

ENVIRONMENTAL QUALITY, HEALTH CAPITAL AND ECONOMIC GROWTH IN NIGERIA, 1970 - 2013

By

ADEJUMO OPEYEM OLUWABUNMI
B.Sc. (Econs), MSc. (Econs)

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2016

DEDICATION

This thesis is dedicated to the Almighty God: the Author and the Finisher of my Faith

OBAFEMI AWOLOWO UNIVERSITY

CERTIFICATION

I certify that this Ph.D thesis was carried out under my supervision by **Ms Quwabunmi Opeyemi ADEJUMO** in the Department of Economics, Obafemi Awolowo University, Ile-Ife, Nigeria

.....
Prof. P. A. Oomla
Chief Examiner & Head,
Department of Economics
Obafemi Awolowo University, Ile-Ife, Nigeria

.....
Prof. A. A. Adebayo
Supervisor,
Department of Economics
Obafemi Awolowo University, Ile-Ife, Nigeria

.....
Prof. A. E. Akinlo
Co-Supervisor,
Department of Economics
Obafemi Awolowo University, Ile-Ife, Nigeria

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TABLE OF CONTENTS

TITLE PAGE	i
DEDICATION	ii
CERTIFICATION	iii
AUTHORIZATION TO COPY	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	viii
LIST OF TABLES	xvi
LIST OF FIGURES	xix
ABSTRACT	xx

CHAPTER ONE INTRODUCTION

1.1 Background to the Study	1
1.2 Statement of the Problem	Error! Bookmark not defined
1.3 Research Questions	Error! Bookmark not defined
1.4 Objectives of the Study	Error! Bookmark not defined
1.5 Justification of the Study	Error! Bookmark not defined
1.6 Scope of the Study	Error! Bookmark not defined
1.7 Organisation of the Study	Error! Bookmark not defined

CHAPTER TWO: LITERATURE REVIEW	Error! Bookmark not defined
2.1 Introduction	Error! Bookmark not defined
2.2 Theoretical Review on Environmental Quality and Health Capital	Error! Bookmark not defined
2.2.1 Environmental Health	Error! Bookmark not defined
2.2.1.1 The Germ Theory	Error! Bookmark not defined
2.2.1.2 Risk Factor Epidemiology Theory . . .	Error! Bookmark not defined
2.2.1.3 Agent-Host Environment Theory . . .	Error! Bookmark not defined
2.2.1.4 The Biophysical and Social Environment	Error! Bookmark not defined
2.2.2 Ecology and Health	Error! Bookmark not defined
2.2.3 Human Ecology and Health	Error! Bookmark not defined
2.3 Theoretical Review on Human-Health Capital and Economic Growth	Error! Bookmark not defined
2.3.1 Classical Theory on Growth and Human Capital	Error! Bookmark not defined
2.3.2 The Solow Growth Model	Error! Bookmark not defined
2.3.3 The Endogenous Growth Models . . .	Error! Bookmark not defined
2.3.4 Augmented Solow Model	Error! Bookmark not defined
2.3.5 Unified Growth Theory	Error! Bookmark not defined
2.3.6 Schumpeter Theory	Error! Bookmark not defined
2.3.7 Human Capital Theory	Error! Bookmark not defined
2.4 Theoretical Review on Environmental Quality and Economic Growth	Error! Bookmark not defined

2.4.1	Classical Overview on Economic Growth and the Environment.	Error! Bookmark not defined
2.4.2	Population Growth and Environmental Quality	Error! Bookmark not defined
2.4.3	Economic Growth and the Environment (The Kuznet Inverted U Hypothesis)	Error! Bookmark not defined
2.5	Conceptual Issues on Environmental Quality.	Error! Bookmark not defined
2.5.1	Steady-State Model	Error! Bookmark not defined
2.5.2	Assimilation Model	Error! Bookmark not defined
2.5.3	Material Balance Model	Error! Bookmark not defined
2.5.4	Neoclassical Perspective of the Environment and Growth	Error! Bookmark not defined
2.5.5	Ecological Perspective on the Natural Environment and Human Development	Error! Bookmark not defined
2.6	Transmission Mechanism among Environmental Quality, Health Capital and Economic Growth	Error! Bookmark not defined
2.7	Empirical Analysis.	Error! Bookmark not defined
2.7.1	Environmental Quality and Human-Health Capital	Error! Bookmark not defined
2.7.2	Environmental Quality and Economic Growth	Error! Bookmark not defined
2.7.3	Human-Health Capital and Economic Growth	Error! Bookmark not defined
2.7.4	Interrelationships between Environmental Quality, Health Capital and Economic Activity	Error! Bookmark not defined
2.8	Conclusion	Error! Bookmark not defined

CHAPTER THREE: METHODOLOGY	Error! Bookmark not defined
3.1 Introduction	Error! Bookmark not defined
3.2 Theoretical Model	Error! Bookmark not defined
3.3 Model Specification	Error! Bookmark not defined
3.3.1 The Nature of Relationships between Environmental Quality and Economic Growth.	Error! Bookmark not defined
3.3.2 Threshold Level and Effects among Environmental Quality Health Capital and Economic Growth	Error! Bookmark not defined
3.3.3 Dynamic Assessment of the Inter-relationship among Environmental Quality, Health Capital and Growth in Nigeria.	Error! Bookmark not defined
3.3.3.1 VEC model Specification.	Error! Bookmark not defined
3.4 Analytical Technique	Error! Bookmark not defined
3.5 Variable Measurement and Sources	Error! Bookmark not defined
3.5.1 Gross Domestic Product (GDP)	Error! Bookmark not defined
3.5.2 GDP Per Capita (GDPC)	Error! Bookmark not defined
3.5.3 Income per Capita (PCI)	Error! Bookmark not defined
3.5.4 Carbon Dioxide Emissions (COI)	Error! Bookmark not defined
3.5.5 Fossil Fuel (FFL)	Error! Bookmark not defined
3.5.6 Combustibles Renewables and Wastes (COB)	Error! Bookmark not defined
3.5.7 Life Expectancy (LHH)	Error! Bookmark not defined
3.5.8 Death rate (DTR)	Error! Bookmark not defined
3.5.9 Population Growth (POPU)	Error! Bookmark not defined

- 3.5.10 Economy Openness (**ECO**). **Error! Bookmark not defined**
- 3.5.11 Gross Capital Formation (**GCI**). **Error! Bookmark not defined**
- 3.5.12 Inflation (**INFL**) **Error! Bookmark not defined**
- 3.5.13 Natural Resource Endowment (**NRES**) **Error! Bookmark not defined**
- 3.5.14 Educational Level (**HUM**). **Error! Bookmark not defined**
- 3.5.15 Rainfall (**RAIN**). **Error! Bookmark not defined**

CHAPTER FOUR THE NIGERIAN ENVIRONMENTAL SYSTEM **Error! Bookmark not defined**

4.1 National and International Policies on the Environment **Error! Bookmark not defined**

4.1.1 National Policies on the Environment. **Error! Bookmark not defined**

4.1.2 An Overview of the Nigerian Environmental Policies/ Regulations-Error! Bookmark not defined****

National Environmental Standards and Regulations Enforcement Agency
(NESREA) **Error! Bookmark**

not defined

4.1.3 International Policies on Environment. **Error! Bookmark not defined**

4.2 Institutions Responsible for Environmental/Pollution Control in Nigeria **Error! Bookmark not defined**

4.3 Evaluation of Enforcement and Compliance . . **Error! Bookmark not defined**

4.3.1 Solid Waste Management **Error! Bookmark not defined**

4.3.2 Industrial Safety Compliance **Error! Bookmark not defined**

4.3.3 Community-Driven Investments **Error! Bookmark not defined**

- 4.4 Environment and Environmental-Health Performance in Nigeria **Error! Bookmark not defined**
- 4.4.1 The Pattern of Agroforestry in Nigeria **Error! Bookmark not defined**
- 4.4.2 The Pattern of Energy Consumption in Nigeria **Error! Bookmark not defined**
- 4.4.3 The Pattern of Carbon Emissions in Nigeria **Error! Bookmark not defined**
- 4.4.4 The Pattern of Environment-Health Effects in Nigeria **Error! Bookmark not defined**
- 4.5 Conclusion **Error! Bookmark not defined**

CHAPTER FIVE: EMPIRICAL ANALYSIS AND RESULTS **Error! Bookmark not defined**

- 5.1 Statistical Analysis of Selected Variables **Error! Bookmark not defined**
- 5.1.1 Descriptive Statistics. **Error! Bookmark not defined**
- 5.2 Unit Root Test. **Error! Bookmark not defined**
- 5.3 Nature of Relationships between Environmental Quality and Economic Growth in Nigeria **Error! Bookmark not defined**
- 5.3.1 The Environmental Quality-Economic Growth Nexus in Nigeria **Error! Bookmark not defined**
- 5.3.2 Verification of the EKC Hypothesis in Nigeria **Error! Bookmark not defined**
- 5.4 Interrelationship among Environmental Quality, Health-Human Capital and Economic Growth in Nigeria **Error! Bookmark not defined**
- 5.4.1 Correlation Matrix Analysis. **Error! Bookmark not defined**
- 5.4.2 Co-integration Test Result **Error! Bookmark not defined**

5.4.3	Test Statistics and Choice of Criteria for Selecting Order of VEC Model for Annual Data	Error! Bookmark not defined
5.4.4	Evidence from Vector Error Correction (VEC) Analysis	Error! Bookmark not defined
5.4.4.1	Error Correction Estimate	Error! Bookmark not defined
5.4.4.2	Impulse-Response Functions	Error! Bookmark not defined
5.4.4.3	Variance Decomposition	Error! Bookmark not defined
5.5	Causality Test among Environmental Quality, Human-Health Capital and Economic Growth in Nigeria	Error! Bookmark not defined
5.6	Threshold Estimates on the Relationship among Environmental Quality, Human-Health and Economic Growth in Nigeria	Error! Bookmark not defined
5.6.1	Threshold Estimates of the Relationship between Environmental Quality and Human-Health Capital in Nigeria . . .	Error! Bookmark not defined
5.6.2	Threshold Estimates of the Relationship between Economic Growth and Environmental Quality in Nigeria . . .	Error! Bookmark not defined
5.7	Discussion of Results	Error! Bookmark not defined
5.8	Conclusion	Error! Bookmark not defined

CHAPTER SIX SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Bookmark not defined

6.1	Summary of Study	Error! Bookmark not defined
6.2	Conclusion	Error! Bookmark not defined
6.3	Policy Recommendations.	Error! Bookmark not defined

64 Limitation to the Study..... Error! Bookmark not defined

65 Contribution to Knowledge..... Error! Bookmark not defined

66 Suggestions for Further Research..... Error! Bookmark not defined

REFERENCES 195

APPENDICES 213

Appendix 1. Lag Order Selection Criteria 213

Appendix 2A Inverse Roots of AR Characteristics Polynomial 214

Appendix 2b Roots of Characteristics Polynomial 214

Appendix 3. VEC Residual Serial Correlation LM Estimate 215

Appendix 4: Breakpoint (Optimal Point) between Environmental Quality and
Health Capital (Life Expectancy) in Nigeria 215

Appendix 5: Breakpoint (Optimal Point) between Environmental Quality and
Health Capital (Death Rate) in Nigeria 216

Appendix 6: Breakpoint (Optimal Point) between Economic Growth (GDP growth) and
Environmental Quality (Carbon Intensity) in Nigeria 217

LIST OF TABLES

Table

1	A Summary of National Policies on Environment	107
2	The National Environmental Policies of NESREA	108
3	A Summary of International Policies on the Environment	113
4	Institutions for Environmental Protection in Nigeria	115
5	Descriptive Statistics of the Major Variables on Environmental Quality, Health Capital and Economic Growth	137
6	Unit Root Test for Environmental Quality, Health Capital and Growth ...	139
7	The Relationship between Environmental Quality and Economic Growth	142
8	Least Squares Estimates for EKC Verification in Nigeria	146
9	Correlation Matrix	149
10	Johansen Cointegration Test Result: Unrestricted Cointegration Rank Test	151
11	Error Correction Result from VECM Estimate	155
12	Variance Decomposition Series	161
13	Causal Relationship Test among Environmental Quality, Health Capital and Economic Growth in Nigeria	164
14	Estimates of the Breakpoint (Optimal Level) between Environmental Quality and Human-Health Capital (Life Expectancy) in Nigeria	166
15	Estimates of the Breakpoint (Optimal Level) between Environmental Quality and Human-Health Capital (Death Rate) in Nigeria	169
16	Estimates of the Breakpoint (Optimal Level) between Economic Growth	

and Environmental Quality in Nigeria	171
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LIST OF FIGURES

Figure	Page
1. Theoretical Relation between Economic Output and Waste Discharge	37
2. The Material Balance Model: Independence of the Economy and the Environment	39
3. A Schematic Representation of the Neoclassical Perspective on Environment	43
4. Ecologically Perspective of the Environment and the Human Economy ...	46
5. Interactions among the Environment, Human Development and Growth ..	49
6. Growth Rate of Forest Area in Nigeria, 1990-2013	119
7. Comparison between Agroforestry and Non-forestry Areas in Nigeria, 1990-2013	120
8. Energy Consumption in Nigeria, 1980-2001	122
9. Growth Rate of Energy Consumption in Nigeria	124
10. Rate of Carbon Emissions in Nigeria, 1970-2013	126
11. Tuberculosis Detection Rate in Nigeria, 1996-2013	128
12. Growth Rate of Carbons and Tuberculosis Incidence in Nigeria	130
13. Rate of Diarrhoea Treatment (% of children under 5 Treated) in Nigeria ...	132
14. Growth Rate of Water Productivity and Diarrhoea Incidence	133
15. Impulse-Response Graph	157

ABSTRACT

The study appraised the Nigeria's environmental policies and environmental-health issues in Nigeria and; assessed the nature of relationships between economic growth and environmental quality in Nigeria. Furthermore, it investigated the direction of causation among environmental quality, human health capital and economic growth in Nigeria and; also determined the threshold level between environmental quality and human health capital; plus the threshold between economic growth and environmental quality in Nigeria. In addition, the dynamic interactions of human health capital in an environment-growth setting in Nigeria. These were with a view to determining the interconnections among the environment, human health and economic growth for sustainable development in Nigeria.

Annual secondary data covering the periods between 1970 and 2013 were employed for the study. Data on carbon emissions, fossil fuels, rainfall, Gross domestic product (GDP), per capita income, life expectancy, and GDP per capita were sourced from the World Development Indicators (WDI), and Central Bank of Nigeria (CBN) bulletin. Tables, graphs, the Generalised Method of Moments (GMM), Dynamic Ordinary Least Squares (DOLS), Vector Error Correction Model (VECM), VECM causality estimates, and break-point estimates were used to analyse the data.

The results showed that despite the laudability and comprehensive nature of the Nigerian environmental policies, the challenges of environmental degradation emanating from desertification, poor waste management, as well as crude production technology indicates a

situation of poor or non-implementation of policies. Also, it was discovered that air pollutants have direct bearing with health conditions and posterity in Nigeria. The results also showed that an increase in environmental quality increased economic growth, but the result was not statistically significant ($t = -0.8$; $p > 0.05$); while an increase in economic growth reduced environmental quality, which was equally not statistically significant ($t = 1.0$; $p > 0.05$). Similarly, increases in per capita income emanating from economic growth does not induce high preferences for clean environment in Nigeria ($t = 5.6$, $p < 0.05$; $t = 6.3$, $p < 0.05$). Furthermore, a bi-directional causation was found between environmental quality and health capital ($F = 10.16878$, $p < 0.05$; $F = 8.178776$, $p < 0.05$), as well as a uni-directional causation between health capital and economic growth ($F = 47.45995$, $p < 0.05$). Also, the threshold analyses revealed that beyond an optimal degradation point of 6% life expectancy will be impaired severely ($t = 2.89$, $p < 0.05$), and beyond an optimal degradation point of 15% death rate will be accelerated significantly ($t = 3.3$, $p < 0.05$). Likewise, below the optimal growth point of 25% economic growth was significantly affecting environmental quality negatively ($t = 3.4$, $p < 0.05$). Last, environmental quality, human-health capital and economic growth converged in the long-run.

The study concluded that the relationships and feedback relationships among environmental quality, human health capital and economic growth indicates continuous interdependencies among variables within the ecosystem. Also, an improvement in environmental quality in Nigeria will enhance human health capital through its effect on longevity and posterity. Similarly, despite the low priority for clean environment in Nigeria, production processes and economic activities that are eco-friendly will engineer sustainable development.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The issues concerning environmental quality and its imminent impact on global development have continuously evolved over the years. Since the 1970s, global discoveries pointed to a potential challenge about the earth's ecosystems, as it was seen to be increasingly fragile. The ecosystems fragility and degeneration has been attributed to increase in human economic activities. This became more evident through intense natural resource consumption, industrial activities as well as increased vehicular and automated processes (European Commission, 2006). Basically, the environment is linked to production activities, since environmental resources are transformed into economic goods. But when the environment is disturbed by overuse and huge amount of wastes, it cannot discharge its functions of cleaning up waste, maintaining genetic diversity and stabilization of ecosystems, (Hussen, 2000). Although economic growth is desirable, economic activities that challenge the ecosystem pose a threat to sustainable human health and human life in general. Therefore an integrated approach to the study of the economy, human health and environment is essential, as all these are closely interlinked within the ecosystem.

Given the insatiable demands of human beings, ranging from rudimentary essentials like food, clothing and shelter to sophisticated luxuries like cars, airplanes, industrial machines, rockets, and information and communication gadgets; production and economic activities that engenders growth remains an unstoppable process. Thus, despite the incredible role economic activities

play in creating economic wealth, environmental preservation cannot be downplayed, especially in the context of sustainable health and wealth. Therefore, in recent times, there have been global agitations on the need to strike a balance between preserving human lives and environmental quality and the quest for economic growth (United Nations, 2015). These agitations spanned from the Earth's Summit held in Rio in 1992, which addressed the dynamic interrelations among economic growth, social welfare and environmental quality. As an offshoot of the summit, countries in attendance were urged to promulgate strategic policies that could mitigate environmental problems within the common pursuit for economic growth for human development. Thus the concept of sustainable development entered its rigorous phase with its main goal of achieving sustainable development. Specifically, highly industrialised economies were urged to continuously play the role of stimulating growth which are globally compliant with environmental quality. This could be achieved through the production of environmentally safe technologies and extra margin of resource transfer. Also, developing economies were urged to keep pace with this global initiatives. They were compelled to think beyond impoverished lifestyles and the quantum of aggregate production; but to also adopt production processes that are environmentally friendly.

In addition to the Rio Declaration of 1992, an International Conference on Population and Development (ICPD) was held in Cairo in 1994. The ICPD affirmed that if growth will be sustained, the central role of human beings in the interaction between environment and economic growth must be emphasized (UNPF, 2011). Also, the Millennium Development Goals (MDGs) of 2000-2015 had, as one of its major thrusts, the need to promote environmental sustainability as well as ensure a healthy lifestyle among nations of the world. A mid-assessment of the MDGs

revealed that while economic growth keeps rising in some countries, its sustainability may be in doubt due to depletion in stocks of unrenewable natural resources and deterioration in the quality of environmental services; thereby emphasizing the need for a vigorous global action that will pursue environmentally and health-friendly policies, (*Millennium Ecosystem Assessment Papers*, 2005). Similarly, in 2006, the European Union while promoting the positive impacts of industrial development, pursued a policy of limiting or eliminating its negative impacts throughout the world (European Union, 2006). More recently, came the Sustainable Development Goals (SDGs) which addressed issues on future international development. The SDGs are a set of proposed goals which have been adopted by the United Nations General Assembly in September 2015, and they are aimed at strengthening the MDGs. Amongst other broad issues addressed by these goals are poverty related issues, health and education advancement strategies as well as combating environmental challenges. Hence, these declarations and global programmes reaffirm the importance of ecological preservation which are essential for sustainability (United Nations, 2015).

The 1992 Rio Declaration on Environment and Development particularly emphasized that human beings are at the heart of development, thus the need to ensure a healthy environment if human beings will be positioned to drive growth in any economy (UNEP, 2007). Hence, this brings to fore the dynamics of health which is part of human capital development and central in labour productivity, (Sapci, 2013). The connection between environmental pollution and human capital can be established through an impact on labour productivity (Carson *et al*, 2010; Hanna and Oiva, 2011; Zivin and Neidell 2012). For instance, pollution may have small individual effects, but these effects may translate into large welfare losses when aggregated across the

economy such as cost spent on illness, hospital outcomes, length of hospital stay which also affect implicitly labour supply impacts.

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