

**TECHNOLOGICAL INNOVATION, PROSPERITY AND CORRUPTION OUTLOOK
IN AFRICA: A MEDIATION ANALYSIS**

**AMONU, OGECHI CHIAGOZIE
(12AF013295)**

FEBRUARY, 2021

**TECHNOLOGICAL INNOVATION, PROSPERITY AND CORRUPTION OUTLOOK
IN AFRICA: A MEDIATION ANALYSIS**

By

AMONU, OGECHI CHIAGOZIE

(12AF013295)

B. Sc Economics, Covenant University, Ota

**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES IN
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER
OF SCIENCE (M.Sc) DEGREE IN ECONOMICS IN THE DEPARTMENT OF
ECONOMICS AND DEVELOPMENT STUDIES, COLLEGE OF MANAGEMANT AND
SOCIAL SCIENCES, COVENANT UNIVERSITY.**

FEBRUARY, 2021

ACCEPTANCE

This is to attest that this dissertation is accepted in partial fulfilment of the requirements for the award of Master of Sciences in Economics in the Department of Economics and Development Studies, College of Management and Social Sciences, Covenant University, Ota, Nigeria.

Mr. John A. Philip

(Secretary, School of Postgraduate Studies)

Signature & Date

Prof. Akan B. Williams

(Dean, School of Postgraduate Studies)

Signature & Date

DECLARATION

I, **AMONU, OGECHI CHIAGOZIE (12AF013295)** declares that this research was carried out by me under the supervision of Dr. Ese Urhie of the Department of Economics and Development Studies, College of Management and Social Sciences, Covenant University, Ota, Nigeria. I attest that the dissertation has not been presented either wholly or partially for the award of any degree elsewhere. All sources of data and scholarly information used in this dissertation are duly acknowledged.

AMONU, OGECHI CHIAGOZIE

Signature & Date

CERTIFICATION

We certify that this dissertation titled “**TECHNOLOGICAL INNOVATION, PROSPERITY AND CORRUPTION OUTLOOK IN AFRICA: A MEDIATION ANALYSIS**” is an original research work carried out by **AMONU, OGECHI CHIAGOZIE (12AF013295)** in the Department of Economics and Development Studies, College of Management and Social Sciences, Covenant University, Ota, Ogun State, Nigeria under the supervision of Dr. Urhie Ese. We have examined and found this work acceptable as part of the requirements for the award of Master of Science in Economics.

Dr. Ese Urhie
(Supervisor)

Signature and Date

Prof. Evans S. Osabuohien
(Head of Department)

Signature and Date

Prof. P. B. Eregha
(External Examiner)

Signature and Date

Prof. Akan B. Williams
(Dean, School of Postgraduate Studies)

Signature and Date

DEDICATION

This work is dedicated to Abba, the Creator of the ends of the earth, whose knowledge is past finding out.

ACKNOWLEDGEMENT

I am very grateful to Abba, my very present help in time of trouble. *Omemma mere m mma.*

To the Chancellor; Dr. David Oyedepo, thank you for creating this platform through the University. I acknowledge the former Vice-Chancellor, Prof. A. A. A. Atayero, the present Vice-Chancellor, Prof. Abiodun H. Adebayo, the Registrar, Dr. Oluwasegun P. Omidiora, the Dean School of Postgraduate Studies (SPS), Prof Akan B. Williams, the Dean, College of Management and Social Sciences, Prof. Uwalomwa Uwuigbe, the Sub-Dean SPS, Dr. Emmanuel O. Amoo, and the entire university management, for all the sacrifices you make towards the building of Kings and Queens in Hebron.

I thank the Head, Department of Economics, Prof. Evans S. Osabuohien and all lecturers in the Department of Economics and Development Studies, Covenant University. Thank you for pouring yourselves into me, and ensuring that I deliver nothing but the best in this dissertation. God has big plans for you all!

I humbly acknowledge my supervisor Dr. Ese Urhie, whose excellent supervision and mentorship has guided the successful completion of this research work. I am forever grateful to Prof. Oluranti Olurinola, Dr. Stephen Oluwatobi, and Dr. Okodua; lecturers turned fathers, who stood by me through it all. May you conquer more grounds.

I acknowledge the priceless investments of my parents; Pharm. Dave and Dcns. Ihuaku Amonu; you are incomparable!! You sacrificed so much to give me a first-class education. I appreciate you a lot. Also, not forgetting my sisters, Chinomso and Chioma. I say thank you for being Rockstar sisters, you have bestowed me with so much love and support. The world will hear of your names soon.

To my friends, Deinma, Baby Sewa, Mercy, Kemi, Favour, Uyo, Uncle Chidi, Ife, Camillus, the Hebron Startup Lab team, Uncle Femi, Auntie Nkeiru, Auntie Enobom, my course mates and everyone who in one way or the other contributed to the success of this work, I am grateful. May the good Lord shower you with His blessings now and evermore.

TABLE OF CONTENTS

CONTENT	Page
COVER PAGE	
TITLE PAGE	
ACCEPTANCE	I
DECLARATION	II
CERTIFICATION	III
DEDICATION	IV
ACKNOWLEDGEMENTS	V
TABLE OF CONTENTS	VI
LIST OF FIGURES	IX
LIST OF TABLES	X
ABSTRACT	X
CHAPTER ONE: INTRODUCTION	1
1.1 Background To The Study	1
1.2 Statement Of Research Problem	9
1.3 Research Questions	14
1.4 Research Objectives	14
1.5 Scope of The Study	15
1.6 Research Method	15
1.6.1 Model Specification	15
1.6.2 Research Hypotheses	15
1.6.3 Estimation Technique	16
1.6.4 Data and Sources	16
1.7 SIGNIFICANCE OF STUDY	17
1.8 STRUCTURE OF THE STUDY	17
CHAPTER TWO: LITERATURE REVIEW	18
2.1 Conceptual Review	18
2.1.1 Technological Innovation	18
2.1.2 Prosperity	20
2.1.3 Corruption	21
2.1.4 Poverty and Corruption	21

2.1.5 Innovation and Corruption	26
2.1.6 Prosperity and Corruption	32
2.2 Theoretical Review	40
2.2.1 Theory of Corruption Control	40
2.2.2 Diffusion of Innovation and Consumption Analysis	41
2.2.3 Schumpeter's Theory of Innovation	43
2.2.4 Endogenous Growth Theory	43
2.2.5 Resource-Based View	45
2.2.6 Theory of Planned Behaviour (TPB)	47
2.2.7 The Prosperity Paradox	50
2.2.8 The Role of Institutions	51
2.3 Empirical and Methodological Review	52
2.4 Stylized Facts	66
2.4.1 Corruption Perception Index (CPI)	67
2.4.2 Prosperity Index	68
2.4.3 Corruption and Prosperity in Africa	68
2.4.4 Individuals' Access to Internet (% of Population)	69
2.5 Summary of Gaps	71
CHAPTER THREE: METHODOLOGY	ERROR! BOOKMARK NOT DEFINED.
3.1 Theoretical Framework	72
3.2 Conceptual Framework	74
3.3 Model Specification	75
3.4 Measures of Variables And Sources	76
3.4.1 Technological Innovation	76
3.4.2 Prosperity Index	77
3.4.3 Corruption Perceptions Index	78
3.4.4 Mean Years of Schooling	79
3.4.5 Unemployment	79
3.5 Technique of Estimation	79
CHAPTER FOUR: RESULTS	81
4.1 Mediation Analysis For 53 African Economies (2018)	81
4.2 Mediation Analysis For 53 African Economies (2015)	85
4.3 Mediation Analysis For 53 African Economies (2012)	89
4.4 Mediation Analysis For 50 Least Corrupt Economies (2018)	93
4.5 Descriptive Statistics, Ols Assumption Tests, and Residual Diagnostics	97
CHAPTER FIVE: DISCUSSION	107

5.1 Research Objective One	107
5.1.1 Overview of The Discussions In Section 5.1	108
5.2 Research Objective Two	109
5.2.1 Overview of The Discussions In Section 5.2	110
5.3 Research Objective Three	110
5.3.1 Overview of The Discussions In Section 5.3	113
5.4 Implications of The Results Of This Research on The African Economy	113
CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS	116
6.1 Summary	116
6.2 Conclusion	117
6.3 Contributions to knowledge	118
6.4 Recommendations	119
REFERENCES	122

LIST OF FIGURES

Figures	Title of Figures	Page
2.1	CPI in Africa (2012-2018)	68
2.2	PRI in Africa (2012-2018)	68
2.3	CPI and PRI in Africa (2018)	69
2.4	Individuals' Access to Internet (% of population) (2012-2018)	70
3.1	Conceptual Model	74
5.1	Heteroscedasticity test for Model One (2018)	103
5.2	Heteroscedasticity test for Model Two (2015)	103
5.3	Heteroscedasticity test for Model Three (2012)	104
5.4	Heteroscedasticity test for Model Four (Least Corrupt Countries)	104
5.5	Normality test for Model One (2018)	105
5.6	Normality test for Model Two (2015)	105
5.7	Normality test for Model Three (2012)	106
5.8	Normality test for Model Four (Least corrupt Nations)	106

LIST OF TABLES

Tables	Title of Tables	Page
2.1:	World Internet Usage and Population Statistics	70
4.1:	Results of regression path analysis- Prosperity	81
4.2:	Results of regression path analysis – Corruption	82
4.3:	Total Effect of X on Y	84
4.4:	Direct Effect of X on Y	84
4.5:	Indirect Effect of X on Y	84
4.6:	Results of regression path analysis-Prosperity	85
4.7:	Results of regression path analysis- Corruption	86
4.8:	Total Effect of X on Y	88
4.9:	Direct Effect of X on Y	88
4.10:	Indirect Effect of X on Y	88
4.11:	Results of regression path analysis- Prosperity	89
4.12:	Results of regression path analysis- Corruption	90
4.13:	Total Effect of X on Y	92
4.14:	Direct Effect of X on Y	92
4.15:	Indirect Effect of X on Y	93
4.16:	Results of regression path analysis-Prosperity	93
4.17:	Results of regression path analysis- corruption	94
4.18:	Total Effect of X on Y	96
4.19:	Direct Effect of X on Y	96
4.20:	Indirect Effect of X on Y	96
4.21:	Descriptive Statistics for Model One (2018)	97
4.22:	Descriptive Statistics for Model Two (2015)	98
4.23:	Descriptive Statistics for Model Three (2012)	99
4.24:	Descriptive Statistics for Least Corrupt Nations	100
4.25:	Serial Correlation Test	101
4.26:	Multicollinearity test	102

ABSTRACT

As the lowest scoring region on the 2019 Corruption Perceptions Index with an average score of 32, Africa's performance gives a bleak impression of inaction against corruption. Though it is the second most populous continent on earth, Africa has the lowest internet penetration rate globally. Over the past decade, global prosperity has increased significantly but in Africa, some nations became poorer, while the bulk barely maintained the same level of average prosperity. This research empirically examines the role of technological innovation (internet access) in curbing corruption through prosperity, citing all 54 African countries as a case study. The mediating role of prosperity in estimating the effect of innovation on corruption was carried out by employing the Corruption Perceptions Index from Transparency International, Prosperity Index by Legatum Institute, and Individuals' access to Internet by WDI in the presence of some covariates. The coefficients of the direct, indirect and total effects showed that internet access can only be significant in reducing corruption if it first leads to socio-economic prosperity for individuals, households and African nations as a whole. Hence, this study recommends that to create more prosperity, internet access be made more accessible, and affordable in Africa. However, to reduce corruption, internet access must be engaged in activities that create national prosperity for all-jobs, profits, infrastructural development.

Keywords: Corruption, Prosperity, Technological Innovation, Internet Access, Mediation Analysis, Hayes.