conditions was estimated with rural roads investment. The estimated benefits included the following:

1. improved accessibility to social infrastructure [schools and health centers], increased opportunities to access education and health facilities and improved social interaction and mobility, which are important for social and economic development;
2. improved access to markets by reducing transport costs;
3. improvement of the marketability of perishable goods through timely and cheaper transport that will provide a direct incentive for more market-oriented agriculture, with more profitable cash crops, an increase in rural income and also additional employment opportunities.

Hine indicate that in the past few years there has been a need to formerly introduce social benefits directly into a cost benefit framework for planning rural roads [Hine 2003]. Hine indicated that in the case of the Ghana Feeder Road Prioritization procedure social access benefits were perceived to be a function of population and the predicted change in unit transport costs. Under the prioritization procedure social access benefits were calculated from the reduced transport costs of every person in the area of influence of the road making five return trips per year of a given length. The implication is that the greater the change in unit transport costs and the larger the population affected, the greater the rural access benefits. These benefits were then added to total benefits within the prioritization procedure.

A recent study [Bryceson 2006] investigated how effective road investment is in addressing mobility and social service accessibility in rural areas by using comparative data from Ethiopia, Zambia and Vietnam. It also investigated the question of whether roads can end geographical isolation and economic and social marginalization for poorer communities. The findings of the paper indicated that rural road investments have the potential to facilitate development and poverty alleviation, subjective to other key factors and basic preconditions that are linked to the realization of benefits. These include (1) the existing density of the rural road network, (2) the level of social and economic infrastructure provisioning, (3) the level of ownership and access of motorized transport in the rural population and (4) the level of purchasing power of rural households to access public transport. The study indicated that when roads enhance mobility it occurs in association with motorized transport, thereby providing easier movement for communities. This could result in poverty alleviation when the savings in travel time and the travel distances covered provide more economic opportunities or improved access to social services.

Socio-economic household surveys carried out in early 2006 in the rural mountain areas of Lesotho, as part of a study [Africon 2006] to determine the feasibility of rural road investment in this area, aimed to obtain the views of communities with respect to the expected impact of the rural road investment on their day-to-day living standard and overall socio-economic conditions. The results of the surveys indicated that, in terms of the views of the communities, the proposed rural road investment would pose significant socio-economic, or indirect, benefits. The surveys indicated that the proposed road investment could potentially create several short-term employment opportunities through road construction, and also long term employment opportunities through continuous road maintenance through the lifespan of the road. The surveys furthermore indicated that daily activities and living conditions of communities in the project road area will be impacted upon positively, in the sense that there will be improved accessibility and mobility due to an improved road, with a subsequent improvement in day-to-day access to public, family and social activities and also improved accessibility to work opportunities. The study results further indicated that factors that are highly correlated with poverty (unemployment, limited to no income, low or no education level, etc) are also related with low access in the sense that men and women can afford little to no transport services, thereby constraining their mobility and accessibility.

Furthermore, communities without access to an all-weather road network definitely have lower access to other facilities, as the specific project road in question in this regard appears to be inaccessible during summer raining, and especially winter snowing conditions. In addition, the survey indicated that accessibility is impacted upon by the income and location of households. As most households in the Lesotho rural mountain areas earn less than \$135 per month, very few households

are in a position of own a private vehicle or make use of public transport on a daily basis. This can tend to limit accessibility to business-, social and cultural centers that are not within walking distance of households. Households that are also located deep into the valleys and mountains and not directly adjacent or at least close the road also have limited accessibility as it is difficult for public transport vehicles to access the valleys and mountains.

3.2 Estimated Impact of Rural Road Investment in Quantifiable Terms

Although there are no specific mechanisms for estimating and quantifying the impact of rural road investment on socio-economic development specifically, general cost-benefit appraisal / analysis can be applied to rural road investment projects in a similar manner, to determine the same benefits as those benefits derived in other road investment projects. Against the above background, the following methodologies are reviewed to estimate the impact of rural roads investment on socio-economic development, through a review of the following features:

- a) Road investment benefits;
- b) Appraisal techniques;
- c) Alternative impact assessment techniques.

a) Road Investment Benefits

The impact of rural road investment can be measured in terms of the following main benefits:

- i Direct benefits;
- ii Indirect benefits;
- iii Induced benefits.

Direct benefits refer to those benefits that are a direct positive impact on the road user and include the following:

- i Savings in Vehicle Operating Costs (VOCs);
- ii Travel time savings;
- iii Reduced accident costs due to the upgrade of the proposed roads;
- iv Possible savings in road maintenance costs.

Direct benefits are usually quantifiable and can be expressed in monetary terms. It is therefore easier to establish these benefits accurately to a certain extent. Indirect benefits refer to those benefits that do not impact directly on the road user and have a wider impact, such as employment opportunities that are related to road investment. Induced benefits refer to those benefits that can be attributed to local economic development as a result of the road investment. These include enhanced self-sufficiency, increased production and efficiency as a result of, amongst other,

improved access to markets for agriculture produce, improved access to social services such as healthcare and educational facilities, and an increase in household income and subsequently a more equal distribution of income.

b) Appraisal Techniques

Historical Cost-Benefit Appraisal (CBA) is the most frequent-used mechanism for the estimation of the impact of road investment on economic development in general. CBA entails that the impact of the proposed investment is usually determined through a comparison of the relevant and related project costs and benefits. The software tool most commonly known and utilized to execute cost-benefit appraisal to determine the estimated impact of road investment is the Highway Development and Management Model (HDM) that was developed by the World Bank under co-ordination of the University of Birmingham. The latest operating version is HDM-4, which is an updated version of the highly popular and extensively used HDM-III program. HDM-4 is aimed at supporting decision-making on road management and the expansion of traffic capacity and is specifically designed to appraise projects, develop road programmes and evaluate long-term road system investment alternatives. HDM-4 has the following main operating characteristics:

- i Economic evaluation of projects where vehicles per day (VPD) are higher than 200.
- ii Detailed input data with respect to the road network, vehicle fleet, respective traffic components and work standards (maintenance and improvement actions) are required;
- iii Benefits are expressed mainly in terms of savings in vehicle operating costs, travel time and accident costs.

Traditional methods of economic appraisal are generally not suitable for the appraisal of low volume roads. However improved appraisal methods are increasingly able to capture the social benefits arising from the provision of adequate road infrastructure (Pinard 2004). As rural roads are most often characterized by low traffic volumes appraisal should ideally be done with a tool specifically designed for low volume roads. The need for the RED Model was based on the fact that the HDM-4 model mainly focuses on higher volume roads, where the VPD are more than 200. For these purposes the Roads Economic Decision Model (RED) was developed by the World Bank (World Bank 2003).

By adopting appraisal methods that are able to capture the non-economic benefits of low volume road provision, e.g. the Roads Economic Decision (RED) Model, the socioeconomic impact of rural road investment can be determined. This model is specifically aimed at improving the decision-making process for the development and maintenance of low-volume roads and can perform an economic

evaluation of road investment options. The RED Model is aimed at improving the decision-making process for the development and maintenance of low-volume roads. The model performs an economic evaluation of road investment options. Benefits are calculated for the respective traffic components (i.e. normal, generated, induced and diverted traffic) and are also expressed mainly in terms of savings in vehicle operating costs, travel time and accident costs.

RED address the following main concerns related to low-volume roads:

1. Reduce the input requirements;
2. Takes into consideration the higher uncertainty related to the inputs;
3. Allows for the incorporation of induced / development traffic;
4. It computes internally the generated traffic due to the decrease in transport costs based on a defined price elasticity of demand;
5. Quantifies the economic costs associated with the days-per-year when the passage of vehicles is further disrupted by a highly deteriorated road condition;
6. Optionally, it use vehicle speed as a substitute parameter to road roughness to define the level of service of low-volume roads (vehicle speeds and possibility);
7. Includes road safety benefits;
8. Includes in the analysis other benefits (or costs) such as those related to nonmotorised traffic, social service delivery and environmental impacts, if they are computed separately;
9. It allows the use of MCA indicators to assist in the ranking of individual projects.

The following table summarizes some of the main characteristics / differences between HDM-4 and RED and also indicate why the RED model is more applicable to roads with lower volumes of traffic:

AFRICAN DEVELOPMENT CHARTER SERIES 2

HDM-4	RED
High volume roads (VPD > 200)	Low volume roads (VPD < 200)
More detailed economic evaluation	Simplified economic evaluation
Detailed input data required	Little input data required
Difficult to apply to economic evaluation of low-volume roads	Easy to apply to economic evaluation of low-volume roads
Do not allow incorporation of induced / development traffic	Allow incorporation of induced / development traffic
Exclude Non -Motorised Transport (NMT) benefits	Include Non -Motorised Transport (NMT) benefits
Feasibility indicators: B/C Ratio ² , NPV ³ & IRR ⁴	Feasibility indicators: B/C Ratio, NPV, IRR & MIRR ⁵

A literature study also indicates the application of techniques such as Multi-Criteria Analysis (MCA) and Cost-Effective Analysis (CEA) to support project appraisal of road investments through software tools such as HDM-4 and RED [World Bank 2001]. MCA is a technique used to rank Rural Transport Infrastructure (RTI) investments, and is typically applied when traffic volumes are less than 50 vehicles per day and too low for conventional consumer surplus measures to make sense [World Bank 2000], but there is still a strong belief that there will be important social benefits.

CEA compares the cost of interventions with their intended impacts and differs from traditional Cost-Benefit Analysis in the sense that it works in a situation where total expenditures for a programme are fixed. In such a case one only needs to decide how to allocate the budget in the best possible way and there is no need to use a consistent metric of benefits that could be the basis for comparisons with other programmes or resource uses. Therefore, although Cost-Benefit and Cost-Effective Analysis both measure benefits to costs, the 'benefit' units are different. Although CEA is specifically used to appraise investments in the social sector, it has rarely been applied in the transport sector. This has been mainly as a result of the view that the impacts of transport interventions are mainly economic in nature and that it should be measures. However, with the increased focus of African countries on poverty alleviation as main objective in the process towards economic growth and development, and the focus on social impacts of transport investments, CEA has recently received more attention.

The above appraisal methods all represent the more direct benefits that are related to project investment and that can be determined.

a) Alternative Impact Assessment Techniques

Whereas direct benefits focus more on the direct impact on the road user, these benefits can be used as the basis to establish a link to, and determine the impact of, road investment on socio-economic development, or the so-called indirect- and induced benefits.

This can be supported by additional data collection methods through which the proposed impact of rural road investment can be estimated and measured by obtaining views from communities with respect to the expected impact on socio-economic conditions on communities.

The most often used method in this regard is the execution of socio-economic household surveys. The main benefit of socio-economic household surveys is that questionnaires can be structured in such a manner that optimal information regarding the perceived benefits of the rural road investment can be obtained. Socio-economic household surveys typically collect information with regard to the following aspects:

1. The perceived impact of the proposed rural road investment on the activities of the communities living adjacent to the road;
2. Existing transport problems experienced as a result of insufficient road investment;
3. How the proposed rural road investment is expected to solve existing transport problems with respect to public, family and social activities;
4. What impact will the project have on daily activities and living conditions;
5. Whether people living in communities without a proper rural roads infrastructure and related access also tend to have lower access to other facilities;
6. Whether people living in communities without access to an adequate rural roads infrastructure tend to spend more time and travel longer distances in the course of their daily activities;
7. Whether accessibility to facilities vary by income and location;
8. Impact of the rural road investment on both women and men

4. CONCLUSION

This paper focused on a review of mechanisms to do estimation of the impact of rural road investments on socio-economic development. The paper indicates that the provision of rural roads infrastructure is an essential service that should be in place to enable and stimulate rural socio-economic growth and development. Several appraisal techniques and software tools exist through which the impact of rural road investments can be determined. Although most of these techniques focus mainly on the determination of direct benefits that are easier to quantify and accurately

determine, there is an increasing trend and movement towards the application of methods to also determine the larger impact of rural road investment on socio-economic development, and ultimately economic growth.

Rural social infrastructure such as education and health facilities is an essential source of economic growth and it is of imperative importance that accessibility and mobility be provided to such infrastructure, through the provision of continuous rural roads investment, to provide sustainable rural roads infrastructure over the long term. Of even more importance is the measurement of the impact of rural road investment on socioeconomic development. The continued investigation into appropriate methods to estimate such impact is also essential, to continuously monitor the impact of rural roads investment, whether through existing techniques that determine direct- as well as indirect benefits, or through the investigation into, and exploration of, new techniques that can be applied to more accurately determine, and even possibly quantify, the larger indirect effects on socio-economic development and subsequent national economic growth. Rural roads investment should be a main concern in the fight towards poverty alleviation and economic growth.

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CHAPTER 4

Towards Sustainable Poverty Alleviation In Nigeria

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ABSTRACT

Poverty, a global issue that is complex and multi-dimensional is one of the most dangerous diseases ravaging mankind. The quality of life one lives is greatly tied to whether he is poor or not, as such, government at all levels in Nigeria has on various occasions attempted to roll out programmes that can alleviate poverty. Despite these attempts, the scourge seems unbolting as a result of the negative role of globalization in the economy of Nigeria, disparities in peoples income, gender imbalance as far as access to economic resources is concerned, disparities in access to health and education, macroeconomic mis-management on the part of successive government, corruption, neglect of agriculture among others. The study recommends investment in infrastructure, involvement of the people at the grassroot in the design, implementation, monitoring of poverty alleviation programmes, introduction of social grants like old age, child support, disability, unemployment etc, end to privatization of state functions, enhanced probity and accountability and reformation of the polity for sustainable poverty alleviation in Nigeria.

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Keywords: Dimensions, poverty, alleviation, sustainable.

INTRODUCTION

Poverty, a global phenomenon that is complex and multi-dimensional is not easy to define. Each region of the world has different yardsticks for measuring the level of poverty based on people's ability to have access to basic things of life namely: food, clothing and shelter. However, it is pertinent to note that despite different yardsticks and indices of measuring poverty from region to region all over the world, the fact still remains that the meaning of poverty still tends towards lack and below average and poor standard of living going by the following definitions as posited by scholars. Narsir (2002) defined poverty as a concept that entails socio-economic and political deprivation which may affect individuals' households, or communities and which may result in lack of access to the basic necessities of life.

The World Bank Report (1990) sees poverty as hunger, lack of shelter, being sick and not being able to go to school, not knowing how to read, not being able to speak properly, not having a job, having fear for the future, losing a child to illness brought about by unclean water, powerlessness, lack of representation and freedom. According to World Bank (1990) and United Nations (1995) the various manifestations of poverty include: lack of income and productive resources sufficient to ensure sustainable livelihood, hunger and malnutrition and other basic services, homelessness and unsafe degraded environment among others. Going by the foregoing definitions and facts about poverty, Ogunleye (2006) concludes that indicators of poverty include: literacy, health status, nutrition status, access to housing, water satisfaction etc Poverty therefore is the inability to attend to or meet up with the basic necessities of life as a result of lack of wherewithal to do so.

FACTS ABOUT DIMENSIONS OF POVERTY IN NIGERIA

According to African foundation for Population and Development (2005), Nigeria is the tenth most populous country in the world and the largest in sub-saharan Africa. It is one of the fastest growing nations in the world. The Nigerian population had more than doubled since she attained nationhood in, 1960. Going by the data obtained from past censuses, the country's population increased sharply from fifty-four (54) million in 1963 to Eighty eight (88) million in 1991. Currently, the country's population has reached one hundred and forty-four (144) Million according to the 2006 population and housing census. With an annual population growth rate of 2.9 percent, which is nearly the same with the annual GDP growth rate (3.5 percent), Nigeria's population will double in the next twenty-five years.

By 2015 (the year benchmarked for the attainment of the Millennium Development Goals (MDGs), Nigeria's population is estimated to be about 178 million. According to the report, Nigeria though rich in natural resources, is currently

ranked among the 13 poorest countries in the world. With per capital income falling significantly to about \$300 (below the subsahara average of \$450) approximately more than 90 million of Nigeria's 144 million people are living in absolute poverty i.e. in less than one dollar a day. Corroborating the assertion above, Nasir (2002) noted that about 1.5 billion people live below the poverty line of less than one dollar per day worldwide. Out of this number, 250 million constituting 17% of the world's total population is Africans and almost one-third of this number coming from Nigeria alone.

Also, available data from the Federal Office of Statistics, (FOS, 1999), indicates that majority of the poor are located in the rural areas of Nigeria. In 1985 for instance, 49.9% of the population in rural areas were poor, declining to 46.1% in 1992, only to rise to 67.85 in 1996. In another development, Nigeria is a country blessed with vast tracks of arable land, abundant human and natural resources. Therefore, Nigeria and poverty should be strange bed fellows. But that is not the case (Tell, Feb. 2, 2009 pg. 53). According to the magazine, Nigeria was regarded as the promising country in the commonwealth ahead of India, Malaysia and Singapore. But, while these countries have made appreciable progress in most indices of growth, Nigeria is still struggling at the bottom of the ladder with most of her citizens unable to meet their basic necessities of food, clothing and shelter.

Going by the facts and figures on dimensions of poverty in Nigeria, the people of the country have suffered untold hardships as a result of the consequences of the scourge on the total well being of the nation. Some of the consequences are physical and psychological. They range from formation of slums in cities, worsening ecological conditions, unemployment and under-employment to upsurge in criminality and increasing mortality rate. It is against this background that this paper tries to look at past and current government efforts at alleviating poverty in Nigeria, causes of poverty and elements contributing or promoting poverty in the country and recommends sustainable poverty alleviation strategies in Nigeria.

PAST AND CURRENT EFFORTS OF GOVERNMENT AT ALLEVIATING POVERTY IN NIGERIA

According to Ogunleye (2006), the federal government of Nigeria did not come out boldly to say she was alleviating poverty until recently. This is so perhaps because it is assumed that poverty to some extent is a feature of the rural areas and such is not a problem commanding national significance. The fact that the available urban centers in the country have pockets of infrastructure and a reasonable above average quality of life had encouraged successive governments in the country to tag their poverty alleviation programmes rural development efforts.

Rural development is persistently erroneously perceived as achieving higher agricultural output. That was why even from the colonial period, the only traces of poverty alleviation of the era was the concentration of the then authorities on opening

up of communication routes that can encourage the movement of agricultural products from the hinterlands to the port of exportation. The period, post World War II till the end of the second National Development Plan in 1975 witnessed increasing agricultural production. This encouraged the establishment of farm settlement schemes in the Western and Eastern parts of the country (Ogunleye, 2006). These schemes have little impacts on their surrounding areas despite huge investments. In the third National Development Plan (1975-1980) greater attention was given to integrated rural development. The vision was to improve upon agricultural productivity and provision of basic social amenities such as water medical services, schools, electricity etc.

In order to achieve the above, the federal government set up Agricultural Development Projects (ADPs) as one of the objectives. Akeredolu (1985) documented that some of the ADPs were successful in agricultural production but refused to transform the quality of life of the people in terms of social and economic development. The focus of the fourth National Development Plan (1981-1985) was on man. Poverty alleviation was not seen as merely providing infrastructures and improving agricultural activities but improving the economic life of the rural areas. According to Adeyinka et al (2002), cooperative development and community development programmes were given more priorities. Despite all these, the standard of living of an average rural dweller did not improve.

When Gen I. B. Babangida assumed the leadership mantle of Nigeria in 1985, he came up with a plan of poverty alleviation in continuance of the previous development plans. The blueprint of the Babangida's rural development and poverty alleviation policy centered on encouraging the role of women, eradication of rural illiteracy, supporting rural markets, rural construction and infrastructures, creation of rural credit system that is grassroot oriented etc. To achieve this goal, several agencies such as the Directorate for Food, Roads and Rural Infrastructures (DFRRI), Better Life for Rural Women, National Directorate of Employment (NDE) were created, yet no meaningful development was noticed.

The government of Chief Olusegun Obasanjo at inception in 1999 came out boldly in anticipation of combating poverty with a programme tagged Poverty Alleviation Programme (PAP). This was later amended further to National Poverty Eradication Programme (NAPEP). These programmes were aimed at providing employment to the jobless Nigerians and to make the take-home pay of Nigerian workers a reasonable one among others. In the same vein, the government of the day believes that Africa's attainment of the Millennium Development Goals depends to a large extent on Nigeria's commitments to poverty reduction. Of utmost significance is the formulation of a homegrown National Empowerment and Development Strategy (NEEDS) which has been described as Nigeria's version of the MDGs. NEEDS was replicated into the state Economic Empowerment and Development

Strategy (SEEDS) and Local Economic Empowerment and Development Strategy (LEEDS) at the state and local government levels respectively. Despite all these laudable programmes, poverty seems not to be removed from the land. No wonder, the Senate (the upper chamber of the Nigerian legislative arm of government) unanimously passed a resolution to probe into the activities of NAPEP since inception in their session of the 17th February, 2009 because poverty seems to be on the increase despite the existence and activities of the agency. The current administration of Alhaji Umaru Musa Yar'Adua is yet to show any flash of seriousness at alleviating poverty despite clearly stating his seven-point agenda on assumption of office in May, 2007.

ELEMENTS CONTRIBUTING TO ESCALATION OF POVERTY IN NIGERIA

Despite several attempts of government, international agencies, NGOs at alleviating poverty as noted above, the scourge is still much apparent in the country. The reasons are numerous, but a few of the most important ones are enumerated as follows:-

1. **The role of globalization in poverty escalation:** The current model of globalization is not sustainable enough in the country and Africa as a whole because the growth it is generating is not creating enough decent jobs for the teeming population.
2. **Disparities in people's income and unemployment:** Generally, the gap between the rich and the poor is so wide in the country that it has been concluded that the middle class does not exist in the country. Quite a number of employable youths are either unemployed or under employed.
3. **Gender:** This is also a prevalent factor in poverty escalation. Overall, women have access to fewer economic resources and have far less social and political power than do men, which greatly restricts their opportunities to climb out of poverty.
4. **Health and education disparities:** In Nigeria the wealthy receive the best schooling and medical care, while many of the poor simply do without. The poor education and health of those living in poverty in turn make it harder for them or their children to advance their economic position. Education is typically seen as a means of narrowing inequalities, however across sub-saharan Africa, Ernest (2006) documented that 37 percent of children did not go to school in 2001, the highest for any world region. Among females the share was 41 percent. Almost all children out of school are from poor families.

5. **Inequalities in power:** Inequalities in income and human capabilities often reflect inequalities in political power. Poor people, women, rural populations and marginalized ethnic groups are disadvantaged in part because they are badly organized, have a weak political voice and are excluded from major areas of decision making in Nigeria especially those involving the distribution of economic and social resources. Unequal political power leads to the formation of institution that perpetuates inequalities in power, status and wealth. All these are characteristics of Nigeria.
6. The Department for International Development DFID (2001) identified three factors as the bedrock of poverty in Nigeria as Macro-Economic mismanagement on the part of successive military and civilian governments, corruption and misuse of oil windfalls. The organisation traced Nigeria's poor economic performance to the failure to productively manage its oil windfall either to improve social infrastructure or encourage non-oil sector economic activities.
7. **Neglect of agriculture:** Before the discovery of oil in the Niger Delta in 1956, agriculture had been the mainstay of the economy of Nigeria. More than 95 percent of the foreign exchange earnings of the country came from the agricultural sector in the first decade of independence, but in the early 70s (during the first oil boom period) the concern of both government and individuals towards agriculture began to dwindle as they saw the "black gold" as an easier and quicker means of getting money. The perception has not changed till today.
8. **Poor infrastructural base:** Good road, portable water, electricity etc no doubt determine the productivity capacity of artisans and the organised private sector. The level of infrastructural development in Nigeria is below average, hence, low level of productivity and poverty escalation.

SUSTAINABLE POVERTY ALLEVIATION STRATEGIES FOR NIGERIA

The following are some of the sustainable strategies at alleviating poverty in Nigeria.

1. Investment in infrastructure that directly enhances productive capacities (such as water supply, irrigation schemes, prevention of erosion) can have a high economic return through increased agricultural output. Roads and other infrastructures should be extended to geographically remote areas.
2. Economic policies of government should be geared towards creation of jobs.

3. Special attention should be given to the needs of the marginalized, disadvantages and vulnerable segments of the population including women towards their empowerment and self-sufficiency.
4. The community must be the center piece of all poverty eradication efforts with the grassroots being involved in the design, implementation, monitoring and elevation of those efforts.
5. Formation of social development departments to disburse social grants like old age, pensions, grants for child support, disability unemployment grants etc
6. There is the need to end the folly of privatizing state functions on a large scale and to rebuild the public institutions and services that were dismantled in recent years. It is true that corruption and mismanagement continue to plague many state institutions in Nigeria, but the shift towards multiparty electoral system and the proliferation of programmes to strengthen good governance can improve the accountability and capacity of these institutions.
7. National tax systems should be made moderately progressive so that the rich (many of whom now evade taxes) pay more, thus, generating additional funds for poverty reduction and basic social services.
8. Enhanced probity and accountability at all levels of governance.
9. Political reforms that can make government accountable to the people and also pave way for confidence in the polity so as to attract investment from abroad.

CONCLUSION

This paper has dealt extensively with the meaning of poverty, its extent in and effects on Nigeria. There is no doubt in the fact that successive government in Nigeria have attempted to alleviate poverty at one time or the other through their poverty alleviation related programmes, the conclusion is that as laudable as some of these programmes are they have not been able to lift the life of majority of Nigerians above the poverty line. The reasons for this are not far fetched; they include; the role of globalisation on the economy, disparities in peoples income, health and education disparities, inequalities in power, macro-economic mismanagement on the part of successive government, corruption, misuse of oil windfalls, neglects of agriculture and poor infrastructural base among others. It is believed that sustainable poverty alleviation is achievable in Nigeria if investment in physical infrastructure is improved upon, enhanced probity and accountability at all levels of governance is embraced and attempt is made to reform the polity such that government is made to be more accountable to the people.

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CHAPTER 5

Poverty, Unemployment And Growth In Nigeria

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INTRODUCTION

The scourge of poverty and unemployment is not only a Nigerian problem but a global phenomenon that affects over four billion people in the world. In the LDCs, it has reached a critical dimension as such needs urgent attention in order to alleviate the problems associated with the malady. Poverty is a social problem in which a country or her people are faced with cultural, social, political, economic and environmental deprivations. Unemployment is the difference between the amount of labour offered at present wage levels and working conditions and the amount of labour hired at those levels. Economic growth, which is one of the major macroeconomic goals, is regarded as important for reducing unemployment and poverty. Economic growth is the rate at which a country's national income increases, usually shown as Gross Domestic Product or an increase in per capita income. It appears that economic growth has not provided the panacea for unemployment and poverty in Nigeria. The problem of poverty and unemployment are associated with a high level of social, economic, political and psychological consequences. Unemployment reduces aggregate demand, leads to financial crises, and induces low economic growth

which culminates into poverty. Unemployment is a major cause of poverty. The international labour organization report showed that the population of world unemployment is steadily increasing and that the number of those without jobs remained at all-time high of more than 195 million or 6.3% in 2007. The Middle East and North Africa having the highest unemployment rate of 12.2% followed by sub-Saharan Africa which is 10% of the world's total unemployment rate. The poverty situation in Nigeria is also quite alarming. Data from the NBS (2006) and UNDP (2009) showed that the incidence of poverty, based on \$1.25 a day, has been on the increase. For instance, in 2010 109.03 million people are living in absolute poverty. The relationship between unemployment and poverty is complex, and the two may not always be directly related

In this chapter we shall explore into the nature of poverty, unemployment and growth in Nigeria. Also, we would ex-ray the measure to be taken to ensure that growth enhances the reduction of poverty and unemployment in the Nigerian economy. The rest of this chapter is structured as follows: following this introductory section is section two which examines the conceptual and theoretical issues of poverty unemployment and growth. In section 3, we present stylized facts on the Nigerian economy, while section four presents the profile of poverty, unemployment and growth in Nigeria. Recent attempt at poverty reduction and problems of poverty alleviation programmes are highlighted in section five. Finally, section 6 concludes the chapter.

CONCEPTUAL AND THEORETICAL ISSUES OF POVERTY, UNEMPLOYMENT AND GROWTH

Poverty is difficult to define universally because it is a multidimensional concept which involves not only material deprivation but also deprivation in terms of capability and vulnerability which influences other institutions that affect one's life. There are many definitions of poverty in economic literature, however, in its simplest form poverty can be described as a state of deprivation or lack of resources to meet basic needs. In economic terms, the poor can be defined as the number of people living below a specific minimum level of income and imaginary international poverty line which recognizes neither boundaries or levels of national per capital income. The UNDP defined poverty from a multidimensional perspective as follows; Poverty has various manifestations , including lack of income and productive resources sufficient to ensure sustainable livelihood, hunger and malnutrition, ill health, limited or lack of access to education and basic services, increased mobility and mortality from illness, homelessness and inadequate housing, social discrimination and social exclusion. It is also characterized by lack of participation in decision making and in civil, social and cultural life.

Poverty can also be absolute, relative, transitory and chronic. Absolute poverty relates to the inability of an individual to provide himself with the basic needs such as food, clothing, shelter, potable water, health service, education public transport etc. this type of poverty leads to deprivation, non-participation in the decision making concerning the issues affecting one's life while relative poverty defines people as being poor if their income falls at the bottom of the distribution of income. Transient poverty is also known as poverty of the hopeful, it is temporary in nature. It may be caused by theft, drought, war, fire and flood. The victims are affected by poverty in the short run. Chronic poverty is a long term and persistent phenomenon. This kind of poverty may be transmitted from one generation to another and is very persistent. There is increasing evidence that the prevalence of transient poverty is significantly greater than that of chronic poverty in many LDCs. Distinguishing transient poverty from chronic poverty is essential because the method employed to alleviate each type of poverty differs. Transitory poverty is taken as stochastic poverty in low-income countries due to failure in finding protection against stochastic elements in the economic environment. Chronic poverty is defined as $C_i \leq P(E_{[yit]})$: while transitory poverty (T_i) is defined as total poverty (P_i) means minus chronic poverty (C_i). In the analysis of poverty, many theories have been constructed. Among these is Marxian theory of poverty which attributed poverty to the existence of class divisions in society. We have individualistic theories which were pioneered by Herbert Spencer who blamed poverty on the poor. Also, there is the culture theory of poverty which was introduced by Oscar Lewis. He explained that the culture of poverty constitutes a 'design for living' that is passed on from one generation to the next. Individuals feel marginalized helpless and inferior and adopt an attitude of living for the present. They are fatalistic. According to Lewis, the culture of poverty perpetuates poverty. It tends to perpetuate itself from generation to generation because of its effects on children.

Unemployment is another economic malady that is damaging the health of LDCs economies. The international labour organization categorizes the unemployed as those who are either out of work, want a job, have actively sought work in the last four weeks and are available to start work in the next two weeks or are out of work, have found a job and are waiting to start it in the next two weeks. In other words, the unemployed is defined as the number of the economically active population who is without work but are available for and selecting work, including people who have lost their jobs and those who have voluntarily left work. According to the national bureau of statistics, the labour force of a country is defined as a set of people of a country who are willing and are able to make available at any given point in times their efforts for gainful employment. Unemployment maybe categorized as voluntary and involuntary. Unemployment is said to be voluntary when people choose not to work

or accept jobs, for which they are qualified to do, at the prevailing wage rate and conditions perhaps because they have other means of livelihood besides employment. Involuntary employment exist when people cannot get jobs even when they are willing to accept lower real wages or poorer conditions than worker of then same similar qualifications that are currently unemployed.

In economic literature, there are also various forms of unemployment as identified by many theories. These include; seasonal, frictional, cyclical and structural unemployment. Structural unemployment is loss of jobs brought about by changes in the structure of the economy. Such structural change may be traced to a decrease in demand for a particular item which can be traced to technology change. Frictional unemployment is due to lack of information and changes in the supply of labour when wage rates are flexible. This type includes the unemployment of persons who temporarily lose jobs or decide to change jobs as well as new entrants into labour market like those just finishing formal school. As for cyclical unemployment, it is associated with cycles and cyclical unemployment differs from structural and frictional unemployment because it is tied to short term economic functions as a result of lack of aggregate demand in a downswing in the business cycle.

STYLIZED FACTS ON THE NIGERIAN ECONOMY

Nigeria is a middle income country with a per capita GDP of about 2000 dollars in 2011. From the supply side the GDP growth is largely driven by the agriculture, wholesale, retail trade and telecommunication sectors. The economy is predominantly agrarian which contributes about 40% of GDP with over 70% being employed in the sector. The agriculture sector's growth fluctuates in tandem with credit supplies and vagaries of the weather. The sector is challenged by infrastructural issues of transport and storage.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table 1.

Contribution of the major sectors to GDP growth

Sector/indicator	1991-1995	1996-2000	2001-2005	2006-2011
Population (million)	94.31	108.80	125.51	154.50
Nominal GDP per Capita	9,047.61	29,225.02	72,489.35	181,180.58
Nominal GDP(Naira Million)	872,339.63	3,197,852.98	9,221,560.98	28,207,209.01
Private Final Consumption Expenditure (Naira Million)	616,180.23	2,304,048.18	7,197,035.42	19,420,205.96
Private Final Consumption Expenditure per Capita	6,387.87	21,155.75	56,620.02	125,122.94
Agriculture (% annual change)	2.67	4.16	15.88	6.38
Solid Minerals (% annual change)	3.48	4.22	9.36	11.91
Crude Petroleum and natural Gas (% annual change)	-1.28	2.89	5.44	-1.68
Manufacturing (% annual Change)	-1.07	0.25	8.85	8.48
Utilities (% annual change)	3.90	0.40	158.82	3.91
Building and construction (% annual change)	3.72	4.28	6.08	12.53
Wholesale and retail trade (% annual change)	1.88	1.89	12.98	13.09
Transportation (% annual change)	2.96	3.61	15.90	6.86
Telecommunication	3.00	5.46	239.39	34.76

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(% annual change)				
Financial Institution and Insurance	3.77	4.11	5.99	4.46
(% annual Change)				
Real Estate (% annual change)	3.64	4.20	6.59	11.22
Public Administration	1.64	1.93	6.91	4.34
(% annual change)				
Health and education	1.64	1.93	7.07	10.23
(% annual Change)				
Other services (% annual change)	1.02	3.20	11.40	6.79
Total GDP (% annual change)	1.02	3.20	11.40	6.79
Gross Domestic Investment	92,400.83	250,893.87	681,903.91	3,054,028.65

CONTRIBUTIONS OF THE MAJOR SECTORS TO GDP GROWTH.

It can be seen from the table above, most sections have shown some growth in recent years mainly due to general reforms in the sector carried out by recent governments after military dictatorship.

Increase in private sectors investment has also contributed to increase in growth in the Nigerian economy. Among the early attempts to promote rapid economic development and alleviate poverty was the implementation of a series of national development plans between 1962 and 1985. The structural adjustment programme (SAP) was introduced in 1986 to address the structural imbalances observed in the economy. However, the effects were mixed, while the programme was helpful in the rural areas due to the fact that it opened up the rural areas and increased employment to rural farmers, it increased unemployment in the formal sector due to retrenchment in the public and private sector. The Nigerian economy has experienced high population growth in the past decades, with a growth rate of 2.3% per annum between 1991 and 2006. According to the national population (NPC), Nigeria's population is estimated at 167 million. The population is dominated by relatively young people, with an economically active population of 92, 384, 738 comprising 50.8% male and 49.2% female. Growth in population increases the labour force which enlarges the labour market, unless there is an expansion in the productive base of the economy and the adequate utilization of population assets, such rapid growth in the population would worsen the unemployment and associated vices. The scenario above reveals that the Nigerian economy has witnessed significant growth in the last few years and at the same time witnessed higher poverty and unemployment levels.

PROFILE OF POVERTY AND UNEMPLOYMENT IN NIGERIA

Nigeria is abundantly blessed with mineral resources and crude oil yet majority of her citizens are extremely poor, what a shameful paradox. Available evidence shows that Nigeria has been grappling with the problem of poverty since independence. At independence in 1960 the poverty level in Nigeria was 15% and twenty years later it has reached 28.1%, by 1985, the poverty level has risen to 46.3%. Data from the UN sources reveal that by year 2000, Nigeria had degenerated further as 87% of the population was below poverty line and rated 154 on the world's marginal poverty index of 172 countries. Poverty in Nigeria has geographical dimension. According to the Nigeria's draft report on millennium development goals, the northern part of the country accounted for higher incidence of poverty which largely predominated in the rural area. The incidence of urban poverty is also on the increase, an indication that poverty is not only seen in the rural areas but also co-existed in urban cities of the country. Unemployment has been on the rise in Nigeria especially between 1980 and 1989 and between 1999 till date.

Data from the NBS (various years) sources show that unemployment rate from 4.2% in 1980 to 7.1% in 1987. Between 1999 and 2010, unemployment rate of 21.10% portends a major economic and social disaster. The geopolitical pattern is even a more serious economic and social threat. Yobe, Zamfara, Sokoto, Katsina, Kaduna, and Kano states have unemployment rates that are well above the national average. In contrast, states like Lagos, Oyo and Ogun have lower rates of 7.6%, 8.8% and 9.9% respectively. The various dimensions of unemployment indicate that concerted efforts should be made to tackle youth unemployment of 17%. If unemployment within the age bracket of 25-44 is not checked it could exacerbate the security challenges in Nigeria.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Youth Empowerment and poverty Reduction

Sector /indicator million	1991-1995	1996-2000	2001-2005	2006-2011
Gross Domestic Saving (naira Million)	192,950.99	670,969.85	1,616,662.93	5,803,418.57
Gross Domestic Investment (% annual change)	12.25	7.94	7.69	10.65
Gross Domestic saving	24.84	18.40	17.21	19.50

Poverty prevalence rate for selected sample (1991-2010)

Country name	1991-1995	1996-2000	2001-2005	2006-2010
Poverty headcount ratio at \$1.25 a day (PPP) (per cent of population)				
Bangladesh	70.2	59.8	50.5	43.3
Brazil	15.9	11.8	10.4	6.7
China	58.3	42	22.3	13.1
Nigeria	61.9	68.5	63.1	68
South Africa	22.9	26.2	25.8	15.6

Poverty headcount ratio at \$2 a day (PPP) (Percent of population)

Bangladesh	93	85	80.3	76.5
Brazil	27.6	21.3	19.6	12.4
China	79.5	66.7	44	29.8
Nigeria	80.4	86.4	83.1	84.5
South Africa	40.5	42.9	40.2	33.5

Demographic and development structure of selected sample (2002-2011)

Country	Bangladesh	Brazil	China	Nigeria	South Africa
Region	South Asia	Latin America	East Asia	SSA	SSA
(southern					

AFRICAN DEVELOPMENT CHARTER SERIES 2

And the Caribbean and Pacific (West Africa) Africa)

Population Size ('Mil)	142.8	188.5	1313.5	145.5	48
Population Growth Rate	1.32	1.06	0.55	2.49	1.15
Per cent					
Population rank	8	5	1	7	24
Economic Active	62.2	66.6	71	53.8	64.5
Population per cent					
HDI Status	Low	High	Medium	Low	Medium
HDI Rank (2011)	129	73	89	142	110
GDP per capita growth	4.6	2.7	10	4.2	2.3
Rate percent					
GDP Growth Rate	6	3.8	10.6	6.8	3.6
Cent					

Empowerment level of working age population (1991-2010)

Country name	1991-1995	1996-2000	2001-2005	2006-2010
Empowerment to population ratio, 15+, total (percent)				
Bangladesh	72	69.5	67.8	67.8
Brazil	63.9	62.1	62.6	64.2
China	75.3	74.2	72.7	71.6
Nigeria	52.7	52.1	51	51.2
South Africa	38.6	39.1	37.7	40.9

Country Name	Employment to population ratio, 15+, male (per cent)			
Bangladesh	84.8	83.8	82.3	81.5
Brazil	80.5	77	75.7	76.6
China	80.3	79.1	77.8	76.8
Nigeria	67.6	63.8	58.7	58
South Africa	50.4	48.4	45.4	48.9

RECENT ATTEMPTS AT POVERTY ALLEVIATIONS

The government awareness of the grave consequences of poverty is not in doubt. Successive Nigerian government have designed and implemented policies to tackle poverty and unemployment right from independence. Some of the programmes and schemes included the following

1. Agricultural development project (ADP) in 1975
2. Operation feed the nation (OFN) in 1976
3. Agricultural credit guarantee scheme (ACGS) in 1977
4. National primary health care agency (NPHCA) in 1989
5. Family Economic Advancement programme (FEAP) in 1991
6. Family support programme (FSP) in 1997

Currents efforts at poverty alleviation are legion and these include;

1. Universal Basic Education (UBE) in 2000
2. National Poverty Eradication Programme (NAPEP) in 2001
3. National Economic Empowerment Development strategy (NEEDS) 2003
4. Commodity Marketing and Development Companies (CDMC) 2003
5. Banking sector reforms 2004
6. Power sector reforms 2005
7. Presidential initiatives on selected commodities, cassava, rice, cocoa, vegetables oil, livestock and fisheries from 1999-2007.
8. SUREP
9. Special Intervention Fund to Nollywood
10. Youth Empowerment scheme (YES)
12. Agricultural reforms
13. You win programme.

Evidently, Nigeria is not lacking acronyms for poverty reduction programmes and employment strategies. In spite of numerous programmes, policies and projects, we still have substantial level of poverty and employment in the Nigerian economy. What then are the challenges facing the alleviation of this nagging problems.

PROBLEM OF POVERTY ALLEVIATION PROGRAMMES IN NIGERIA

A number of factors have contributed to the low achievement of poverty and unemployment alleviation programmes in Nigeria, the major ones are;

- 1· Poor targeting mechanisms
- 2· Failure to focus on the poor
- 3· Programme inconsistency
- 4· Poor implementation of policies, programme and schemes.
- 5· Corruption
- 6· Political instability and income inequality.
- 7· Long term ethnic conflict and civil unrest.

WAYS FORWARD

Nigeria has one of the world's highest economic growth rates, averaging 7.4% according to the Nigeria economic report released in July 2014 by the World Bank. Poverty still remains significant at 33.1% in Africa's biggest economy. For a country with massive wealth and a huge population to support commerce, the level of poverty and unemployment remains unacceptable.

To this end, the following under-listed points are what we consider as ways forward.

- 1· Commitment to due process, good governance, transparency, accountability and social responsibility.
- 2· Implementation of policies should be people oriented and deeply rooted. Efforts should be geared at empowering beneficiaries of poverty schemes.
- 3· Government should invest more on agriculture and the power sector.
- 4· Government should have the courage to prosecute and punish those who sabotage her efforts at reducing poverty and unemployment.
- 5· Political allegiance and continuity of programmes, projects and services.
- 6· Broad-based economic growth and equality.
- 7· Harmonization of agricultural and industrial strategies.

CONCLUSION

The level of poverty and unemployment is antithetical to economic growth in Nigeria. Also, the paradox that the Nigerian situation exhibits is not only shameful but also embarrassing, majority of Nigerians are suffering in the midst of abundant resources. It has become more imperative therefore to be forcefully and diligently determined to put a big dent on poverty and unemployment in Nigeria. In this connection, the government should give expression to poverty alleviation objectives in national development plans. Issues of good governance, controlled population, equity, zero tolerance for corruption should be looked into and formulated to policies.

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CHAPTER 6

An Empirical Analysis Of The Impact Of Foreign Exchange Management And External Reserve On The Nigerian Economy

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ABSTRACT

Nigeria has adopted several strategies in managing its foreign exchange, all with a view to achieving internal and external economic balance and stability. However, in spite of measures taken towards effective management of Nigeria's foreign exchange, it has continued to experience excess demand and significant depreciation in the value of the naira with its attendant consequence on the country's external reserve. This paper examines foreign exchange management practices in Nigeria and their effectiveness using an empirical approach. The study establishes that foreign exchange management and foreign reserves in Nigeria are effective and have had significant impact on economic growth (gross domestic product). The study therefore recommends continued use of intervention policy in Nigeria with slight fine-tuning to stabilize the foreign exchange market, increase reserves and grow the economy. The current dwindling state of the reserves should be halted with immediate effect

Keywords: Foreign Exchange, Management, External Reserve, Nigerian Economy.

INTRODUCTION

The foreign exchange market phenomenon is obviously not a recent development; quite a number of governments across the globe have intervened in foreign exchange markets with a view to ensure proper management. The essence has mostly been to try to dampen volatility and to slow or reverse currency movements. This is usually borne out of concern that excessive short-term volatility and longer-term swings in exchange rates that "overshoot" values justified by fundamental conditions may hurt their economies, especially sectors heavily involved in international trade. And this concern has increased both in scale as well as in dimension with the foreign exchange market thus becoming more volatile in recent times.

In Nigeria, the apex bank introduced explicit measures in response to what were considered exceptional circumstances that put the exchange rate market under significant stress. According to Tapia and Tokman (2004), the "two-corner hypothesis" suggests that currency regimes worldwide are either shifting towards extremely tight commitments or to floating regimes, has brought new attention to exchange rate management. When an explicit currency commitment exists, the central bank has an obvious role to play, naturally using its tools (i.e. reserves, interest rates) to validate such commitment. Same view is expressed by (Eichengreen (1994), Obstfeld & Rogoff (1995).

The Central Bank of Nigeria (CBN) has periodically intervened in the foreign exchange market since 1986. As part of the International Monetary Fund (IMF) conditions under the structural adjustment package, the CBN has also intervened in the form of foreign exchange purchases in order to accumulate foreign reserves for the government. In a liberalized and market determined economic and financial system in which the exchange rate is floated, exchange rate management becomes an important component in the transmission mechanism.

The more open the economy, the greater the importance of the exchange rate in the economic policy process and the more important this variable becomes as an optional policy conduit. Thus, the stability of the exchange rate is very important for macroeconomic stabilization. To ensure this, Adebayo (2007) opined that most central banks manage foreign exchange markets to smooth out short run fluctuations of the exchange rate.

The main concern of this paper is to determine whether foreign exchange management and foreign reserve which bears direct impact on the volatility of foreign exchange have effect on economic growth in Nigeria.

LITERATURE REVIEW

Reserves adequacy is the level of external reserves that ensures sustainable balance of payments and macroeconomic adjustment resulting from external price shocks or reversals in short-term foreign capital flows. The debate on foreign exchange reserves

adequacy transcends the use of visible imports or level of import cover in most of the 1950's through the mid-1990's to the recent calls for the incorporation of a broader measure that includes the need to meet major external liabilities such as external indebtedness and other forms of capital flows.

A refocus on the issue of reserves adequacy was in the 1990's and early 2000's when depleting foreign exchange reserves associated with the currency crises in some emerging economies became worrisome. The aftermath was the move to accumulate reserves to self-insure against future crises.

In their own contribution, Lane & Burke (2001) opine that, apart from trade openness, financial depth and external indebtedness also influence the demand for international reserves. Aizenman and Marion (2004) point out that the size of international transactions; their volatility, exchange rate arrangement and political stability are some of the key determinant of international reserve holdings in most East Asian countries.

The Central Bank of Nigeria (CBN) Act 1991 vests the custody and management of the country's external reserves in the CBN. The Act provides that the CBN shall at all times maintain a reserve of external assets consisting of gold, balance at any bank outside Nigeria where the currency is freely convertible; treasury bills; securities of or guarantees by a government of any country outside Nigeria, securities of or guarantees by international financial institutions of which Nigeria is a member; Nigeria's gold tranche at the international monetary fund and allocation of special drawing rights made to Nigeria by the International Monetary Fund.

Though the management of foreign reserves of a country is the exclusive responsibility of the Central Bank, the quantum of reserves to be held at any point in time depends on several exogenous factors, depending on its development objective and the prevailing economic situations.

There are various hypothesis proposed for the establishing management policy of foreign reserves in Nigeria. According to Auwal and Hamzat (2006), there are two phases to economic management in Nigeria. For the first phase (1970-1985), Nigeria operated a controlled exchange rate regime where exchange rate of the naira was pegged to the dollar. The second phase of exchange rate history in Nigeria began in 1986.

However, Adebayo (2007) argued that between 1960 and 2000, exchange rate policy in Nigeria has fluctuated from a fixed exchange rate system (1960-1986) to a flexible exchange rate system (1986-1993) with regulation in 1994 following the pegging of official exchange rate and the reversal of policy in 1995, which has been tagged 'guided deregulation' of the exchange market. With this exchange rate was liberalized and a dual exchange rate mechanism was instituted in 1997 and 1998.

Reserve holding is expected to increase with economic size and the volume of international transactions. Thus, in view of the nature of commodity base production and oil export in Nigeria, both the level and growth rate of output are expected to influence reserve accumulation. Increase in current and capital account vulnerability should motivate Central banks to hold more reserves, while exchange rate flexibility reduces demand for reserves. Economic theory predicts that the higher the opportunity cost of holding reserves the lower would be the demand for reserves.

THEORETICAL FRAMEWORK

There are various approaches in the estimation of reserves benchmark level as stated by Triffin (1947), IMF (1953 and 2002), Heller (1966) and a host of others. These equations assume that optimal reserves should be that which could finance the gap between demand and supply of foreign currency, smoothening external payments imbalances and prevent exchange rate crisis. Some of the propounded equations are discussed in subsequent parts of this study.

The IMF (1953) and Triffin (1947) opine that reserves adequacy requires an annual threshold rate to import ratio of about 30-35 per cent. Thus postulated the equation below: -

$$RA \square Rs/M$$

Where

$RA \square$ Reserves adequacy; $Rs \square$ Reserve Stock; $M \square$ Imports

Other researchers in the field such as Kaminsky (1999), Pablo (1999) and Greenspan (1999) suggested different equations which are mix of both the balance of payments and monetary (balance sheet) approaches. Pablo (1999) and Greenspan (1999) proposed a new minimum reserves stock benchmark that includes short term debts. The equation proposed is: -

$$RA \square Rs/M + Dt \text{ (2)}$$

where $Dt \square$ Short Term Debt (that are not more than one year)

At about the same period, Kaminsky (1999) suggested the use of monetary aggregates in form of the ratio of broad money ($M2$) in place of imports as earlier advocated by Triffin (1947). This view was supported by De Beaufort Wijnholds and Kapteyn (2001) but used aggregate money stock. They posit that the ratio of the money stock to reserves will likely give better information on the measurement of reserves adequacy hence suggest the equation below: -

$$RA \square Rs/M2 \text{ (3)}$$

where $M2 \square$ Aggregate Money Stock

A quantitative approach derived by Frenkel and Jovanovic (1981) for optimal reserves based on the result of restocking financial transactions is presented below: -

$$R_t = -\mu dt + \sigma dW_t \text{ (4)}$$

where R_t stands for external reserves, W_t represents the Wiener process that has a mean of zero and a variance of t . Thus, the distribution of the reserves holdings is presented as: -

$$R_t = R_0 - \mu t + \sigma W_t \quad (5)$$

where R_0 is the optimal initial stock of reserves, μ is a drift indicator while σ is the standard deviation for the Wiener reserves increment.

This equation is adjudged incapable to make accurate prediction since estimation of the random factors which could be unforeseen macroeconomic shocks and financial assets volatility will be difficult.

Lastly, Shcherbakov (2002) proposed a simple equation which assumes foreign exchange outflows as major “drainers” of external reserves. He suggested three basic variables that could be used in measuring reserves adequacy viz import bills, short-term debt payments and money base. The equation is given as: -

$$RA_t = I_t + D_t + M_t \quad (6)$$

where:

RA_t Reserves Adequacy in year t

I_t Value of Imports in year t

D_t Debt Service Payments in year t

M_t Base Money in year t

This equation is more popular due to its simplistic approach and was used for Nigeria's statistical calculation.

RESEARCH METHODOLOGY

This study analyses the effect of foreign exchange management and foreign reserves on the growth of the economy. It conducts empirical examination from 1970 to 2012. Linear regression analysis was employed using the Ordinary Least Square (OLS) method. Data used is from the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS). The paper examines the order of integration for the variables; conducts cointegration tests before estimating the relationship. A linear relationship is assumed for the variables to test the hypothesis that: -

- Ø Foreign exchange rate and foreign reserves have no significant effect on gross domestic product (GDP)

The a priori expectation is that both foreign exchange rate and foreign reserves will be greater than zero i.e. $ER, ES > 0$

MODEL SPECIFICATION

To find out whether exchange rate and foreign reserve have any significant influence on Gross Domestic Product (GDP) the following model will be estimated.

$$GDP_{t0} = \alpha + ES_t + ER_t + E_t$$

Where GDP_{t0} Gross Domestic Product

ER_t the nominal exchange rate

ES_t External Reserve at time

E_t Error at time t

MODEL ESTIMATION AND INTERPRETATION

In this paper, unit root tests (ADF) were conducted. The growth rates of all the variables were used. The results of the unit root tests are presented in table below:

Table 1: Results of Unit Roots Tests using Augmented Dickey Fuller (ADF)

Variables	ADF Statistics with Constant but no linear trend	Prob (sig)	Order of Integration	Remark
GDP	18.43772	0.001	I(1)	Stationary
RS	-4.522292	0.001	I(1)	Stationary
ER	-5.936036*	0.001	I(1)	Stationary

The results in Table 1 show that all the variables (GDP, RS and ER) are stationary in their first difference. In addition to this, a cointegration test was conducted and it shows that the variables are cointegrated in their first difference. The regression result is presented below.

Table 2: - Model - Result of Analysis with DGDP as the Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	422.0105	42.91764	8.320916	0.0000
DES	117.2412	30.23411	15.94474	0.0000
DER	21587.651	8304.193	3.898361	0.0005
R-squared	0.841210	Mean dependent var		5422014.
Adjusted R-squared	0.721509	S.D. dependent var		7104221.
S.E. of regression	1556182	Akaike info criterion		23.62712
Sum squared resid	7.59E+13	Schwarz criterion		33.22551
Log likelihood	-321.12001	Hannan-Quinn criter.		21.43287
F-statistic	414.3348	Durbin-Watson stat		1.976066
Prob(F-statistic)	0.000000			

Note: - "D" before the variable denotes first difference.

The result above shows that the estimates of the variables conform to a priori expectations. The estimated econometric model above revealed that the dependent variable Gross Domestic Product (GDP) has an autonomous value 422.0105 and a positive relationship with the explanatory/independent variables with the coefficient of 117.2 and 21587.6 respectively.

This estimation indicates that each component of the explanatory variables had variant impact on the dependent variable. Meanwhile, the coefficient of determination (R^2) is about 0.84. This in a nutshell means that the value of the dependent variable can be explained by about 84 percentage of the independent variable. The remaining 16% variations is explained by other elements not included in the model, but are taken care by the error term, hence the prob.(F-stat) of 0.00000 indicate fitness of the model or proper specification of the model..

At 5% significant level, the level regression passed the overall significant test (F-test), this is an indication that none of the estimated coefficient is equal to zero and that there is a linear relationship between the dependent variable and the explanatory variables. This conforms with our previous assumption. The Durbin-Watson statistic of 1.97 could be approximated to 2 which indicate the absence of auto-correlation. This implies that the problem of serial autocorrelation does not constitute a problem in the research analysis.

Overall, it means that both foreign exchange and foreign reserves have huge and significant impact on the Nigerian economy. However, the impact of exchange rate is larger than that of foreign reserves.

CONCLUSION AND RECOMMENDATIONS

Policymakers often are constrained in their use of fiscal and monetary policy to influence exchange rate values. The various research works suggest the importance of foreign exchange management and even foreign reserves. This result supports the need for nations to manage foreign reserves and exchange rates for developmental purposes.

The study has shown that there is a positive correlation between external reserves and the growth rate of GDP. It is therefore important for appropriate policy formulation and implementation of such policies to encourage and boost the growth rate of these variables. Since there is a direct relationship between external reserves and GDP, the need to diversify the economic base and encourage agriculture becomes instructive so as to increase our non oil export. Where agricultural production is encouraged, it will not only guarantee food security, boost exports and increase the nation's GDP and foreign earnings, but it also stands to generate employment and ultimately increase the standard of living of the populace. It will also act as a buffer to cushion shocks against volatility and other forms of instability in the international oil market. This paper opines the need to encourage the downstream oil sector so as to increase foreign exchange earnings to the country. Government should provide an enabling environment for the operators and prevent security hazards that pervade the environment. This will assist to generate more foreign currencies and reduce or remove the current volatility in the country's external reserves.

All efforts should be geared to increase foreign exchange earnings through exports and reduce imports that will guarantee enhanced or increased foreign reserves for the country and also stabilize the balance over time. The country stands to benefit immensely from this process both in the short and long run.

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CHAPTER 7

Re-engineering The Agricultural Sector: A Panacea For Economic Growth And Industrial Development In North-eastern Nigeria

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ABSTRACT

It may be recalled that in the 1960s, 1970s and early 1980s, agriculture was the mainstay of Nigeria's economy, as it contributed over 80% of the country's GDP, over 70% of the GNP, source of raw materials for industries & export; above all a major source of employment in the country. But agriculture today has witnessed a decline, to an extent that many today sees agriculture as pre-occupation for the poor or rural dwellers, especially in the North-east. It is in view of this that this study seeks to examine the impact of agriculture on economic growth and industrial development of North-Eastern Nigeria. This study employed survey design and content analysis. Primary data was generated through administration of structured questionnaire and interview; whereas secondary data on the other hand, was generated through content analysis. The population of the study was drawn from a sampled distribution of peasant farmers in nine Local Governments Areas of Adamawa, Gombe and Taraba states in North-eastern Nigeria. These local Governments were selected purposively for their engagement in farming activities in significant proportion. Findings were made that agriculture has a significant impact on the growth and industrial development of the Nigeria's economy. And that they have not only

economic implications but social implications as it is a major source of employment; especially to the teeming youth populace who is idle and engage in all forms of vices/restiveness. And that there is a significant relationship between poor infrastructure/technology applications and increased agricultural output. In line with the findings; this study recommended that the government as a matter of urgency pro-active measures to reach out to farmers through a community agricultural network and provide succor to the plight of farmers within the threshold of reviewing the Land use Act; which will make the arable in the north-east more accessible to farmers. Provide agricultural inputs in form of fertilizers, insecticides, hybrid seedlings, etc and also enhance tax incentives available to agricultural productions and agro-allied businesses. And that a mechanized agricultural loan scheme be provided such that modern farm equipments like tractors, harvesters, harrows and other state of the art farm equipments be given to farmers in form of loan and the repayment period should cover half of the estimated useful lives of such machines.

Key Words: Agriculture, food security, Re-engineering, economic growth, industrial development, employment generation.

INTRODUCTION

Since the petro-dollar replaced the agro-dollar in Nigeria as the chief foreign exchange earner of the country in the early 1970s, public institutions, corporate entities and individuals in the country re-directed their attention to the oil and gas sector, such that the Federal Government, State Governments and Local Government councils in the country today rely solely on the statutory allocation from the Federation account, which over 80% of it is earned from the oil money. University graduates and the teeming youth population of the country today looks up to oil companies in the upstream and downstream sectors for white-collar job. In fact, a survey conduct by Azizi (2007) and Nicholas (2009) among final year students in 12 Nigerian universities revealed that 6 out of every 10 prospective University graduates in Nigeria preferred to gain employment with oil companies, 3 out of every 10 preferred to worked in the banking sector and only 1 out of every 10 selected other sectors of the economy. And 0 out of every 10 selected agriculture/or the agro-allied sector. This menace of relegating agriculture to the background has today cut across all age groups in the Nigerian society. Every average Nigerian citizen today wants to be rich overnight, by any means with the oil boom, regardless of the issue of food security.

In the 1960s and early 1970s, agriculture was the mainstay of Nigeria's economy, as it contributed over 80% of the country's GDP, over 70% of the GNP, major foreign exchange earner, source of raw materials for industries & export; above all a major source of employment in the country. With the discovery of crude oil in the

Niger-Delta region in commercial quantity, agriculture witnessed a decline and became neglected, to an extent that many today sees agriculture as pre-occupation for the poor or rural dwellers. In view of the persistent decline in agricultural production and the realization of the fact that crops and animal production holds the key to the survival of the manufacturing sector and the economy, the Federal Government of Nigeria has established several agricultural development policies aimed at reviving this sector, but it seems the lost glory of agriculture is yet to be restored.

In Nigeria, the predominant occupation of the people, especially rural dwellers still remains farming; most of this farming is done on subsistence basis and these farmers live from hand to mouth. Nigerian farmers are faced with the problems of inadequate finance, lack of modern farming equipment, lack of technical know-how, complete absence of research ideas and dissemination of research information. The government has initiated several Support programmes, aimed at overcoming all these problems, but one would begin to wonder if these programmes has solve the afore-mentioned problems. It is against this background that a study of this nature would not only be timely but inevitable.

In North-Eastern Nigeria, having advantage of the fertile landmass, especially in the savannah region and the green vegetation, agriculture has the potentials of stimulating economic growth and development of the region, developing local industries and generating employment for the teeming youth population. It is in view of this that; researchers need to re-direct their attention to focus on the development of agriculture which has a direct impact on food security, employment generation, income generation and a major source of raw material for other sectors of the economy.

Re-engineering refers to the act of overhauling systems and processes from the design stage, development and introduction stages. Re-engineering in agriculture therefore, is construed by this study as an act of reviewing the land tenure system, reviewing the methods and processes of traditional/subsistence farming and the design, development and introduction of mechanized methods and processes of farming, in order to re-invent and rejuvenate the agricultural sector in Nigeria.

Agricultural re-engineering involves the use analytical models and techniques to solve the myriad problems affecting agricultural productions. These problems as mentioned earlier ranges from inadequate finance, lack of modern farming equipment, lack of technical know-how, complete absence of research ideas and dissemination of research information. However, in practice, agricultural re-engineering does not involve the utilization of any specific skills or models but it is interdisciplinary in approach, as it draws from the knowledge of crop production, animal production, soil science, agricultural engineering, agricultural financing,

irrigation facility management, agricultural economics, agricultural extension services and applied agriculture to address identified problems, as well as to devise new and innovative means of enhancing agricultural production. It is also worthy to note that re-engineering agricultural production in all its ramifications would mean a giant step toward job creation, enhancing food production and global food security which will translate into an increased GDP and GNP of the country.

It is in view of the above that; researchers need to re-direct their attention to focus on agricultural production which has a direct impact on the level of poverty in most emerging economies, Nigeria inclusive. The need to pay more attention to research efforts geared towards reviewing the land use act; re-invention of agricultural systems and practices; design, development and introduction of mechanized farming cannot be over-emphasized, as it is known to be the engine room of growth.

The main objective of this study therefore, is to examine the impact of agriculture on economic growth and industrial development of North-Eastern Nigeria and also examine some of the problems affecting agricultural production in Nigeria. In an attempt to achieve the stated objective, some research hypotheses were developed in null form, thus:

Hypothesis One: Agriculture has no impact on economic growth and industrial development in Nigeria.

Hypothesis Two: There is a significant relationship between lack of modern farming skills and increased agricultural output.

Hypothesis Three: There is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

SCOPE AND SIGNIFICANCE OF THE STUDY

This study covered the impact of agriculture on economic and industrial development in Nigeria; it was however limited to three states in Northeastern Nigeria, namely: Adamawa, Gombe and Taraba States. A great deal of emphasis was placed on questionnaires and oral interview that were administered among farmers in some local government areas of these states.

This study would be a cursor for policy makers charged with the responsibility of formulating policies on agriculture in Nigeria. They would have a clear understanding of the agricultural potentials available in this country; especially in the Northeast sub-region. Investors (both domestic and foreign) will be familiarized with the agricultural potentials available in the Northeastern states. Farmers will also find this research report indispensable as it highlighted the major problems they face in farming activities; this would enable them pursue a common platform for government intervention programmes in these three states which constituted the study area.

CONCEPTUAL CONSIDERATIONS

In this section, relevant literatures related to the study were reviewed, relevant publications both local and international were reviewed including the work of Azubike (2009), Nzotta (2007), Odusola (2006), Appah, (2004), Appah and Oyandonghan (2011), Anyanfo (1996), Anyanwu (1997), Tosun and Abizadeh (2005), (Kaldor and Hume, 2004), Longe, (1997), Due (1980), Agyel, (1990), etc. This section further discuss some of the past agricultural policies of government, a look at the strategies used by the government in supporting small scale farmers and concluded on the economic growth and development theory.

AN OVERVIEW OF AGRICULTURAL PRODUCTION

Agriculture is by far the most important sector of the Nigeria's economy, engaging over 70% of the labour force. Agriculture contributes immensely to the Nigerian Economy in various ways, namely; in the provision of food for the increasing population; supply of adequate raw materials and labor input to a growing industrial sector; a major source of employment, generation of foreign exchange earnings and provision of a market for the products of the industrial sector. Agriculture is widely driven by the public sector (i.e: the government), which has established institutional supporting form of agricultural research, extension, commodity marketing, input supply and land use legislation to fast-track the development of agriculture.

THE DECLINING TREND OF AGRICULTURAL PRODUCTION IN NIGERIA

Agricultural productivity started declining in Nigeria in the decade of independence, Eluhaiwe (1993) posits that before independence, the agricultural sector contributed about 64.39% this fell to about 18.00% in 1990. The Federal Office of Statistics, Economic and Social Statistics Bulletin, January, 1995 also concurred that the decade of independence witnessed a drastic reduction in the country's agricultural output.

Johnson (1992), positioned that Nigeria before the civil war has abundant food supply which were sold at cheaper rate and the country's export during those days were mainly agricultural during which Nigeria had major share in the exportation of Cocoa, Palm Product, Groundnut, Cotton etc. but with the emergence of oil sector as the major exporting sector in the early 70's the situation changed. The oil industry grew rapidly while agriculture started to decline and the relationship between the development of the oil and gas sector and the agricultural sector seems to be inverse (Olatunbode, 2000).

This decline can be explained by the greater diversification which have taken place in the economy, including growth in industrial sector, increase in urbanization, but the prominent reason is an increased dependence on petroleum resources, while the agricultural sector suffer a continual decline due to neglect. This is confirmed by

the gradual decrease in most cash crop production which includes: Rubber, Cocoa, and Oil Palm in the southern part and the gradual disappearance of the famous groundnut pyramids in Kano, and cotton in the extreme northern parts of the country. Therefore, decline in agricultural production in Nigeria is largely due to negligence to provide adequate finances to the present practicing farmers, Agricultural sector invariably constitute a significant but declining proportion to Gross National Product (G.N.P).

GOVERNMENT INTERVENTION POLICIES IN AGRICULTURAL DEVELOPMENT

Policy is said to be an intervention, a course of action taken by government, or management (in the case of an organization) or better still, an individual to influence or arrived at pre-determine outcome. The Federal Government of Nigeria (FGN) did recognize the importance of the agriculture early enough, so it decided to pursue policies that promote access to finance and financial infrastructure for agricultural production, with the ultimate aim of achieving the country's developmental goals. The reasons for government intervention in the agricultural financial markets are to:

1. Smoothen imperfections in the agricultural financial market: the agricultural financial market (also the rural financial market (also the rural financial market) exists to facilitate exchange, a platform or the reconciliation of demand and supply of capital for agricultural and rural development. Often times, the market is constrained by certain factors such as information asymmetry, moral hazard, adverse selection etc. from performing its roles effectively. Government then intervenes to iron out those imperfections and create a more pare to-optimal environment for market players.
2. Ensure food security: since finance is critical for investment in agricultural production either in form of equity or debt, government intervention in form of expenditure on credit to farmer's direct production etc is to guarantee that food is available and affordable. There is the realization that securing access to cheap food for Nigerians would ensure social stability and lessen reliance on food imports which supply can be cut at anytime depending on prevailing global political and economic conditions or similar conditions on the exporting countries.
3. Achieve favorable balance of payment: a high food import bill-exerts pressure on the foreign reserves of the country, leading to its depletion. This adversely affects the (BOP) and hence, the international position of the country. Whereas we have being endowed with abundant land resources and farming-friendly climate, just a little push in the direction of other resources, including financial capital is all that is needed to ensure that this happen, thereby saving foreign reserves for the productive use.

4. Promote foreign exchange earnings from agricultural exports: government policies on agricultural financing aim at, first, ensuring self-sufficiency in food production and then, exporting the surplus to earn foreign exchange.
5. Enhance other socio-economic issues: such as poverty reduction, employment generation, reduction in rural-to-urban migration and especially, food price stability since it is known that food price fluctuations are the precursor of inflation in developing countries. This follows from Engel's law, which states that a higher proportion of income in developing countries is spent on food. And since income elasticity of demand for food is highly elastic, it is easy to see why expenditure on food is large enough to cause inflationary trends in the country.

GOVERNMENT AGRICULTURAL POLICIES IN NIGERIA

The Federal Government of Nigeria (FGN) has over the years embarked on certain number of agricultural programmes aimed at promoting access to finance and financial infrastructure for agricultural production, in order to boost food production, provide adequate supply of raw materials and labour input to a growing industrial sector; generate employment and foreign exchange earnings. The Federal Government of Nigeria has intervened in the following ways:

- (a) Agricultural Credit Guarantee Scheme Fund (A.C.G.S.F), 1978 till-date: Established by Act No. 20 of 1978, this offers a 75 percent guarantee backed by the Central Bank of Nigeria (CBN) on agricultural credit in default, net the amount realized from the disposal of security for such credit. Financing is at market determined interest rates. The CBN offers a rebate equivalent to 40 percent of loans interest when loans are duly repaid.
- (b) Small and Medium Enterprises Equity Investment Schemes (SMEEIS) 2001: This is a voluntary initiative of the banker's committee to support Micro, Small and Medium Enterprises (MSMEs) including agro and agro-allied businesses. Financing is in form of either debt or equity. In the case of debt, the borrowing rate is not to exceed single digit.
- (c) Supervised Agricultural Loans Board: Most state governments set up these boards to dispense finance in form of credit to farmers. It should be added that aside this boards, the state Agricultural Development Programmes (ADP) have recently been working in conjunction with the National Programmes for Food Security (NPFS) in the provision of credit to farmers.

- (d) Agricultural Development Programme – 1975: It is jointly funded by World Bank, Federal and States in Nigeria aimed at provision of rural roads to farm service centers, etc. toward achieving food production. Extension activities implemented by ADPs included facilitating access to improved technology and helping lead farmers to teach others.
- (e) Operation Feed the Nation (OFN) - 1976. OFN was part of the third National Development Plan. It had objectives to mobilize the people to embrace agriculture, create job, income, and utilizes all available land resources in the country.

MAJOR AGRICULTURAL POTENTIALS AVAILABLE IN NORTH-EASTERN-NIGERIA

The North-east sub-region comprises of six states, namely; Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe. However, this study was conducted in three states (Adamawa, Gombe and Taraba). These three states are known for agricultural activities, favored by the green vegetation, the savanna region, undulating hills and mountains of the Mambilla plateau (in Taraba state) which is a hub for tea and cattle production, etc. In fact, in terms of agro-allied industries, the North-east sub-region is host to a handful number of manufacturing companies whose major raw materials input are obtained from agriculture; the Nigerian Beverages Production Company (NBPC) LTD in Kakara, Mambilla plateau-Taraba state, the Savannah Sugar Company in Numan, Adamawa state, the Maiduguri Flour Mills, the Potiskum Flour Mills, the AFCOTT Nigeria PLC in Ngure, Adamawa state, the Baissa Timber Company in Taraba state, the Lau Tomato Company in Taraba state, etc. The region lies mainly in the savannah belt which supports the cultivation of cash crops, food crops and animal products like Maize, Rice, Beans, Cowpea, Sorghum, Millet, Guinea-Corn, Yams, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep, Goats, Pigs, Poultry, Fish, Oil-Palm, etc. In fact, these potentials can best be presented based on the Richardian theory of comparative cost advantage. The major agricultural products found in the study area are grouped according to local government areas, in Table 1.1 below.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table 1.1: Showing Agricultural Potentials available in L.G.As within the Study Area

S/NO:	State	L.G.A	Agricultural potentials
1	Adamawa	Ganye	Yams, Groundnut, Sugar -Cane, Maize, Orange, Mango, Water-Melon, Beans, Guinea -Corn, Cassava, Cattle, Sheep, bee-keeping, Goats, Poultry and Fish farming.
2	Adamawa	Fufore	Maize, Cotton, Rice, Beans, Cowpea, Millet, Guinea -Corn, Onion, Tomatoes, Cattle, Sheep, Goats, Poultry and Fish farming.
3	Adamawa	Maiha	Rice, Beans, Cowpea, Sorghum, Millet, Guinea -Corn, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep and Goats.
4	Gombe	Akko	Groundnut, Rice, Beans, Cowpea, Sorghum, Millet, Guinea-Corn, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep, Goats, Poultry, and Fish.
5	Gombe	Kaltungo	Rice, Beans, Cowpea, Sorghum, Sugar -Cane, Millet, Banana, Groundnut, Mango, Orange, Guava, Guinea-Corn, Cassava, Onion, Tomatoes, Pepper, Cattle, Sheep, Goats and Pigs.
6	Gombe	Funa-Kaye	Rice, Beans, Cowpea, Sorghum, Millet, Guinea-Corn, Maize, Vegetables, Onion, Tomatoes, Pepper, Cattle, Sheep and Goats.
7	Taraba	Sardauna	Pear fruits, Banana, Guava, Mango, Maize, Beans, Groundnut, Vegetables, Soya-beans, Cocoa -yams, Cassava, Euclatus, Kola -nuts, Pepper, Cattle, Sheep, Goats and Oil-Palm.
8	Taraba	Takum	Yams, Cassava, Tomatoes, bee -keeping, Pepper, Poultry, Fish, Oil-Palm, etc
9	Taraba	Zing	Yams, Cassava, Rice, Tomatoes, Pepper, Poultry, Fish

Source: Generated by the Researcher via Field Survey (2014)

The table above shows that the different local communities in the Northeast are differently endowed. With one, two or three of the local areas having one or two products in common, therefore; the principle of comparative cost advantage advanced by "David Richardo" can be applied such each local government area can concentrate on the production of product that it has a comparative cost advantage over it. It will encourage mass production, increased output as a result of benefit of specialization and efficiency.

The theory holds that nations should produce those goods for which they have the greatest relative advantage in his book "Principle of Economy" (1817), Richardo argued that it makes sense for a country to specialize in the production of those goods that it produces most efficiently and to buy the goods it produces less efficiently from other countries, even if this means buying goods from other countries that it could produce itself efficiently. Therefore, these communities may decide to produce goods that they have the greatest relative advantage and buy the goods it produces less efficiently from other communities.

PROBLEMS AFFECTING AGRICULTURAL PRODUCTION IN NORTH-EASTERN-NIGERIA

The major problems facing small Scale Peasant farming and commercial farming in North-Eastern States were identified as follows:

1. **Inadequate agricultural loan and subsidy:** As summarized by Stevenson (2001), access to financing is one of the major impediments of both small scale and large scale farmers in Nigeria. Farmers were disadvantaged in capital markets because they lacked the collateral security or knowledge to obtain commercial loans, especially at market interest rates. Therefore, farmers lacked access to the resources necessary to expand, modernize or grow their potentials and productivity. Their stunted growth prevented farmers from increasing employment and productivity and also contributing fully to overall economic growth in the economy. To acquire finance in starting small scale farming in Nigeria could be identified as one of the major, if not the biggest constraint facing them. Inegbenebor (2006) stresses that even though banks are a major source of funds for small and large scale farming in the developed world, in Nigeria, this is not the case.
2. **Lack of Adequate Support and Incentives Programmes:** Ekpenyong (2002) opined that Past government policies were centered on small scale farming development which has the capacity to exploit local endowments and propel the engine of growth if properly managed. This policy focus on small farmers started with the Third National Development Plan (1975-1980), but the implementation of these programmes were faulty as most of the loan schemes provided were not accorded to targeted farmers.

3. **Lack of Modern Farming skills:** Coughlin (2000), stated that the ability to run a successful farming venture, farmers needs a collection of competencies in order to manage these functions. For example research and development (R&D) in new production skills, financial control and market management all demand education and experience. Rapid developments also require current advanced knowledge in new farming skills and innovation. The management of successful farming venture also demands efficient training in production, financing, marketing, etc. Ude (1999) claimed that Most often, the owners of large scale farms pay more attention to producing one item or the other while they pay little or no attention on how to acquire knowledge in innovative skills concerning their farming activities.
4. **Lack of Infrastructure and Technological Application As categorized by Aiyedun (2004:4)** another area where farmers are facing a lot of problems in terms of Inadequate and inappropriate technology or non use of modern equipment in farming, lack of capacity to translate scientific research results into agricultural outputs are identified as some of the factors hindering growth of agriculture. Most farmers in Nigeria still use local implements and crude methods in their production.

METHODOLOGY

The population of the study was drawn from a number of peasant farmers in nine Local Governments Areas of the three selected states. The sample for the study is made up of 450 peasant farmers selected from Sardauna, Zing and Takum LGAs in Taraba State, Akko, Kaltungo and Funa-Kaye LGAs in Gombe State and Ganye, Fufore and Maiha LGAs in Adamawa State. A total of 450 questionnaires were distributed and only 298 were returned, representing a response rate of 66.22%. The research was conducted between 5th July, 2013 to 25th November, 2013. From the collected 298 responses, 42 were from Sardauna, 35 from Zing, 23 from Takum, 44 were from Akko, 31 from Kaltungo, 25 from Funa-Kaye, 38 from Ganye, 39 from Fufore and 21 from Maiha LGAs of the three selected states.

These local Governments were selected purposively for their engagement in farming activities in significant proportion. However, a stratified sampling method was used in selecting them as the LGAs in the states were first classified into three strata; i.e: according the three senatorial districts in each state. From each senatorial district, one (1) LGA was selected, to enhance even spread and coverage of the LGAs in the three states.

This study employed survey design and content analysis. Primary data was generated through administration of structured questionnaire and interview; whereas secondary data on the other hand, was generated through content analysis.

Structured questionnaire was used to collect the primary data. The questionnaire was structured on a 5 point likert-scale arranged in four sections; A – D covering a total of 20 questions with each section having 5 questions that shall be used to test the four null hypotheses formulated. The Five-point likert scale was categorized follows: Strongly Disagreed -1, Disagreed-2, Undecided -3, Agreed-4, and Strongly Agreed –5.

The following hypotheses were developed in null form, to enhance the collection of adequate and relevant data needed for the study.

Hypothesis One: Agriculture has no impact on economic growth and industrial development in Nigeria.

Hypothesis Two: There is a significant relationship between lack of modern farming skills and increased agricultural output.

Hypothesis Three: There is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

METHODS OF DATA PRESENTATION AND ANALYSIS

This research used tabular method to present the data collected and with the aid of a computer based package known as the Statistical Package for Social Sciences (SPSS). Also, the research results was interpreted and discussed with respect to the research problem, research hypotheses, relevant literature and experience. Conclusions was drawn, recommendations made and relevant areas for further studies suggested. A simple analysis of variance (CHI-SQUARE) was employed to analyze the data that was collected using the questionnaire. The result of the analysis was interpreted and use for testing the hypotheses.

DATA PRESENTATION AND INTERPRETATION

The table (1.1) below shows the data collected from respondents in a coded form so as to enhance their input into the computer (SPSS) for analysis. Question code refers to a special number assigned to each question as structured in the questionnaire. For instance, question code A1 refers to question number 1 under section A of the questionnaire, and so on. The respondents' choice narrowed down answers actually given by the respondents to an already 5 leveled scale numbered 1 – 5; 5 indicating that the respondent strongly agree to a very high extent with the assertion (question), 4 for high extent, 3 for average extent, 2 for to a low extent and 1 where the respondent strongly disagree to a very low extent. Frequency refers to the number of time respondents made a particular choice for a particular assertion (question). Table 1.2 below is used as an example to presents the data in Section A of the questionnaire in a coded form.

TABLE 1.2: Descriptive Statistics of the Impact of Agriculture on Economic Growth and Industrial Development in North-Eastern Nigeria

Variables	MEAN	Std Deviation	Skewness	Kurtosis	FREQUENCY (%)	
					CUM.HIGH)	CUM.LOW
A1	2.8875	1.55078	.151	-1.464	75	25
A2	2.2750	1.2322	.703	-.655	95	5
A3	3.1000	1.37427	-.154	-1.290	82.5	17.5
A4	2.1000	1.14295	1.052	.351	95	5
A5	3.0500	1.33027	.171	-.868	75	25
A6	2.0875	.98333	1.214	1.533	96.3	3.7
A7	3.7875	1.46429	-1.060	-.322	57.5	42.5
A8	2.7750	1.42291	-.023	-1.390	88.8	11.2
A9	2.5625	1.11200	-.020	-1.347	72.5	27.5
A10	4.0750	1.20940	.480	-.478	90	10
A11	2.9750	1.62243	.041	-1.618	71.3	28.7
A12	2.2500	1.34541	.584	-1.131	95	5
A13	4.0125	1.20646	.109	-.757	85	15
A14	2.6375	1.42530	-.454	-1.218	85	15
A15	3.1875	1.41505	-.204	-1.057	73.8	26.2

Source: Generated by the Researcher (Using SPSS 2013).

The Mean values in table 1.0 show that A10 and A13 with 4.0750, 4.0125 (Agriculture has impact on Economic Growth in North-Eastern Nigeria). While A4 (Agriculture has impact on Industrial Development in North-Eastern Nigeria) was the least in agriculture and economic growth with a mean of 2.1000.

The frequency column in table 1.0 shows the cumulative low and cumulative high values associated with agriculture and economic growth and industrial development. It should be noted that options 1,2,3 in the questionnaire (i.e., "Strongly Disagree", "Disagree", "undecided") make up the Cumulative Low column in table 1.2, while options 4, and 5 in the questionnaire (i.e., "Average usage," "Highly used," and "Very highly used") make up the Cumulative high column in table 1.0.

Under the Cumulative Low frequency column in table 1.1, it can be seen that none of the variables received relatively low usage emphases as all the variables are far below 50%. Table 1.0, also, shows that the whole fifteen (15) variables received relatively high usage emphases (as shown in the "cum high" column). These variables are A1 75%, A2 95%, A3 8.25%, A4 95%, A5 75% A6 96.3%, A7 57.5%, A8 88.8%, A9 72.5% A10 90% A11 71.3% A12 95% A13 85%, A14 85%, and A15 73.8%.

AFRICAN DEVELOPMENT CHARTER SERIES 2

These means that agricultural production is positively related to economic growth and industrial development as it enhance and facilitate economic development through direct food security, employment generation, income generation and a major source of raw material for other sectors of the economy.

Table 1.3: Showing Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N0 of Items
.298	.298	15

Source: Researcher's Design (2014)

Show the reliability coefficients of the research measures: These values exceed the minimum cut off point of 0.70 suggested by Cronbach (1947) and Churchill (1995).

Table 1.4: Showing Analysis of Variance (ANOVA) with Friedman's Test

	Sum of Squares	Df	Mean Square	Friedman's Chi-Square	Sig
Between People	169.552	46	3.686	63.592	.000
Within Between Items	27.254 ^a	14	1.947		
Residual	254.746	644	.396		
People Total	282.000	658	.429		
Total	451.552	704	.641		

Source: Field Study findings (2013)

Grand Mean \bar{X} 4.3206

a. Kendall's coefficient of concordance W \bar{X} .060.

Test of Hypothesis

HO1:- Agriculture has no impact on economic growth and industrial development in Nigeria.

HO2:-There is a significant relationship between lack of modern farming skills and increased agricultural output.

HO3:-There is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

Interpretation of Result

As shown in the ANOVA summary table 1.3, there is much difference between the mean squares of between group and within group, resulting in significant differences (F \bar{X} 3.686 and 0.396; sig \bar{X} 0.00). Moreover, P value is lower than 0.05. This means that HO:1, HO:2 and HO:3 should be rejected.

DISCUSSION OF RESULTS AND FINDINGS

The result from Table A.3 above shows that $P < 0.05$ (the probability of significant of the F ratio is less than 0.05), which means that the result is significant, thus we reject the Null hypothesis:

HO1: concluded that Agriculture has impact on economic growth and industrial development in Nigeria.

HO2: conclude that there is a significant relationship between lack of modern farming skills and increased agricultural output.

HO3: conclude that there is a significant relationship between poor infrastructure/technology applications and increased agricultural output.

The chi-square test statistic is 63.592 with an associated $p < 0.001$.

The null hypothesis should be rejected, since $p < 0.001$ and a conclusion is made that agriculture has a positive relationships with economic growth and industrial development. Examine the pattern of numbers it is noted that more respondents agreed that agriculture enhance food security, employment generation, income generation and a major source of raw material for other sectors of the economy.

CONCLUSION

From the findings above, the following conclusions are drawn:

1. This research concluded that agriculture has a significant impact on the growth and industrial development of the Nigeria's economy. And that they have not only economic implications but social implications as it is a major source of employment; especially to the teeming youth populace who is idle and engage in all forms of vices/restiveness. Although this research does not cover all aspect of agricultural productions but it examined the agric potentials available in the north-east sub-region and discovered that it is inclusively re-engineered, it would boost the GDP of the country.
2. The research findings also show that there is a significant relationship between lack of modern farming skills and increased agricultural output. The results of the descriptive statistics indicated that most of the farmers in the north-east sub-region are engaged in agriculture for subsistence reasons; and they make use of local/traditional methods of farming despite the availability of arable land which has the potentials of supporting crops and animal production in commercial quantity.
3. Finding were also made that there is a significant relationship between poor infrastructure/technology applications and increased agricultural output. The results of the descriptive statistics indicated that most of the farmers in the north-east sub-region make use of local farm implements despite the

availability of machines and state of the art farm equipments which would boost agricultural production in the region.

RECOMMENDATIONS

Based on the conclusions drawn above, the followings are recommended:

1. The government as a matter of urgency pro-active measures to reach out to farmers through a community agricultural network and provide succor to the plight of farmers within the threshold of reviewing the Land use Act; which will make the arable in the north-east more accessible to farmers. Provide agricultural inputs in form of fertilizers, insecticides, hybrid seedlings, etc and also enhance tax incentives available to agricultural productions and agro-allied businesses.
2. There should be an accessible agric extension services to be provided to farmers on communal basis, such each farming community should have a community agric extension office; where all agricultural inputs in form of fertilizers, insecticides, hybrid seedlings, etc to be provided to farmers be channeled through this offices and the community be made to participate in the running of the extension offices.
3. Although the government over the years has embarked upon several forms of agricultural interventions but the results in terms of productivity is not commensurate with the amount of investment. Therefore; this research recommends that a mechanized agricultural loan scheme be provided such that modern farm equipments like tractors, harvesters, harrows and other state of the art farm equipments be given to farmers in form of loan and the repayment period should cover half of the estimated useful lives of such machines.

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AFRICAN DEVELOPMENT CHARTER SERIES 2

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CHAPTER 8

The Agricultural Sector And Labour Output In The Niger Delta

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ABSTRACT

The importance of the agricultural sector in the development of the Nigerian economy cannot be over stressed. As most part of the world, the development of an enduring economy goes hand in hand with agricultural development. It is thus a critical sector that drives the economic development and industrialization of the African economy. Thus, its development is critically important for ensuring food and nutritional security, income and employment generation and for stimulating industrialization and overall economic development of the country. This article x-rays these importance and also highlights the challenges facing the development of agriculture in the Niger Delta region of Nigeria. The study further recommends that concerted efforts must be made in ensuring the viability and sustainability of agricultural production in the region and Nigeria at large.

Keywords: Agriculture, Labour Output, Climate Change, Economic Development

INTRODUCTION

The Niger Delta is located in the southern part of Nigeria, and is made up of nine states Abia, Akwalbom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo, and Rivers States. Although the region is widely known for oil and gas, it is also blessed with agricultural resources; as the fertile land also provides a wide range of economic trees and agricultural resources, including oil palm, coconut, rubber, sugar cane, cassava, mango, locust bean, mahogany, cocoa and rice. Significantly, "over 70 percent of the extremely poor people live in rural areas and depend mainly on agriculture for their livelihoods" (Onokerhoraye, 2013, p.1) .It is estimated that rice production in the region can feed the whole of West Africa (Ibaba, 2012). This highlights the agricultural potentials of the region and by extension its development potentials. The literature has made this important point on the agriculture-development nexus. For example, Ogbalubi and Wokocha (2013, p.60) have pointed out that:

1. Agriculture is the mainstay of many economies. All over the world, the development of an enduring economy goes hand in hand with agricultural development. Agriculture is considered a catalyst for the overall development of any nation. It is thus a critical sector that drives the economic development and industrialization of the developing nation, and also holds the ace for reducing unemployment. Thus, its' development is critically important for ensuring food and nutritional security, income and employment generation, and for stimulating Industrialization and overall economic development of the country. The technological strides recorded by the world's leading economies
2. Agriculture growth has been identified as one important vehicle which enhances poverty reduction, through direct impact on farm income and employment generation, and the critical role it plays in manufacturing and industrialization; through backward and forward linkages related to agricultural processing and in-put supply industries (Byerlee, Diao& Jackson, 2005).

Significantly however, agricultural output in the Niger Delta is low (Albert &Isife, 2009); Onokerhoraye, 2013; Ahmadu&Egbodion, 2013).The poor performance of the agricultural sector in the Niger Delta is critical given its linkage to development, poverty and peace building.

Table 1: Agricultural Resources and Potential areas of Investment in the Niger Delta

Resource	Investment Potential
Oil Palm	Palm oil production/processing Vegetable oil production cosmetics production Palm kernel oil production
Cassava	Commercial/industrial garri of production Production of alcoholic drinks Production of industrial starch
Rice	(iv) Commercial rice production and paddies for export
Plantain/Banana	Production of canned fruit drinks Industrial production of chips
Sugar Cane	Production of sugar Production of industrial alcohol
Coconut	Production of coconut oil Production inputs for confectionary industry Production of cosmetics
Pineapple	Production of canned fruit drinks
Sweet Potatoes	Industrial production of chips
Rubber	Production of rubber latex

Source: Bayelsa State Government Report, 2007: 2425

THE CHALLENGES

Agriculture development and farmers output faces a number of challenges in the Niger Delta. Some of these are discussed below:

Climate Change

Climate change is the variation in the Earth's global or regional climates overtime (Etuonovbe, 2008, p.4), as a result of natural changes or manmade factors, caused by increasing concentrations of greenhouse gases such as carbon dioxide or CO₂ water vapour (H₂Ov), chlorofluorocarbons, methane, nitrous oxide, ozone, and halocarbons. Climate change effects include high temperature, high rainfall and sea-level rise, unpredictable and changing weather pattern, migration of pests and diseases, flooding and drought.

Table 2: Environmental Problems linked to Climate Change in the Niger

Climate Change Effect	Type of Environmental Problem	Impact on Environment
Sea Level Rise	(a)Coastal/ river bank erosion	(i) Loss of coastal vegetation (ii) Destruction of settlements and economic infrastructure such as oil pipelines (iii) Destroys farmlands, crops, and economic trees (iv) Removes top soil
	(b)Coastal Flooding	(a) Enhances the Intrusion of sea water into fresh water sources. (ii) Increases the salinity of surface and underground water (iii) Worsens erosion (iv) Removes top soil (v) Destroys settlements and infrastructure such as roads (vi) Destroys farmlands and crops
Change in Rain Fall Pattern	Makes the dry and rainy season unpredictable	Disrupts agricultural activities and reduces crop yield

Source: Adapted from Uyigue&Agho, 2007, pp.8 -12; Efe 2010, pp.2 -3; Onuoha& Gerald, 2010, pp.11-19

Sea level rise and flooding and effect of irregular, unpredictable and high rainfall, disrupts agricultural activities and destroys crops and farmlands, leading to decline in productivity and income losses. Idowu, Ayoola, Opele&Ikenweiwe (2013).

Oil Spillages and Gas Flare

Oil spills are caused by a combination of factors such as equipment failure, corrosion, sabotage and human error, and the Niger Delta environment has experienced several oil spills, with the attendant damage to the ecosystem. Pollution arising from oil spills destroys soil nutrients, crops, economic trees, farmlands and marine life, and this has impacted on the local economies largely based on farming and fishing; leading to occupational displacement/disorientation, and forced migration (UNDP, 2006). Gas flare is also noted to have caused severe environmental problems. Nigeria flares 20 billion out of the global 150 cubic feet of gas that is flared annually (Uzoma, 2008). Gas flare cause severe damage to the environment, as it destroys all vegetation within its area of impact, including economic trees which it withers away. Further, it reduces crop yield by as much as 90 percent, depending on the distance between the flare site and farmland (Adeyemo, 2002).

Table: 3The Impact of Gas Flaring on Agricultural Output

Distance of Farmland from Flare Site	Percentage Loss in Yield of Crops
200 metres	100 percent
600 metres	45 percent
1 kilometre	10 percent

Source: Opukri&Ibaba, 2009

In a study on Delta State, Inoni, Omotor and Adun (2006) reported that "oil spill reduced crop yield, land productivity and greatly depressed farm income as a 10 percentage increase in oil spill reduced crop yield by 1.3 percent while farm income plummeted by 5 percent"(p.41).

Poor Input Support by the Government

The federal and state governments in the Niger Delta have consistently neglected pro-poor concerns, including agriculture, in public expenditure; the implication is that adequate funds have not been invested in the sector. Furthermore the education and expert support given to farmers through extension services have been neglected for a very long time. Thus lacking capacity and funds, the output of farmers have declined. Perhaps more significant is the point made by Onokerhoraye (2013) that:

....Extension services to small scale farmers in Nigeria, these programmes have not made any significant efforts to involve the local farmers as key participants in the programme of change. The farmers are therefore basically passive beneficiaries of such programmes. Furthermore, the failure of most agricultural extension programmes in Nigeria can also be attributed to the way information on agricultural improvement is delivered to local

farmers. In most cases agricultural information is not integrated with other development programmes to address the numerous related problems that face farmers. Information is an essential ingredient in agricultural development programmes but Nigerian farmers seldom feel the impact of agricultural innovations either because they have no access to such vital information or because it is poorly disseminated. The information provided is exclusively focused on policy makers, researchers, and those who manage policy decisions with scant attention paid to the information needs of the targeted beneficiaries of the policy decisions (pp.1-2).

The implication is that farmers do not get the information required to improve their capacity and increase output or performance

Conflict/Violence

The Niger has been characterised by a conflicts ranging from inter/intra community conflicts, community-oil company conflicts, community-state conflicts, cult and militia related conflicts, inter-ethnic conflicts and the militia led insurgency which lasted 2005-2009. These conflicts, particularly inter-community and inter-ethnic conflicts drove people from their farmlands due to insecurity. The conflicts also displaced people and also led to forced migration, leading to the loss of agricultural labour and disruptions in farming activities.

Lack of Access to Land and Credit

A major constraint to agriculture development in the region is access to land and credit facilities. Due to culture of limited farmlands, farmers are limited to small land holdings where they engage in subsistence farming. Culture excludes women in land ownership and this makes them the worst victims. Although women can buy land for their farming activities, the lack of funds, compounded by the lack of access to credit/loans makes this worse. The acquisition of land for oil production activities and other development infrastructures such as roads, schools, health centres, etc, have also contributed to this problem by reducing cultivable land that is available to some farmers. One consequence of this has been land fragmentation and over farming, leading to land degradation and poor soil nutrient that undermines crop yield.

Lack of Market and Price Stability

A major problem faced by farmers is the lack of formal markets for the sale of their farm produce. Consequently, they are always at the mercy of middlemen who buy the produce on their terms. In most cases, the farmers make far less income than the market women/men who buy from them at the local markets and sell in the urban markets. To make matters worse, prices are not stable. During harvest the price is low in response to huge supply and vice versa when harvest is over. But because the

farmers lack storage facilities, they usually sell off their produce during harvest time; meaning that they do not benefit from the higher price regime after the harvesting period.

Conclusion and Policy Issues

It is clear from the discourse that although the agriculture, particularly farming is a major occupation in the Niger Delta, output or performance is poor, a situation that tends to undermine poverty reduction. Given the significance of the sector not only to poverty reduction, but also to economic growth and peace-building, a number of policy issues are suggested here for consideration.

(a) Adaptation to Climate Change

The Inter-governmental Panel on Climate Change (IPCC) defines Adaptation as "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploit beneficial opportunities". It is different from Mitigation which implies, 'implementing policies to reduce green house gas (GHG) emissions and enhance sinks' (cited in Mitchell & Tanner, 2006). Adaptation seeks to develop resilience and absorptive capacitive to cope with climate change effects. Thus far, farmers in the region have adopted "the use of organic manures, planting of cover crops, planting of trees, increase in number of weeding, protection of water sheds, mulching, preservation of seeds/seedlings for planting and use of windbreaks/shelter belts"(Ajayi, 2014, p.9) as adaptive strategies and the government can integrate these into agricultural development policy. Furthermore, government can, through extension services support farmers to introduce quick yielding crops to guarantee harvest before flood or make up for short planting season due to delays in rainfall. The introduction of processing and storage facilities would also help farmers to add value to their produce and enhance output and income.

(b) Agricultural Extension Services

The supply of farm inputs such as improved variety of seedlings, fertiliser, pesticides and information on improved farming techniques to farmers is critical for improved performance. But beyond this, it is also important for extension officers to locate the education of farmers and support to their activities in the context of their social realities. Interactions with farmers should also identify their social needs and problems that may hinder their productivity with a view to providing guidance and counselling. This integrated approach is essential to ensure that farmers give their all to farming activities.

(c) Dealing with Oil Spillages and Gas Flaring

This is very critical as oil spillages and gas flaring is fundamental causes of productivity losses in the agricultural sector in the Niger Delta. First, the government has to strictly enforce its gas flare out policy. Oil companies who continue to flare gas should be fined the equivalent value of the gas that is flared. Furthermore, the gas gathering projects of the oil companies need to be pursued with vigour as it will help to reduce the volume of gas that is flared presently. Oil companies should adhere to international best practices of efficient and quick response to oil spills, clean-up of spilled oil and remediation of impacted areas.

(d) Creating Access to Land and Credit

Given that land is under the control of the government by virtue of the Land Use Act, government should support farming by acquiring land for distribution to farmers. Furthermore, even when farmers purchase land, they usually lack the security of tenure due the lack of certificate of occupancy. Government should therefore put in place a policy to ensure quick release of certificate of occupancy. This will promote security of land tenure and encourage long time investment in agriculture.

(e) Creating Markets

To promote the income earnings of farmers it would be necessary for local governments to create central commodity markets to cater for farmers from cluster of communities. To ensure that farmers derive the critical benefits, storage and processing facilities can be located in theses central markets, while farmers should be taught simple demand and supply lessons to enable them control supply and price of farm produce.

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CHAPTER 9

Tourism Infrastructure And Support Services: Issues And Challenges For The African Economy

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ABSTRACT

Tourism has become a major player in the economy of developing countries. However, the development and sustenance of tourism in Africa and other parts of the world relies on appropriate infrastructure and support services. They are referred to as basic physical and organizational structures needed for the operation of a society or economic organizations. Infrastructure such as accommodation and other forms of built attractions, transportation, energy, utility, communication, solid waste management systems serve as basic foundations for the development and sustenance of tourism in the destination. The importance of these economic units, challenges affecting it availability and factors that can enhance it adequacy are examined in this review. It however submits that for African economy to utilize the full potentials of tourism in the development of their economy, basic infrastructure must not just be put in place but also sustained.

Keywords: Tourism Infrastructure, Support Services, African Economy

INTRODUCTION

Tourism is defined by Woods, Perry and Seagull (1991) as an export industry that provides domestic services and experiences of domestic resources to foreign consumers in exchange for foreign currency. This has attendant economic benefits. Economic benefits arising from the tourism industry include foreign exchange earnings, employment creation and opportunities that can improve the quality of life of local populations (UNEP, 2001), cited in Ascher (2007).

According to UNWTO report (2010), tourism in many developing and least developed countries is the most viable and sustainable economic development option, and in some countries, the main source of foreign exchange earnings. Part of this income trickles down to different groups of the society and, if tourism is managed with a strong focus on poverty alleviation, it can directly benefit the poorer groups through employment of local people in tourism enterprises, goods and services provided to tourists, or the running of small and community-based enterprises, etc, having positive impacts on reducing poverty levels. Tourism has become a major player in the economy of developing countries (UNWTO, 2010).

Ashley (2010) maintained that there are various characteristics of tourism as an activity which makes it particularly relevant to low income countries and to poor communities within them. These include:

1. Its response to particular assets. Tourism places great value on some common features of developing countries, such as warm climate, rich cultural heritage, inspiring landscapes and abundant biodiversity. These strengths can be particularly apparent in rural areas, which may have a comparative advantage for tourism while being at a disadvantage in most other economic sectors.
2. Its accessibility to the poor. Tourism is a relatively labour intensive sector and is traditionally made up of small and micro enterprises. Many activities in tourism are particularly suited to women, young people and disadvantaged groups such as ethnic minority populations. Many tourism jobs are potentially quite accessible to the poor as they require relatively few skills and little investment. Some may also be part time and used to supplement income from other activities.
3. Its connectivity. As so many different activities and inputs make up the tourism product, which has a large and diversified supply chain, spending by tourists can benefit a wide range of sectors such as agriculture, handicrafts, transport and other services. Additional rounds of spending by those people whose income is supported by tourism spread the economic benefit further

- (the multiplier effect).
4. Its linking of consumers to producers. Tourism, unusually, is an activity which brings the consumers to the producers. The interaction between tourists and poor communities can provide a number of intangible and practical benefits. These can range from increased awareness of cultural, environmental, and economic issues and values, on both sides, to mutual benefits from improved local investment in infrastructure (Ashley, 2010).

The tourism industry is one of the main sources of national income in most part of the world, like Tanzania and Nigeria. The performance of the tourism industry in Tanzania increases every year. In Nigeria, the guiding objective for tourism development is defined within her Master Plan. The plan, among other things defines the commitment of the sector to make Nigeria No. 1 Tourism Destination in Africa (Anam, 2014). The overall objective of the policy is to assist in efforts to promote the economy and livelihood of the people, essentially poverty alleviation through encouraging the development of sustainable and quality tourism that is culturally, socially and ecologically friendly (Anam, 2014). Achieving this policy framework is hinged on several factors, one of which is the availability of an effective tourism infrastructure base. Infrastructure is an essential component for the promotion of tourism development. They must be designed in systematic and scientific ways, such that modern technologies are employed.

MEANING AND RELATIONSHIP BETWEEN INFRASTRUCTURE AND TOURISM DEVELOPMENT

In Keynesian economics, the word infrastructure was exclusively used to describe public assets that facilitate production, but not private assets of the same purpose. In post-Keynesian times, however, the word has grown in popularity. It has been applied with increasing generality to suggest the internal framework discernible in any technology system or business organization .

Infrastructure refers to the basic physical and organizational structures needed for the operation of a society or economic organisations. It also refers to economic cum service facilities necessary for an economy to function. Ukpong (2009) further added that it is the set of interconnected structural elements that provide a framework supporting an entire structure of development. It is an important term for judging a country or region's development (Ashley, 2010). Generally speaking therefore, economic and social activities depend on infrastructure .

The term typically refers to the technical structures that support economic activities in a society. Such structures include roads, bridges, water supply, sewers, electrical grids, telecommunications, and so forth. They constitute "the physical components of interrelated systems providing commodities and services essential to

enable, sustain, or enhance societal living conditions" (Adebayo, 2014) Viewed functionally, infrastructure facilitates the production of goods and services, and also the distribution of finished products to markets, as well as basic social services such as schools and hospitals; for example, roads enable the transport of raw materials to a factory (Ukpong, 2009).

Tourism infrastructure are facilities or public assets that promote the development and sustenance of tourism activities within the society. Despite infrastructure being an intrinsic part of tourism, there has been little research undertaken on the detailed relationships between tourism infrastructure and tourism development. Gearing et al (1974) study on the case of Turkey as a tourist destination found that infrastructure (comprising roads, water, electricity, safety services, health services, communications and public transportation) is a key determinant explaining tourist arrivals. Tang and Rochananond (1990) concluded that infrastructure is an important element in promoting Thailand as a tourist destination country. Kim, (2000) in discussing the case of Sun Lost City, South Africa, and McElroy (2003) in discussing small islands highlight the importance of infrastructure, particularly government financed infrastructure, in the success of a destination (cited in Eberhard, 2007) .

Murphy, Pritchard and Smith (2000) relate infrastructure to demand and supply analysis and describe how various components of the destination interact with tourists. Gunn, (1988) defines the product as a complex consumptive experience that results from a process in which tourists use multiple services (information, transportation, accommodation, and recreation). Smith (1994) acknowledges the role of service infrastructure in creating a product experience. He argues that service infrastructure is housed within the larger macro-environment of the destination and that infrastructure and technology in a destination is key features that can enhance experience (cited in Eberhard, 2007).

The importance of roads as key infrastructure to tourism development is highlighted in the works of Crouch and Ritchie (1999). They emphasized that, tourism planning and development would not be possible without roads, airports, harbours, electricity, sewage, and potable water. Kaul (1985) is among the first to recognize the importance of transport infrastructure as an essential component of successful development in that it induces the creation of new attractions and the growth of existing ones. The Tourism Task Force (2003) of Australia asserts that, transport is a big part of the equation. This system is responsible for connecting tourism-generating regions to destinations (Georg, 2009) .

The connection between infrastructure and tourism is emphasized in numerous professional studies, which underline, on the one hand, the special role of tourism development in the infrastructure's modernizing, and on the other hand, the reverse direction, the generation of multiplication effects of infrastructure

development upon tourism (Gunn and Var 2002; Eagles and McCool 2002). Today, the infrastructure development represents a preoccupation of the decision factors and specialists from almost all fields, for the elaboration of detailed plans regarding the infrastructure development, the transport infrastructure having an important role (Boers and Cottrell, 2007; Culbertson, et al, 1994; Beedasy and Whyatt 1999; McAdam 1999; Itami et al, 2002) (cited in Hayes, 2005).

The development of tourism infrastructure supports detailed territorial management plans, able to ensure balanced relationships between the territorial systems' components, especially between infrastructure and economy, on the one hand, and the rural environment, which very often feels the development of tourism activities, on the other hand. The development of tourism infrastructure attracts series of economic activities, which accompany the touristic phenomenon, upstream and downstream (Bulbeck, 2005; Knight, 2005; Maneesha, 2006; Lovelock, 2008; Andereck et al, 2005) (cited in Huler, 2010).

Prideaux, (2000) argues that a destination should be easy to get to and easy to get around. Most tourists, being citizens of developed countries, are accustomed to modern and efficient transport infrastructure, and they expect to experience in the destination country comforts similar to home (Cohen 1979; Mo, Howard and Havitz 1993), failing which they will seek alternative destinations.

CLASSIFICATION OF TOURISM INFRASTRUCTURE

As with other economic units, tourism infrastructure is classified into hard and soft infrastructure, as well as general and superstructures infrastructure.

1. **Hard infrastructure:**

This refers to the large physical networks necessary for the functioning of a modern industrial nation. They include, but not limited to fixed and capital assets that serve the function of conveyance or channeling of people, vehicles, fluids, energy, or information, and which take the form either of a network or of a critical node used by vehicles, or used for the transmission of electro-magnetic waves. The following elements of hard infrastructure are worth mentioning;

- a. **Transport systems:** Transport systems include roads, railway, airport/ airstrips, transport facilities (vehicles, wagons, aeroplane units and balloons). Easy access to tourism destinations in terms of international transport and facilities for easy movement within the destinations are generally considered to be prerequisites for the development of tourism. Transport infrastructure enable not only tourists to reach the park and go back to their destination, it also help to transport huge amounts of goods to tourist resorts, hence to reduce cost of services to tourist resorts. Good tourism infrastructure determines the length of stay of tourists in a particular area. Good infrastructure makes availability of goods and services for tourists become cheaper.

- b. **Accommodation infrastructure:** This includes hotels and campsites. Good accommodation services to the tourists attract them to stay longer at destinations hence increase national income of the hotel or campsite and the entire country. The absence of quality food, quality rooms, customer care and recreation in hotels discourage tourist to stay at a particular area of tourism destination (park). This statement has been supported by the study conducted by Okello and Yerian (2009) they concluded that "tourist satisfaction for all the parks is independent of tourist attractions, accommodation facilities, and tour services". (Okello and Yerian (2009:15)
 - c. **Energy infrastructure:** This include electrical power network, generating plants, electrical grid, substations, local distribution, gas pipelines, storage and distribution terminals, as well as the local distribution network. Some classifications may include the gas wells, as well as the fleets of ships and trucks transporting liquefied gas. Petroleum pipelines, including associated storage and distribution terminals.
 - d. **Utility infrastructure:** Utility infrastructure includes water supply and power supply facilities. The adequate supply of electricity as well as clean water to the tourist sites is vital for the development of tourism because most tourists expect to get all services like in their home countries, things like warm swimming pools, laundry, dry-cleaning, lighting, entertainment including videos, television, radio, night clubs and elevators requires good flow of electricity in tourist destination. Good and pure water supply system an important requirement for domestic and recreational use. Not only that, also good water management systems and waste disposal methods are good attractions for tourists (Larry, 2008) .
 - e. **Communication:** Postal services, callable television, internet, etc. Reliable internet connections, the use of online payment as well as good telephone networks are the key issue for tourist attraction within the area.
 - f. **Solid waste management:** Municipal garbage and recyclables collection, Solid waste landfills, Solid waste incinerators and plasma gasification facilities, Materials recovery facilities and hazardous disposal facilities are important facilities for solid waste management (Nicolas, 2011)..
2. **Soft infrastructure**
Soft infrastructure refers to all the institutions which are required to maintain the economic, health, cultural and social standards of a country, such as the

financial, education and health care systems. The systems of government such as law enforcement and emergency services are also critical. Soft infrastructure includes both physical assets such as highly specialized buildings and equipment, as well as non-physical assets such as the body of rules and regulations governing the various systems, the financing of these systems, as well as the systems and organizations by which highly skilled and specialized professionals are trained, advance in their careers by acquiring experience. Unlike hard infrastructure, the essence of soft infrastructure is the delivery of specialized services to people.

3. **General infrastructure**

General infrastructure includes all forms of construction on and below ground, required by any inhabited area in extensive communication with the outside world and as a basis for extensive human activity within, such as highways, railway lines, power houses, communication network, water supply system, sewerage, hospitals, police lines, industries for productive goods and services essential for living and so on. It is the pre-requisite for accelerating the socio-economic growth of a country.

Uche (2014) maintained that, the image and resources of a country are built on the perception of infrastructure provision in the particular destination. Thus, no country can think about the image and to increase touristic inflow without the adequate provision of infrastructure facilities. Therefore, two interesting contradictions emerge when we take up the issue of infrastructure. He said, tourism expands the space of tourist and in doing so, it brings into his orbit destinations which should be socially, culturally and economically different from his home environment. However, in many cases tourists are unable to cope with these differences. Tourists make use of local resources, international airlines, hotels, tour operators, value system and other commodities which are meant for host community. This dilutes the economic and social benefits of a country.

However, if tourism is developed and planned by taking into consideration these vital factors, tourism infrastructure and services will not produce results which hamper the residents from meeting tourist's basic needs and yet achieve the objectives of income, job opportunities and development of the areas. These two have an important impact on infrastructure development in the tourism business. It is the secondary input for the tourism industry.

4. **Tourism superstructure**

Tourism superstructure is the primary input and is essential for tourism development. It encompasses a wide range of facilities and services, such as, lodging, food and catering, historical sites, entertainment houses, shopping centers, transportation facilities, tourism organisations, human resources, sports, financial facilities, airports etc. In India superstructure facilities are provided by the private sector, tourism enterprises, central government, state government and local bodies (Uche, 2014).

The tourism product within a country is not a separate enclave. It is the amalgamation of various sectors of a nation such as, agriculture, religion, trade, health, mountain, land, education, forestry, manufacturing and settlement pattern. Thus, the relationship is not just only between buyers and sellers of travel, as tourism supply is a part of community lives. This is because the tourist product and resident product are intermingled and overlapped, for example hotel, museum, wildlife sanctuaries, monuments, sports, religious places, entertainment and cultural centers and transportation etc.

Thus, the more a local community takes pride in the involvement of its community, the greater will be the strength of its tourism product. Infrastructure can be defined as the provisions, facilities and the policies, relationships, institutions that remove the barriers to free movement of people. The development of new touristic infrastructure and improvement in the existing infrastructure are vitally significant in the developing countries like India. These developments may confer benefits upon the resident population by providing them with amenities and facilities which they will be enjoying.

Furthermore, the provisions for infrastructure may provide the basis for or serve as an encouragement for greater social and economic diversification. Government promotes and encourages various industrial enterprises to serve the needs of tourism and stimulate the economic activities. The tourism industry requires or uses the existing infrastructure to achieve its objectives. The industry has today the multifarious benefits of being able to generate profits and create employment opportunities from the existing infrastructure and thus makes remarkable contribution to the growth of national economy.

TOURISM INFRASTRUCTURE IN AFRICA: CHALLENGES AND PROSPECTS

Lack of adequate and functioning infrastructure is a major setback to tourism development in Africa and other developing countries. According to the China Daily Africa Weekly (2013), statistics from the World Tourism Organization shows that in recent years, despite the rapid development of tourism in Africa, the continent's share in the global tourism market is still less than 5 percent. Though there is

immense growth potential, a majority of the African countries lack the resources needed for developing in-depth tourist products. In other words, it is the tourism product system in Africa that needs to be improved quickly.

The report maintained that, Egypt, Morocco, South Africa, Tanzania and Kenya are all making efforts to improve their tourism infrastructure, promote tourism privatization, and increase publicity. South Africa, Kenya and Egypt have been showcasing their tourist attractions in China Central Television, CNN, BBC and other mainstream media to attract more foreign tourists (China Daily Africa Weekly, 2013).

Let's examine some of the infrastructural challenges faced by the tourism industry as highlighted by the China Daily Africa Weekly (2013).

1. First, shortage of funds is the primary factor that is constraining African tourism and limiting the number of Chinese tourists. This is a common challenge for most African countries. The shortage of funds is concentrated in three aspects: the relatively heavy debt burden, a very low domestic savings rate and a dwindling net inflow of external funds. This has led to limited funding in the tourism industry, and hence tourism infrastructure is far from adequate. Poor accessibility, accommodations and a host of other problems directly affect the development of tourism in Africa.
2. Second, compared to China and the US, African tourism products are quite monotonous. Currently, the African country's tourism products are mostly leisure-based traditional sightseeing. Africa has abundant tourism resources, but many unique and high-quality resources are still not being developed.
3. Third, safety hazard is a big concern for many Chinese who plan trips to Africa. Security is a fundamental factor affecting the choice of travel destinations. Due to historic and social reasons, civil war, unrest, terrorism, natural disasters and the spread of diseases in Africa have become constraints on the development of tourism.

Currently, even tourist powers like Kenya have an unsatisfactory security situation. Nairobi's high crime rate has posed huge problems for the safety of foreign tourists. African criminals, especially in South Africa and Kenya, have been targeting Chinese tourists who are used to carrying a certain amount of cash and expensive cameras. Many Chinese tourists thus prefer a more secure European itinerary.

To attract international tourists and offset the adverse effects of the financial crisis, African tourism should take the initiative to team up with China and explore effective crisis response measures to improve tourist infrastructure. China is also

setting off an investment boom in Africa. Many large Chinese enterprises and private capital are eyeing opportunities from the rapid growth of tourism in Africa, such as the construction of airports, highways and high-end hotels.

African countries should seize this opportunity to attract Chinese capital, technology and high-level employees, to increase tourism infrastructure, especially public investment in services and facilities. At the same time it should also rectify and improve tourism product planning, promote reform and innovation, improve staff training, product standardization and the overall quality of the tourism industry (China Daily Africa Weekly, 2013).

CONCLUSION

The article examined the importance of infrastructure as a factor in destination development. Infrastructure base of a country is a potential determinant of the attractiveness of a tourism destination. Infrastructure forms an integral part of the tourism package. In retrospect, road infrastructure enhances accessibility of tourists to different parts of the destination country while sound airport infrastructure ensures that tourists experience a comfortable transition from the plane into the borders of the destination country and vice versa. Communication infrastructure allows quick and cheap communication between the origin and destination country as well as provides maximum information about the destination thereby reducing uncertainty, fear and asymmetric information. Also, infrastructure such as waste water and energy among others are also believed to result in more reliable services and thus enhance the attractiveness of the destination. It is therefore important that government, private organizations and donor agencies advance concerted policy decisions, with enabling implementation strategies to develop and sustain infrastructure for the effective development and utilization of tourism potentials.

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CHAPTER 10

Creating A Sense Of Place Using The Concept Of Critical Regionalism For A Sustainable Recreational And Amusement Park Design In Nigeria

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ABSTRACT

This paper sought to establish the need for cultural identity, and environmental (place or region) consciousness in recreational and amusement park in this era of globalization and proliferation of generic approaches to tourism and recreational design, with a semblance of place, given its context; an architecture which relates in its base forms and materials both in the place (region) and to the international. The approach is at a way forward from modernism, but a culturally and environmentally sensitive architecture which strive to insulate the region against the universalizing forces of modern architecture. The attempt is set to restore the "sense of place" which seems to have been lost to the forces of globalization as a result of modernization that is sweeping across the nation through architectural expression which communicates the ideas that defines a building and its usage, through suitable vocabulary which includes building site and its planning, forms and size, shape, material, colour, texture and ornamentation. Through a careful study and appreciation of local or regional traditions, the paper is conceptually divorced and synthesized from received philosophy in qualitative exploration, analysis, evaluation of related region's cultural and environmental sensitive indices, which help in

establishing or creating a sense of place using critical regionalism to provide an urban architecture which while being true to its time, is more extensively also true to its place, by this means enhancing, and sustaining the unique character of one of the world's most beautiful regions.

Keywords: Critical Regionalism, Sense of Place, Spirit of Place, Recreation, & Amusement Park

INTRODUCTION

The "need to do something for recreation" is an essential element of human biology and psychology. Recreational activities are often done for enjoyment, amusement or pleasure and are considered "fun". The term recreation implies participation to healthy refreshing mind and body. Recreation is difficult to separate from general concept of play, which is usually the term children's recreational activity. It has been proposed that play, amusement or recreation are outlets of or expression of excess energy, channeling it into socially acceptable needs, without need for compulsion and providing satisfaction and pleasure for the participant (Futrell, 2004).

Recreation can be seen as the refreshment of the mind and the body after work, especially by engaging in enjoyable activities, or can be understood as the activity a person takes part in for pleasure or relaxation rather than as work. By this, any material or object designed to achieve this relaxation can be termed a recreational facility (Gray, 2001). Recreation could be defined in terms of formative and felt needs. It could also be defined in terms of normative need as 'a set of philosophically necessary yet pleasurable activities undertaken during non-work time which restore and refreshes the individual and prepares him or her for work again and otherwise contribute to his or her well-being'. Considering felt needs, recreation could be defined as what an individual would do given minimum of constraints on high autonomy or "it is a set of personally ideal activities in the mind of the individual which given the opportunity he or she will undertake" (Godale and Godbey, 1999). Furthermore, to some, recreation means the network of public agencies that provide such facilities as parks, play grounds, aquatic centres, sports fields and community centres in thousands of cities, towns, regions and park district today. Amusement park is a term for an elaborate group of entertainment attractions, rides and other events in a fixed location for the enjoyment of large numbers of people, usually providing attractions meant to cater for children, teenagers, and adults. (Etudaiye, 2013)

Places today have become exhibitions of themselves through heavy investment in Architecture, Art designs, Exhibition space, Landscaping and various kinds of redevelopment towns, cities and countryside proclaim their possession of various cultural values: such as changing nature, the historic past, the dynamic

future, multiculturalism fun and pleasure, artistic creativity or simply stylishness. These cultural values have come to be seen as indigenous context, the possession of which is the key to the important task of attracting visitors. And this context is expected to use a currently favoured term in urban design, to be legible (Dicks, 2004). Places whose identity seems inaccessible, confusion or contradictory do not present themselves as destinations. They do not, in other words, seem visit-able.

An identity that is painted in the form of well-restored or beautifully designed buildings, art works shopping plazas, streets, walkways or garden does not comprise itself into a view nor offer itself as an "experience". To avoid such a fate, places should make the most of themselves instead of, or like the well-toned body promoted in healthy living magazines. In this way they can find their niche in the new cultural economy of visibility (Dicks, 2004). When you have lived or worked in a place for a long time you may cease to notice it unless something happens to jolt you. It might be the sun glinting on a stone wall revealing the fossils in it, discovering that the street name indicates a market place which explains the wide pavements, the felling of ancient and much loved trees in the place. Therefore understanding what makes our place different from next, what accumulations of story upon natural history give it, its uniqueness may help us to maintain a relationship which ensures a future for local distinctiveness, and attachment to place is a prerequisite to endeavor on its behalf.

ARCHITECTURAL PROBLEMS OF LEISURE, RECREATION AND AMUSEMENT PARK IN NIGERIA

An examination of some recreational and amusement parks in Nigeria shows that their compositions and its relationship with the site does not portray critical regionalism and as such exhibits "placelessness". Most of the existing recreation parks in Nigeria are seen to be detached from the site they are built. They are not designed with respect to the site and region in which they are situated. This circumstance has had a subduing effect on the attraction and experience. This is because people do not just strive for leisure and recreation but also want an experience of living close to nature as well as having a feel of culture different from theirs. One is forced to ask if any of the recreational and amusement parks in Nigeria today is situated around the "Area of Outstanding Natural Beauty" (AONB) like interesting topography, availability of natural landforms e.g. Rocky outcrop, water bodies, good scenery, accessibility and way finding. If they really serve the function of recreation centre, and appropriate for that particular destination. Does any of the recreational and amusement parks meet the need for quite enjoyment of the countryside and having regard for the interests of those who live and work there? How have the theories of critical regionalism been applied to recreation facilities in Nigeria? How can critical regionalism be reflected in the leisure, recreation and amusement parks in Nigeria? Problem of mass tourism such as hostility from

indigenous population, poor experience by tourists can be resolved by having sense of place. Recognizing critical regionalism; advocates for culture & civilization, which is, evolving from site, use of local building materials, skills and construction techniques, culture vs. nature: topography, context and tectonic form, reflection of local building form, and indigenous spaces and site planning is one of the many ways of avoiding mass tourism and duplication of architectural products.

This problem is best described as the erosion of local culture and institutionalization of modern architecture across the nation. Therefore our approach must involve a recovery of a sense of place. Since every site or community has its own distinct character, the challenge is to divorce that unique character and stimulate it into architectural poetry. A monumental architectural composition as recreational and amusement park could be an important architectural signature or statement, which without spoken words can visually communicate the language, idea, culture, and even the purpose of its design.



Plate 2.1: Entrance Castle, and Burger Lounge & Indomie Kitchen of Maitama Amusement Park, Abuja Completely Modern and not Having Regard for the Region (Source: Field Survey)



Plate 2.2: Entrance Castle of Wonderland Amusement Park Finished With Stones; An example of growing of building from the site (Critical Regionalism) Because of Its situation around an Igneous Rock Outcrop and the use stones for finishes (Source: Field Survey)



Plate 2.3: At The Background of Wonderland Amusement Park Is Rock Outcrop, and The Skillfull Use of Stones for Landscaping; An Example of Growing of Buildings (AONB) Around Area Of Outstanding Natural Beauty (Source: Field Survey)



Plate 2.4: Entrance Castle Of The Pixie-Dixie Amusement Park Kaduna Not Given Prominence, And The Walls Not Decorated With Relief Sculptures, Love Garden Of Pixie-Dixie with Circular Huts & Thatch Roof, An Example of Hausa Traditional Architecture (Source: Field Survey)



Plate 2.5: Adorned with a Beautiful Landscape Is a Typical Exquisite Yoruba Palatial Village Setting Of Jhalobia Recreation Parks & Garden, Ikeja Lagos(Source: Field Survey)



Plate 2.6: Curvilinear Shops and the Rectangular Lounge with Thatch Roof in Cyprian Ekwensi House, Abuja Depicting Local Character both In the Form and Materials (Source: Field Survey)



Plate 2.7: The Indigenous Form and Relief Sculptures of Human Figures Depicting Hausa, Igbo & Yoruba Blaring Trumpet and Beating Drums on The Walls of Cyprian Ekwensi House, An Example of Culture And Civilization (Source: Field Survey)



Plate 2.8: The Use of Stones Finishing and Landscaping Blended With an Interesting Maneuvering Of The Undulating Topography In Obudu Mountain Resort, Calabar – Cross River State (Source: Field Survey)



Plate 2.9: The Exploitation and Exploration of The Rain Forest Part, and Undulating Mountainous Ranch With Suspended Rope -Bridge and Cable Car In Obudu Mountain Resort, Calabar – Cross River State (Source: Field Survey)



Plate 2.10: The Mastery use and Control of Site Features in Creating a Sense of View of Nature in Obudu Mountain Resort, Calabar – Cross River State (Source: Field Survey)



Plate 2.11: The Perspective View Of A Rectangular Guest Chalets, with parts finished with stones, and Situated On A Stony And Hilly Site With An Interesting Network Of Roads Separated By Verges And Flowers, Carpet Grass In Ikogosi Warm Spring Resort, Ekiti State (Source: Field Survey)



Plate 2.12: The Beautiful Restaurant Situated around a Cozy Swimming Pool Provided to Serve Yoruba Indigenous Cuisines (Source: Field Survey)

In a country like Nigeria, rich in cultural and environmental diversity, residents convey their sense of place through myriad cultural expression, and this can be factored into the land-use decisions. A cultural and environmental consciousness is necessary if people hope to survive. In the light of the above stated, and with the hope to create cultural and environmental conscience, is the premise in which recreation facility designs that are attractive, functional, safe and accessible and sustainable, beautifully complements its surrounding should be advocated and encouraged.

CRITICAL ASSESSMENTS OF SOME NIGERIAN RESORTS, LEISURE, RECREATIONAL AND AMUSEMENT PARKS

Six (6) Case studies of Nigerian recreational and amusement parks were selected, with two (2) chosen from Southwest; Jhalobia parks and garden - Lagos, Ikogosi warm spring - Ekiti state, two (2) from FCT Abuja; Maitama amusement parks, Wonderland amusement parks and resort, one (1) from North-central; Pixie Dixie amusement park- Kaduna, and one (1) from the South-south of Nigeria; Obudu mountain resort – Cross River state. An in-depth, comparative and contrasting assessment was made of them using the architectural vocabularies like building site and its planning, forms and size, shape, building materials, colour, texture & ornamentation, and cultural characteristics. And the inference derived from the studies shows that those conforming in one way or the other to the concept of critical regionalism are more visit-able, economically viable and socio-culturally sustainable while those that do not are not visit-able and thus, not enjoying patronage as tourist destinations. Good illustrations of these are the plates 2.1 – 2.12 on page 3-7.

THE CONCEPT OF SENSE OF PLACE AND CRITICAL REGIONALISM

A comprehensive study of "sense of place" and related concepts usually present challenges for research of this kind. Inconsistent application of terms, questions regarding their origin and a lack of awareness of research findings contribute to the vagueness of these concepts. This integrative review of research provides relevant, current information on the role of sense of place in natural-resource based recreation and tourism. Special focus is given to the foundations of place attachment, how place attachment may differ among other user types, the theory, and relation of place attachment to their phenomena such as attitudes is also examined. The term "sense of place" has been defined and used in many different ways by many different people. To some, it is a characteristic that some geographic places have and some do not, while to others it is a feeling or perception held by people (not by the place itself). It is often used in relation to those characteristics that make a place special or unique, as well as to those that foster a sense of authentic human attachment and belonging as geographer (Yi-Fu, 1980) puts it.

Some places are considered to possess more recognizable identities than other places and have more expensive character. Place character is considered by many people a highly valued amenity, as witnessed by communities that lament its loss and tourists who gravitate to places that they feel have still retained "a lot of character", while avoiding places that they feel have lost their character. Yet it is often hard to know exactly why some places are regarded as possessing desirable character, while other places seem to lack this quality, these are what the geographer Edward Relph (1976) has referred to as 'placeless' environments, denoting settings that lack distinctiveness of character, and which may encourage a sense of place alienation. Tuan (1974) maintains that people will experience a sense of place in two fundamental ways; through perceptual and aesthetic awareness of the environment, and through the meanings one ascribes to it over time. He refers to the former as 'public symbols' and latter as 'fields of care', the distinction being that the former are more obvious visually, while the latter are more inconspicuous, but elicit deeper affective responses (Tuan, 1974). Spirit of place is referred to as the unique, distinctive and cherished aspects of a place; often those celebrated by artists and writers, but also those cherished in folk, tales, festivals and celebrations. Often the term is applied to a rural or a relatively unspoiled or regenerated place.

Relph (1976) suggests that such shared place images will be structured both vertically and horizontally, with the vertical dimension representing individual intensity and depth of experience, while the horizontal dimension represents the degree of knowledge about the place, shared by others whom one is intimately associated in that place. Conflicts can occur between different groups who share different conceptions of a place. For example, 'insiders' within a community might oppose a particular environmental change, for example, a proposal for a new building that they feel will be incompatible with their conceptions of the character of the place. 'Outsiders' on the other hand may not be as troubled by the prospect of such a change because they have not yet had time to form definite images of the place against which they can judge the compatibility of the change. To insiders, who would be more likely to have formed meaningful, often unconscious bonds with their familiar everyday environments, the change may be perceived as a threat to their sense of self. Since outsiders will tend to lack such deep and meaningful connections the change may not be a threat to their sense of self, and therefore, will not necessarily be perceived as inappropriate. The implication here is that through long-term involvements in, and familiarity with a place, the insider will establish emotional attachments that outsiders will typically not have had time to form.

NATURE OF SENSE OF PLACE

Specific qualities of landscape infused a site with a sense of place for people's past experience heavily influenced relationship between people and place, as places were sensed as a combination of setting, landscape, ritual, and routine and in the context of other places. Each having structure of people, space, and environment contributes a particular set of qualities of *genius loci*. The holistic perspective of "topophilia" described by Tuan (1974) states that topophilia is the relations, perceptions; attitudes, values, and world view that effectively bond people and place. Analyzing the content of people's remembrances for significant and reoccurring themes about space and place, yields insights into fundamental life themes of sense of place, environmental mastery, privacy and autonomy.

- a. Loss of place – humiliation – losing one's past, present and future sense of place.
- b. Placelessness – distress – attaining a sense of place.
- c. Rootlessness – alienation – continuity and change in the sense of place.

An understanding of sense of place for which places are not merely objects, but objects for subjects is needed. The sense of place can most usefully be conceptualized in terms of structure of feeling. Collective identity and sense of place is one of the primary social functions of residential differentiation for most people in modern societies. Sense of place helps to protect the regions cultural heritage and promotes cultural awareness and strong kinship ties. The ancient platonic approach to memory is focused on re-collective experience.

Recollection promotes access to transpersonal memorial and involves a turning inward, a withdrawal of attachments to the external world, and a gathering in or coming to presence of the self. These re-collective experiences may underlie the sense of place, boundaries, personal identity, and human autonomy. The three variables of sense of place are legibility, the perception of and preference for the visual environment, the compatibility of the setting with human purposes. The theories of sense of place are all about cherished aspects of location which could be referred to as spirit (soul) of place, and refers to the unique, distinctive and cherished aspects of a place; often those celebrated by artists and writers, but also those cherished in folk tales, festivals and celebrations. It is thus as much in the invincible weave of culture (stories, art, memories, beliefs, histories, etc.) as it is the tangible physical aspects of a place (monuments, boundaries, rivers, wood, architectural style, rural crafts, pathways, views, and so on) or its interpersonal aspects (the presence of relatives, friends and kindred spirits and the like).

People can become attached emotionally to places and place features (Low and Altman, 1992) and these attachments often become integral to their sense of place (Brown and Perkins, 1992). Such attachments become particularly important

when they are threatened or disrupted during times of environmental change (Fried 1963; Godkin 1980; Sell and Zube 1986), which can result in a sense of continuity with the environment being lost. As Taylor et al (1987) point out, 'strength of these attachments may not be apparent until places are removed from the landscape-when the corner store is torn down; the childhood swimming hole is filled, or the nearby woodlot cut down'. Yet it has also been suggested that even the threat of change to valued places can draw communities together in their defense, thereby strengthening community sense of place and promoting a desire for environmental stability, greater local control and for slower, as opposed to more rapid change (Sell and Zube, 1986). "Residents not only sense but know that their world has an identity and a boundary when they feel threatened....We owe our sense of being not only to supportive forces but also to those that pose a threat. Being has a centre and an edge: supportive forces nurture the centre while threatening forces strengthen the edge" (Tuan, 1974).

A sense of belonging to a place, which is integral to forming place attachments, is something that develops over time as people become increasingly familiar with their everyday surrounds, thus suggests a dialectic relationship that exists between the place experiences of 'insiders' and 'outsiders', the difference being largely determined by the degree to which one feels a sense of belonging with a place. He conceptualizes this as a continuum from what he defines as 'existential insiders' at one extreme to 'objective outsiders' at the other. Place experiences of objective outsider represent a '...deep separation of person and place'. He characterizes this as the way planners and environmental designers can experience places based on information gleaned solely from maps, photographs and written descriptions in which they hold a '...dispassionate attitude towards places in order to consider them selectively in terms of their location or as spaces where objects and activities are located...' (Ralph, 1976).

Finally, the ability to form attachments to place features may serve to dispel a sense of alienation and displacement in unfamiliar settings or when one is faced with rapid environmental changes- for example in the aftermath of natural disaster (Green et al, 1985b) or during times of rapid change in one's residential environs (Fried, 1963). Place attachments may also qualitatively change over the course of one's lifetime (Chalwa, 1992). Furthermore, not only individuals, but also families, communities and entire culture can share similar attachments to places.

MAINTENANCE OF PLACE IDENTITY

The concept of 'place identity' (Proshansky, 1978; Proshansky et al 1983) also plays a role in the establishment of sense of place. This concept denotes the contribution of places features to one's sense of self-identity, suggesting that one's self identity relies, to a certain extent, on the distinction between one's self and others. If indeed

place features can represent an extension of a person's self, then preserving distinctive features of a place that differentiate it from other places may be important to the psychological well-being of people. Hence, there may be features associated with places that are important in defining both the character of places and the self and or group identity of those who live in or visit those places. Modification to the character of places can, therefore, have implications for the psychological and social well-being of those living in those places.

"We need to develop what I call an ethics of place. It is premised on a sense of place, the recognition that our species thrives on the subtle, intangible, but soul-deep mix of landscape, smells, sounds, history, neighbours, and boyfriends that constitute a place, a homeland. An ethic of place respects equally the people of a region and the land, animals, vegetation, water, and air. It recognizes that (residents) revere their physical surroundings and that, they need and desire a stable, productive economy that is accessible to those with modest incomes. An ethic of place ought to shared community value and ought to treat the environment and its people as equals, to recognize both as sacred, and to leisure that all members of the community not only search for but insist upon, solutions that fulfill that ethic." (Charles, 1990)

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Brundtland Commission (1987). In a similar accord, World Conservation Union (1991) also sees sustainable development to mean "improving the quality of human life while living within the carrying capacity of supporting ecosystems." Sustainable development is "any form of positive change which does not erode the ecological, social, or political systems upon which society is dependent" (Rees, 1988). Miller in the preface, "Architecture that heals the heart, our biological systems, and the environment is sustainable. It needs to be shaped and for region's condition. Therefore, the core of sustainable design lies in the "spirit of place".

CRITICAL REGIONALISM

An approach to architecture, that strives to counter the "placelessness", and lack of meaning in modern architecture by using contextual forces to give a sense of place and meaning. In 1980s, a few architects and theorists were disappointed with the direction that architecture was taking under the influence of postmodernism. Critical regionalism present an interesting antidote to the perceived inadequacies of architectural responses to the universalizing and leveling effects of technology and other movements such as international style, and deconstructivism.

This provides a framework for thoughtful and informed works that both incorporates self-critique regional vocabularies of materials, history and site and that acknowledges regionalism's (or regions) role or place in a large global context. Critical regionalism should adopt modern method of architecture critically for its

universal progressive qualities but at the same time should value responses particular to the context. Emphasis should be on topography, climate, light, tectonic form rather than being scenographic, and the tactile sense rather than the visual (Frampton, 1983).

ELEMENTS OF CRITICAL REGIONALISM APPLICABLE TO AMUSEMENT AND RECREATION PARKS

A recreation is a response to aesthetic experience, achievement of a person's goals, or positive feedback from others. It is independent of activity, leisure or social acceptance. In the context of recreation, "culture can refer to anything from architecture, heritage buildings and attractions, to the visual and performing arts, festivals and events, to entertainment and leisure complexes", as well as culture as the way of life of people. In many cases, culture is used as a tool to enhance or aestheticize declining areas of cities. Culture and commerce have clearly become intertwined in the post-modern world of global consumption. Culture has become a commodity to be packaged and sold much like any other. Many recreation projects therefore have a strong economic and business imperative, despite their apparent 'cultural' focus (Evans, 2001). Elements of critical regionalism which should be integrated in the design of recreation and amusement park design are;

- i. **The Indigenous or Local Architecture:** The design and construction of most structures (bar, town hall) with use of natural building materials such as engineered timber products, timber decking and flooring seasoned bamboo, palm-leaf thatch will exhibit the local architecture of the area and region. Building (layout and organization), spatial arrangement, building size and construction methods are applicable.
- ii. **Special Places:** Archeological evidence from many places around the world suggests that most ancient cultures did invest particular localities with special meanings and these localities were distinguished from place to place, often to the point of being treated as sacred ground. Such special places have been described as possessing a unique 'sense of place' or personality.
- iii. **Symbolic Meaning:** Places and place-features can convey symbolic meaning if they represent or typify objects, ideas or events related to specific localities. Monuments in the landscape function as public symbols representing centers of place-based meaning with some monumental features acquiring such powerful meanings that people across various cultures will share those meanings. This can also be provided through a theme park.

- iv. **Folklore, Myth and Legend:** These add local flavor to the content of the themes for activities, spaces in the recreation centers.
- v. **Natural Landscape and Fauna:** Natural outcrops like rock formations, flowers, spatial configuration and formal attributes of vegetation are applicable to recreation centers. A landscape scene that is able to trigger one's imagination and entice one to travel further into it may represent a reoccurring archetypical symbol, one that has been frequently depicted in landscape paintings in the past.
- vi. **Cuisine and Art:** Dishes and cuisines served in the recreation centre would be local to the area. Art works, such as paintings, carvings statues and other objects indigenous to the area would be used to embellish outdoor and indoor spaces.

THE BENEFITS OF CRITICAL REGIONALISM APPLICABLE TO THE DESIGN OF RECREATIONAL AND AMUSEMENT PARKS

- i. The recreation designers and local authority in place branding have basis for their design concept.
- ii. It helps in preservation of the cultural heritage of the region. The locals or people indigenous to that location would be inclined to relate positively with the design because thought has been given to their presence.
- iii. Conservation of buildings representing traditional architectural styles and aesthetic qualities.
- iv. Appropriate control over building and construction in the area.
- v. Creates conducive environment for studying and appreciating foreign cultures.
- vi. It provides employment opportunities for the aborigines who have knowledge of traditional art, cuisines, folklore or myth and legends, local architecture and language.
- vii. It brings the tourist in a 'virtual' contact with the culture of the aborigines and the region which leads to exchange of culture, ideas and foster intimacy.
- viii. It brings about economic viability when it appears visit-able

CONCLUSION

The target or objective of this paper was to establish how important is sense of place, and how it could be created using the concept of critical regionalism in recreation and amusement park architecture. It is clear that while this critical regionalism may have been applied in different degrees in some national public buildings, here in Nigeria, the effect has not been that felt in recreation parks. The inference derives

from the region or indigenous architectural elements, exposition of the elements of construction should speak more of relationship of the building to its space with the recreation site critically studied, should have its peculiarities brought out to the advantages of the design to mediate the impact of universal civilization with elements derived both directly and indirectly from the peculiarities of the region. However, if carefully, not compromising the quality of the environment and the peculiarities of the region are factored into park design, the tourism industry will become more viable, visit-able and sustainable, and by this means enhance the attraction, recreation perception and experience, this will result in a highly intelligent, appropriate, and sustainable recreation and amusement park architecture.

Through the demonstrated empirical evidence the role of leisure, recreation and amusement park architecture in transforming the city or town to an architectural destination via signature architecture, it will be amounting to an economic sabotage, and socio-cultural suicidal of tourism destination, leisure and recreation development if we are talking of sustainable tourism developments and the concept of critical regionalism is not applied to the architecture of this kind.

RECOMMENDATIONS

Recreational and amusement parks have become the most patronized and most visit-able arena by the urban man, therefore to have a continued, forever and fun-filled experience by the fun-seekers, the concept of critical regionalism should be seen as the only preferred approach to the enhancement of human psychological experience, visual effect and human comfort within and around recreation parks. The attributes of critical regionalism can be adopted in solving problem of spatial interaction and circulation inherent in amusement parks. Therefore, there is need to create another home (cultural & civilization) away from (region) home in the urban centres with the under listed;

- i. Since every state of Nigeria is gifted with some unique and cherished cultural and environmental characteristics, and they are all required to develop their tourism, leisure and recreation destinations. Hence, critical regionalism should be adopted in developing recreation and amusement park designs to protect and enhance environmentally friendly and conscious designs.
- ii. In deriving the aspect of this kind of design, the architectural sensibility of the work should dwell much on the looks to the uniqueness of site, and location, while preference should be on the architect great deals with irregularities of the physical landscape and the blending of the local culture and traditions that are deeply rooted in the local condition.

- iii. The influence should also be felt on the modern method but relies on the organic unity of local materials, climate, cultural characteristics, and topography, vegetation and building methods to land coherence to the finished work.
- iv. The adaptations of local forms and method should be hinged on the proper planning of the recreational & amusement park so that space distribution and facilities juxtaposition is flexible and reflects or embraces the requirement of modern functionality.
- v. There should be a sense of place in most of the recreation facilities, and prominence should be given to the Entrance Castle/ Tower, and a towering fencing with relief sculptures, terracing contours and overall landscape, and height of the buildings which in most times helps in creating architectural vista and the feelings of "thereness".

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CHAPTER 11

Managing Corporate Transformation Of The Commercial Banking Sector In The Fast Growing Nigerian Economy: Challenges And Strategies

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ABSTRACT

The fast growing Nigerian economy makes corporate transformation an inevitable feature of corporate life in Nigeria of today. Corporate Transformation is the process of changing the characteristics and corporate culture of an organization so that it will not only lead further changes in the industry or environment but be the change itself. The commercial banking sector because of its intermediary role is positioned to lead other sectors to key in and grow with the economy. To perform this role the sector has to transform through the process of strategic management in which the following strategies prescribed in the paper will be implemented namely: staff training, recapitalization, corporate governance and focusing on core banking business and aggressive drive for deposits. To complement the transformation there should be effective supervision and regulation of the system by the Central Bank of Nigeria (CBN) and the Nigerian Deposit Insurance Corporation (NDIC).

Keywords: Corporate transformation, rebased economy, Gross Domestic Product, Commercial bank sector, strategic management.

INTRODUCTION

Over the past one and half decade, 1999-2014 that Nigeria has been experimenting with democratic rule available statistics have shown that the Nigerian economy has been growing at significant rates. Currently according to the National Bureau of statistics NBS (2014) the economy is growing at 7.5% p.a with a rebased Gross Domestic Product (G.D.P) of more than N500 trillion. This rate of growth which has been acknowledged as among the fastest in the global economy should make planned changes inevitable features of corporate organizations in Nigeria. This will reposition the organizations to key in to profit and grow alongside the economy for the inclusive sustainable development of the country as a whole.

In this paper our focus is on the challenges and strategies for managing corporate transformation in the Nigerian commercial banking sector which is a leading sector in the economy. It is our belief that the commercial banking sector should lead the change by providing the quantum of finance needed by the other sectors particularly the manufacturing sector instead of reacting to changes.

THE CONCEPT OF CORPORATE TRANSFORMATION

Volberda, et al (2011 p.585) define corporate transformation or “transformational renewal” as a holistic process in which top management with the support of lower level managers and other stakeholders plan to influence the environment in which they operate through a process of “collective sense-making and the development of shared strategic schemas across organizational levels” collective sense making is described as “enactment in the social psychology of organizing”. In everyday language this means managing to carry all organizational members along and making them focused on producing the desired change in the fortunes of their organizations.

The Oxford Advanced Learners Dictionary defines “transformation” as the action or an instance of transforming: the state of being transformed and to transform is to change completely. Corporate or organizational transformation, therefore, is the instance of changing completely the organizational culture and characteristics of an organization.

Specially organizational transformation connotes a turn around, a change to a higher level of performance. A transformed organization is not just effective in achieving its set objectives and goals it rather surpasses its targets with the least cost per unit of production, that is with efficiency. By focusing on its goals and objectives and with “collective sense” as guide to action all actors particularly the key actors like top management (strategic management people) are not only proactive but also entrepreneurial in approach. They retool, restructure, reorganize, reengineer and develop distinctive and core competences that mark them out as the brand to beat (Wheelen & Hunger 2000). They set the benchmark for others to follow. Their leaders

and managers (Board and management) are described as transformational rather than transactional (Stoner, Freeman & Gilbert, 2010 pp 488-489) Transformational leaders motivate their employees by meeting their psychological needs (Abraham Maslows higher order needs) of esteem and self actualization (see Maslow, 1943). The employees do not work for the sake of material rewards. They are rather more spiritual in their work ethics (McGhee & Gant 2008).

Transactional leaders on the other hand motivate with physiological (lower order) needs of organizational rewards namely: good pay, promotion and so on. In other words transactional leaders motivate their employees with quid pro quo; give and take. In the absence of such rewards job performance suffers. Again, transformational leaders earn the commitment of their organizational members through their own charisma. They use their personal vision and energy to inspire their followers to go the extra mile. The subordinates become affectively committed to change to the extent that even when the leaders are not around the tempo of work continues with the so called protestant ethics. This is because they are corporate citizens and there is good corporate governance, transparency, disclosure and moral courage on the part of leadership.

In a transformed organization all performance indices look upwards, so to say: the performance curves are upward sloping to the right. They include high Profitability Ratio (PR) High Return on Assets (ROA) and high Liquidity Ratio. This ensures that current assets – bills receivable, marketable securities, bank balances and cash in till are significantly higher (double) the current liabilities including trade credits, bills payable, over draft facilities, accrued expenses and so on. With such a liquidity position the transformed organization can conveniently pay off its current liabilities and still have a good margin of current assets to transact business with. A transformed organization is a very credit worthy organization. It can always contract long term loans for the expansion of performance capacity through the execution of capital projects. This notwithstanding, the leverage ratio is kept under check so that the repayment of principal (amortization) as well as interest on loans are effected as and when due. In a transformed organization quality is emphasized as well as customer satisfaction, shareholder satisfaction, employee satisfaction and commitment (good industrial relations), good public relations and social responsibility as well as good relationship with the government as a corporate citizen paying corporate taxes as and when due. In a transformed organization even the office premises wear new looks with their brand colour paints. The staff show evidence of good dress code, courtesy and respect to customers. Other banks in Nigeria are now copying Access bank in saying thank you to customers. Their balance sheet shows they are transforming. Zenith bank has of course long transformed just like G.T. bank. The Nigerian breweries limited is the brand to beat in the breweries sector. Outside the shores of Nigeria we have American Telephone and

Telegraph (AT & T). International Business Machine (IBM) and General Motors (GM) (see Stoner, Freeman and Gilbert 2010 p. 488). In conclusion transformation is a process and not a project.

THE THEORETICAL FOUNDATION OF CORPORATE TRANSFORMATION

The concretization of planned change: Organizational or corporate transformation, as an essential aspect of organizational life can be traced to Lewin (1951). Kurt Lewin conceptualized organizational change as a function of two opposing forces: those naturally pressing for change and those that seek to maintain the status quo and oppose any change. When the forces are opposite and equal the organization is in a temporary state of equilibrium. To effect a change, therefore, one will have to do the forcefield analysis to know the forces in operation and either increase the forces pushing for change or decrease those forces maintaining the "Quasi-stationary equilibrium" or apply some combination of both. Lewin suggested that modifying those forces maintaining the current state produces less tension and resistance than increasing the forces pressing for change (revolution). Consequently the former strategy is prescribed as the more effective change strategy. To adopt this model of planned corporate transformation Lewin suggested three steps as follows: First, the unfreezing stage in which the organizational members through meetings, seminars conferences and so on are made aware of the disfunctioning of the system. Second, the moving stage in which changes is gradually introduced in the organizational structure and processes. Finally, the refreezing stage in which the new structure, values, culture and ethics are internalized to produce a brand new state of equilibrium.

In the Nigeria banking industry of the 1980s and 1990s those organizations that sought to replace their aged and obsolete executives with younger MBAs with skills in Information Communication Technology (ICT) met stiff resistance from the staff unions and later went under. It was those who prepared the minds of their oldies and retrained those that were still trainable that succeeded in corporate transformation. The then State Government owned banks, African Continental Bank (ACB), National Bank (NB), Mercantile Bank (MB) etc were in the category that went under partly because of stiff opposition from unions. The likes of First Bank who still maintained their retiring age at 60 and retrained their staff and introduced change gradually have been transformed and are waxing stronger today. This is a vindication of Lewin's Model.

The alternative theory is the Action Research Model (French, 1969, pp 23-34, Frohman, Sashkin & Kavanagh, 1976 pp 129-42, Schein, 1980). The Action Research Model envisions effective organizational change as being accomplished through a process of researching into the organization to collect data, analysing the data and acting on the information received to produce a feed back and using the feedback as

data to act on the organization again in a cyclic order thereby moving the organization forward. The strategic management process practiced in many organizations belongs to this Action Research Model. A typical strategic management process has the following stages (see Thompson, Gamble & Strickland 2004; Cole, 2005).

- 1) Internal Audit Stage in which the organization identifies its current position and challenges.
- 2) Environmental scanning stage in which the organization conducts analysis of strength, weaknesses, opportunities and threats (SWOT Analysis).in its micro and macro environments.
- 3) Strategy formulation stage in which objectives are set with relevant action plans to achieve the objectives.
- 4) Implementation stage in which resources are allocated to programmes and implementation units.
- 5) Strategy Evaluation Stage in which results are measured against plan to produce feedback which are used again to continue the strategic management over a long period of time.

THE FAST GROWING NIGERIAN ECONOMY

The Nigerian economy has witnessed significant growth from 1999 to date. It behoves on corporate organizations to transform and key in into this growth for the inclusive sustainable development of the country in economic, social, and political terms. In table 1 we present the Gross Domestic Product (G.D.P) at current basic market prices, the concomitant growth rate, agricultural production and the average manufacturing capacity utilization to represent the economy. This table provides us with a good framework for analysis.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table 1 G.D.P at Current Basic Prices in Millions, GDP rate, Agriculture and Average Manufacturing Capacity Utilization % 1999 – 2012

S/N	Year	GDP @ Current Basic Prices	GDP Rate	Agric	Manufacturing Capacity Utilization %
1	1999	3,194,014.97	17.9%	1,127,693.12	34.60
2	2000	4,582,127.29	43.5	1,192,910.00	36.10
3	2001	4,724,086.00	3.1	1,594,895.53	42.70
4	2002	6,912,381.25	46.3	3,357,062.94	54.90
5	2003	8,487,032.57	22.8	3,624,579.49	56.50
6	2004	11,411,066.91	34.5	3,903,758.69	55.70
7	2005	14,572,239.12	27.7	4,773,198.38	54.80
8	2006	18,564,594.73	27.4	5,940,236.97	53.30
9	2007	20,657,317.67	11.3	6,757,867.73	53.38
10	2008	24,296,329.29	17.8	7,981,397.73	53.84
11	2009	24,794,283.66	2.0	9,186,306.05	58.92
12	2010	33,984,754.13	37.1	10,310,655.64	55.82
13	2011	37,409,860.61	10.1	11,590,120.18	-
14	2012	40,544,099.94	8.4		-

Source: CBN Statistical Bulletin Vol 23 Dec 2012 pp 111 – 113 and pp 182-184.

Table 1 shows that the GDP has an average growth rate of 22.1% over the past 14 years of democratic rule.

Analysis of the data provided by table 1 shows that the GDP rate, agriculture and the manufacturing capacity utilization have been growing in positive correlation with the key sectors impacting significantly on GDP since 1999 when democratic rule was returned. Currently the economy is growing at 7.50% p.a with a rebased G.D.P of more than N500 trillion (NBS, 2014) the G.D.P was recalculated in April 2014. This pushed it ahead of South Africa's GDP to make Nigeria Africa's top economy and this is attracting growing interest from foreign investors in spite of the security challenges. The rebasing of the economy reflected changes in output as shown by the capacity utilization in manufactory industry and other sectors. Traditionally, the main components of the G.D.P included agriculture, manufacturing industry, commerce, building and construction and services including banking and insurance etc. With the rebasing of the economy sectors such e-commerce, tele-communication with 8% of GDP, entertainment including the country's prolific "Nollywood" film industry

worth N7.2trillion have had to be factored-in in the GDP calculations to broaden the base. The enlarged base has also narrowed the budget deficit to 1% from 1.9% in 2012. The debt to GDP ratio is also now at 11% for 2013 against 19% in 2012. These are healthy indicators (Chima, 2014 p.1).

THE NEED TO TRANSFORM THE COMMERCIAL BANKING SECTOR

There is no place corporate transformation is required to move in tandem with the Nigerian economy than in the commercial banking sector. The banks have the duty to drive the other sectors of the economy. A glance at commercial bank's credit to SMEs (Mbaegbu, & Gbandi, 2014 p. 18-29) shows an abysmal rate of exposure of the banks to SMEs. Adebayo, (2014 p.28) citing Okonjo – Iweala also has revealed that SMEs access to finance in Nigeria is only 21% while in South Africa it is 71%, UK, 176%, Germany 101%. US 50%.

The banks have to provide the loan-able funds or credit to oil the wheels of the economy. They are not only expected to provide short term credits like overdraft facilities and advances for firms to augment working capital but they are also more importantly expected to provide long term capitalized loans of good magnitude with more than 10 years tenor and good moratorium to enable corporate organizations retool and increase their capacity for production. This is effected through fixed assets accumulation. As noted by Vanhorne (2010) long term loans when capitalized by performing corporate organizations remove pressure from immediate repayment of principal and interest and gives the company breathing space for planning and implementing strategies for their own transformation and sustainable development nationwide.

CHALLENGES AND STRATEGIES FOR TRANSFORMING THE COMMERCIAL BANKING SECTOR

There is no doubt there are development challenges facing businesses in the Nigerian environment. These include economic, social, political technological and global challenges (Mbaegbu, & Ogbeifun, 2009 pp 16-29). The economic challenges include the high rate of inflation which currently hovers around 8%, high exchange rate of N156.00/Dollar and high interest rate of about 20% p.a. These cost correlates push up the cost of operations in the banks. The basic social challenge centre on infrastructural deficiencies including bad roads, energy crises irregular power supply and insecurity posed by ethnic and religion crises. Politically the system is constantly being overheated and threatened by irresponsible opposition. There is also policy inconsistency. In terms of technology it is clear that accessing information online and using electronic banking facility take a lot of time because of broadband problems and often bank customers are delayed because of systems break down. Broad band penetration in Nigeria is only 6% (Azeez, 2014 p. 31).

Globally, our economy is still tied to the apron string of the economies of US and Western Europe. When these economies sneeze the Nigerian economy catches cold by way of recession and depression. However, these challenges are being addressed gradually through reforms, privatization and so on.

To ensure effective management of planned change in the commercial banking sector there is a need to adopt the strategic management process of the Action Research Model of change management. We hereby prescribe the following 6 strategies for effective transformation of the commercial banking sector (See Umoh, 1992, p.19)

INTENSIVE TRAINING AND RETRAINING PROGRAMMES

Many commercial bank staff knows nothing beyond counting notes. This is as a result of the disfunctioning of the Nigerian education system. In table 2 we present budgetary allocation to the education sector from 1999 to 2014.

Table 2. Budgetary Allocation to Education 1999 – 2014

S/n	Year	Allocation in ₦billions	%
1	1999	23.047	11.20
2	2000	44.225	8.30
3	2001	39.885	7.00
4	2002	100.2	5.09
5	2003	64.78	1.83
6	2004	72.22	7.80
7	2005	92.59	8.30
8	2006	166.6	8.70
9	2007	137.48	6.07
10	2008	210.00	13.00
11	2009	164.64	13.00
12	2010	149.08	12.00
13	2011	356.51	-
14	2012	400.15	-
15	2013	427.52	-
16	2014	493.45	-

Source: www.newtelegraphonline.com/education Wednesday, May 28, 2014, p. 21.

A look at the above table shows that budgetary allocation has to education never gone beyond 13%. During the military era it was as low as 1%av. The UNESCO minimum for sustainable development is 26% (Mbaegbu, 2011). This abysmal deficit is the root cause of all the problems in the system – industrial actions and poor quality. The commercial banks therefore have a compelling reason to invest in training and development in order to bridge the knowledge gap, change work attitudes and enhance skill acquisition of their staff to lead the change.

RECAPITALIZATION

Recapitalization is the process of ensuring that the capital base of a bank is adjudged adequate for its volume of business particularly lending. The minimum capital fund prescribed for licenced deposit money banks in Nigeria is fully paid up share capital of N25bn. For capital adequacy ratio each bank has to ensure that the ratio between its core capital and its weighted risk assets – loans, investments and so on should not be less than 10%. It used to be 7.5-8% before the regulatory bodies pushed it up. This is achieved through the process of consolidation; that is the merging together of all the subsidiaries and the acquisition of weaker banks. It can also be done through the injection of new funds or through foreign investment. Before the 2005 forced consolidation all Nigerian 89 banks put together were smaller than the 4th largest bank in South Africa, Nigeria's major economic competitor in Africa and the smallest bank in Malaysia (Soludo, 2006). After the exercise the banks shrank to 24 but with strong capital bases. Many like Zenith Bank, G.T Bank, Access Bank, UBA, Union Bank, First Bank and Fidelity Bank are now International banks.

However, for transformation purpose, the banks should regard capitalization as ongoing process. They do not have to wait until banking regulation forces it on them before the recapitalize. Recapitalization ensures liquidity. By regulation the liquidity ratio is now 30%, a bank should maintain a ratio of 30% between its liquid and current assets (cash and cash reserves) and its total assets. Cash reserve ratio on public sector funds is put at 50%. The loan-deposit ratio is another safe guard on liquidity.

CORPORATE GOVERNANCE AND EFFECTIVE MANAGEMENT

The organization of Economic Co-operation and Development (OECD) (cited in Anya, 2003) defines corporate governance as the system by which business corporations are directed and controlled. Where there is corporate governance the rights and responsibilities of stakeholders are specified through a template of rules and regulations i.e. the prescription of due processes so that no stakeholder acts beyond their powers, abdicates their responsibilities or take what is not due to them. This way, control is effected and corporate plans are implemented to achieve corporate objectives and goals. In other words, corporate governance is about promoting

organizational culture of fairness, probity, transparency and accountability. In a commercial bank where corporate governance is enshrined no director will grand himself loans over and above authorized limit. Effective management is about producing desired results; working in a team to achieve planned goals and objectives efficiently.

FOCUSING ON CORE BANKING BUSINESSES AND COMPETENCES

With the advent of the universal banking practice in 2000 many commercial banks veered into nonbanking businesses that tasked their expertise and risked the safety of depositor's money. The non bank subsidiaries include: pension fund management, mortgage banking, assurance business, capital market and share registration, properties and so on. With the abolition of universal banking the commercial banks should return to their core banking businesses and enhance their core competences. Deposit money banks were directed on November 15, 2010 to divest from their non-banking subsidiaries and focus on their core banking business of financial intermediation with core competences in any of commercial banking, investment banking, corporate banking and so on. Many commercial banks are yet to comply with the Central Bank directive even as banks were told they could form holding companies with separate boards to control both the banks' boards and the boards of their subsidiaries as separate independent entities.

AGGRESSIVE DRIVE FOR DEPOSITS

Deposits are the stock-in-trade (inventories) in the commercial banking business. It is a crime for a deposit money bank to use depositor's money to acquire fixed assets. That is the function of core capital and reserves. With transformation customers will bring in their unsolicited deposit accounts. However to ensure there is good deposit base to fund long term loans of significant magnitude there should be aggressive drive and marketing for deposits particularly private sector funds which are more reliable. Public sector funds are hot money that cannot be kept for long because when sources of government revenue dry up government deposits are withdrawn. This creates a mismatch between loans repayment schedule and rate of deposit inflow. It reduces the Loans/Deposit ratio below regulatory minimum and trigger off distress syndromes

EFFECTIVE SUPERVISION AND REGULATION

No matter how sound a commercial bank is corporate transformation cannot be achieved if there is weak supervision and regulation. A bank can be driven by the risk appetite for profit making to sign off depositors money and collapse. To ensure stability, therefore, there must be effective supervision and regulation by the Central Bank of Nigeria (CBN) and the Nigeria Deposit Insurance Corporation (NDIC) (Umoh,

1992). The regulators and supervisors must exhibit a high level of integrity competence and oversight skills to check the level of corporate governance and market discipline through the rendition of transparent statutory statistical returns and physical inspection of banks. That is off-site and on-site supervision according to Banks and other Financial Institutions Act (BOFIA) 1991, formerly BOFID as amended. Finally there will be need to enforce the Failed Banks (Recovery of Debts) and Financial Malpractices in Banks Act, Laws of the Federation of Nigeria, 2004.

CONCLUSION

Corporate transformation is a turnaround process that completely changes the characteristics and organizational culture of a corporate organization so that it will be able to lead the industry in which it operates. With corporate transformation the organization guarantees customer satisfaction, profitability and the achievement of other organizational goals and objectives.

The fast growing Nigerian economy makes corporate transformation an inevitable feature of corporate life in Nigeria. There is no sector of the economy where planned change is needed more than the commercial banking sector. With a transformed commercial banking sector the other sectors will leverage on the facilities of the banks to key in and grow with the economy. Currently the commercial banking sector is confronted with economic, social, political, technological and global challenges but these challenges are being addressed by the government. To be able to play significant roles in the fast growing Nigerian economy the commercial banking sector has to strategize. The strategies prescribed are: training and retraining of staff, recapitalization, corporate governance, focusing on core banking businesses aggressive drive for deposits and effective supervision and regulation of the banking system.

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CHAPTER 12

Understanding Entrepreneurship And Business Plan

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ABSTRACT

Entrepreneurial development is significant in employment creation. It has been emphasized as one of the avenues for reducing unemployment, poverty and dependence. But it is importance to understand entrepreneurial process. This article highlights the characteristics of a successful entrepreneurial process, the challenges of facility availability and the strategies for developing and sustaining a successful business enterprise.

Keywords: Entrepreneur, Business Plan and Financial Systems.

INTRODUCTION

Have you ever been paid for washing a car or polishing a pair of shoes? Have you ever 'made' someone else's hair or 'cut' someone else's nails in return of money? If so, you have a good idea what an entrepreneur does. An entrepreneur is someone who provides a product or service for somebody else for money. Entrepreneurs are engaged in entrepreneurship. They work for money. Profit motives provide the drive for the work.

Entrepreneurship is the process of running a business of one's own. In Nigeria there are many small businesses. Young people have created some of these businesses. Some operate their businesses for only a short term. Others start a small business as a teenager and grow it into a larger business. Some even acquired the business experience from their parents. Their business may help them shape their career. Through entrepreneurship, individuals become better and accomplished human beings (Badu and Badi, 2008).

ENTREPRENEURSHIP: UNDERSTANDING WHAT IT IS

The word 'entrepreneur' is widely used, both in everyday conversation and as a technical term in management and economics. Its origin lies in seventeenth century France, where an 'entrepreneur' was an individual commissioned to undertake a particular commercial project by someone with money to invest. In its earliest stages this usually meant an overseas trading project. Such projects were risky, both for the investor (who could lose money) and for the navigator-entrepreneur (who could lose a lot more). The intertwining of the notions of entrepreneur, investor and risk is evident from the start. A number of concepts have been derived from the idea of the entrepreneur such as entrepreneurial entrepreneurship and entrepreneurial process. The idea that the entrepreneur is someone who undertakes certain projects offers and opening to developing and understanding of the nature of entrepreneurship. Undertaking a particular project, demands that particular tasks be engaged in with the objective of achieving specific outcomes and that an individual take charge of the project. Entrepreneurship is, then, what the entrepreneur does. Entrepreneurial is an adjective describing how the entrepreneur undertakes what they do. The fact that we use the adjective suggests that there is a particular style to what entrepreneurs do. The entrepreneurial process is what the entrepreneur engages. It is the means through which new value is created as a result of the project: the entrepreneurial venture (Philip, 2006).

But what is very general. Offering a specific and unambiguous definition of the entrepreneur presents a challenge. This is not because definitions are not available, but because there are so many: the management and economics literature is well served with suggested definition for the term "entrepreneur". The problem arises because these definitions rarely agree with each other on the essential characteristics of the entrepreneur. Economics have long recognized the importance of the entrepreneur. But even in this discipline, known for its rigor, the entrepreneur remains an elusive beast. The difficulty lies not so much in giving entrepreneurs a role, but in giving them a role that is distinct from that of 'conventional' employed managers, clearly, this is a distinction that is important but the difficulty is a long standing one. Review of the issue by Arthur Cole William Baumol Harvey Leibenstein and James Soltow (all 1968) are still pertinent today and highlight issues still not fully resolved.

William Gartner (1990) undertook a detailed investigation of this matter. He surveyed academics, business leaders and politicians, asking what they feel were a good definition of entrepreneurship. From the responses he summarized ninety different attributes associated with the entrepreneur. These were not just variations on a theme. Many pairs of definitions shared no common attributes at all.

This suggested that a quest for a universal definition had not moved on since 1971 when Peter Kilby noted that the entrepreneur had a lot in common with the "Heffalump", a character in A.A. Milne's Winnie the Pooh, described as:

A rather large and important animal. He has been hunted by many individual using various rapping devices, but no one so far has succeeded in capturing him. All who claim to have caught sight of him report that he is enormous, but disagree on his particulars.

Gartner (1958) is led to conclude that 'differences among entrepreneurs and among their ventures are as great as the variations between entrepreneurs and non entrepreneurs and between new and established firms'.

CHARACTERISTICS OF A SUCCESSFUL ENTREPRENEUR

Successful entrepreneurs are most likely than other people to have parents who were entrepreneurs. They also tend to possess unique personality traits. Research reports suggests that successful entrepreneurs are most likely to be inquisitive, passionate, self- motivated, honest, courageous, flexible, intelligent, and reliable individuals. These good qualities are especially important for the would-be entrepreneurs. Entrepreneurs are also achievement oriented, they like to take responsibilities for their decision, dislike repetitive task and routine work. They equally dislike doing things in other peoples' way.

Creative entrepreneurs possess high level of energy and great degree of perseverance and imagination, which, combined with willingness to take moderate, calculated risks that enable them to transform what often began as a very simple, ill-defined idea into something concrete. They convey a sense of purpose and, by doing so, they are able to convince others that they are where the action is. They know how to lead an organization and give it momentum.

AN ENTREPRENEURIAL CAREER

Entrepreneurship plays an important role in the economic growth and development of a nation. It is a purposeful activity which includes initiation, promotion and distribution of wealth and service. An entrepreneur is a critical factor in economic development and an integral part of the socio-economic transformation. It is a risk taking activity and challenging tasks. It requires utmost devotion, total commitment and grater sincerity with fullest involvement for personal growth and development. The entrepreneurial career is not a one day job nor is it a bed of roses. Prosperity and

success never come easily. It takes time and need hard work. Systematic planning and business acumen are keys to becoming a successful entrepreneur (Eisenhuwer, 1995).

In brief, an entrepreneur:

- 1· Is a person who develops and owns his own enterprise.
- 2· Is a moderate and calculated risk taker and works under uncertainty for achieving the goal.
- 3· Is innovative
- 4· Peruses the deviant pursuits
- 5· Reflects strong urge to be independent
- 6· Persistently tries to do something better
- 7· Is dissatisfied with routine activities
- 8· Prepared to withstand the hard life
- 9· Is determined but patient
- 10· Exhibits sense of leadership
- 11· Exhibits sense of competitiveness
- 12· Takes personal responsibility
- 13· Is oriented towards the future
- 14· Tends to persist in the face to adversity
- 15· Convert a situation into opportunity

The unique features of an entrepreneur briefly include:

- 1· Need for achievement
- 2· High need for power
- 3· Desire to be independent
- 4· Propensity to take risk
- 5· Personal modernity
- 6· Support
- 7· Business enterprise
- 8· Leadership qualities

Entrepreneurship is not the propriety quality of any caste or community. Many may possess the qualities, but are baffled with too many questions of why, what and how to get about starting new venture.

Think about the Challenges

When thinking about becoming an entrepreneur, one should consider the challenges.

1. Entrepreneurship is risky. All small businesses run the risk of going out of business or losing money.
2. Entrepreneurs may face uncertain and irregular incomes. Entrepreneurs may make money one month and lose money the next money. Because they often are the sole owner of the business, they cannot afford many losses.
3. Entrepreneurs work long hours. Entrepreneurs never really are finished with their jobs. They can work for long, unpredictable hours. They receive no paid days off. They may have to work evenings and weekends.
4. Entrepreneurs must take all decisions by themselves. Unless they have partners, must make all decisions alone. This can be a problem if the entrepreneur does not have the necessary knowledge.

Entrepreneurship is not easy. The business may fail. The entrepreneur could lose his or her investment and possibly more. The more you think of how to overcome these challenges, the more entrepreneurial you become.

Financing Options for Entrepreneurs

As a nation progresses through various stages of economic growth and development, expectations regarding the role of entrepreneurs in economic growth, development and business mobilization assume greater and weightier dimensions. The economic situation necessitated the examination of the role of finance in revitalizing the economy through a more effective functioning and better attention to the 'traditional financing methods' with a view of moulding them into a modern business financing. A close study of this section introduces the reader to the following:

- 1· The problems and prospects of Native Traditional Methods of Financing.
- 2· Facilities of Modern Traditional Financing Methods.

Native Traditional Financing Methods

The existence of traditional financing methods dates back to history. At the beginning (i.e. the early days), the practice was said to have differed greatly from one community to another but, with improvement in technology and the growth of civilization and communication systems, the trend shifted towards some form of uniformity.

In the past, all ancient communities practiced the system of exchanging goods for goods (i.e. trade by barter). This system is not a convenient means of transacting business as such communities have to struggle to get out of barter. In Nigeria there were various types of commodities used as a medium of exchange, but

cowrie's shells were most widely used. It was even reported that in 1893, forty (40) strings of one hundred shells were equivalent to one shilling in certain markets.

Through safe keeping of peoples gold' and issuing them with receipts and through the experience that not all gold deposited with them were being withdrawn, as receipts were instead partly being used in the transfer, London Goldsmith of the time discovered that these receipts were circulating like currencies. The transferability of the receipts depends on the reputation of the individual goldsmith. As bulk receipt was not easy to facilitate settlement of small debt, the goldsmith decided to issue notes. The goldsmith later, through their experience, added the function of lending to the earlier ones of safe keeping of deposits and also agents of payment.

INFORMAL MOBILIZATION OF FUNDS IN NIGERIA

The decline of the barter system of exchange and the monetization of the economy as introduced by the colonial rulers, motivated the desire for some form of mobilization of savings, through either formal or informal methods with a view to extending them in the form of credit to those in need. Thus a type of 'banking' activity known as 'rotational savings' became common in both rural and urban areas. This well entrenched system is still practiced in most parts of the country today. Various names were given to it depending on the geographical location. The Hausa/Fulani speaking areas of the North call it "Adashi". The Yorubas call it "Esusu", Ibos generally name it "Isusu" and certainly other Nigerian ethnic groups also have their names for it. This "Adashi system" like the banking system, is built on confidence and trust. Normally a group of people come together and agree to contribute fixed amounts at regular intervals. These amounts may not be equal as some may like to take up a multiple of the basic minimum rate in which case their contributions and takings will maintain strict ratio relationship with regards to those of others. On each due date of collection, the amount collected (no defaults are assumed to occur) is handed to the person due as on the list. That round is then deemed to be completed and a new one starts with admission of new members and/or withdrawals of some members on similar terms. The coordinator is known as 'Uwar Adashi'. This method has now been modified whereby the coordinator collects the contributions and record same in a register (passbook). Of course the coordinator will charge some commission or fee for his work.

This form of finance does not attract interest, hence it encourages the habit of savings and thus enables entrepreneurs to have fairly good amount of money that the low level of his business activity will need. It is not for mobilizing huge amounts of money that medium or big sized business will need. The rate of default adversely affects its efficacy. Disloyalty of some members will tend to dislocate the arrangement. It is usually for people who have regular income hence traders and

wage earners are the major patronizers of the system. The system in its simplest form can no longer be sustained due to increasing wave of defalcation and disloyalty in the society.

Despite some of these limitations, one Chief Okupe developed this "Esusu System" in the former western Nigeria. The method became a problem to him. He was compelled to team up with others and they continued to operate under the name "Agbonmagbe Brothers". As developments progressed and more patronage was forthcoming, the partnership developed into various cooperative and loan societies in a method similar to the one adopted by the Goldsmiths of the Great Britain referred to earlier. This business grew to the extent that Agbonmagbe obtained a Banking License in 1945 with the participation of the government of the former Western Nigeria culminating in changing the name to "Wema Bank" to reflect the shareholding of the bank. One can, therefore, see how the "Adashi" or "Esusu" system operated on a modest scale and developed into a full-fledged bank, what a success story (Akerlo, 1970).

The Esusu Financing System

In those early stages, therefore, before the evolution of the present financial intermediation, anybody who, for one reasons or the other, wanting to spend more than what he had, would have to wait for his turn to receive his sum when due. The other alternative was to look for a wealthy man or a money lender from whom he could borrow. As crude as this may appear to be, it at least satisfied the needs of the time as the requirements must have been limited to such personal uses like marriage, burials, buying dresses and small capital for farming or petty trading (Anyanwu, 2004).

It is a known fact that traditional money lenders often charge exorbitant interest rates and the loan is often granted with stringent conditions that keep the borrowers perpetually at the mercy of the lenders. Here the method used by the Ijesha traditional money lenders called the "Osomalos" readily comes to mind. The Ijesha man, we are made understand, stoop to await the settlement of his debt as it falls due and will not stand up until the debt is paid. If the borrower moves to another place, the lender will still follow him there and stoop. This embarrassment will force the borrower to pay.

PROBLEMS OF THE NATIVE TRADITIONAL FINANCING METHOD

As simple as this financing method appears to be, it has problems some of which has already been mentioned. In a summarized form, they include.

- i. Personalized financing was often harsh and sometimes wicked. There was the tendency of degradation because the borrower was seen as indigent person.

AFRICAN DEVELOPMENT CHARTER SERIES 2

- ii. It was not possible for 'term' use hence long term projects could not be financed; only few allowed long enough periods to cover farming season.
- iii. There were instances when the borrower had to relinquish the use of his farmland until the debt or allow one of his children to work for the lender. The lender, under the system, took all benefits from the farm as additional benefit which did not reduce the principal.
- iv. The interest rate was usually high.
- v. Limited operations due to usually low level of loanable funds.
- vi. When a money lender lends directly to a borrower, he takes an 'all or nothing' risk. The loan may be safe in which case it is repaid or it might go bad and the lender loses everything.

Prospects of the Native Traditional Method of Financing for Entrepreneurs: In spite of everything else, this method still has its advantages amongst which are:

- i. It provides easy access to investible funds with minimum formality.
- ii. It provides an aggregation service by collecting the savings of many individuals and channeling them to ultimate users.
- iii. There is reduced overhead cost.
- iv. It is a source of capital formation for the small entrepreneurs.
- v. The Nigerian is basically a traditionalist, notwithstanding slogans to the contrary, hence, things of this nature will continue to thrive.
- vi. They operate in small units in so many places hence this tends to create many jobs and reduce unemployment.
- vii. The system is free from credit expansion restriction by Central Bank of Nigeria.

FACILITIES AVAILABLE FOR ENTREPRENEURS IN MODERN TRADITIONAL FINANCIAL SYSTEM

The Nigerian economy is characterized by excessive use of cash. The economy is indeed a cash economy. People are scared of fraudsters who issue "dud" cheques and other instruments of payment. As a result, a greater number of Nigerians prefer to accept cash. People go about with large amount of cash and will make large withdrawals in cash, in making payments instead of issuing cheques. It must be clear that Nigeria is still gradually moving into a credit economy, where the use of modern banking instruments will assume greater acceptability. According to Akanji, (2001), the facilities available in the modern banks for financing credits include:

- a. **Loan:** in making a loan, the lender lends a specified amount usually for a fixed period.
- b. **Overdraft:** in giving overdraft facility, the bank permits the customer to draw on his account so that it goes into debit exceeding a specified amount. It is repayable on demand and fluctuates from time to time.
- c. **Equipment Leasing:** these are of two types, namely:
 - i. Finance Lease, which refers to transaction in which the lessor agrees to lease the asset to one lessee upon the latter's agreement to make series of payments for its use. Usually the payment will include premium representing the profit on the leased property, and
 - ii. Operating Lease, i.e. that in which the lessor gets involved with the running, insurance and maintenance of the asset.
- d. **Loan syndication:** Advanced learner's dictionary defines a syndicate as "combination of commercial firms associated to forward a common interest ..." Loan syndication can be seen as a process whereby financial and non-financial institutions share risks and handle a number of large loans.
- e. Other facilities available in the modern traditional financial system include; debt factoring, hire purchase, discounts, commercial papers etc.

As noted by Folake (2005), some of the facilities mentioned above were more or less in abeyance until this era of keen competition when all of them are now very much in vogue.

Problems

While a wider range of facilities abound in the modern traditional financial system, it has its numerous problems which are posing big threats to the industry. In brief form, without elaboration these include the following.

- I. Frauds, both manual and mechanical
- ii Inflation
- iii. Diversion of funds
- iv. Frequent changes in government policies
- v. External influence
- vi. Quality of staff
- vii. Falling professionalism
- viii. Lack of bankruptcy laws
- ix. Unhealthy rivalry at board level in some of the institutions

THE IMPORTANCE OF BUSINESS PLAN TO THE ENTREPRENEUR

A business plan is a written document that describes all the steps necessary to open and operate a successful business. (Forbes, 2005) Once an entrepreneur has worked out the details of his business, it is important to put everything on paper. Writing these details will help an entrepreneur visualize all the parts of the business. It also will help him persuade other people and banks to invest in his business idea. A business plan

- a Describes what the business will produce, how an entrepreneur will produce it and who will buy the product or service.
- b Explains who will run the business and who will supply it with goods.
- c States how the business will win over customers from competitors and what the business will do to keep customers.
- d Provides detailed financial information that shows how the business will succeed in earning a profit.

Writing a business plan is one of the most difficult and important things an entrepreneur will do. A business plan can make or break the business.

PURPOSE OF A BUSINESS PLAN

The business plan serves three important purposes:

1. A business plan explains the idea behind the business. It spells out how the product or service will be produced and sold. To persuade people and banks to invest in the business, an entrepreneur needs to show that his business idea is a good one. So, he will need a completely new product or service or one that is better or less expensive than products or services that already exist. He will need to identify who his target customer is and show how his company will be able to get and keep customers.

2. A business plan sets specific goals and describes how the business expects to achieve them. A good business plan includes sales estimates for the short term (the first year, the medium term (two or five years after startup), and the long term (five years in the future). It describes the products and services that will be introduced over the next five years. It also describes future plans, such as expansion of the business.
3. A business plan describes the backgrounds and experience of the people who will be running the business. Banks and other lenders make financing decisions based on how well they think a company can meet its goals. Entrepreneurs that have a background related to their business idea are more likely to succeed. If an entrepreneur provides good information on the background and experience of the people who will be running the company, the bank or investor will be more likely to invest money in the business.

Basic Elements of a Business Plan

All businesses are not alike. Therefore, not all business plans are alike. A business plan for a sole proprietorship business based in a home will differ from a business plan for a large corporation with offices in many cities. However, observed by Ledgerwood (1999) all business plans have the same purposes, so they all should include seven basic elements.

1. History and background of your idea
2. Goals for your company
3. Products or services you will offer
4. Form of ownership
5. Management and staffing
6. Marketing
7. Current and projected financial statements

History and Background

Something must have sparked the idea for your business. Describing how the entrepreneur came up with the idea can help lenders, investors and others understand how your business will operate

Goals

An entrepreneurs' business plan should outline his short-term, medium-term and long-term goals. This section of the business plan describes the vision of where the entrepreneur wants his company to be in the future. Some entrepreneurs are very clear about what they want to do with their business. Others know their short-term goals, but they have not thought further ahead.

Products or Services

This part of the business plan should describe the products or services the company plans to produce or offer. The entrepreneur should explain how these products or services differ from those already in the market. He will need to describe any unique features of his products or services. He also needs to explain the benefits customers will gain by purchasing from his company.

Industry

In the product or service section of the business plan, the entrepreneur should describe the industry in which he will operate. It should include:

- 1· Outside factors affecting his business such as high competition or lack of suppliers.
- 2· Estimates for industry growth.
- 3 Economic trends of the industry.
- 4 Technology trends that may affect the industry.

To find this information, he will need to conduct research. Government documents, newspapers and magazine articles, book on industry leaders and the internet are all sources of information. Be sure to name all of these sources in the plan. Listing sources makes a business plan more persuasive.

Location

The product or service section of the business plan also should describe the location of the business. This is because the location of a business, is often important to its success. Lenders want to know exactly where the business will be located.

Form of Ownership

In his business plan, the entrepreneur should have a section describing the form of ownership. Provide information that relates to the form of business such as whether he has partners or how many shareholders he has. This section of the business plan is important because each form of business ownership has a different effect on how the business works and makes profits. If an entrepreneur uses his business plan to obtain financing, the lender will be interested in this information.

Management and Staffing

The entrepreneur and the people he hires to help run the company are responsible for its success. Even the best business plan will not help the company succeed, if it is carried out by people who are not capable. The management and staffing section of

the business plan should show the entrepreneur and the people who will be working for him have the experience, maturity and knowledge to operate the business.

Marketing

In the business plan, the entrepreneur should include information on marketing his business. He will explain who his target customers are, how large the market is for his product or service and how he plans to enter that market. He also should explain how he plans to deal with competition. He should list his company's advantages over his competitors. These advantages may include:

- 1· Performance
- 2· Quality
- 3· Reliability
- 4· Location
- 5· Price
- 6· Promotion
- 7· Public image or reputation

CURRENT AND PROJECTED FINANCIAL STATEMENTS

The financial section of the plan consists of three elements:

1. **Identification of Risks**
Lenders and investors will want to know what risks the business faces and how he plans to deal with them. Do not be afraid to list potential problems. Lenders know that every business faces risks. They will be reassured to see that the entrepreneur have clearly thought through the potential problems and have developed a plan for dealing with them. Example of risks that the entrepreneur could face are competitors lowering prices, costs running higher than estimated, and demand for the product or service declining over time.
2. **Financial Statements**
A new business must include projected financial statements, known as pro forma financial statements, in its business plan. A business already in operation must include current financial statements as well as projected financial statements.
3. **Loan Request and Return on Investment**
The entrepreneur must state how he needs to borrow and how he plans to use the money. He should give investors an idea of how much money they could

expect to earn on their investment in his business. He also should state how much of his own money is invested in the business.

From the above, it is now clear that a business plan is a written document giving in detail all relevant internal and external elements that affects a business and strategies for starting a new venture. A business plan is an important document which deals with all aspects of proposed new businesses. Planning is an on-going process in any industry, business or business enterprise. It is more important for a new business. The preliminary business plan drawn initially goes evolving and refining as the entrepreneur learns more about the market, the product, the management team and the fund requirements of the new venture. The business plan integrates the functional plans of different segments of the organization such as marketing, production, finance and human resources. The business plan also takes into account a time horizon of 2 – 3 years for a new venture. The business plan is also referred to as “the road map or game plan of the organization”.

In preparing a business plan, an entrepreneur takes help of experts in different fields such as finance, legal, marketing, and technical consultants for necessary inputs. Small scale organizations take care of small-scale industries services, made available by government for large organizations. Help is taken from reputable consultants for making an objective assessment of skills available within the organization, skills to be hired and plan step-by-step the initial business activities. A business plan is prepared by the entrepreneur and it is a written document, so that it can be made known to all concerned.

THE SCOPE AND VALUE OF BUSINESS PLAN

The scope of the business plan has four elements, namely, what is the venture, what is marketing perspective, what is the investor's viewpoints and the fourth is socio-economic issues.

- 1· The entrepreneur should decide and define what the venture is all about and the aims and objectives of the venture may be given in a written document. The nature of the product may be given.
- 2· Any new enterprise should aim at a particular segment of customers. Without customer orientation, there will not be any viability of any enterprise. It is also seen that many entrepreneurs are carried away by product or technology and not customer orientation. The marketing focus and plans may be given. A customer product or a new e-commerce business will have different focus. The size of the market, customer segmentation, completion and potential growth will have considerable impact on the business plan.

- 3· Good financial projections by the entrepreneur for the new enterprise attract investors.
- 4· The business plan also should address the socio economic impact of the proposed new venture so as to get the general acceptance of the public and government institutions.

The business plan is known to all personnel and organizations that help to build the new organization namely, the entrepreneur, investors, employees, bankers, government institutions, customers, suppliers, consultants. The business plan document should be made based on the questions all these stakeholders may ask and address all their concerns. Each of the group will have their own viewpoint and questions on the business plan of the proposed venture. The general questions that occur are: is this good business? Will it succeed? Who are the customers? How the competition is met? How the funds are made available? How the business will be managed? And so on. To answer such questions, an entrepreneur should think from various viewpoints.

The business plan helps all the people connected with the new venture in understanding:

- 1 Vision and scope of proposed ventures
- 2 Viability of the venture in a designated market segment
- 3 Guidance to entrepreneurs and his team
- 4 Help in getting finance
- 5· Educate all stakeholders about the new enterprise

ORGANIZE THE BUSINESS PLAN

The business plan is the best opportunity to let other people know what the entrepreneur want to do with your company. It gives him chance to persuade them that his idea is good and that he has the talent and resources to make the idea a successful business venture.

To make the best impression on people who read the business plan, he would want to create an attractive document that is neat, well organized and easy to read. Handwritten business plans are not acceptable. All business plans must be word processed and printed on standard-sized paper. In addition, the business plan should follow a standard format. There are certain things that should be included in the business plan. These things include introductory elements, the main body of the plan an appendix.

Introductory Elements

Every business plan should begin with a cover letter, a title page, a table of contents, a statement of purpose and an executive summary. These elements help set the tone for the business plan.

Cover Letter

A cover letter is a letter that explains or provides more information about a document or a set of documents. The cover letter for the business plan should include the name, the name of your business, address and telephone number. It should briefly describe the business and its potential for success. It also needs to tell the reader how much money the entrepreneurs need to borrow.

Title Page

The business plan should have a title page that indicates the name of the company, the date, the owner(s) of the company and the address and phone number of the company.

Table of Contents

A table of contents is a listing of the material included in a publication. It shows the reader what each page covers. The table of contents needs to be accurate. So the entrepreneur is to make sure that the sections are in the correct order. He should check the page numbers to make sure that they are shown correctly in the table of contents.

Statement of Purpose

The statement of purpose briefly describes why the entrepreneur is asking for a loan and what he plans to do with the money. It should be no more than one or two paragraphs.

Executive Summary

An executive summary is a short restatement of a report. It should capture the interest of its readers and make them want to read more. If the executive summary is unconvincing, a lender may decide not to read the entire business plan. A strong executive summary is important to the success of the business plan.

The executive summary should be no longer than one or two pages. It should be written in a clear, simple style. The executive summary should:

- 1· Describe the business idea and communicate what is unique about the idea.
- 2· Include the estimates for sales, costs and profits.

- 3· Identify the needs such as inventory, land, building and equipment.
- 4· States the amount the entrepreneur are interested in borrowing.

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CHAPTER 13

An Investigation Into The Availability And Utilization Of Resources In Teaching Physics At The Secondary School Level

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ABSTRACT

The study investigated the availability and utilization of teaching resources at the secondary school physics. The study adopted a descriptive survey type of research design. One Hundred senior secondary school physics students were randomly selected from three schools in Yaba Local Government of Lagos state. A self-constructed and validated questionnaire ($r = 0.79$) using cronbach alpha of 12 items and a 50 item check list were used in collecting data. Three research questions guided the study. Data collected were analyzed descriptively. Results obtained showed that resources for teaching physics were not readily available. Researchers recommended for quick training of practising physics teachers on improvisation through in service means.

Key words: Availability, utilization, physics, teaching resources

BACKGROUND TO THE STUDY

Physics is the bedrock of science and technology because many of the tools on which the scientific and technological advancement depends are the direct products of Physics. Physics is therefore a core subject in science and technology since it studies the essence of natural phenomena and helps people understand the rapidly technological changing society (Zhaoyao, 2002). The principles of Physics have been widely used for economic, scientific and technological advancement. This has reduced the world into a global village through the use of satellites and computers. Also, the knowledge of Physics had led to sustainable development in the area of industrialization for improvement of materials useful to the well-being of human race. Furthermore, Physics education enables the learners to acquire problem-solving and decision-making skills that pave way for critical thinking and inquiry that could help them to respond to widespread and radical changes in all facets of life.

Despite the importance of Physics in scientific and technological development of our nations, understanding of the subject had dwindled over the years and performance of the Physics students had not been encouraging. Ho and Boo (2007) discussed that in many countries, has been a decline in the number of students wishing to continue with Physics. Ali (2000), Okebukola (2007), Nneji (2008), Ogunleye (2000) and Umeh (2002) were all of the opinion that students' performances in the science subjects were poor. Also, previous study had shown that students who hold negative stereotype images of scientists, science and technology in society are easily discouraged from pursuing scientific disciplines and usually performed poorly in science subjects (Changeiywo, 2000). This situation does not favour Nigerians towards developing a scientific and technological nation. Physics as a science subject is an activity oriented subject and the suggested method for teaching it, is guided discovery method which is resource base (NTI, 2007). This suggests that the mastery of Physics concepts cannot be fully achieved without the use of instructional learning materials (Ogunleye 2009). The teaching of Physics without learning materials will certainly result to poor performance in the course. Franzer (2002) stressed that; a professionally qualified science teacher no matter how well trained would be unable to put his ideas into practice if the school setting lacks the equipment and materials necessary for him or her to translate his competence into reality. Bassey (2002) also stressed that science is a resource intensive subject; he also submitted that in a period of economic recession, it will be difficult to adequately find some of the electronic gadgets and equipment for Physics in Schools.

Furthermore, students shun sciences particularly Physics when given an option and this especially applies to girls (Aduda, 2003). This implies that given a choice, a student would rather drop Physics in favour of other science subjects. Improving the learning of Physics and achievement in it requires a lot of input from the teachers because the role of the teacher in the classroom is important. The

teaching approach that a teacher adopts and the available materials he/she teaches with are factors that may affect students' achievement (Mills, 2001). Using adequate and suitable laboratory equipment to teach Physics in Secondary Schools may probably help to improve the academic achievement of learners. The study will provide empirical evidence on the availability and adequate utilization of Physics resources at the senior secondary school level..

The Science Curriculum for Secondary Schools clearly spelt out the objectives of instructional media, as well as the methods/strategies for effective teaching and learning of physics. Much as the Physics curriculum appears laudable, the fact still remains that the successful implementation of any educational programme is, to a large extent contingent on the availability of the appropriate resource materials. To ensure effective teaching and learning of Physics, in Nigeria Secondary Schools therefore, appropriate and sufficient resource materials are required for the implementation of Physics education curriculum. It is only by so doing that the recipients of Physics instructions will be sufficiently groomed and equipped with the knowledge, skills, attitudes and competencies that are expected of them at that level of education. Resource materials are described as information carriers designed specially to fulfill objectives in teaching learning situation. The indispensability of resource materials for teaching Physics cannot be overemphasized. Empirical studies have established that students achieve greater learning as evidence in acquisition of cognitive and psychomotor skills when resource materials are used for instructional purpose (Ifeakor, 2000).

There is a dearth in science facilities in the laboratories and this contributes to students' poor academic performance in science (Physics) at the Secondary School level (Ihuarlam, 2008; Ifeakor, 2006; Udo, 2006; Okafor, 2000). It is on this note this study investigated the adequacy of laboratory facilities and utilization of teaching resources in Secondary Schools in Lagos State with specific reference to assessing the extent at which laboratory facilities in the Secondary Schools are adequate for the teaching of Physics and to what extent are they utilized? Improving the learning of Physics and achievement in it requires a lot of input from the teachers because the role of the teacher in the classroom is important. The teaching approach that a teacher adopts and the available materials he/she teaches with are factors that may affect students' achievement (Mills, 2001). Therefore, the use of appropriate teaching equipment and teaching method is critical to the successful teaching and learning of Physics. There are still much to be done in the area of effective utilization of available teaching equipment. Therefore, this study aimed at finding out the available and utilized Physics laboratory equipment at the secondary school system,

More often than not, unavailability or inadequacy of suitable teaching facilities is responsible for the poor performance among other factors such as the teacher competency, teacher's methodology and the attitude of the students towards

the subject. Using adequate and suitable laboratory equipment to teach Physics in Secondary Schools may help to improve the academic achievement of learners. The available research in literature does not indicate any research on the utilization of suitable Physics laboratory equipment in Senior Secondary School Physics in Nigeria. This research study was therefore intended to fill this gap in the body of knowledge. The study will provide empirical evidence on the utilization of suitable and available physics laboratory equipment and its adequacy. Improving the learning of Physics and achievement in it requires a lot of input from the teachers because the role of the teacher in the classroom is important. The teaching approach that a teacher adopts and the available materials he/she teaches with are factors that may affect student's achievement (Mills, 2000). Therefore, the use of appropriate teaching equipment and teaching method is critical to the successful teaching and learning of Physics.

Although, studies had been conducted examining different teaching methodology adopted in Physics class for example, Kibett & Kathuri (2005) found that students who were taught using project based learning outperformed their counterparts in regular teaching approach. There are still much to be done in the area of effective utilization of available teaching equipment. Therefore, this study aimed at finding out the availability and utilization of Physics laboratory equipment and its adequacy of suitable teaching facilities was identified for the poor performance among other factors such as the teacher competency, teaching methodology and the attitude of the students towards the subject. Using adequate and suitable laboratory equipment to teach Physics in Secondary Schools will help to improve the academic achievement of learners. The study will provide empirical result on the availability and adequacy of teaching resources in Senior Secondary School Physics.

STATEMENT OF THE PROBLEM

The problems facing the development of Physics education in the country are numerous. Many studies have been carried out to identify factors that contribute to student's poor performance in Physics. Such as non-availability of facilities for teaching, lack of classrooms, textbooks, journals and overpopulation of students, inadequate number of Physics teachers in the Senior secondary schools in Nigeria. Also, lack of qualified teachers and facilities in Physics education.

PURPOSE OF THE STUDY

The purpose of this study is to find out empirically the extent of availability, adequacy and frequency of use of resource materials for the teaching and learning of Physics in Lagos State Secondary Schools.

RESEARCH QUESTIONS

The following research questions were raised to guide the study.

1. What are the available resources for the teaching of Physics?
2. Are the available material resources adequate for the teaching and learning of Physics?
3. How often are the available material resource utilized in the teaching and learning of Physics in the Secondary Schools in Lagos State?

SIGNIFICANCE OF THE STUDY

The study has revealed the existing status of resources in the teaching of physics at the secondary schools in Lagos state. It has also provided empirical data on the availability, utilization and frequency of use of the teaching materials.

LITERATURE REVIEW

Resources for teaching science could be human (e.g. teachers and laboratory assistants), materials (e.g. library, laboratory, teaching aids, classrooms, etc.), facilities (e.g. running water, constant electricity supply, etc.) and appropriate chemicals and reagents. There is the need to use modern and standard resources for teaching science because it enables students to improve on students' performances (Offormatu, 2000). Effective teaching and learning of science depends on teacher know-how in terms of expertise in content areas and teaching strategies, availability of teaching aids, recommended textbooks and other supplementary reading materials, laboratory equipment, chemicals and reagents.

Okeke and Inomiesa (2006) found that library materials and science laboratory equipment are positively related to the performance of students. Science instruction/teaching is more effective when laboratory materials are available and when these are well used. Oladeji (2001) in his study found that many Secondary Schools do not have enough materials for teaching basic concepts. The researcher further added that schools that were poorly equipped produced students with poor performance than those from well-equipped Schools. Other factors attributed to this poor performance include; shortage of qualified staff (teachers), lack of adequate teaching facilities and high teachers' student ratio. The studies reported above show the importance of resources in the teaching-learning process. Thus, the aim of analyzing resources is essentially to direct the teaching-learning activities which in itself is meant to increase students learning and help to improve their performance in examination. In the course of Nigeria's quest to advance technologically and compete favourably with other advanced countries of the world, both human and material resources in the teaching of science need to be sought for without delay.

The success achieved in any educational system would largely depend on the human resources inputs, namely teaching and non-teaching staff. Inadequate staff would constitute a log. Furthermore, Ajani (2005) discovered that the experience of teachers is positively related to the academic achievement of students. Also, the study carried out by Abari (2003) on teacher demand and supply of teachers in Lagos State secondary. The result showed that professionally qualified teachers were inadequate during that period. Also, Adejumbi (2007) used a sample of 90 teachers from 9 secondary schools in Badagry local government of Lagos state. Using a multiple regression and F-ratio analysis for Mathematics, Physics, Biology and English language, the findings showed that the teacher's qualification and experience are significant in predicting students' academic achievement in the four subjects.

Instructional materials have been defined by various authors. For example, Obanya (2009) defined it as didactic materials thing which are supposed to make learning and teaching possible. Isola (2010) referred to them as objects or devices, which help the teacher to make a lesson much clearer to the learner. Instructional materials are also described as concrete or physical objects which provide sound, visual or both to the sense organs during teaching (Agina-Obu, 2005). Instructional materials are in various classes, such as audio or aural, visual or audiovisual. Thus, audio instructional materials refer to those devices that make use of the sense of hearing only, like radio, audio tape recording, and television. Visual instructional materials on the other hand, are those devices that appeal to the sense of sight only such as the chalkboard, chart, slide, and filmstrip. An audio-visual instructional material however, is a combination of devices which appeal to the sense of both hearing and seeing such as television, motion picture and the computer. Among the instructional materials the classroom teacher uses, the visuals out-numbered the combination of the audio and audio-visual sufficient, qualified teachers and adequate classrooms with the required numbers of desks and chairs to accommodate the required number of students (EFA News, 2004; WCEFA, 2000). Inadequate number of teachers, textbooks, instructional materials, classrooms, desks and chairs may lead to poor students' academic achievement. This is because students' academic achievement depends on these important educational inputs (teaching resources) Beynon, 2007.

Psacharopoulos and Woodhall (2005) assert that a good result in education has to do with the way the educational inputs are transformed into outputs (scores on achievement tests). Input-output or production-function model assumes that performance output of the educational process is related to a series of inputs. For schools, the input groups usually are classified as family resources, school resources, community characteristics, student resources and peer group characteristics, while the outputs are scores on achievement tests. The purpose of input-output research is to predict on outcome rather than to explain how the results

were produced. In terms of the open-systems model, input-output research ignores the system's internal transformational process and uses only inputs to predict outputs (Hoy & Miskel, 2006). One of the goals of all managers is to be productive. Productivity is about the output-input ratio within a time period with due consideration for equality; and it implies effectiveness and efficiency in individual and organizational performance. Effectiveness is the achievement of objectives while efficiency is the achievement of the ends with the least amount of resources. In essence productivity improvement is about effectively performing the basic managerial and non-managerial activities (Olum, 2004). In the education system, teachers, instructional materials, classrooms, desks and pupils form the components. The interaction of these inputs in the education system results into better learning outcomes (Ngala et al., 2005). The quality of human and material resources (inputs) available for teaching and learning determines the type of results (outputs), which in this study is students' academic achievement.

There have been several studies on instructional materials and academic achievement. For instance, Isola (2010) conducted a research on the effects of instructional resources on students' performance in West Africa School Certificate Examinations (WASCE) in Kwara State. In the study resources were correlated material resources with academic achievements of students in ten subjects. Data were collected from the subject teachers in relation to the resources employed in the teaching. The achievements of students in WASCE for the past five years were related to the resources available for teaching each of the subjects. The study concluded that material resources have a significant effect on student's achievement in each of the subjects. In the same manner, Moronfolo (2002) carried out a research in Ilorin Local Government Area of Kwara State. Questionnaires were used to collect data on the material resources available for the teaching of some selected subjects in ten secondary schools and related these to students' achievements in each of the selected subjects and to the amount of resources available for the teaching of the subjects. Finding showed a significant effect of material resources on the Students' academic performance in these subjects.

In the same vein, Popoola (2000) investigated the effect of instructional resources on the academic achievements of students in Ogun State. Five Secondary Schools in Abeokuta were used for this study. Questionnaires were designed to elicit responses on instructional materials that were available for the teaching and learning of each of the three school subjects examined. The researcher collected WASC Examination results for five years and compared achievements of students in schools with adequate material resources and achievements of students in schools with inadequate material resources. The result showed a significant difference in the achievements of the two sets of students. The schools with adequate instructional materials performed better than those with inadequate instructional materials.

Teachers are very important facilitators of the teaching and learning process. They are responsible for arranging learning experience (Shiundu & Omulando, 2002). When there are few teachers, their efficiency in arranging comprehensive learning experiences for learners is hampered. Further, when teachers are few and students are many, their workload becomes more, thus making it difficult for them to perform to their optimum level, to enable students to release the expected learning outcomes (EFA News, 2004). Meaningful learning takes place in the classroom through the interactions of teachers and students. Effective instruction therefore results in meaningful learning process. Teachers are crucial to meaningful learning that results into high student academic achievement (ADEA, 2004).

Free Secondary Education initiative. Teachers are expected to deal with overly-large classes. Further, a lack of facilities at schools and busier teachers are indications that many public Secondary Schools are already struggling to perform well in National Examinations, a situation that could be worsened by students entering institutions that are ill-equipped to receive them (Oyaro, 2008).

The Ministry of Education's recommendation of 40 students per class is aimed at providing achievement (Republic of Kenya, 2011). However, since most schools do not have prior arrangement for extra classes in anticipation of more students due to Free Secondary School (FSE), this recommendation has caused a major threat to students' academic achievement (Oyaro, 2008). A textbook constitutes an important tool for academic achievement (Owoeye & Yara, 2010). Many writers, as cited in Owoeye and Yara (2010), have variously highlighted the contribution of textbooks to academic achievement. Studies have revealed in some instance, that textbooks provide the only source of information for students as well as the course of study for the subject. After exploring the effects of textbooks and other factors on student achievements, Lockheed et al. (2006) have found in their longitudinal data from a national sample of eight grade mathematics classrooms in Thailand that textbooks may affect achievement by substituting for additional post-secondary mathematics education of teachers and by delivering a more comprehensive curriculum.

Altbach (2003) opines that "nothing has ever replaced the printed word as the key element in the educational process and as a result, textbooks are central to schooling at all levels". In an empirical study on the use of textbooks and educational achievement involving 1,006 primary school pupils, Fuller (2005) has revealed that students who had used more than two textbooks were almost three times as likely to pass, at 67 percent graduating examination compared to students who had no textbooks in schools (only 24 percent graduating). Squire (2001), writing on teachers' reliance on textbooks, states that those seeking to improve the quality of education believed that improvements in instructional materials would inevitably lead to changes in actual teaching. For many teachers, textbooks can provide an excellent

and useful resource, without usurping the position of the teacher. While the selection of a textbook has been adjudged to be of vital importance to academic achievement, it is sad to say that relevant textbooks are not available for teaching and learning activities (Odulaja & Ogunwemimo, 2009).

Laboratory has been conceptualized as a room or a building specially built for teaching by demonstration of theoretical phenomenon into practical terms (Owoeye & Yara, 2010). Farombi (2008) argues that "seeing is believing" is the effect of using laboratories in teaching and learning of science and other science related disciplines as students tend to understand and recall what they see that what they hear or were told. Laboratory is essential to the teaching of science and the success of any science course is much dependent on the laboratory provision made for it. Affirming this, Ogunniyi (2003) says there is a general consensus among science educators that the laboratory occupies a central position in science instruction. It can be described as a place where theoretical work is practicalized whereas practical in any learning experience involves students in activities such as observing, counting, measuring, experimenting, recording, observation and carrying out field work. These activities are totally different from the theoretical work which involves listening to talks and taking down notes from such talks.

Odulaja and Ogunwemimo (2009) points out that the teacher assumes a position of dispenser of knowledge with the laboratory serving the function of drill or verification. The researchers further explain that at the other extreme, the teacher assumes the position of a guide to learning and laboratory as a place where knowledge is discovered. However, there are growing evidences that teachers do not exhibit behaviours which are complementary to achieving the stated objectives. They include methods of teaching practical work; inadequacy or absence of well-equipped laboratories; high enrolment of students; inadequacy of resources for teaching and learning practical work; quantity and quality of teachers.

Balogun (2002) says that no effective science education programme can exist without equipment for teaching. In terms of academic achievement, Soyibo and Nyong (2004) have shown that schools with well-equipped laboratories have better results in the school certificates science examinations than those that are ill-equipped. Corroborating this, Gana (2007) reiterates that students instructed entirely by the laboratory methods had higher attitude's scores but lower achievement scores than students instructed entirely by the traditional lecture or textbook mode.

The adequacy of the human resources according to Adeogun (2009) means having the right quantity and quality of staff in an organization. According to Nwana (2003) teacher quantity refers to total number of teachers in the school system. Nwana was of the view that the teacher is the most important resource in the secondary school system, and for teachers to be effective, they must be adequate in number. Castetter (2002) opined that the success of any human endeavor, secondary

school inclusive, is closely related to the quality of personnel who perform the tasks. Casteter was of the view that the extent to which public education succeeds will depend to a large extent, upon the quality of the personnel engaged in the educational process, and upon the effectiveness with which they discharge individual and group responsibilities. Lassa (2000) found out the adequacy in the number of teaching staff in relation to students' population has primary influence on the overall efficiency and effectiveness of an educational institution. This implies that for secondary schools to be effective and efficient there is need for adequate provision of human resources.

According to the Federal Ministry of Education, adequacy of material resources means having the required school facilities as recommended in the guidelines on minimum standards in schools nationwide. .

METHODOLOGY

This study adopted a survey type of descriptive survey design. The simple random sampling was used to select sample for the study from three (3) schools in Yaba Local Government. The selection was done across all the various classes in Senior Secondary Schools in the Local Government to ensure the selected truly represent the population of the study. The sample of the study comprised one hundred (100) students. Participants were selected from the sampled schools

The instrument used for data collection was a self-constructed questionnaire and scores of students in Physics. The questionnaire was entitled "Investigation on human and material resources in teaching physics" and a "Laboratory Observation Checklist". The first part comprised of one section. Section A contained items on demographic data of the participants and questionnaire for resource (human and material) availability (QFRA), Responses to the first section were rated on a four-point Scale as follows: AA ☐ Always Available, SA ☐ Sometimes Available, RA ☐ Rarely Available and NA ☐ Not Available. The second part comprised of Section B which contained all the available resources in teaching Physics. Items were rated on a Scale as follows:

Availability ☐ no of items

Adequacy ☐ adequate (A) and not adequate (NA)

Frequency of use ☐ often use (OU), sometimes use (SU) and rarely use (RU)

The instrument was designed, validated and administered by the researchers. Its reliability coefficient was 0.79 using chronbach alpa

METHOD OF DATA COLLECTION

One of the researchers administered the instrument personally to the participants.. Copies of the questionnaire were distributed to the Physics teachers and 40students, 30students and 30students respectively in each school. The checklist was used to

cross check the available equipment in the laboratory of each school by one of the researchers that went to were collected on the spot which ensured 100% return rate. The data collected were analyzed with descriptive statistics.

RESEARCH QUESTIONS

1 What are the available resources for the teaching of Physics?

TABLE 1. Analysis of the available resources for the teaching of Physics in the selected schools.

S/N	List of Apparatus	Fazil-Omar Senior High School	Birrel Avenue High School	Devickys College
1	Physics Laboratory	1	1	1
2	Dry cells	40	10	5
3	Wet cells	4	5	-
4	Rheostats	10	13	-
5	Standard resistors	12	10	-
6	Voltmeters	10	12	-
7	Ammeters	8	8	-
8	Light Bulbs	20	7	4
9	Galvanometers	4	10	-
10	Connecting wires	1 reel	4reels	4reels
11	Magnets	5bars	7bars	-
12	Resistance wires	4reels	10reels	-
13	Potentiometers	6	11	-
14	Meter bridge	4	5	-
15	Resistance boxes	10	10	-
16	Jockeys	8	7	-
17	Keys/switches	10	8	-
18	Vernier calipers	10	10	-
19	Beam balance	-	5	4
20	Pulleys	4	3	-
21	Standard Masses	40	8	8
22	Drawing boards	10	10	8
23	Tracing pins	-	5	4
24	Spring balance	10	8	2
25	Stop watches	-	4	4
26	Stop clocks	4	3	4
27	Pendulum bobs	10	12	2
28	Concave Lens	4	5	4
29	Convex Lens	8	10	4
30	Plane Mirrors (concave)	20	15	2
31	Curved Mirrors (convex)	4	6	2
32	Calorimeters	8	5	2
33	Thermometers	20	18	2
34	Triangular prisms	10	8	2
35	Tuning forks	4	5	-

AFRICAN DEVELOPMENT CHARTER SERIES 2

36	Lens holders	20	15	2
37	Corks	1pack	20	2
38	Milliammeter	2	1	-
39	White screens	4	3	4
40	Meter rule	20	17	4
41	Spiral springs	10	8	2
42	Rectangular Glass blocks	10	5	2
43	Knife edges	20	15	4
44	Measuring cylinders	2	2	6
45	Bunsen burners	-	1	4
46	Tripod stand	40	20	2
47	Beakers	10	8	5
48	Slide projector	-	1	1
49	Micro-meter screw gauge	1	1	2
50	Thread	-	2	2

The table 1.presented above shows the number of available resources in teaching Physics in the three (3) schools selected for the study. From Table 4.1, the most available materials are dry cell, light bulbs, standard mass, plane mirrors, thermometers, corks, lens holder, meter rule, knife edges and tripod stand.

Are the available material resources adequate for the teaching and learning of Physics?

Table 2.Mean responses of students on availability, adequacy and frequency of use of resource materials for the teaching and learning of Physic2

Name of School	Number of Students	Availability \bar{X}	Adequacy \bar{X}	Frequency of use \bar{X}
Fazil-Omar Senior High School	40	9.44	1.78	1.24
Birrel Avenue High School	30	8.22	1.64	1.18
Devickys College	30	2.20	1.36	0.94

From Table 2 of the mean responses of students on availability, adequacy and frequency of use of resource materials for the teaching and learning of physics, it is revealed that 16 out of the 50 available resource materials are adequate for the teaching and learning of Physics in the three (3) selected Secondary Schools.

These includes: Physics laboratory, dry cells, rheostats, standard resistors, light bulbs, connecting wires, resistance wires, resistance boxes, standard masses, plane mirrors, thermometers, lens holder, corks, meter rule, knife edges and tripod stand. This means 32% of the available resource materials were not adequate

How often are the available material resource utilized in the teaching and learning of Physics in the Secondary Schools in Lagos State?

The results from Table 3 of the table on mean responses of students on availability, adequacy and frequency of use of resource materials for the teaching and learning of physics show that only 12 out of the 50 available resource materials are frequently used in the teaching and learning of Physics in the three (3) selected Secondary Schools. The resource materials frequently used are Galvanometers, masses, standard resistors, vernier caliper, pendulum bob, thermometer, stop clock, meter rule, voltmeters, knife edges, corks and tripod stand. This means 24% of the available resource materials are often used in Physics lessons by the teachers. The inference here is that physics teachers do not averagely use the resource materials available of human and material resources on students' academic achievement in Physics

SUMMARY OF FINDINGS

The result shows that: human and material resources are not readily available and the available ones were not adequately utilized.

DISCUSSION

The study shows that physics material resources are not readily available, the few available ones are not well utilized the view of Jegede (2002) that the absence or insufficient availability of laboratory facilities and other instructional materials necessary for the teaching of science had made the sciences more difficult for the students to understand and hence affect their achievement adversely. Igwe (2000) contended that Physics laboratory equipment facilitates science learning and stimulate learners' interest. Adegboye (2003) linked low achievement trend of students in sciences especially Physics to non-availability of instructional materials in schools. Eshiwani (2004) asserts that availability of classrooms; desks, laboratories, workshops and library are symbols of high education quality. Orji (2006) observed that science instruction/teaching is more effective when laboratory materials are available and when these are well used. Oladeji (2001) further added that schools that were poorly equipped produced students with poor performance than those from well-equipped schools. The National Curriculum, FME (1998) clearly spelt out the objectives, instructional media, as well as the methods/strategies for effective teaching and learning of physics. Much as the physics curriculum appears laudable, the fact still remains that the successful implementation of any educational

programme is, to a large extent contingent on the availability of the appropriate resource materials. To ensure effective teaching and learning of physics, in Nigeria Secondary Schools therefore, appropriate and sufficient resource materials are required for the implementation of physics education curriculum. It is only by so doing that the recipients of physics instructions will be sufficiently groomed and equipped with the knowledge, skills, attitudes and competencies that are expected of them at that level of education.

SOME POLICY IMPLICATIONS

Findings from the present study have some implications for the educational policy makers. These include:

- 1 There should be policy formulation that will ensure adequate provision for material resources, both foreign and local.
- 2 All Science subjects' teachers should be exposed to, and trained on the use of material resources on regular basis so as to make teaching-learning more effective.
- 3 Available materials must be properly utilized
- 4 Available materials must be frequently used by students for better performance.

CONCLUSION

This study has established that material resources are not readily available. Available ones are not adequately and often utilized

RECOMMENDATIONS

The following recommendations are made based on the findings of this study:

1. The Secondary Schools should be provided with standard laboratory (especially the state owned public schools) in which improvised and other concrete materials such as models and specimens could be stored for the purpose of science teaching.
2. High priority should be placed on good management techniques of the science laboratories in order to appraise the technology of science instruction in the schools which enables us to develop within the limits of our human and material resources, a system that enhances understanding, thinking, production and problem solving.
3. Inspections should be routinely carried out on schools' laboratories and worn out equipment replaced with new ones.
4. Teachers should be taught on how to improvise on certain laboratory materials as well as help the schools to discover ways of improvising the

laboratory equipment from locally and available materials. It is therefore recommended that the study be carried out on other science subjects such as biology, chemistry and agriculture in order to know the problems associated with teaching the subjects with the view to improving the students' academic achievement.

5. Government should put money into education sector purposely for the purchase of instructional materials, laboratory facilities/apparatus, especially, computer is very important in school at this age of ICT. Individuals, corporate bodies, communities and non-governmental agencies should not see financing of education as government responsibility alone; they should come in partnership with government to finance science education. All schools must have internet facility in their schools to ensure students have free access to internet. Teacher should encourage the use of this internet by given assignment to students on internet. Based on the findings of this study the following recommendations are made.
6. Physics laboratories should be adequately equipped. Upon equipping of the laboratories, physics teachers should strive to teach physics by doing rather than theoretically. This will improve the students' hands-on ability and experience besides triggering an inquisitive and analytical mind.

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CHAPTER 14

Rural Empowerment And Microfinance As A Strategic Tool For Sustainable Development: (case Of Ezinihitte Local Government Area Imo State)

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ABSTRACT

Inadequate or non basic facilities in the rural areas are the major cause of mass movement of rural dwellers to urban cities leading to over crowdedness. The provision of financial services in the rural areas is paralysed by either mismanagement by operators or inaccessibility by the active poor. Meanwhile, the universal objective of micro finance is to make it possible for large number of low income earners to access institutional financial services hence, this research work is focused on micro finance as a strategic tool for rural empowerment. The broad objective of this study was to find out if there is a relationship between micro financing and rural development. Both primary and secondary data were elicited. Research instrument was questionnaire that was structured and administered to elicit data from the respondents. Two hundred and twenty two (222) questionnaires were distributed to the respondents living in Ezinihitte Mbaise Local Government Area of Imo State Nigeria and two hundred (200) which represents 90% of the total questionnaires were received. The data was subjected to regression analysis using the statistical package for social science (SPSS). Secondary data were derived from

texts, journals and other write ups. Results showed that there is a significant relationship between micro finance and rural empowerment. The correlation table indicated a significant correlation at 5% level. A multiple regression analysis was carried out to access the relationship between the dependent variable, (standard of living) and independent variable (outreach). The result reveals that $R^2 = 0.811$ (81.1%) for outreach, $SE = .018$, $t_c = 11.275$, $t_r = 1.984$. Accept the alternative hypothesis. As a result of the above findings, the under-listed recommendations among others are proffered. For there to be a stop to over-crowdedness in cities in Nigeria, there has to be better access to micro financing as this will enable rural dwellers to have source of credit. Appropriate measures should be taken by CBN for the establishment of more microfinance banks and other sources of microcredit, so that rural active poor can conveniently benefit by getting loans to start their petty trading.

Key words: Rural, Empowerment, Microfinance, Strategic Tool, Micro Credit, Poverty Alleviation.

INTRODUCTION

Non or inadequate basic facilities in the rural areas seems to be the driving force driving rural dwellers to cities and this is associated with lack of proper empowerment that ought to have enabled them meet their daily needs without hassle. Rural areas are often known for lack of jobs, no water, no good roads, poor power supply and poor financial services, making it impossible for them venturing into small and medium scale businesses (entrepreneurships). It is important to know that the universal objective of microfinance is to make it possible for large numbers of low-income people to access institutional financial services, hence the potential benefits of microfinance has accounted for its widespread adoption as an economic development, job creation and poverty reduction strategy.

The microfinance policy regulatory and supervisory framework was launched in Nigeria in December, 2005. The framework provides a roadmap for the participation of stakeholders in microfinance provision. The concept of microfinance was well received in Nigeria, culminating in the conversion of 606 erstwhile community banks to microfinance banks (MFBs) at the end of December, 2007 and licensing of 363 de novo MFBs, resulting in a total of 969 MFBs as at August 31, 2010 (The Nigerian Microfinance Newsletter, 2010).

In recent times, the growing awareness of the potentials of microfinance in poverty reduction, economic development, coupled with the increasing number of microfinance institutions has effectively put the issue of microfinance a top agenda in most developing countries. The monetary authority (CBN) is spearheading this campaign in Nigeria and they act as the supervisory and regulatory body for this sub-

sector. The financing of the industrialization process which is one of the major goal of Nigeria policy makers, cannot be overemphasized.

For any program on rural empowerment to be successful, the economy needs a viable industrial sector that can cushion the economic and production process in the country and also ensuring that the people in the rural areas are being looked after in order for them to be satisfied to a reasonable extent and have the desire of willing to stay in the said area. In most developing countries of Asia, Africa, South America and the rest, poverty reduction is anchored on the development of small and medium scale enterprises. This is due to the low technological capacity of these nations; majority of people in these nations engage in low productive activity.

There are facts that poverty is indeed increasing in Nigeria and in particular the rural area where farming produce is supposed to come and exported in order to have a favorable balance of trade, based on the poverty assessment study mostly in rural areas commissioned and sponsored by the World Bank in 1995 (Akanji, 2006). Attacking 'poverty' is based on a deeper understanding of the meaning and causes of poverty. In the opinion of Akanji (2006), the World Bank report shows that economic development continues to be central to success in reducing poverty, but that poverty is also an outcome of economic, social and political processes that interact with and reinforce each other in ways that can ease or exacerbate the state of deprivation in which poor people live.

Effectively functioning financial markets have fundamental roles to play in fostering development in rural areas. At the level of individual livelihoods, financial markets can perform very crucial functions. They can be a principal means for the poor to get access to financial assets; through facilitating savings, they can be of importance in reducing the vulnerability associated with uneven and unpredictable year-to-year changes in circumstances, and they can help convert illiquid assets into liquid ones in the event of emergencies (Olomola, 2008).

A huge number of micro loans are needed to serve the poor, but banking institutions prefer dealing with big loans in small numbers to minimize administration expenses. They also look for collateral with clear title-which many low-income households do not have. In addition, bankers tend to consider low income households a bad risk, imposing exceedingly high information monitoring costs on operation (Shastri, 2009).

STATEMENT OF THE PROBLEM

Microfinance is supposed to be a bailout for rural empowerment, poverty reduction and means of getting loans to foster small and medium scale business in both rural and urban areas as proposed by the Nigeria government in 2005 when the idea of it came to be. But how far this objective is achieved is a thing to ponder about. Rural areas as characterized by most Nigerians is a place where old or aged people live, but

the truth is that it is not meant to be like that if adequately planned for by the Nigerian government. The difficulty of rural dwellers to have access to loan in order to start up something new (business) and other factors such as bad roads, pipe borne water, and poor power supply are the major reason for the migration of the dwellers from their place of abode to urban areas thereby making it overpopulated and causing unemployment. Generally, there is still persistent increased poverty in the country especially the rural areas, people are still without jobs, and standard of living is still poor. The question now is, how far has micro-finance banks gone in achieving her initial objectives? In view of the above, this paper seeks to find out the impact that micro finance has on rural empowerment by proxy increased accessibility of loans by rural dwellers, improved standard of living of rural dwellers, and poverty alleviation in rural areas using Ezinihitte a local government area in Mbaise, Imo State.

OBJECTIVE OF THE STUDY

The broad objective of this study is to find out whether or not there is a significant relationship between micro financing and rural development especially on people standard of living in rural areas (Ezinihitte Mbaise-Imo State).

RESEARCH QUESTION

What impact does Micro-financing have on people standard of living in rural areas (Ezinihitte Mbaise)?

HYPOTHESIS OF THE STUDY

One hypothesis was formulated and tested

H₀: Micro-financing has no significant impact on rural development

H₁: Micro-financing has significant impact on rural development

LITERATURE REVIEW

The conceptual, theoretical and empirical frame works as relate to micro finance and economic developments were briefly reviewed in line with restricted space .

CONCEPTUAL FRAMEWORK

Various authors conceive microfinance differently. Microfinance is the provision of financial service to the economically active poor who are hitherto un-served by the mainstream financial service provider. Kabuoh (2011) viewed microfinance as the provision of broad range of financial services, money transfers and insurance to poor and low income households and their micro enterprises. Microcredit is commonly defined in terms of loan amount as a percentage of average per capita income. In the context of Nigeria, with a per capita GDP of N112, 800 (about \$752) in 2008, loans up to N112, 000 (around \$750) will be regarded as micro loans, while Micro savings are

defined as savings accounts with a balance of less than N22,500 (about \$150), that is less than 20% of the average annual income per capita (USAID, 2005). Microfinance is coined as the financial service rendered to the deprived group of the people and small entrepreneurs to help them in developing self-employment opportunities and various income generating activities. Audu Achegbulu (2011) expressed that the small size of the loan, regular savings, small scale entrepreneurs, diversified utilization and simple and flexible terms and conditions are determining of features of its definition.

According to Rajesh (2014) microfinance is considered as a tool for socio-economic development, and can be clearly differentiated from donations. The Central Bank of Nigeria (CBN, 2005) defined microfinance as the provision of financial services to the economically active poor and low income households. These services include credit, savings, micro-leasing, micro-insurance and payment transfer. In a similar notation, Yinusa (2006) described microfinance as an amazingly simple approach that has been proven to empower very poor people around the world to pull themselves out of poverty.

According to Central Bank of Nigeria 2004 annual report, the formal financial system provides services to about 35% of the economically active population while the remaining 65% are excluded from access to financial services. The size of the unserved market by existing financial institutions is large. The average banking density in Nigeria is one financial institution outlet to 32,700 inhabitants. In the rural areas, it is 1:57,000, that is, less than 2% of rural households have access to financial services. Lack of access to finance is one of the main constraints to the growth and expansion of small businesses.

According to Okurut, Banga and Mukungu (2004), microfinance approach was institutionalized in 1976 by Muhammed Yunus, an American educated Bangladeshi economist who had observed that a significant percentage of the world's population has been barred from acquiring the capital necessary to rise out of poverty. The creation of the Grameen Bank in Bangladesh was implemented to solve the problem. The repayment of the micro credit was facilitated by group community members' pressure and encouragement which was a unique approach in the Grameen system. According to Spinelli (2004) the most serious causes of bankruptcy in small enterprises could be condensed into three categories: lack of vital business skills or knowledge, lack of access to finance, and an unfavorable economic climate. Savings and credit facilities have the potential for improving the incidence of survival among small enterprises.

MICROFINANCE BANK AND STANDARD OF LIVING

Income is one of the important elements of living standard of the poor people as well as saving. Mohammad and Mohammed (2007) The Microfinance Banks are to provide loans to the poor not only to increase their income but also to mobilize their savings CBN, (2005). Apart from these other factors that contribute to human development, like education, empowerment are also included as variables indicating a level of standard of living. Mohammad and Mohammed (2007) said Microfinance banks lend micro credit which helps to empower the society, especially among the women clients. Traditionally, development initiatives are synonymous with raising people's incomes, employment opportunities, consumption, building of assets and accumulating savings. Impact assessment studies look for indicators and variables that measure prosperity no terms of material and tangible assets that can be awarded numeric values such as increased income, greater employment ownership of physical assets (Ghalid 2008).

THE ROLE OF MICRO FINANCE BANK IN THE SOCIO-ECONOMIC DEVELOPMENT OF RURAL COMMUNITIES

Generally before the formal introduction of microfinance banks in Nigeria, the country witnessed a rapid growth of commercial banking activities in many rural communities in the 80s where banking habits, culture, commitment and community development were poor if not non-existent. It is instructive to note that during this period, community funds among rural dwellers were hardly gathered for savings and loans in order to stimulate domestic investment. Suffice it to say that in rural communities, the rural business class hardly seeks formal institutional credits to improve their economic base.

It would be observed that, despite the presumed developments in the Nigerian economy, the country is still largely being regarded as a developing country (Onyema, 2006). More so, its industrial growth is not quite impressive. Before the emergence of formal microfinance institutions, informal microfinance activities flourished all over the country. Traditionally, microfinance in Nigeria entails traditional informal practices such as local money lending, rotating credit and savings practices, credit from friends and relatives, government owned institutional arrangements, poverty reduction programmes etc (Lemo, 2006).

THEORETICAL FRAMEWORK

There are quite a number of theories associated with microfinance and poverty alleviation, but few and more relevant ones are to be considered here.

The Technocratic Approach: This is usually associated with economists, focusing on targeting and exploring the theoretical and empirical implications of trying to direct limited resources to people with the greatest need. These efforts emphasize the difficulties of identifying target groups and using creative approaches to program design that substitute for detailed information required to achieve first best results. Central to such explorations are the incentive effects of program design, which underscore the need to know key behavioral parameters, such as labour supply responses, in order to formulate policy.

The Institutional Approach: Is more common among non-economists, for the non economists, the question of why program for the poor do or do not work has much more to do with social institutions than the policy design. Antipoverty policies fail because the poor lack political power or because of administrative incompetence or corruption keeps government from delivering services. Thus improving the lives of the poor requires developing institutions, improving government performance, and changing political structures and attitudes towards the poor.

Akanji (2001), the gulf between technocratic and institutional perspective is evident in their views of the role of non government organizations (NGOs), in poverty reduction programs. The technocratic approach rarely refers to NGOs, while the institution approach considers them vital to the attack on poverty in developing countries. The increasing concern with better targeting in poverty reduction program stems from governments desire to minimize the cost of achieving poverty reduction objectives. This desire is an implication of models in which taxpayers, as financiers of transfer programs, seek fiscally efficient methods of helping the poor that is, they want program to be designed in a way that minimises the financial burden imposed. Thus the insights from the technocratic literature are legitimate concerns in a well defined decision making model of anti poverty policy.

Economic theory; The economic theory argued that the success in any business venture, including microfinance, is determined by the entrepreneurs' ability to deliver appropriate services and profitability (Remeny, 2000) .

Psychological theory; This theory on the other hand argued that a species of profit making private venture that cares about the welfare of its customers can be conceived. In other words, it is possible to develop capitalist enterprises that maximize private profits subject to the fair interests of their customers (Mohammed, 1998).

The challenge of most enterprises especially microfinance banking is lack of appropriate support from the regulating body. The micro clients most often do not access the credit as anticipated, when accessed might not be well managed making payback difficult and as such leaving the microfinance banks profitless while the client remain poorer.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Empirical framework
Table .1.

NAME S	YEAR	TITTLE OF THE STUDY	METHODOLOGY	FINDINGS
Opue et al	2011	The influence of microfinance bank operations (roles) on the socioeconomic development of rural communities in CRS	Survey	That CBN credit policy has a significant effect on the supply of credit to institutional borrowers such as micro-finance banks, micro finance bank operation (role) has no significant effect on credit demand by small scale business enterprises. And the socio economic development of rural communities in CRS
Robert, E.H	2011	The role of micro finance banking on the poor through mobile banking.	survey	It was estimated that about 90% of the people living in developing countries do not have access to financial services, the poor could be offered banking services through mobile technologies
Onaolapo and Odetayo	2012	Microfinance bank is an engine of economic growth.	Personal interview	For microfinance banks in Nigeria to achieve its objectives and compete with her peers globally, financial strategies must be employed

AFRICAN DEVELOPMENT CHARTER SERIES 2

Onyebinama and Onyebinama	2012	The impact of microfinance banks on the frontier, exploitation and development of economic opportunities in the informal sector of the Nigerian economy.	Survey	Through deposit mobilization and credit delivery, micro finance banks had substantially expanded the financial frontier by integrating the informal sector and the mainstream of the national financial system and also contributing to the transformation of the informal sector from subsistence orientation to market orientation.
Babajide, A.	2011	Weather Microfinance improved access to credit for microenterprises in Nigeria or not	Survey	Microfinance banks (MFBs) alleviated micro businesses finance constraints.
Jegade et all	2011	The relationship between microfinance loan disbursement and poverty alleviation	survey	The findings revealed that there is a significant difference between those people who used microfinance institutions and those who do not use them. by increasing income and changing economic status of those who patronize them.
Gumel, G.	2011	The outreach performance and sustainability of microfinance institutions in Nigeria.	Survey method	No significant difference was found among genders, geographical location and occupations in term of outreach performance and sustainability of micro finance institutions in Nigeria.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Abiola B.	2012	The effect of microfinance on micro and small business growth in Nigeria.	Panel data survey	Access to microfinance does not enhance growth of micro and small enterprises in Nigeria. However other firm characteristics such as business location are found to have positive effect in enterprise growth.
Okwoli et al	2013	Microfinance Banks and Rural Development in Nigeria.	Primary and Secondary Data	On the part of the program creating job opportunities at the grassroots. Out of the total number of 150 respondents sampled,48 of them have created job opportunities for 104 rural dwellers.
Imtiyaz et al	2014	Is Micro-Finance an Innovative Tool for Poverty Reduction?	survey	Maximum sample beneficiaries were actually worse off after availing the loans. The reason behind this fact is that they pay higher interest rate on micro-credit and on other hand they earn less than prevailing market wage rate.

METHODOLOGY

Random sampling technique was adopted; this is done because everybody living within Igbogbo community has an equal chance of being picked. The sample size is 222 from Igbogbo community of a total population of 500 adult individuals living within the local government area. The sample size was picked from the total population without any biases using 5% as the error margin using Yamane method as shown below.

Sample error

$$n = \frac{N}{1 + Nb^2}$$

Where;

N = Study population

n = Sample size

b² = Error margin

$$\begin{aligned} \text{Therefore: } n &= \frac{500}{1 + 500(0.05)^2} \\ &= \frac{500}{1 + 1.25} \\ n &= 222 \end{aligned}$$

Data collection was made through administering and retrieval of questionnaires.

The questions was divided into two sections A and B section A represents the demography of the respondents while sections B was based on various research topic questions. The questionnaire was distributed to 222 people living in the community via a 6 point lickert scale response of Strongly agree (SA), Agree (A), Partially agree (PA), Partially disagree (PD) Disagree (D) and Strongly disagree (SD). 200 respondents (90%) completed and returned their questionnaires which was analysed and further subjected to regression analysis using the Statistical Package for Social Sciences (SPSS).

Model specification

To determine the relationship that exists between the variables the model will be specified as

$$Y = a + bx + e$$

$$RE = F(OU)$$

$$RE = a_0 + a_1OU$$

Where RE = Rural empowerment

OU = outreach

TESTING OF HYPOTHESIS AND DISCUSSION OF FINDINGS

H₀: There is no significant relationship between Micro-financing (outreach) and people standard of living in rural areas (Igbogbo Ikorodu).

H₁: There is a significant relationship between Micro-financing (outreach) and people standard of living in rural areas (Igbogbo Ikorodu).

Regression model

$$Y = a + bx + u$$

$$STD = \beta_0 + \beta_1(OUT) + u$$

Where y = Standard of living (STD)

x = Outreach (OUT)

β_0 = autonomous/intercept

β_1 = Coefficient of OUT

Table .2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.913(a)	.811	.867	.17533

a Predictors: (Constant), micro financing outreach .

DISCUSSION OF FINDINGS**R-square**

R² = coefficient of determination of the two variables. This shows the percentage of total variation of the dependent variable explained by the independent variable. The R-Square in this research work shows that micro financing outreach has positive effect on standard of living. According to our analysis, R² = 0.811 (81.1%), which is high implies that the variation in standard of living are explained by changes in the rate of micro financing outreach. The remaining 18.9% variation are explained by stochastic error term (e) meaning that 18.9% of changes in micro financing outreach are explained by factors that are not explained in the model.

AFRICAN DEVELOPMENT CHARTER SERIES 2

Table .3. Anova (b)

Model	S	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.446	1	5.436	182.225	.000(a)
	Residual	1.107	198	.041		
	Total	8.553	199			

a Predictors: (Constant), micro financing outreach .

b Dependent Variable: standard of living .

DISCUSSION OF FINDINGS

With the F value of 182.225 and P value of 0.000 at 0.05 significant level, the regression ANOVA indicates that the regression variables have a significant effect on the response variable. This is also confirmed by R^2 of 0.811 (81.1%).

Table .4. Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	0.183	.225		5.001	.000
	micro financing outreach (table 6)	.024	.018	.933	11.275	.000

a Dependent Variable: standard of living

Standard error test

The decision rule for the standard error test goes thus:

If $S.E(B1) > B1/2$ Accept null hypothesis and reject alternative hypothesis.

If $S.E(B1) < B1/2$ Accept alternative hypothesis and reject the null hypothesis.

From the analysis above:

$S.E(B1) \approx 0.018$, $B1/2 \approx 0.755$, Now $0.183 \approx 0.0915/2$, $0.018 < 0.0915$

Therefore: we accept the alternative hypothesis and reject the null hypothesis, what this means is that there is a significant relationship between Micro-financing (outreach) and people standard of living in rural areas (Ezinihitte Mbaise).

T test analysis

This deals with the determination of $T_{calculated}$ and $T_{tabulated}$

According to the regression result, $T_c \approx 11.275$, $T_t \approx 1.984$, $11.275 > 1.984$

RESULT

Accept the alternative hypothesis which states that there is a significant relationship between Micro-financing (outreach) and people standard of living in rural areas (Igbogbo Ikorodu).

CONCLUSION

There is a significant relationship between Micro-financing (outreach) and people standard of living in rural areas (Ezinihitte-Mbaise). Some of the borrowers default by not paying on time, at times not paying at all. People migrate to urban areas in search for lively means as access to loans from conventional banks is difficult to the active poor making rural life so unbearable. All gender and economically active poor have access to microfinance services as this is not determined by marital status, educational qualification, position or religion. However, an individual's source of income pre-access to microfinance loans/credit is paramount. It was found that though micro financing act had been enacted in Nigeria but its impact has not really been felt by the expected beneficiaries.

RECOMMENDATIONS

As a result of the above findings, the under-listed recommendations were proffered.

1. For there to be a stop to over-crowdedness in cities in Nigeria, there has to be better access to micro financing as this will enable rural dwellers to have source of credit.
2. Appropriate measures should be taken by CBN for the establishment of more microfinance banks and other sources of microcredit so that rural active poor can conveniently benefit by getting loans to start their petty trading.
3. The study also recommends that the society has a role to play, due to the fact that they are the borrowers of money for individual purposes, thus should do all it can to ensure that money collected are returned in good fate rather than result to quarrel and running away when it's time to pay.
4. Measures should be taking by the CBN to ensure compliance of guiding principles by Microfinance operators as well as the clients.

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CHAPTER 15

Constituency Projects In Nigeria: Lessons And Implications For Sustainable Community Development.

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ABSTRACT

Constituency projects are special hybrid projects that involve the provision of wads, water, schools and scholarship schemes, health centres, meeting halls etc. There are projects in Nigeria that were initiated by the Federal Government to foster a good relationship between the executive and legislature. Basically they are created as part of providing the dividends of democracy by legislators to their constituents. However, it is important to examine the extent to which constituent projects have been provided in Nigeria and its impact on community development. The study adopts a survey design. Data are obtained from secondary sources and reviewed within the context of socio-economic well being of community dwellers in Nigeria. Lessons and implications for sustainable community development are highlighted to guide policy decisions and sustainable development framework.

Keywords: Constituency Projects, Constituency Development Fund, Sustainable Community Development and Socio-Economic Well being.

INTRODUCTION

A constituency is a body of citizens entitled to elect a representative to a legislative or executive position. It is the most basic voting area or grass root of any political system. A project is typically defined as a collaborative enterprise, frequently involving research or design that is carefully planned to achieve a particular aim. Projects can be further defined as temporary rather than permanent social systems that are constituted by teams within or across organizations to accomplish particular tasks under time constraints.

There are basically five types of projects, which include: construction; research; reengineering; Procurement and Business implementation projects. Construction projects produce artifacts, which have sometimes complex human and mechanical components and include buildings, warships, roads and multipurpose complex; research projects on the other hand produces knowledge, which may be formally represented as models, patterns or patents and this knowledge may be embedded in a working process or artifact and includes business modeling, design of a new species of a product or evaluation and testing of a project.

Reengineering projects on the other hand are projects that produce a desired change in some system or process, such as designing and installing a company intranet system. Procurement projects produces a business relationship contractually based, with a selected supplier for a defined product or service based on a fixed specification and/or defined specification process such as outsourcing a complete business function or imposing new rules and measures on a regulated industry. Business implementation projects produce an operationally effective process and the value generated by the project is embedded in the process, examples of such projects include developing to repackaging or exploiting existing assets or installing e-commerce.

There are other projects which are sometimes difficult to clarify such as national symbolic programmes like placing a man on the moon; large medical programmes, like creating an artificial heart or other hybrid or interdisciplinary projects like pilot projects or moving offices. The primary difficulty in classifying these projects arises from ambiguity about the primary purpose of the project. Are we doing the project for its own sake or merely as an experiment? Are we doing this drug trial to benefit current patients or to create knowledge that will benefit future patients? What is the real political agenda?

Constituency projects are special hybrid projects that involve the provision of roads, water, schools and scholarship schemes, health centres, meeting halls etc., which were initiated in 2001 by former President Olusegun Obasanjo. It was designed as an Executive Act Special intervention Fund meant to foster a healthy relationship between the executive and legislature as well as assist in providing basic

infrastructures in the various constituencies of the elected members of the Nigerian national assembly. Constituency projects were also a product of political pragmatism on the part of the executive to court the loyalty of the lawmakers and whittle down their oversight and meddlesomeness in the activities of the executive at the Centre. This has also been replicated at the state level in the country at an alarming rate. It corrupts and compromises the entire democratic structure and culture.

Besides, other reasons have been given to justify the constituency project and the need for its formalization through an Act of the National Assembly. One is that the level of public consciousness is such that the electorate expects their representatives to bring some facilities home as democracy dividends. As a result, it is not a bad idea to grant elected members of the National Assembly that opportunity to contribute to grassroots development. Secondly, that the money is not directly disbursed to the lawmakers as it is domiciled in the Central Bank of Nigeria and its use is contingent upon approval by the Ministry of Finance and the Ministry of Special Duties and Inter-Governmental Affairs which vet implementation before payments are made to the various contractors.

There are others who see constituency projects as an abuse by lawmakers and they argue that it is an aberration as the constitution is clear about the duty of the elected members of the National Assembly which is essentially to make laws for the good governance of the country as well as perform oversight functions over the executive organ of government. Thus, implementing constituency projects no matter the finesse is tantamount to usurpation of the executive functions of government including the functions of local governments set up to advance development at the local level.

The conduct of public affairs calls for horizontal accountability, the capacity to check the illegality of other state institutions in situations of encroachment and corruption. Needless to say that constituency projects are an encroachment on the functions of the executive in the federal, state and local governments. Thus, this paper examines critically issues anchored on constituency projects, which appropriate the projects and what lessons and implications they have on the development of our local communities in the past 10yrs of its practice.

The presentation is divided into five sections. The first section is the introduction; section two examines the history and practices of community projects in Nigeria and other selected countries, while section three establishes the framework for assessing the impact of these projects on the local community in Nigeria. Section four discusses the lessons and implications of the practice and section five concludes.

HISTORY AND PRACTICE OF CONSTITUENCY PROJECTS IN NIGERIA AND OTHER COUNTRIES

CONSTITUENCY PROJECTS IN NIGERIA

Constituency projects in Nigeria were initiated by the Federal Government to foster a good relationship between the executive and legislature. The projects usually come to the national assembly as an Executive Act Special Intervention Fund to assist in providing basic infrastructures project to the various constituencies across the country.

The Nigerian national assembly is a bi – cameral parliamentary/legislative system, which consists of two houses: The senate and the House of Representatives. However, a unicameral system is in place in the state and local government levels. Elections into national and state assemblies are held every four years to elect a total of 360 members of the House of Representatives, who represent the nation's 360 constituencies and 109 senators (3 per state and one from FCT) who represent the 109 senatorial district.

Constituency projects were created as part of providing the dividends of democracy by legislators to their constituents, because as most of the legislators reasoned that their supporters will not judge them by the number of motion or bills passed, but by the number of projects they attract to their constituencies. Thus constituency projects were conceived as the Federal government direct intervention in the development of the country by the provision of various projects and intervention directly to the 360 federal constituency and 109 senatorial districts.

Constituency projects were also created to ensure a minimum presence of government in every constituency by having some grass-roots projects sited in each, during the budgeting process. Legislators were merely required to identify projects which they wished to be sited in their constituencies for inclusion in the budget, with a financial ceiling for the budgetary provisions for such projects in each constituency. The 1999 Constitution gives power to the National Assembly to appropriate funds for government spending as highlighted in section 80 (2, 3 and 4). Senator Femi Okuronmu argued that the rationale behind the introduction of constituency project is:

To ensure a minimum presence of government in every constituency by having some grass-roots projects sited in each one, during the budgeting process... Legislators were merely required to identify projects which they wished to be sited in their constituencies for inclusion in the budget, with a financial ceiling for the budgetary provisions for such projects in each constituency. The award of contracts for, and the supervision and payments for such contracts were left completely in the hands of the appropriate executive agencies of government. (Okuronmu, 2009).

Senator Ayogu Eze corroborated the position above, he argued, "Our role is simply to identify the projects for our constituency while the Executive arm of government will identify the contractor to execute the project" (cited in Tunji, 2010). The Constitution of the Federal Republic of Nigeria, 1999 furnishes the National

Assembly with the power to appropriate funds for government spending as captured in section 80 (2, 3 and 4). According to the Deputy Senate President, Ike Ekweremadu, the concept of constituency project came up as a result of the need to ensure equitable distribution of infrastructure and that every part of the country has a proper representation, in the House of Representatives and in the Senate. Ekweremadu argued that this is due to the fact that there will be lopsided development in the country, if governors and senators are allowed to decide where projects should be cited. As a result, all the representatives usually come up with what their constituents want (Anyanate, E. 2009).

It is deducible from the foregoing, that the concept of constituency project cropped up as a result of the need to ensure equitable and even distribution of infrastructure/ development. Ensure adequate representation of every part of the country in the House of Assembly, in the House of Representatives and in the Senate. However, parliamentarians merely recommend programmes and projects to be cited in their constituencies based on the needs and demands of their constituents. The award of contracts and the supervision and payments for such contracts are completely in the hands of the appropriate executive agencies of government.

The National Assembly usually budget N100 billion for constitutes projects every year since 2004 for the six geo-political zones. The money is domiciled in the Central Bank of Nigeria (CBN) with the Ministry of Finance; the Ministry of Special Duties and Inter-Governmental Affairs serving as a clearing house to approve the releases for payments to the various contractors. According to Senator Ali Ndume, chairman senate committee on Millennium Development Goals (MDGs) the national assembly has so far received N900b for constituency projects since 2004. The coordination, implementation and execution of these projects are handled by the minister for special duties, and for the current 2013 appropriation year a total of 2,399 constituency projects have been slated for execution.

However, there is a school of thought that views the concept of constituency project, as another conduit pipe through which the nation's treasury is being drained. For instance former President Olusegun Obasanjo accused Senators and members of the House of Representatives of corruption through the padding of federal budgets and collection of unjustifiable allowances that amount to billions of naira. President Obasanjo, who spoke in Abuja (in 2010) at a retreat for Niger State Senior Civil servants, alleged that the National Assembly members insert items into the budget, which are not actually required by ministries, and connive with contractors in the execution of constituency projects by taking kick-backs and at the same time turn around to accuse others of corruption. He also decried the huge cost of maintaining federal lawmakers, disclosing that it cost the federal government more than N250 million annually per head (Daily Trust, Monday, August 16th, 2010).

There is also the notion held by some that there is hardly any concrete

accomplishment by the federal lawmakers proportionate to and commensurate with their outrageous salaries and allowances. Government spends huge sums of money hosting federal legislators. Yet, very insignificant number of bills and motions are passed to justify these allowances. This school is also of the view, that most representatives visit their constituencies only during electioneering campaign. Thereafter, they abandon most pledges and promises made to their constituencies and constituents.

CONSTITUENCY PROJECTS IN OTHER COUNTRIES

The practice of parliamentarians or legislators involvement in community development projects is not unique to Nigeria. In other developing countries, the practice has strong roots and examples of their use can be seen in other countries such as Kenya, Pakistan, India, Uganda, Bhutan, Jamaica and Papua New Guinea. The policy instrument used in these countries similar to our constituency projects is the Constituency development Funds (CDFs). This fund dedicates public funds to benefit specific political subdivisions through allocations and/or spending decisions influenced by their representatives in the national parliament (Baskin et al, 2010). The management of CDFs includes goals and size of the funds; the structure of decision making on the use of the funds at all stages of implementation; oversight of CDF operations; and the relative influence of different individuals and groups in making policy.

According to Baskin, et al (2010) Constituency Development Funds is akin to the venerable U.S. congressional allocations generally known as “pork barrel,” “earmarks” or “member items” in national and state-level policy making. The management of CDFs has sometimes been controversial because they raise fundamental questions about the efficacy of government service delivery. It indicates the extent to which such service delivery can be made accountable, the role of legislators in selecting development priorities, and how public participation in policy making can be made more meaningful.

The major aim of the CDF is redistributing national resources to the community to improve rural economy, alleviate poverty, create employment and improve the standard of living of Kenyans. It also ensures that services and facilities are closer to the people as a means of reducing poverty. It is a complementary effort aimed at boosting existing funds (such as the Local Authorities' Transfer Fund, Bursary Fund, Fuel Level Funds and Roads Maintenance Fund) directed at the rural/community level.

In Kenya, the Constituency Development Fund (CDF) was established by the National Rainbow Coalition (NARC) government through the Constituency development Fund Act of 2003, as an annual budgetary allocation by the Central Government to each of the country's parliamentary constituencies (Kimani, F. et al,

2009). It was established as a strategy for the devolution of resources and attaining of even development. It was also a strategy for attaining enhanced people's participation and power in decision-making processes; promote good governance, transparency and accountability.

However, various issues and concerns have been raised regarding the CDF processes and structures and community participation in decision-making in the administration, management, monitoring and evaluation of the fund in various Constituencies. Some Constituencies have been termed as good Constituencies while others bad constituencies based on Constituency Development Fund implementation level.

In Kenya, the CDF is managed by several rules that govern the utilization of the Fund to ensure transparency and accountability, for example, decisions over the utilization of the funds are supposed to be mainly by the Constituents. Efforts to anchor the CDF on a legal foundation were initiated in 1999 when the first motion on Constituency Development Fund was moved in parliament. The motion prayed the government to devote 5% of government revenue to community-based projects. The motion was passed but then the government did not implement it. According to Mwangi S. K. (2005) in 2001/2, a caucus of Members Parliament (MPs) was constituted to lobby the Minister for Finance to allocate the 5% to community based projects. The initial 5% captured in motion was further amended/ reviewed downwards to 2.5% through the collaborative effort of Parliament and the Ministry of Finance. In furtherance of giving every legal backing to the CDF, the Constituency Development Fund Bill was drafted and presented to Parliament in April 2003. The bill was passed in November 2003, thus establishing the Constituencies Development Fund (CDF) through an Act of parliament. As such, 2.5% of all the government ordinary revenue collected every year is paid into the fund (Kimani, F. et al 2009, Mwangi, S. K. 2005).

Kimani, F. et al (2009) further argued that the CDF has four management organs, namely: The Constituencies Fund Committee; The Constituency Development Fund Board; The District; the District Project Committees and The Constituencies Development Fund Committees. The Constituencies Fund committee is made up of 11 selected parliamentarians and the Clerk of the Kenya national assembly, and is charged with the responsibility of:

- a) Considering and recommending to Parliament any matter requiring action by the National Assembly;
- b) Considering referenced project proposals submitted from various Constituencies through the Board;
- c) Considering and reporting to Parliament names of persons required to be approved under the Act;

AFRICAN DEVELOPMENT CHARTER SERIES 2

- d) The link between the CDF Board and National Assembly;
- e) Overseeing the implementation of the CDF Act, 2003 and its subsequent amendments (CDF Amendment Act 2007);
- f) Overseeing the policy frame work and legislative matters that may arise in relation to the Fund;
- g) Continuously review the frame work set out for the efficient delivery of development programmes financed through the Fund (Kimani, F. et al, 2009).

The Constituency Development fund Board is the national board to oversee CDF implementation. Specifically the board mandate according to Kimani, F et al, (2009) include to:

- i. Ensure allocation and disbursement of funds to every Constituency;
- ii. Ensure prudent management of the Fund;
- iii. Receive and discuss annual reports and returns from the Constituencies;
- iv. Ensure the compilation of proper records, returns and reports from the Constituencies;
- v. Receive and address complaints and disputes and take any appropriate action;
- vi. Ensure timely submission to Parliament of various returns, reports and information as required;
- vii. Review, scrutinize and approve Project Proposals from the Constituencies that are consistent with the Act;
- viii. Refer Disapproved Project Proposals or any other policy issue, from the Constituencies with adequate reasons, to the Constituency Fund Committee for direction and consideration.

The District project committee is the organ that coordinates the implementation of projects financed through the Fund. It ensures that no duplication of projects occur particularly where it is prudent to combine efforts on projects designed to benefit a large section or sector of a community traversing several constituencies in each parliamentary district.

The Constituencies Development fund Committee is constituency based and comprises of a minimum of 12 people and a maximum of 15 people. The membership consists of the following:

- a) An elected member of Parliament;
- b) Two councillors in the constituency;
- c) One district officer in the constituency;
- d) Two persons representing religious organizations in the constituency;
- e) Two men representatives from the constituency;

- f) Two women representatives from the constituency;
- g) One person representing the youth from the constituency;
- h) One person nominated from among the active NGOs in the area if any;
- i) A maximum of three other persons from the constituency such that the total number does not exceed fifteen;
- j) An officer of the Board seconded to the Constituency Development Fund Committee by the Board, who shall be an ex – officio.
- k) The CDF places high premium projects from the locations. The list of priority projects is then submitted to parliament by the legislator representing affected district. This committee is also saddled with the management and implementation of CDF projects at the constituency level. Constituency Development Fund members enjoy a three year term of office. This term is renewable or upon the appointment of a new committee in a manner provided for in the CDF Act, whichever comes first. Approved proportions of funding include; administration – 3%, education bursary – 15%, emergency reserve – 5% and operation and maintenance of vehicles, equipments and machinery - 3%. Others are sports activities – 2%, monitoring and evaluation – 2% and environmental – 2%.

In Uganda, the Constituency Development Fund (CDF) is an outcome of series of meetings between the Presidency and Members of the Ugandan 7th Parliament (MPs). The Presidential pledge made to Members of the National Assembly, which was intended to relieve Parliamentarians of the pressures of their Constituents in regard to the promised and other development projects. Like in Kenya, Constituency Development Fund in Uganda involves a sum of money mapped out annually for the development of each legislative district.

The concept of Constituency Development Fund (CDF) was first used in Uganda during the budget proposals for the Financial Year 2005/ 2006. After a presentation of a Ministerial Statement before the Legal and Parliamentary Affairs Committee, a plenary session of Parliament on 9th September 2005 adopted the proposal for a CDF (UDN, Briefing Paper on the Constituency Development Fund, May 2007). The sum of 2.95 billion shilling was recommended by the Ugandan national Parliament to be earmarked for MPs and that the said sum should be released expeditiously. Unlike Kenya, there is no comprehensive law governing the management of CDF in Uganda. The Constituency development fund implementation committee ensures the following:

- i. That every MP has to establish a Committee of 5 people composed of him/ herself as the Chairperson, a Secretary, a Treasurer and two other members for the purpose of handling this money;
- ii. That the money would be released to the individual MP and the responsibility

of accountability to the Accounting Officer (Clerk to Parliament) would lie with the MP;

- iii. That the money for each Financial Year is accounted for within one year;
- iv. That the funds are invested on activities that directly increase household incomes and productivity; on interventions that can trigger rapid rural transformation and economic development; and on agro-processing and marketing of produce in the respective constituencies;
- v. That the money is not spent on development of infrastructure projects already under the Local Government initiatives or Central Government programmes or projects; and on political and/or religious activities.

The Clerk to Parliament releases the constituency development money to the personal accounts of the parliamentarians and holds MPs accountable for every fund released.

India has two CDF-style schemes: the Members of Parliament Local Area Development Scheme (MPLADS) at the national level and the Member of Legislative Assembly Local Area Development Fund (MLA-LAD) for the Legislative Assembly of each of India's 28 States. The MPLADS scheme was instituted in India in 1993 under the dominant national party, the Congress Party. Under the MPLADS, an equal amount is allocated annually to each single-member parliamentary constituency; the funds are to be used for "works of developmental nature with emphasis on the creation of durable community assets based on the locally felt needs."

The Ministry of Statistics and Programme Implementation has overall responsibility for managing the funds. Each State government must designate a Nodal Department which is responsible for coordination with the Ministry and effective supervision (including physical inspection) of the work on site. The MPs recommend projects which are sanctioned by the District Authority who is directly responsible for implementation. The District Authority identifies the agency to be used to execute the project; this may be a local government, government agency or NGO. The District Authority is also responsible for enforcing the provisions of the guidelines with regard to admissible expenditure.

Tanzania took the Kenyan practice of allocating 25% of the fund according to the poverty index and went further to include factors of geographical size and population in their allocation formula. According to Section 3 of the Act, 25% of the total amount will be divided equally between all constituencies (IBP, 2010). The remaining 75% will be split between the constituencies as follows:

- i. 45% in relation to the constituency's population
- ii. 20% in relation to the poverty margin, and;
- iii. 10% in relation to the geographical size of the constituency.

Similar to Kenya, the Constituency Development Catalyst Committee (CDCC) for each constituency is convened and chaired by the MP. However it is limited to 6 members, including the District Planning Officer who serves as Secretary. Table 1 below shows the national variation in the amount of money allocated for CDF to Members of Parliament in various countries across the world.

Table 1: National Variation in CDF Allocation

S/N	COUNTRY	Average Amount Allocated Per MP in USD(\$)
1.	Philippines	\$4,270,001
2.	Bhutan	\$43,000
3.	Solomon islands	\$140,000
4.	Kenya	\$794,464
5.	Malaysia	\$577,951
6.	Jamaica	\$456,361
7.	India	\$420,000
8.	Sudan	\$317,543
9.	Pakistan	\$240,000
10.	Malawi	\$21,352
11.	Tanzania	\$13,761
12.	Uganda	\$5,187

Source: Udefuma et al, 2013.

THEORETICAL FRAMEWORK

Project Life Cycle

The project life cycle consists of four phases, initiation, planning, execution (including monitoring and controlling) and evaluation. Taken together, these phases represent the path a project takes from the beginning to its end.

1. Project Initiation Phase

The Project initiation phase involves defining the purpose and scope of the project or the need assessment is undertaken; the justification for the undertaken the project is specified and the solution to be implemented. An appropriate response to the need is documented in a business case with recommended solution options. A feasibility study is conducted to investigate whether each option addresses the project objective and a final recommended solution is determined. Issues of feasibility ("can we do the project?") and justification ("should we do the project?") are addressed. Once the recommended solution is approved, a project is initiated to deliver the approved solution and a project manager is appointed. It also involves recruiting the project team and carrying out a Phase Review, before proceeding to the next stage.

The following four major activities are the outcome of the initiation phase:

- a· A Business Case is developed, describing the business problem to be addressed by the project, the alternative solutions and the potential costs and benefits associated with each. The Business Case is foundation for the project as it fully describes the project, the reasons for creating it and the key benefits to be produced.
- b· A Feasibility Study is then completed to ascertain the likelihood of the alternative solutions actually delivering the stated benefits in the Business Case. This is used to identify the preferred solution, which must be approved before proceeding.
- c· The Terms of Reference describe what the project intends to achieve and the boundaries within which it must achieve it. This includes the project vision, objectives, scope, deliverables, project organization and an Implementation Plan.
- d· Once the project is defined, it is time to appoint the Project Team. The Project Manager is recruited to take on responsibility for the project and recruit the remaining members of the team.
- e· Finally, a Phase Review is carried out to ensure that all of the required activities have been completed and to provide formal approval to proceed to the next phase of the project.

2. Project Planning Phase

The project planning phase involves further development of the project solution earlier identified at the initiation phase. In this phase, the project team creates the set of planning documents that will guide the project team throughout the project. This involves identification of the projects tasks and resources requirement, along with the strategy for producing them. This is referred to as scope management. Also, during this phase a project plan is created outlining the activities, tasks, dependencies and timeframes. The project manager coordinates the preparation of a project budget; by providing costs estimates for the labour, equipment and material costs. The budget is used to monitor and control cost expenditures during project implementation.

The key activities during this phase are as follows:

- a· A comprehensive Project Plan is critical to the success of the project. It identifies the Work Breakdown Structure (WBS) of phases, activities and tasks to be undertaken to complete the project. It also identifies the sequencing, duration and dependencies of tasks and the resources and financial expenditure required to complete the project.

- b· The Resource Plan should give a detailed assessment of the resources required to undertake the project. It should list the required labour, equipment and materials and quantify the amount of each resource. It should also give a resource usage schedule to give the Project Manager with a complete view of the total amount of resources needed at each stage.
- c· The Financial Plan describes the financial resources required during each stage of the project.
- d· The total cost of each item of labor, equipment and materials is calculated, as well as the total cost of undertaking each activity.
- e· The Quality Plan lists the quality targets that need to be achieved to ensure that the project deliverables meet customer requirements. Quality Assurance and Quality Control activities are scheduled to make sure that the required level of quality is achieved throughout the project.
- f· The Risk Plan identifies all foreseeable project risks and rates them in terms of their likelihood of occurrence and potential impact on the project. The risks are prioritised and actions identified to reduce the likelihood of each risk and minimize its impact on the project.
- g· An Acceptance Plan is created to ensure that customer acceptance is sought for each deliverable produced by the project. The Acceptance Plan provides a schedule of Acceptance Reviews.
- h· The Communications Plan describes the information to be provided to project stakeholders to keep them informed of the progress of the project. A schedule of communication events and activities is drawn up to make sure that the right information is communicated to the right people at the right time.
- i· Finally, a Phase Review is carried out to ensure that all of the required Planning activities have been completed and to provide formal approval to proceed to the next phase.

3. **Project Execution Stage**

The project execution phase involves the execution of the project plan. During this phase, the deliverables are physically built and presented to the customer for acceptance. While each deliverable is being constructed, a group of management processes are carried out to monitor and control activities. Once all the deliverables have been produced and accepted by the customer, the project is ready for closure.

The first and most important step is to build the deliverables specified in the Terms of Reference. During this activity, a detailed design of each deliverable is created and the deliverables are physically constructed, tested and reviewed to determine whether they meet the quality criteria and the acceptance criteria. When all the criteria have been met the deliverables are signed off on by the customer and handed over. At this stage, the project is ready for closure. During the construction of

the deliverables the project manager performs several management processes to monitor and control the time, cost and quality of each deliverable as follows:

- a· Time Management involves monitoring and controlling the time spent by staff on the project. Timesheets are used to track and record time spent, so that the project manager can ascertain the overall progress of the project.
- b· Cost Management involves identifying project costs and recording the rate of consumption of the project budget.
- c· Quality Management involves undertaking the Quality Assurance and Control activities specified in the Quality Plan, to manage a project's level of quality and ensure that the project deliverables meet customer requirements.
- d· Risk Management involves monitoring and controlling project risks by taking the steps necessary to prevent risks and minimize the impact on the project should those risks occur.
- e· Issue Management involves resolving any unforeseen issues that may arise before they affect the ability of the project to meet its stated objectives.
- f· Acceptance Management involves carrying out Acceptance Reviews to gain the customer's approval of each deliverable. If the customer does not accept that the deliverables meet their requirements the success of the project will be compromised.
- g· Communications Management involves completing the activities specified in the Communications Plan to ensure that every stakeholder receives the right information, at the right time.
- h· Finally, a Phase Review is undertaken to ensure that all of the required activities in the Execution phase have been completed and the project is ready to proceed to the next phase.

4. **Project Evaluation and Closure**

The Project Closure phase involves releasing the final deliverables to the customer, handing over project documentation, terminating supplier contracts, releasing project resources and communicating project closure to all stakeholders. The final step is to undertake an Evaluation to determine the extent to which the project was successful and note any lessons learned for future projects. The Project Closure Report should list all the activities required to close the project, to ensure that project closure is undertaken smoothly and efficiently. Once the report has been created and approved, the closure activities specified within the report are undertaken and the project is then officially closed. One to three months after the project has been closed and the business has begun to experience the benefits provided by the project, it is important to undertake an Evaluation, often referred to as a Post Implementation Review (PIR). This allows the business to identify the level of success of the project

and list any lessons learned for future projects.

Evaluation is often carried out by an independent person to provide an unbiased opinion of the project outcome. The first step is to review the project performance to determine whether the project delivered the benefits, met the objectives, operated within the scope, and produced the deliverables on time, within budget and using the allocated resources. The review also needs to determine whether the project conformed to the management processes specified in Terms of Reference. It should also identify the key project achievements, failures and any lessons learned for future reference. The evaluation should review how the project performed against each of the targets set during the Initiation and planning phases of the project, ie has the project:

- i. Delivered the business benefits described in the Business Case?
- ii. Achieved the objectives specified in the Terms of Reference?
- iii. Deviated from the original scope as defined in the Terms of Reference?
- iv. Met the quality targets defined in the Quality Plan?
- v. Proceeded according to the planned Delivery Schedule?
- vi. Deviated from the budgeted project expenditure as defined in the Financial Plan?
- vii. Deviated from the forecast resource levels as defined in the Resource Plan?

The next stage is to identify the extent to which the project has conformed to the management processes (as set out in the Terms of Reference) during the Execution phase of the project. These are: Time Management, Cost Management, Quality Management, Change Management, Risk Management, Communications Management and Acceptance Management. Finally, the Evaluation should:

- i. List the major achievements for this project and describe the positive effect that each achievement has had on the customer's business.
- ii. List any project failures and describe the effects they have had on the customer's business.
- iii. Describe the lessons learned from undertaking this project and list any recommendations for similar projects in the future.

SUSTAINABLE COMMUNITY DEVELOPMENT

A sustainable community is one that is economically, environmentally, and socially healthy and resilient. It meets challenges through integrated solutions rather than through fragmented approaches that meet one of those goals at the expense of the others. And it takes a long-term perspective-one that's focused on the present and future, well beyond the next budget or election cycle.

Sustainable communities are communities planned, built, or modified to promote sustainable living. This may include sustainability aspects relating to equality, water, transportation, energy, and waste and materials. They tend to focus on environmental sustainability (including development and agriculture) and economic sustainability. Sustainable communities should focus on sustainable urban infrastructure, social equity, and sustainable municipal infrastructure. The intersection of all three areas of sustainability, economy, environment, and equality, are necessary to the creations of a sustainable community.

Sustainable communities are places that have a variety of housing and transportation choices, with destinations close to home. As a result, they tend to have lower transportation costs, reduce air pollution and storm water runoff, decrease infrastructure costs, preserve historic properties and sensitive lands, save people time in traffic, be more economically resilient and meet market demand for different types of housing at different price points. Rural, suburban, and urban communities can all use sustainable communities' strategies and techniques to invest in healthy, safe and workable neighborhoods, but these strategies will look different in each place depending on the community's character, context, and needs.

Thus, a sustainable community manages its human, natural, and financial resources to meet current needs while ensuring that adequate resources are equitably available for future generations. It seeks:

- i. A better quality of life for the whole community without compromising the well being of other communities.
- ii. Healthy ecosystems.
- iii. Effective governance supported by meaningful and broad-based citizen participation.
- iv. Economic security.

A sustainable community's success depends upon its members' commitment and involvement through:

- i. Active, organized, and informed citizenship.
- ii. Inspiring, effective, and responsive leadership.
- iii. Responsible, caring, and healthy community institutions, services, and businesses.

The Institute of Sustainable communities (ISC, 2013) views the concept of a sustainable community as a framework to guide action, and proposed three basic requirements for community development towards sustainability. These are a healthy climate and environment; Social well being; and economic security.

1. A Healthy Climate and Environment

Sustainable communities are expected to promote a healthy climate and environment through:

- i. Protection and enhancement of local and regional ecosystems and biological diversity.
- ii. Conservation of water, land, energy, and nonrenewable resources.
- iii. Utilization of prevention strategies and appropriate technology to minimize pollution.
- iv. Use of renewable resources no faster than their rate of renewal.
- v. Infrastructure that improves access to services and markets without damaging the environment.

2. Social Well being

Communities that seek to develop on the path of sustainability are expected to provide:

- i. Satisfaction of basic human needs for clean air and water and locally sourced nutritious, uncontaminated food.
- ii. Affordable provision of quality health prevention, care, and treatment services for all community members.
- iii. Safe and healthy housing accessible to all.
- iv. Equitable access to quality education services, formal and informal.
- v. The basic human rights of all community members are respected and defended against injustices including exploitation and psychological and physical harm.
- vi. Protection, enhancement, and appreciation of community manifestations of cultural diversity, treasures, customs, and traditions.

3. Economic Security

Economic security is a basic and fundamental requirement for sustainable communities. These can be achieved through

- i. Community members equitably benefit from of a strong and healthy community-centered economy.
- ii. Diverse and financially viable economic base.
- iii. Reinvestment of resources in the local economy.
- iv. Maximization of local ownership of businesses.
- v. Meaningful employment opportunities for all citizens.
- vi. Responsive and accessible job training and education programs that enable the workforce adjust to future needs.
- vii. Businesses that enhance community sustainability

Developing more sustainable communities is important to our national goals of strengthening our economy, creating good jobs now while providing a foundation for lasting prosperity, using energy more efficiently to secure energy independence, and protecting our natural environment and human health. These must be the ultimate goal of constituency projects and if effectively handled will lead to even development in the country.

LESSONS AND IMPLICATIONS FOR SUSTAINABLE COMMUNITY DEVELOPMENT IN NIGERIA

From the foregoing, there are quite a lot of lessons and implications of the practice of constituency projects on sustainable community development in Nigeria. These include:

1. The Concept and Practice of Constituency projects

It is obvious, that the concept and practice of constituency projects is not novel to Nigeria. It is practiced in other climes; however there is remarkable difference between the way it is practiced here and in other places. Whereas, in other places there are institutional structures that guarantee its continuous existence and feasibility, here its existence is only guaranteed by the continuous stay of the member of the National assembly in government. Thus there is the urgent need to create institutional structures to supervise and make it relevant to national development in Nigeria.

2. Problems with Constituency Projects

Currently, many of the constituency projects are not completed or abandoned at various stages of implementation due to large turnover in the national assembly. Since the fourth republic started, the national assembly has had about a 70% turnover of its members. In other words, over 70% of the members of the house and senate do not return back to the national assembly. The result is that projects started by legislators that were unable to return to the house or senate are often abandoned. Apart from this, many constituency project lacks clearly defined objectives and are located in economical unviable locations. Many of the projects are not designed based on any known project management principles making them impossible to complete.

3. Abandoned Projects in Nigeria

The spate of abandoned constituency projects, has contributed to the total number of abandoned projects in Nigeria. Currently, there are over 11, 886 (Eleven thousand, eight hundred and eighty six) abandoned projects in Nigeria that will cost an estimated N 7.78trillion to complete. This is based on the report of the Presidential Projects Assessment Committee (PPAC) set up in March, 2011, by President

Jonathan to look into cases of abandoned Federal government projects. If the government does not start any new project, it will take more than 5yrs of budgeting N 1.5 trillion to complete them.

4. **Need to Re – evaluate On – going Constituency Projects**

In a bid to stem the crisis arising from abandoned and uncompleted projects, the Federal government has decided to put all abandoned projects under the Ministry of Special duties and Inter – governmental affairs. In the light of the previous unplanned nature of the projects, there is urgent need to re – evaluate the projects based on basic project management principles to make them serve basic requirements for sustainable community development.

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INDEX

A

- Ababa, 84, 89
- abandon, 286
- abdicates, 226
- Abeokuta, 253, 263
- aberration, 283
- abeyance, 238
- Abia, 180
- Abiodun, 18, 139
- Abiola, 274, 279
- abode, 268
- abolition, 227
- aborigines, 214
- Abubakar, 279
- Abuja, 22, 43, 150, 203, 205, 208, 280, 285
- Academy, 86
- accepting, 81
- accompany, 193
- accrue, 53
- acculturation, 20
- accurate, 119, 155, 245
- accurately, 124, 128-129
- accuse, 285
- acquire, 170-171, 227, 248
- acronyms, 148
- acumen, 233
- acute, 66, 78
- adapt, 110
- Adequate, 12, 170
- Adeyemi, 177
- Adeyinka, 134, 138
- adhere, 186
- adjacent, 124, 128
- Ado, 131, 138
- adopt, 141, 212, 221, 225
- ADP, 148, 167
- adult, 115, 275
- adverse, 166, 197
- advocates, 16, 203
- aeroplane, 193
- Aesthetic, 216
- affirms, 16-17
- Afghanistan, 58
- afore, 121, 163
- agglomeration, 109
- Aggregate, 154
- Alex, 22
- Algeria, 29
- alien, 20
- Aliu, 230
- allocate, 15, 112, 127, 287
- Alpha, 174
- alternatives, 44, 125
- amalgamation, 196
- amateur, 26
- Analyst, 19
- Anam, 1, 15, 25, 189, 191, 199
- anatomy, 199
- anchor, 287
- anemia, 17
- Angola, 41, 67, 69
- Antai, 1
- Antarctica, 20
- Anthony, 265
- antidote, 212
- Antonio, 29, 45
- Anyanwu, 165, 177, 236, 246
- apex, 152
- appendix, 244
- appetite, 227
- apron, 225
- apt, 8
- aquatic, 201
- arable, 133, 162, 175-176
- architect, 215
- arena, 215
- arguably, 83
- argue, 50, 59, 77, 283
- artisans, 136
- artistic, 202
- Arugu, 179
- ascertain, 292, 294
- Ashley, 190-191, 199
- assaults, 2
- assemblies, 284
- assure, 4
- asymmetric, 198
- asymmetry, 81, 166

INDEX

attracted, 15
attractive, 208, 244
attracts, 13, 34, 193
attrition, 18
AU, 21
Audu, 269, 279
aural, 252
Austerity, 199
Australia, 159, 192
Authentic, 229
autonomy, 201, 210
Azizi, 162, 177
Azubike, 165, 177

B

Babajide, 247, 273, 279
Babangida, 134
Babcock, 150, 265, 279
Badagry, 252
Baden, 87
baffled, 233
bailout, 267
Ballesteros, 114
balloons, 193
Balogun, 255, 261, 263
bamboo, 213
Banana, 169, 181
bananas, 53
bankruptcy, 239, 269
barely, 1
barter, 234-235
Bassey, 1, 15, 189, 248, 261
Bate, 16
Bauchi, 168
Baumol, 231
Bayelsa, 104, 179-180, 187-188
BBC, 197
Beakers, 258
Beam, 257
BEAMING, 8
beaming, 8
beast, 231
Bedford, 228

bedrock, 136, 248
began, 136, 153, 232
behoves, 222
Bello, 262
benchmark, 154, 219
Benin, 188
Benito, 109
Benjamin, 280
berth, 36
bilateral, 6, 55
Bill, 16, 287
binding, 112
biodiversity, 190
biological, 212, 297
Biology, 252, 261, 263
biology, 201, 261
Biomass, 65
biomass, 3, 65, 67
Birmingham, 125
Birrel, 257-258
birth, 8
black, 24, 136
blame, 44, 80
blamed, 141
Blaring, 205
ble, 169
Blended, 205
blending, 215
blessed, 133, 145, 180
Bliss, 199
blocks, 258
blood, 17-18
blossomed, 49
blueprint, 134
BOFIA, 228
BOFID, 228
Borno, 168
Brazil, 66, 87
breweries, 220
Britain, 17, 236
Broad, 149, 224
broadest, 11
broadly, 19, 55, 78
Brown, 18, 210
Bruce, 19

INDEX

- Budget, 299
Bulbs, 257
Bullion, 178
bulwark, 105
bureau, 141
Burger, 203
Burke, 153, 159
Burkina, 60, 67, 72
Bursary, 286
Burundi, 60
Button, 84
- C**
- Cable, 206
Cairo, 8
cajoled, 16
Calabar, 19, 25, 189, 199, 205-206, 262, 264, 279
California, 34, 229
Cambridge, 115, 217
Cameroon, 69, 86
campaign, 16, 228, 266, 286
Campus, 177
Cape, 8, 67, 87
capitalism, 22
carbon, 67, 182
cargo, 40
Caribbean, 119
Cartography, 115
Castro, 15
Catalyst, 291
caucus, 287
caught, 232
causality, 59, 114
Cayman, 31-33
CDCC, 291
CDF, 286-291
ecilia, 9
census, 132
Century, 159, 264
Chad, 60, 67, 69
chaired, 291
chairman, 285
Chalets, 207
chalkboard, 252
Challenge, 82, 178
Chambers, 88
charcoal, 3, 65
charisma, 220
Charles, 19, 212, 216
chart, 77, 80, 252
chasm, 21
cheap, 166, 198
chemical, 62
Chile, 159-160
Chilean, 160
chips, 181
cholera, 3
Chronic, 141
Churchill, 174, 177
citizenry, 10, 25
clarify, 282
clarion, 21
Clark, 216
Cliff, 229
climb, 135
climes, 298
Closure, 294
CNN, 197
Coalition, 23, 286
coarse, 51
Coconut, 181
cohesion, 40, 47
collapse, 227
collateral, 170, 267
collude, 111
Colorado, 87
Commodities, 86
compares, 62, 127
compelled, 236
competent, 19
complexes, 213
complexity, 83
compliance, 278
compulsion, 201
computed, 126
concave, 257
concedes, 22

INDEX

conducts, 155, 222
conduit, 152, 285
confectionary, 181
confer, 196
conflicts, 12, 184
conform, 157
Congo, 2, 16, 35, 41, 69
Congress, 290
consequent, 2
considering, 17
Consortium, 5, 39
construct, 55
constructs, 23
construed, 163
consultants, 243-244
Continental, 221
contractor, 284
contradict, 11
converge, 48
Convergence, 159
Convex, 257
conveyance, 193
cope, 52, 81, 185, 195
Copenhagen, 138
Correlates, 263
Corroborating, 133, 255
corrosion, 183
Cotton, 165, 169
Coughlin, 171, 177
Cowpea, 168-169
cowrie, 235
creations, 296
Criteria, 89, 127
critique, 178, 212
critiques, 51
CRS, 272
Culbertson, 193
cult, 184
cultivable, 184
cultivating, 2
curricular, 262
cursor, 164
cyclic, 222
cyclical, 142
Cyprian, 205

D

Dakar, 30
Dam, 35
damage, 12, 55, 108, 183
Damaturu, 200
dampen, 152
Dayton, 15
DC, 83, 115, 159, 187
demands, 5, 108, 171, 231, 285
Democracy, 299
Deng, 43
denies, 299
dent, 150
dependency, 20, 23
deposited, 235
Deputy, 25, 285
descriptions, 211
destinies, 22
Destroys, 182
destroys, 182-183
destruction, 60
detached, 202
Deterioration, 119
Deutsche, 41
devaluation, 81
deviant, 233
diagnosis, 20
Diagnostic, 5, 46, 80, 83, 89
dialectic, 211
Diaspora, 19
dichotomy, 60, 80
Dickey, 156
Dicks, 202, 216
dictated, 25, 27
dictatorship, 144
didactic, 252
differentiation, 210
Digital, 83, 87
Diji, 281
Dime, 56
dioxide, 182
Directorate, 134
disburse, 137
discrepancies, 60

INDEX

disheartened, 12
dislocate, 235
Disloyalty, 235
Dissecting, 129
disseminated, 184
dissimilar, 56
distorted, 55
divorce, 203
Dixie, 204, 208
downstream, 158, 162, 193
downswing, 142
downwards, 287
drift, 15, 155
drill, 255
Durbin, 157
dwindle, 136
dynamic, 6, 49, 74, 115, 201

E

eagerness, 76
Eagles, 193
Eboh, 108, 115
Ebola, 16
Ebonyi, 15
Econometrics, 86
ecosystem, 183
ecosystems, 212, 296-297
ECOWAS, 21-22
Edet, 13
EDGE, 7
Editorial, 299
Edo, 180
Edward, 25, 139, 209
Efficacy, 299
Efficiency, 299
Egbe, 279
Egypt, 197
Ekpenyong, 170, 177
Ekwensi, 205
elaborate, 201
electorate, 283
electro, 193
element, 43, 192, 201, 254
elevators, 194

eligible, 55, 67
elude, 22
emeritus, 34
emigrate, 17
eminent, 20
Empirics, 159
enactment, 219
enclave, 196
endowment, 46, 59, 109
England, 15-17, 88, 246
Englewood, 229
Enrique, 109, 115
enrolment, 255
enshrined, 227
enthusiasm, 20
entice, 214
Enugu, 115, 177
enumerated, 135
Equatorial, 67, 69
equilibrium, 57-58, 221
Equity, 167
eradicate, 21
Ernest, 135, 138
erode, 45, 212
erstwhile, 266
esteem, 220
Ethereal, 199
Europe, 62, 217, 225
evade, 137
Evans, 213
evolve, 9
exceeds, 77
exclude, 48
Exploration, 206
exponentially, 36
Export, 4, 85
exposition, 215
Exquisite, 204
extant, 44
Extreme, 2

F

Facilities, 234, 263
factory, 192

INDEX

FACTS, 132, 142
Falling, 88, 239
famous, 166
Fang, 41
fatalistic, 141
feasibility, 123, 291, 298
Federation, 162, 228
fees, 33
fertile, 163, 180
fetched, 137
fickle, 38
Fidelity, 226
Filipino, 59
fined, 186
finesse, 283
Firewood, 65
Fiscal, 84
fitness, 157
fluctuated, 153
fluids, 193
flush, 59-61
footpaths, 119
forecast, 295
foreseeable, 293
format, 244
formula, 290
fortunes, 8, 22, 219
fossils, 202
Foster, 49, 77-78, 84, 86, 89
fragile, 29, 39-40, 45
Fragmentation, 88
Frampton, 213, 216
France, 41, 231
Frankfurt, 41
Frauds, 239
fraudsters, 238
fraught, 79
Frazer, 262
French, 221, 229
frivolous, 23
fuel, 121
Future, 106, 115
fuzzy, 49

G

Gabon, 41, 60, 69
gadgets, 248
Gallup, 2
galvanizes, 39
Galvanometers, 257, 259
Gamble, 222, 229
garbage, 194
Gartner, 216, 232
Gearing, 192
generators, 41, 52, 65
generic, 6, 200
generosity, 24
Geneva, 86
genius, 210
Geoffrey, 217
geographer, 208-209
Geographic, 115
George, 41
Georgia, 53-54, 87
Geosciences, 187-188
geothermal, 45, 67
Gerald, 188
German, 41
Ghana, 18, 67, 70, 122, 280
Ghanaian, 18
GHG, 185
ghosts, 36
Gibson, 51, 58, 86
Gilbert, 220-221, 229
glance, 224
Glasgow, 261
Globally, 225
Glory, 13
Goldsmith, 235
Governance, 89
Governor, 14, 24
graduating, 254
grand, 227
Grant, 229
grater, 232
grave, 148
gravitate, 209
Greenspan, 154, 159

INDEX

Greg, 38
Gridlines, 88
Guatemala, 59, 89
Guava, 169
gulf, 21, 271

H

habit, 235
habitable, 20
halocarbons, 182
halt, 26, 68
hamper, 60, 79, 120, 195
harbours, 45, 192
Harcourt, 150, 177, 187-188
Harmonization, 149
harness, 8, 26
Harvey, 231
hassle, 266
hastily, 79
Hausa, 204-205, 235
Hay, 113
hazard, 166, 197
hedonic, 74
Herbert, 141
Herrick, 19, 22
heterogeneous, 115
hinder, 185
hindrance, 1
historic, 197, 201, 296
HIV, 1, 15-17, 23
holistic, 6, 210, 219
Hollis, 84
honesty, 23, 26
hope, 12, 14, 208
hoped, 35, 45
hopeful, 141
hopes, 79
horizon, 243
hovers, 224
Howard, 193
humanistic, 280
humiliation, 20, 210
Hutchinson, 177
hybrid, 162, 176, 281-282

hydro, 67
hygiene, 56-57
hypotheses, 164, 172

I

Ibom, 9-10, 13
Ibrahim, 28
ideological, 44, 80
Idowu, 182, 187
Igbo, 205
Igneous, 203
Igwe, 259
Ijesha, 236
Ike, 263, 285
Ikorodu, 276, 278
illegality, 283
illiteracy, 19, 106, 134
ILO, 21
Ilorin, 229, 253, 262
IMF, 21, 69, 85, 152, 154, 159-160
immunize, 3
Imo, 180, 265, 268
impairment, 65
impartial, 2
impassable, 36, 120
impedes, 31
Imperial, 43
impetus, 4
imprecise, 50
improves, 54, 297
Inability, 122
inability, 17, 20, 59, 132, 141
inaccessibility, 265
inaccessible, 123, 202
inadequacies, 212
inadequacy, 249, 255
Inadequate, 88, 119, 170-171, 252, 265
inadequate, 18, 38, 45, 51-52, 55, 83, 112, 118-119, 140, 163, 250, 252-253, 266
inappropriate, 171, 209
inat, 157
Inaugural, 187
inaugurated, 41
Inc, 88

INDEX

incapable, 155
incentive, 77, 122, 271
Incentives, 170
inception, 134-135
incidence, 140, 145, 269
incinerators, 194
incompatible, 209
incompetence, 271
incredible, 2
increment, 155
Indonesia, 52, 59, 84, 87
Industrial, 84, 104, 161, 173, 181
inefficiency, 113
inefficient, 31, 45, 112
Inequalities, 136
inequitable, 48
inferior, 141
Inflation, 239
inflationary, 167
infused, 210
inherent, 81, 215
injection, 226
innovation, 12, 114, 171, 198
Inspiring, 296
install, 41
instructive, 158, 270
instructors, 262
insulate, 200
Insurance, 85, 199, 218, 227
insurgency, 184
integrity, 5, 27, 228
intermediation, 227, 236
Interpretation, 174
intertwined, 213
intervened, 152, 167
intimacy, 214
intranet, 282
intrinsic, 192
intruders, 23
investor, 30, 79, 231, 240, 243
invincible, 210
Ireland, 229
Irene, 104
Irwin, 229

Island, 104
isolation, 72, 123
itinerary, 197
Iweala, 224, 228

J

Jackson, 180, 187
Jamaica, 286, 291
James, 231
Japan, 24
Jegede, 259, 262, 273, 279
Jerome, 43-45, 84, 87
Jersey, 216, 229
Jolly, 84
jolt, 202
Jonathan, 104, 299
Jones, 69, 88, 109, 115
jurisdictions, 31
Just, 26
justice, 2, 11
justification, 117, 121, 291
juxtaposition, 216

K

Kaduna, 145, 204, 208, 230
Kampala, 18, 263, 279
Kano, 145, 166
Katherine, 34
Katsina, 145
Kauffmann, 86
Kenyan, 290
Keynesian, 107, 191
kilowatt, 65-66
kindred, 210
kinds, 201
kinship, 210
knowhow, 163
Kolade, 18
Korea, 72-73, 112
Kurt, 221
Kurtosis, 173
Kwara, 253, 262

INDEX

L

Laboratory, 255-257, 262
lacked, 170
lacuna, 43
LAD, 290
lament, 209
landfill, 32
Landscape, 204, 214, 217
languish, 26
Larry, 194, 199
Lassa, 256
latex, 181
Latin, 52, 54, 62, 83, 86, 119
laudable, 135, 137, 249, 259
laundry, 194
Lay, 17
League, 21
Leal, 15
Lease, 238
Lecture, 187
legacies, 39
legacy, 4
Legend, 214
legible, 202
legion, 148
legislation, 165
legitimate, 271
Leisure, 217
Leone, 16, 60
lethargy, 17
leverage, 220, 228
Lewis, 34, 141
liabilities, 153, 220
Liberia, 2, 16
limitation, 62
Linear, 155
linkages, 6, 73, 180
Liquidity, 220
literacy, 19, 28, 132
literal, 29
lobby, 287
localities, 213
locomotives, 41
locust, 180

lodging, 196
Lombard, 117
longevity, 109
Lounge, 203, 205
loyalty, 283
Luis, 109, 115
Lumbar, 18

M

Machine, 221
Macmillan, 178, 217, 262
Madagascar, 60
Madonna, 218
magnetic, 193
mahogany, 180
Maiduguri, 168
malady, 139, 141
Malaria, 16
Malawi, 60, 291
Malaysia, 133, 226, 291
Mallorca, 87
Manila, 87
mantle, 134
Margret, 265
Marion, 153, 159
Massachusetts, 217
Mastery, 206
maternal, 18
matrix, 23
Matthias, 41
Mauritania, 8, 72
McAdam, 193
McGraw, 229
McMillan, 88
meddlesomeness, 283
medication, 1, 47
megawatt, 65
Melinda, 16
Melon, 169
Mercantile, 221
Merchant, 178
methane, 182
microcosm, 22
migrate, 278

INDEX

militia, 184
minimal, 17, 29, 82
Ministerial, 289
Minneapolis, 217
Minnesota, 217
mirage, 159
Mitchell, 185, 187
mitigate, 78
modernism, 200
modernity, 233
modesty, 21
MOFINews, 8
Mohammed, 270-271, 279
monopoly, 77, 111
monotonous, 197
monumental, 203, 213
moratorium, 224
morbidity, 56
motifs, 12
motivate, 154, 220
multiculturalism, 202
multifarious, 196
Multilateral, 15
multilateral, 5-6, 55, 79
multiples, 65
Murphy, 192
Murray, 52, 84
Musa, 135
museum, 196
myriad, 22, 163, 208
Myth, 214
Mythic, 216

N

NACB, 178
nagging, 148
Nairobi, 45, 48, 197, 261-262
NAPEP, 134-135, 148
NEED, 224
nevertheless, 1
nexus, 46, 54, 180
NGO, 290
Nicholas, 162, 178
nonetheless, 74

normal, 126
northern, 1, 145, 166
nouvelle, 30
Nsukka, 263
numerical, 46
nurses, 17
nurture, 211
nutrient, 184
nutritious, 297
nutshell, 157
Nyong, 255

O

oars, 8
OAU, 21-22
obligation, 78
obscured, 47
obsession, 20
obsolete, 26, 221
obstacle, 38, 40
Obubra, 279
Obudu, 205-206, 208
obvious, 35, 40, 77-78, 152, 209, 298
Ojah, 19
Okada, 229
Okafor, 249, 263
Okeke, 251, 263
Okene, 216
Okija, 218
Okon, 299
Okonjo, 224, 228
Okoye, 105, 108, 115
Onitsha, 177
Onyema, 270, 280
openness, 60, 153
operational, 23
operator, 29
opinions, 44, 80
opposed, 70, 211
Optimal, 159, 263
optimism, 79
organ, 25, 283, 288
original, 295
originated, 108

INDEX

Orji, 259
ornamentation, 200, 208
Oscar, 141
Otuoke, 179
Outcrop, 203-204
outflows, 155
outlays, 13
outlining, 292
outrageous, 286
overcrowded, 36
overhauling, 163
Overinvestment, 33
overlapping, 177
overpriced, 44
overzealous, 20
oxide, 182
Oyo, 145
ozone, 182

P

Pablo, 154, 159
Pacific, 59, 62, 280
paintings, 214
Pakistan, 58, 280, 286, 291
Palatial, 204
Palgrave, 217
Palma, 87
Panacea, 161
pandemic, 23
paradigm, 19, 30
PARADOX, 20
paragraphs, 245
paramount, 278
parity, 2
Parks, 204, 216
Parliament, 287-291
Partially, 275
passionate, 232
Paterson, 216
payoffs, 57
Peasant, 170
peculiarities, 82, 215
pegging, 153
Pendulum, 257
Peregrine, 216
peripheral, 20
perishable, 53, 122
Perkins, 50, 88, 210
persuade, 239, 244
persuasive, 241
pervade, 158
pesticides, 185
Petroleum, 188, 194
Phenomenology, 217
philanthropies, 16
Philosophical, 217
photographs, 211
Pierce, 89
Pigs, 168-169
Pineapple, 181
Pius, 25
plague, 36, 137
plagued, 40, 50
plasma, 194
plateau, 168
platonic, 210
pledge, 21, 289
plenary, 289
plethora, 29
plight, 162, 176
poetry, 203
poignantly, 44, 59
polity, 131, 137
populous, 132
portends, 145
Portfolio, 41
Postal, 194
Potential, 72, 85, 181
Poultry, 168-169
pragmatism, 44, 283
precedence, 79
precipitation, 1
precluded, 23
predicts, 154
predominant, 163
pregnancy, 3
preparation, 30, 292
Pretoria, 246

INDEX

priority, 30, 260, 289
Prisms, 280
privacy, 210
probe, 135
probit, 26, 131, 137, 227
procedure, 122
profound, 13
Program, 39, 83, 279
prolific, 223
Prominence, 204
proposal, 209, 289
prosecute, 149
prosperity, 28, 270, 298
prudent, 288
pure, 194
pursue, 164, 166
pushed, 223, 226
pyramids, 166

Q

qua, 12, 44
qualitative, 200
quantum, 30, 104-105, 153, 219
quarrel, 278
Quarter, 85
Quasi, 55, 87, 221
Quest, 87
Questionnaire, 279
quid, 220
Quinn, 157
Quinones, 280
quintile, 75, 77
quo, 220-221

R

race, 248
racism, 48
rail, 10, 29, 34, 36, 38, 40-41
Railways, 40-41
rain, 1
Ralph, 209, 211, 217
Ranch, 206
Rand, 34-35

Rapid, 171
Rarely, 256
Ratings, 63
Ratio, 127, 220
rationale, 284
ravaging, 131
realistic, 81
realms, 44
Rebased, 228
recapitalize, 226
Record, 86
recording, 252, 255, 294
recruit, 292
rectify, 198
recurring, 1
recyclables, 194
reductions, 34, 54, 77, 83
refinery, 37
refocus, 153
Refugees, 3
rehabilitation, 54
reign, 157
reinforce, 267
Reinvestment, 297
reiterates, 255
relaxation, 201
Reliable, 194
religious, 20, 196, 288, 290
relinquish, 237
reluctant, 39
remittances, 67
removal, 78
rendition, 228
renewable, 41, 67, 108, 289, 297
Request, 242
requisites, 12
resident, 196
resides, 60
Residual, 174, 277
resilience, 185
respiratory, 66
respond, 15, 248
Restaurant, 207
restiveness, 162, 175
restriction, 237

INDEX

retardation, 20
rethink, 20
retiring, 221
retrospect, 198
reversal, 153
reviving, 163
Rheostats, 257
rhetorical, 8
rhythms, 4
Richard, 84
rigorous, 56
ripple, 119
roadmap, 266
Robert, 48, 115, 272, 280
robust, 43, 51, 55-56, 58, 60, 74
route, 40
Rubber, 166, 181
runoff, 296
ruthlessly, 8
Rwanda, 60, 67
Ryan, 299

S

sabotage, 149, 183, 215
sacred, 212-213
sad, 23, 255
saddled, 289
Sagamu, 265
salient, 106
salinity, 182
Salvador, 58
Sardauna, 169, 171
Savanah, 168
SCALE, 108
scanty, 12
SCOPE, 164, 243
scores, 57, 252, 255-256
Scott, 216
scourge, 131, 133, 135, 139
Scrap, 299
segment, 66, 243-244
seldom, 48, 184
Senate, 135, 285
Senegal, 30
septic, 60
sequencing, 292
serial, 157
seventeenth, 231
Seventy, 2
sewage, 18, 34, 192
shares, 1
shelved, 32
Sheppard, 88
shilling, 235, 289
side, 78, 142
signal, 5
simplistic, 155
simulations, 72
Singapore, 133
slows, 38
slums, 133
Sociocultural, 21
Software, 130
Sokoto, 145
Sola, 131
Solomon, 291
Soludo, 24, 115, 226, 229
Sorghum, 168-169
Southwest, 208
Soya, 169
spectrum, 8
Spencer, 141
sphere, 29
Spillage, 187
Spring, 207, 257
spring, 208
spur, 40
spurs, 13
SQUARE, 172
stabilize, 151, 158
staffing, 240-241
staggering, 3
stagnant, 36
Standards, 53
Stanley, 216
starch, 181
starvation, 1
Statistic, 157

INDEX

STD, 276
stereotype, 248
sterile, 17
Stern, 82, 89
Strauss, 85
Subsidies, 77
Subsistence, 122
substantive, 217
subtle, 23, 212
suburban, 296
Sudan, 16, 36-37, 41, 67, 291
suffer, 26, 38, 59-60, 113, 165
Sugar, 168-169, 181
Sunday, 299
supervisory, 246, 266
sure, 14, 35, 241, 245, 293
surface, 182
surge, 16
survive, 208
Sydney, 115-116
symbol, 214
Symposium, 262
syndicate, 238
syndrome, 20
synergetic, 12
synonymous, 81, 270
synthesis, 56

T

tabular, 172
tackle, 83, 145, 148
tagged, 16, 67, 134, 153
tailor, 40
tantamount, 283
Tariffs, 89
Taxation, 177
Technical, 129
technocratic, 271
teeming, 162-163, 175
template, 110, 226
tendency, 236
tenure, 163, 186
territorial, 193
Thailand, 52, 87, 192, 254

theorists, 212
Thermal, 217
thermometer, 259
Thesis, 138, 216, 262-263
Thomas, 217
Thompson, 222, 228-229
threats, 222, 239
Timber, 168
Titilayo, 247
Topography, 205
TOURISM, 191, 193, 196
Tourist, 216
traffic, 125-127, 296
Tragedy, 87, 187
trails, 26, 44, 119
train, 40
trainable, 221
transcends, 153
Transient, 141
transmitted, 141
transported, 40
transporting, 194
Treasurer, 289
Treaty, 22
tremendously, 50
Triangular, 257
trillion, 219, 223-224, 298-299
troublesome, 55
Trumpet, 205
truth, 268
Tuberculosis, 16
Tunisia, 28

U

UBA, 226
UBE, 148
Uche, 195-196
Udo, 249, 264
Ugandan, 52, 289
Ukpong, 191-192
Umaru, 135
unaltered, 22
unambiguous, 231
unanimous, 44

INDEX

unbearable, 278
unbiased, 295
uncommon, 14
unconvincing, 245
undergo, 26
underlying, 19
underscore, 79, 271
undesirable, 77
undulating, 168
Unequal, 136
unequivocally, 50
UNESCO, 21, 24, 226
uneven, 267
unexploded, 2
unexplored, 43
unfamiliar, 211
unfortunate, 12, 20
unfreezing, 221
UNICEF, 21, 95-96
uniformity, 234
unilateral, 37, 78
Universal, 148
unjustifiable, 285
unpaved, 34
unrest, 149, 197
Unstable, 41
upsurge, 133
urge, 8, 233
urgency, 162, 176
USA, 187-188, 246
USAID, 21, 41, 269, 280
Uyo, 11, 264
Uzoma, 183, 188

V

vagaries, 80, 142
Valley, 262
Variables, 156
variances, 57
vector, 4, 6
veered, 227
Verde, 8, 67
verdict, 22
Veronica, 247

Vietnam, 53-54, 58, 89, 123
vigorously, 46
vindication, 221
vocabularies, 208, 212
vogue, 238
vulnerable, 26, 55, 137

W

Waddington, 56, 88
wads, 281
wage, 73, 139, 142, 236, 274
wages, 54, 142
wagons, 40-41, 193
wait, 226, 236
War, 134
ward, 18
wardens, 107
ware, 257
WASC, 253
waterborne, 3
weaken, 40
weaker, 226
westernization, 20
whilst, 30
whooping, 16
Wikipedia, 178
Wilberforce, 104
William, 231-232
wisdom, 57
withdrawal, 210
worrisome, 153

Y

Yaba, 247, 256
Yamane, 275
yardsticks, 132
Yobe, 145, 168, 200
Yoruba, 204-205, 207
youngest, 28
youths, 135

INDEX

Z

Zachariah, 17
Zambia, 18, 40-41, 121, 123
Zamfara, 145
Zaria, 216
Zenith, 220, 226
Zimbabwe, 2, 262
Zing, 169, 171