

UNIVERSITI PUTRA MALAYSIA

THE IMPACT OF QUALITY OF INSTITUTIONS ON HEALTH EXPENDITURES, HEALTH OUTCOMES AND ECONOMIC GROWTH IN THE SUB-SAHARAN AFRICAN COUNTRIES

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FEP 2017 27



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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Doctor of Philosophy

June 2017

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DEDICATION

To my wife, Fatima Fina for her love and sacrifices.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fullfillment of the requirement for the Degree of Doctor of Philosophy

THE IMPACT OF QUALITY OF INSTITUTIONS ON HEALTH EXPENDITURES, HEALTH OUTCOMES AND ECONOMIC GROWTH IN THE SUB-SAHARAN AFRICAN COUNTRIES

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This study investigates the impact of quality of institutions on health expenditures, health outcomes and economic growth in the sub-Saharan African countries. While other parts of the world are living longer and healthier, mortality rate in Sub-Saharan Africa has remained the highest. This research is motivated by the increasing disparities in Sub-Saharan African's health, their spending on health and their contribution to economic growth with the rest of the world. The data used in this study is secondary data from four different sources. Health outcomes indicators including life expectancy, infant and under-five mortality were sourced form World Health Organization (WHO), Development Assistance for health to non-governmental organizations was sourced from Institute for Health Matrix and Evaluation (IHME), institutions variables (Voice and accountability, regulatory quality, control of corruption, political stability and absence of violence, rule of law and regulatory quality) were sourced from World Governance indicators (WGI). All other indicators representing public and private health expenditures, demographic structures, health service delivery, income per capita, disease patter, capital formation, literacy rate, fiscal space and environmental quality were from World Bank World development indicators (WDI). Generalized method of moment was used to evaluate the impact of quality of institutions on health expenditures, health outcomes and economic growth in the sub-Saharan African countries. Diagnostic tests and robustness checks were conducted for all the estimated models to ensure reliability and efficiency of the estimates. The result of the impact of institutions on health expenditures reveals that both aggregated and disaggregated institutions have positive impact on health spending but that control of corruption, voice and accountability as well as rule of law have a greater impact on health spending. On the impact of institutions on health outcomes, institutions were found to have a negative effect on under-five and infant mortality and positive effect on life expectancy. The effect of institutions when



interacted with public health spending increases the effect of health expenditures on health outcomes. This means that funds allocated for health would be better utilized to purchase basic health care package or provide basic health care services to the people with improvement in the quality of institutions. Lastly, on economic growth, the study shows that though the region is among the fastest growing economies, income per capita is still the lowest and resources are concentrated in the hands of few individuals who have strong links to the governments. The general findings suggests that an increase in the quality of institutions improve health spending, health outcomes and economic growth. This study, makes policy recommendations to stake holders on the need to strengthen institutions by promoting the rule of law, controlling corruption, improving management quality and accountability of resources for health, cutting down bureaucracy in the provision of health care services and ensuring political stability and violence free society. This will increase efficiency and effectiveness in the purchase of health care services, increase life expectancy through an improved utilization of health care services and increase the people's contribution to wealth creation in the region.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

KESAN KUALITI INSITUSI KE ATAS PERBELANJAAN KESIHATAN, HASIL KESIHATAN DAN PERTUMBUHAN EKONOMI DI NEGARA-NEGARA SUB-SAHARA AFRIKA

Oleh

SHAMSUDDEEN ALIYU SA'AD

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Kajian ini menyiasat kesan kualiti institusi keatas perbelanjaan kesihatan, hasil kesihatan dan pertumbuhan ekonomi di Sub-Sahara Afrika. Manakala bahagian lain di dunia hidup lebih lama dan sihat, kadar kematian di Sub-Sahara Afrika masih kekal yang tertinggi. Kajian ini didorong oleh jurang kesihatan yang semakin meningkat di Sub-Sahara Afrika, peningkatan perbelanjaan mereka untuk kesihatan dan sumbangan mereka kepada pertumbuhan ekonomi dengan negara lain di dunia. Data yang telah digunakan dalam kajian ini merupakan data sekunder yang telah diperolehi dari empat sumber berlainan. Data kesihatan termasuk jangka hayat manusia serta kadar kematian bayi dan kanak-kanak di bawah lima tahun telah diperolehi dari World Health Organization (WHO), Bantuan Pembangunan Kesihatan untuk badan bukan kerajaan telah diperolehi dari Institute for Health Matrix and Evaluation (IHME), institusi pembolehubah (suara masyarakat dan akauntabiliti, pengawalseliaan kualiti, kawalan rasuah, kestabilan politik dan ketiadaan keganasan serta perundangan peraturan) telah diperolehi dari World Governance Indicators (WGI). Semua penunjuk lain yang mewakili orang awam, perbelanjaan kesihatan swasta, struktur demografik, penghantaran khidmat kesihatan, pendapatan per kapita, pola penyakit, pembentukan modal, kadar literasi, ruang fiskal dan kualiti alam sekitar telah diperoleh dari World Development Indicators (WDI). "Generalized Method of Moment" telah digunakan untuk menilai kesan kualiti institusi keatas perbelanjaan kesihatan, hasil kesihatan dan pertumbuhan ekonomi di Sub-Sahara Afrika. Ujian diagnostik dan semakan kesahihan telah dilakukan untuk semua model anggaran bagi memastikan kebolehpercayaan dan kecekapan anggaran. Hasil daripada kesan institusi ke atas kesemua pembolehubah perbelanjaan kesihatan telah mendedahkan kedua-dua institusi samada agregat atau tidak mempunyai kesan positif ke atas perbelanjaan kesihatan. Walau bagaimanapun kawalan rasuah, kebebasan bersuara suara dan akauntabiliti serta kedaulatan undangundang mempunyai impak yang lebih besar kepada perbelanjaan kesihatan. Mengenai



impak institusi kepada hasil kesihatan, institusi didapati mempunyai kesan negatif ke atas kematian di bawah umur lima tahun dan bayi manakala kesan positif ke atas jangka hayat. Kesan daripada institusi apabila berinteraksi dengan perbelanjaan kesihatan awam meningkatkan lagi kesan perbelanjaan kesihatan ke atas hasil kesihatan. Ini menunjukkan bahawa dana yang diperuntukkan untuk kesihatan akan lebih baik digunakan untuk membeli pakej kesihatan asas atau menyediakan perkhidmatan penjagaan kesihatan asas kepada rakyat dengan peningkatan kualiti institusi. Akhir sekali,bagi pertumbuhan ekonomi, kajian menunjukkan bahawa walaupun rantau ini adalah antara ekonomi yang paling pesat berkembang, pendapatan per kapita masih di tahap terendah dan sumber lebih tertumpu di tangan beberapa individu yang mempunyai hubungan yang rapat dengan kerajaan. Hasil kajian umum menunjukkan bahawa peningkatan dalam kualiti institusi meningkatkan perbelanjaan kesihatan, hasil kesihatan dan pertumbuhan ekonomi. Kajian ini, membuat mengusulkan cadangan dasar kepada pemegang saham mengenai keperluan untuk mengukuhkan institusi dengan menggalakkan kedaulatan undang-undang, mengawal rasuah, mempertingkatkan kualiti pengurusan dan akauntabiliti sumber untuk kesihatan, mengurangkan birokrasi dalam penyediaan perkhidmatan kesihatan dan memastikan kestabilan politik dan keganasan masyarakat yang bebas dari keganasan. Ini akan meningkatkan kecekapan dan keberkesanan dalam pembelian perkhidmatan penjagaan kesihatan, meningkatkan jangka hayat melalui peningkatan penggunaan perkhidmatan penjagaan kesihatan dan meningkatkan sumbangan rakyat untuk menjana kekayaan di rantau ini.

ACKNOWLEDGEMENTS

O Allah, this blessing i received is from you alone, You have no partner. All praise is for you and thanks is to you.

The completion of this study would not have been possible without the expertise of my supervisory committee. First, for his support, guidance and words of wisdom, I would like to thank my supervisor Professor Tan Sri Datuk Dr. Nik Mustapha Bin Raja Abdullah, my Co-supervisor and advisor Dr. Norashidah Binti Muhamed Nor whose guidance eased a lot of difficulty I might have undergone. Lastly, I thank my co-supervisor Associate Professor Dr. Normaz Binti Wana Ismail for her motherly role.

I am deeply indebted to my parents Alhaji Aliyu Sa'ad and Hajiya Hauwa Umar Aliyu. The best I can say to them is "My Lord! Bestow on them Your mercy as they did bring me up when I was small" (Q17:24). To my in laws Alhaji Abu Baba-Ari and Hajiya Fatima Yelwa Ladan for their prayer and support in taking care of my wife and child while I was away I say a big thank you.

I owe special gratitude to my wife Fatima Fina for her patience, courage, strength and support throughout the challenging period of my candidature and to my son Hisham who kept his mother engaged while I was away. Thank you, may Allah reward you in ways you never expect.

One special person that deserves my deepest appreciation is Hajiya Aishatu Lami – The Director Admin and Human Resource, NPHCDA without whose approval and encouragement I wouldn't have travelled to study oversea. Her role and actions motivated and ensured this dream becomes a reality. Thank you very much Aunty Lami.

I would like to thank my friends and colleagues who have contributed in one way or the other towards the completion of my studies; Salisu Ibrahim Waziri who encouraged me to do my PhD in UPM and reminded me the power of prayers when the going got tough. Dr. Yusuf Ibrahim KofarMata, Dr. Abdulazeez Shehu, Dr. Abdallah Sirag, Tukur Ahmed, Peter Adamu, Dr. Sulaiman Chindo, Abdullahi Adamu, Usman Dangogo, Salamatu Abubakar, Khudiri Gambo, Idris bugaje and others too numerous to mention for their prayers and immeasurable support.

Finally, I would like to thank my Uncles and Aunties that have supported me like Architect Jamil Sa'ad, Alhaji Abdulfatah Sa'ad and Hajiya Zainab Umar Jega among others. I owe special gratitude to my siblings: Firdausi, Naim and Abdulqadir for their prayers and support and for doing my errands during the period of my study. To my brothers and sisters in law Ubale, Bello, Adudu, Abba, Bebi, Mammy, Mama, Dada and Walida, I duly appreciate the love and support you showed my wife and child throughout my study period.



I certify that a Thesis Examination Committee has met on 20 June 2017 to conduct the final examination of Sa'ad Shamsuddeen Aliyu on his thesis entitled "The Impact of Quality of Institutions on Health Expenditures, Health Outcomes and Economic Growth in the Sub-Saharan African Countries" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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TABLE OF CONTENTS

ABSTRACT

ABS	TRAK		iii
ACH	KNOWI	LEDGEMENTS	v
APP	ROVA	L	vii
DEC	CLARA'	ΓΙΟΝ	ix
LIST	Г OF TA	ABLES	xiii
LIST	Г OF FI	GURES	XV
LIST	Г OF Al	BBREVIATIONS	xvi
CHA	PTER		
1	INTE	CODUCTION	1
1	1 1	Overview	1
	1.1	Background	3
	1.2	Research problem	10
	1.4	Research questions	10
	1.5	Objectives	12
	1.6	Significance of the study	13
	1.7	Scope of the Study	14
	1.8	Organisation of the study	14
2	ыть	PRATURE REVIEW	16
4	2 1	Introduction	16
	2.1	Literature review	10
	2.3	Summary	29
•			•
3	MEI	HODOLOGY	30
	3.1	Introduction	30
	3.2	Theoretical Framework and model specification	30
		3.2.1 Theoretical framework for objective one	30
		3.2.2 Model specification for objective one	32 34
		3.2.5 Infeotetical framework for objective two	20
		3.2.5 Theoretical framework for objective two	59 40
		3.2.6 Model specification for objective three	42
	33	Estimation Method	
	5.5	3.3.1 Generalised method of moments (GMM)	 44
	34	Source of data	46
	т	3 4 1 Data	$\frac{1}{47}$
		3.4.2 Justification for the use of variables	47
	3.5	Summary	52

i

4	RESU	ULTS AND DISCUSSION	53
	4.1	Introduction	53
	4.2	Preliminaries of the Estimation results	54
		4.2.1 Test of Outliers	54
		4.2.2 Collinearity Tests	56
	4.3	Impact of Institutions on Health expenditures	56
		4.3.1 Diagnostic test	57
		4.3.2 Descriptive Statistics	57
		4.3.3 Public Health Expenditure Model (PHE)	58
		4.3.4 Out-Of-Pocket Health Expenditure Model (OOPHE)	61
		4.3.5 Development Assistance for Health to Non-	
		Governmental Organizations Model (DAH)	64
	4.4	Impact of Institutions on Health Outcomes	66
		4.4.1 Descriptive Statistics	66
		4.4.2 Infant mortality model	67
		4.4.3 Under-five mortality model	69
		4.4.4 Life expectancy model	71
	4.5	Impact of Institutions, Public Health Expenditure and Health	
		Outcomes on Economic growth	73
		4.5.1 Descriptive statistics	73
		4.5.2 Economic growth model	74
	4.6	Summary	77
5	SUM	MARY CONCLUSION AND RECOMMENDATION	
J	FOR	FUTURE RESEARCH	79
	5 1	5 1 SUMMARY	79
	5.2	Policy implications and recommendation	80
	5.3	Limitations of the study and recommendations for future study	82
REFE	RENC	ES	84
APPE	NDICI	ES	104
BIOD	ATA C	DF STUDENT	121
LIST	OF PU	BLICATIONS	122

LIST OF TABLES

Table		Page
4.1	Test of Outliers Using Cook's D method	56
4.2	Descriptive Statistics	58
4.3	Result of Dynamic Panel System GMM estimation showing impact of institutions on Public Health expenditure	61
4.4	Result of Dynamic Panel Difference GMM estimation showing impact of quality of institutions on Out-Of-Pocket Health expenditure	64
4.5	Result of Dynamic Panel System GMM estimations showing impact of quality of governance on Development Assistance for Health to Non-Government organization	66
4.6	Descriptive statistics	67
4.7	Dynamic Difference/System GMM with Infant mortality rate as dependent variable	69
4.8	Dynamic Difference/System GMM with Under-five mortality rate as dependent variable	71
4.9	Dynamic Difference/System GMM with life expectancy rate mortality rate as dependent variable	73
4.10	Descriptive Statistics	74
4.11	Results of Dynamic Panel System GMM estimation Showingimpact of institutions, health expenditure and health outcomes on economic growth	76
4.12	Result of Dynamic Panel Difference and System GMM estimation showing impact of institutions, health expenditure and health outcome on economic growth	77
5.1	Collinearity Diagnostics of health expenditure model	104
5.2	Correlation matrix of Health Expenditure model	105
5.3	Correlation matrix of Public health expenditure model	106
5.4	Correlation matrix of Out-of-pocket health expenditure model	107

5.5	Correlation matrix of Development assistance for health to NGOs model	108
5.6	Collinearity Diagnostics for Health Outcomes model	109
5.7	Correlation matrix of under-five mortality model	110
5.8	Correlation matrix of infant mortality model	111
5.9	Correlation matrix of life expectancy model	112
5.10	Collinearity Diagnostics for Economic growth model	113
5.11	Correlation Matrix for Economic growth model	114
5.12	List of countries in the study	115
5.13	Health Expenditure Trend of the world-1995-2013	116
5.14	Definition of variables	117

C

LIST OF FIGURES

Figure		Page
1.1	Map of Sub-Saharan Africa	2
1.2	Per Capita Health Expenditure across the world 1995-2013	4
1.3	Average Public Health Expenditures as % of GDP 2005-2013	5
1.4	Average Public Health Expenditures as % of GDP 2005-2013	5
1.5	Global Health outcomes	6
1.6	Average Private Health Expenditures as % of GDP 1995 – 2013	7
1.7	Average Public Health expenditure across regions (% of GDP) 2013	8
1.8	Development assistance for Health to non-governmental organizations 2011	8
1.9	Author's conceptual precentation of institutions	10
4.1	Leverage Plot Test of Outlier	54
4.2	Test of Outliers Using Cook's D	55

LIST OF ABBREVIATIONS

	AFDB	African Development Bank
	AIDs	Acquired Immunodeficiency Syndrome
	AGI	African Governance Institute
	AU	African Union
	CPIA	Country Policy and Institutional Assessment
	DAHG	Development Assistance for Health Government
	DAHHG	Development Assistance for Health to Non-Governmental Organizations
	DPT	Diphtheria, Pertussis, and Tetanus vaccine
	GDP	Gross Domestic Product
	GDPPC	Gross Domestic Product per capita
	GMM	Generalized Method of Moment
	HIV	Human Immunodeficiency Virus
	HDR	Human Development Repot
	HDI	Human Development Index
	ICRG	International Country Risk Guide
	IIAG	Ibrahim Index of African Governance
	IMF	International Monetary Fund
	IMR	Infant Mortality Rate
	LDCs	Low-Income developing Countries
	MDGs	Millennium Development Goals
	OOPHE	Out-Of-Pocket Health Expenditures
	OOPT	Out-Of-Pocket as percentage of Total Health Expenditures
	OECD	Organization for Economic Co-operation and Development

- OECD-DAC Organization for Economic Co-operation and Development-Development Assistance Committee
- PHE Public Health Care Expenditure
- PPP Purchasing Power Parity
- SDGs Sustainable Development Goals
- SES Socio-Economic Status
- SSA Sub-Saharan Africa
- WDI World Development Indicator
- WGI Worldwide Governance Indicators
- WHO World Health Organization
- WTR World Trade report
- UHC Universal Health Coverage
- UN United Nations
- UNDP United Nations Development Program
- UNICEF United Nations Children's Education Fund
- UN IGME United Nations Inter-agency Group for Child Mortality Estimation
- 2SLS Two-Stage Least Square

CHAPTER 1

INTRODUCTION

1.1 Overview

The ability of a country to provide basic health care services for its citizenry is considered an important component of policies to stimulate economic growth. Likewise, a healthier workforce is regarded more productive and contributes more to the development of a society, thus, every country increases resource provisioning on health care believing healthier citizens are more productive and will make better contribution to wealth creation in their societies (Yaqub et al., 2012).

The general view is that health is a function of its investment. In this line governments and organizations over the years advocate increase in health spending. Spending on healthcare across the globe increased considerably, from 3% of the world's GDP in 1948 to 5% in 1995 and 6% in 2013 (WDI, 2015). As planned, the increase in health spending from government sources impacted positively on health across the world with little impact in low income countries particularly sub-Saharan Africa. Research has pointed why health investments in developing countries have not been complemented by a corresponding improvement in universal health coverage especially in Sub-Saharan Africa (SSA). Advocates of this have pointed towards environmental quality degradation, low income per capita, low level of education etc. One argument that stands out is that poor institutions quality and resource scarcity makes health systems design and implementation difficult in Sub-Saharan Africa (Carrin et al., 2001), health expenditures unproductive and health targets even more challenging (Tolmie, 2007; Baldacci et al., 2008; Dias and Tebaldi, 2013; Butkiewicz and Yanikkaya, 2011).

Despite the increase in health spending as a share of GDP by various governments in Sub-Saharan Africa from less than 2% of GDP in 1990 to about 3% in 2013, the regions health performance is ranked lowest based on selected health indicators (World Bank, 2012). The highest rate of child mortality is in Sub-Saharan Africa, with an under-five mortality rate of 92 deaths per 1,000 live births — more than 15 times the average for developed regions (UN IGME, 2013). Life expectancy in the region is just 57 compared to 74 in East Asia and Pacific and 66 in South Asia (WDI, 2015). While progress has been made in reducing child under-five mortality from about 200 in 1995 to 92 deaths per 1,000 live births in 2013, many countries in Sub-Saharan Africa have one in seven children dying before their fifth birthday (WDI 2015). Additionally, the concentration of child birth in the region continue to increase and by 2050, about one-third of all child birth will occur in this region (World Bank, 2015; UN IGME, 2014).

The quality of enforcement of institutions in the health sector of the region supports absenteeism which suggest lack of respect for the authority (Lewis, 2006), purchasing public positions, drug mismanagement and leakage in kind supplies by patients to care givers (Narayan, 2000; Lewis, 2000, 2002) and leakage of public funds (Di Tella and Savedoff, 2001; Dehn, Reinikka and Svensson, 2003) also suggests corruption as well as mismanagement in health service delivery (La Forgia et al, 2004).

Though increasing resource allocation is necessary and vital to the delivery of basic health care package, it is however regarded insufficient to guarantee health for all, (Rajkumar and Swaroop, 2008; Hu and Mendoza, 2013) improve the lives of citizen's, increase their productivity and ensure economic growth when these factors are not addressed. It is however not surprising that poor health outcomes are linked to low per capita GDP as a result of reduced number of hours working due to sickness.

Lastly figure 1.1 shows the map of sub-Saharan Africa to give readers a clear view of its geographical location. It lies south of the Sahara and has a population of close to 1 billion people which is projected to be around 1.5 billion by 2050 according to UN, (2015) prediction. The region is divided into West, central, eastern and southern Africa. It has wide variety of climate that includes equatorial climate, monsoon climate, arid and semi-arid climate, cold, warm and hot desert climate and warm Mediterranean climate etc. It has a tropical forests that stretches along the southern coast of West Africa and woodlands in the Eco-region of southeast Africa with rich array of flora and fauna. Major land marks include Sahara and Kalahari deserts. Major religions are Islam and Christianity while traditional religions are sparsely distributed.





Figure 1.1 : Map of Sub-Saharan Africa

Geographically, West Africa is located in the westernmost sub-region of sub-Saharan Africa with 18 countries¹ and a GDP of about \$656 billion. The sub-region has an estimated population of about 350 million people that span across 5,112,903 KM². East Africa is situated in the easterly part of Africa².

West Africa has an average of \$65 per capita health expenditure which is the lowest compared to southern African countries at \$229, eastern African countries at \$132 and central African countries with \$111 per capita health expenditure. On OOP as a percentage of total health expenditure, West Africa has the highest which makes its citizens more prone to catastrophic health expenditures that pushes them more into poverty trap there by denying them access to basic health care. Southern, Eastern and Central Africa have less exposure to catastrophic health expenditure at 20, 30 and 34 respectively. While no sub-region has met the 15% Abuja declaration, some perform better than other. For instance, Health expenditure as a percentage of GDP is 2.4, 3.8, 2.7 and 2.3 in West, South, East and Central Africa respectively. On per capita growth, West Africa has 1.7 percentage growth, 2.2, 3.2 and 3.2 percent for South, East and Central Africa respectively.

This research will therefore examine the issues discussed above. Section 1.2 presents the study background; section 1.3 highlights the research problems; section 1.4 asks the research questions and forms the study objectives in section 1.5; section 1.6 enumerates significance of the study; section 1.7 discusses the scope of the study and lastly section 1.8 concludes the chapter with organization of the study

1.2 Background

This research addresses important issues related to health expenditures, health outcomes and economic growth. First, on health expenditures, Campos and Pradhan (1996) have explained that lack of transparency and accountability are the major factors that have contributed to weak spending efficiency in sub-Saharan African countries.

Health Care expenditure in sub-Saharan Africa is predominantly grouped into public health expenditures as percentage of GDP, private health expenditures dominated by one's ability to pay out-of-pocket and development assistance for health to governments and non-governmental organizations (DAHG and NG) or External resources for health. The effective targeting and allocation of all sources are a vital condition for a good functioning health system, which in turn is a necessary

¹ Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Cote d'Ivoire, Liberia, Mali, Mauritania, Niger, Nigeria, Saint Helena, Senegal, Sierra Leone, Sao Tome and Principe and Togo

² Burundi, Kenya, Rwanda, South Sudan, Tanzania, Uganda, Djibouti, Eritrea, Ethiopia and Somalia

condition for decreasing child/infant mortality rates and improving health outcomes in general.

However, the poor quality of institutions built on bad governance have been established to have destructive effects on the development process in Sub-Saharan Africa and are said to weaken democracy, ingrain corrupt practices, destabilize the economy and create unconducive business environment for foreign direct investment and foreign aid, threaten the rule of law and obstruct the implementation of development policies (Hope, 2009).

Evidently, figure 1.2 and 1.3 below show that sub-Saharan Africa with a total per capita health spending below the global average spent US\$101 in 2013 on health only better than south Asia with US\$56 per capita at current prices, yet health outcomes are still much better in South Asia than in Sub-Saharan Africa. (See figure 1.4 and 1.5). Even where health expenditure is improved beyond the threshold, absenteeism in work place, bribing to secure health jobs, in-kind bribery by patients to care givers, corruption in supply chain and leakage of public funds all characterize the health care system (World Bank, 2003; La Forgia et al, 2004). When corruption is rampant, development takes a back seat and slows down growth and development (Daily Independent, 2015).







Figure 1.3 : Average Public Health Expenditures as % of GDP 2005-2013 (Source: WDI 2015)

For instance, life expectancy in the region is just 57 compared with 74 in East Asia and Pacific and 66 in South Asia (WDI, 2015); Almost 20% of the population is undernourished. And Undernourished children are twice the developing countries average. Child Under-five mortality rate is the highest when compared with other regions as more than 9% of children die before reaching their fifth birthday (UNDP 2015). There are also less than 2 midwives and nurses per 1,000 people and about 5% of its population is infected with HIV/AIDs and 280 people in 1,000 face health threat from incidence of tuberculosis (WHO, 2015)



Figure 1.4 : Average Public Health Expenditures as % of GDP 2005-2013 (Source: WDI 2015)



Figure 1.5 : Global Health outcomes (Source: WDI 2015)

Additionally, health insurance is limited to less than 5% of the working population in most countries with little or no provision for the poor and vulnerable. The Sub-Saharan region of Africa is the world's poorest region and has the highest rate of fertility and mortality rates at 5 birth per woman and 510 maternal mortality rate per 1,000 women (estimate) WDI, (2015). It is a region with the highest number of people infected with both communicable and non-communicable diseases- HIV/AIDs, Hepatitis, Malaria, Yellow fever, measles etc. Most of these diseases determine whether a child will survive to witness their 5th birthday.

The rise in disease burden coupled with low public health expenditures in the region forced private individuals to increase their health expenditure – See figure 1.6 below. Additionally, Filmer et al., (2000) explained that corruption and market failure contribute to public expenditures ineffectiveness in sub-Saharan Africa.



Figure 1.6 : Average Private Health Expenditures as % of GDP 1995 – 2013 (Source: WDI 2015)

According to Siebert et al. (2006), this form of health payment is the most regressive and ineffective source of health sector financing for the poor because it denies individuals the benefits of income redistribution, risk pooling, and financial protection hence restricting access to health services at the point of need. Some countries in Sub-Saharan Africa have more than 60% of their private health spending being out-of-pocket spending (WDI, 2014) in contrast to high-income countries where this is only 37% is the highest out-of-pocket health expenditure.

As a remedy to increase access to health care services and reduce financial protection, African heads of government agreed to increase public spending, on health to 15 percent of their total budget in 2001 in what is today referred to as 'The Abuja declaration' (WHO, 2011). Presently, no country in the region spends 15 percent of its total budget on health, still yet, the average regional public health expenditure was 2.5 percent of GDP in 2013 (See figure 1.7 below).

When OOP health expenditure becomes large and exceeds 30 - 40% (no consensus reached on benchmark) of people's total income it becomes catastrophic which affects consumption and results in impoverishment (Pal, 2013), reduces expenditure on education (Rusell, 2004) and health, deprives people of purchasing basic social amenities and limits their ability to create wealth and engage in productive activities that would increase their income and contribute economically to their countries growth.

7



Figure 1.7 : Average Public Health expenditure across regions (% of GDP) 2013 (Source: WDI, 2015)

Evidenced

The low level of public health expenditures necessitated a rise in philanthropy the world has never seen. This is evidenced in figure 1.8 below where sub-Saharan Africa alone received 74% of total development assistance for health to non-governmental organizations. Much of which were allocated for immunization activities, construction of health care centers and supply of hospital equipments as well as treatment of both communicable and non-communicable diseases.



Figure 1.8 : Development assistance for Health to non-governmental organizations 2011 (Source IHME, 2013)

Globally, \$6.5 trillion was devoted to healthcare in 2011. Of this figure less than \$40 billion was sub-Saharan Africa's public health expenditure (IHME, 2013). A wide variation with respect to economic development exists in global health expenditure between high and low-income countries (Xu, Saksena, and Holly, 2010). The average global expenditure per capita (PPP) is US\$1230 in 2013. While the average per capita Health expenditure of SSA in 2012 was US\$199 and Public Health expenditure (% of GDP) in 2013 was less than 3% of GDP (WDI 2015). Comparatively, the country with the highest total per capita health expenditure in the world according to WDI, (2015) is US with almost \$9,000 and Eritrea the lowest with US\$14 per capita per annum. While Luxembourg with annual public health expenditure per capita of US\$6906 remains the government with the highest spending on health in the world (WHO, 2015). A great disparity can be seen when compared to a low-income country like the Chad Republic with a total annual public health expenditure of less than 1% of GDP. While an increasing number of SSA countries spend less than 3% of their GDP on health, less than 5 countries in SSA spent more than 8% of GDP on health as at 2015. As a result of cry from global partners such as WHO, UNICEF, IMF, WORLD BANK, UNDP, Bill and Melinda Gates foundation among others, African governments increased their health expenditure with the help of development partners in 1995 from \$38 to \$101 per capita in 2013.

In 2012, Equatorial Guinea, South Africa, Seychelles and Mauritius had a Per Capita Health Expenditure of US\$1138, US\$645, US\$520, and US\$444, on the other hand, Niger, Malawi, Burundi, Madagascar, Ethiopia, Democratic Republic of Congo, and Eritrea had their per capita expenditure as low as US\$25, US\$24, US\$19, US\$18, US\$17, US\$15, and US\$14 respectively (World Bank WDI 2014).

For a country's health status to improve, sufficient and well-organized funding must be in place (Anyanwu et al., 2007). Conventional wisdom has it that, increasing public health expenditure does not always translate into improved health outcomes without a minimum resource threshold. In 2001, 2009 and 2012, the number of international organizations including-The Commission on Macroeconomics and Health, Taskforce on Innovative International Financing and WHO estimates that the minimum spending per capita per annum required to provide basic lifesaving services to meet the MDGs is US\$34, US\$44 and US\$44 respectively. But for the purpose of this research, we'll take \$44 as the benchmark. This amount may increase to US\$60 per capita by 2015 (Xu et al., 2010). Though a handful of countries in the region spend more than US\$60, their health status still remains deplorable.

Findings from medical, economic and social explanations of mortality transitions in the world have all agreed that institutions are a force to reckon with for a desired optimum health. While all hands point to institutions as the key to unlocking poor health outcomes, improving health expenditure effectiveness and economic growth, it remains poor and pitiable in Sub-Saharan Africa. Institutions are generally defined as "constraints that human beings impose on themselves" (North, 1990). These constraints are in the form of rules that guide human behavior and interaction. The rules according to North (1990) could either be formal or informal. When they are formal, they are written rules made to guide human economic, social, political and legal interactions. The unwritten rules are informal and mostly guide human values and norms which are otherwise referred to as traditional institutions. Institutions also involve measures of enforcing the rules and punishing offenders (WTR, 2004). The effective enforcement of these rules help to reduce transaction costs, improve information flows and define and enforce property rights. Conceptually, figure 1.13 explains North's definition of institutions.



Figure 1.9 : Author's conceptual precentation of institutions (Source: North 1990)

Lastly, health expenditure is an important component of health service delivery. Importantly, the effective delivery of health services at rates affordable to a community determines not only improved access to health care services like immunization, supply of drugs and other consumables but also access to clean drinking water and sanitation facilities which guarantees improved quality of life, productivity and income.

1.3 Research problem

A wide variation with respect to global health expenditure exists between high and low-income countries (Xu et al., 2011). The average global expenditure per capita (PPP) was US\$1230 in 2013, while the average per capita health expenditure of SSA in 2012 was US\$199 and public health expenditure (% of GDP) in 2013 was less than 3% of GDP (WDI 2015) violating the Abuja declaration of 2001 on increasing public health expenditure to 15 percent of national budgets. One consensus reached by researchers is that while funding is a crucial factor for health systems to provide effective service in health care provision, institutional factors related to absenteeism, purchase of public positions, mismanagement, informal payments, corruption in

supply chain and leakage of funds as outlined by Lewis, (2006) affect health expenditure effectiveness. These institutional factors that deter health expenditure effectiveness are a major cause of decay in health systems (Bloom and Canning 2003). Surprisingly, no research has studied these institutional failures and their effect on health expenditure effectiveness in sub-Saharan Africa.

Accordingly, sub-Saharan Africa and South Asia are the only regions yet to meet MDG 4, 5 and 6. While south Asia has made remarkable progress, sub-Saharan Africa still lags far behind. Though sub-Saharan Africa has a higher total per-capita health expenditure than south Asia, health outcomes are much better there. For instance life expectancy is 67 years in south Asia compared to sub-Saharan Africa at 57 years, child under-five mortality is almost 100 in every 1000 live births as against less than 50 in south Asia. Globally, under-five mortality and infant mortality rates have declined faster over the last two decades than at any other time (UN IGME, 2014). The global annual rate of reduction in under-five mortality has increased gradually from 1.2% between 1990 and 1995 to 4.0% between 2005 and 2013 (UN IGME, 2013). However, the current rate of reduction remains insufficient for Sub-Sahara to meet the SDGs by 2030. Although Sub-Saharan Africa has had fewer deaths in 2013 than in 1990, the average annual rate of reduction is insufficient to reduce the number of children dying below the world's average. The more rapid reduction of child under-five mortality in other regions of the world has made concentration of under five children higher in Sub-Saharan Africa and by 2050 about a third of all live births will be in the region, so without more progress the number of under-five deaths could increase (World bank, 2016, United Nations, 2015). While researchers (Houweling, Caspar, Looman, and Mackenbach, 2005; Mogford, 2010; Novignon, Olakojo, and Nonvignon, 2012; UN-IGME, 2014) have agreed that social, economic and institutional factors must play a complimentary role in ensuring that SDGs are met. Most studies refer to corruption and government effectiveness (see Rajkumar and Swaroop, 2008) as the only indicators of institutions and fail to incorporate political stability, absence of violence and terrorism, accountability, rule of law and the quality of regulation which might have significant impact on improving the effect of health care resources.

Health outcomes refer to the impact health care activities have on people's symptoms, their ability to do what they want to do, on whether they live or die. It includes whether a given disease gets better or worse, and satisfaction derived from consuming medical and non-medical inputs. (myhealthoutcomes, 2015)

Similarly, some scholars (Daron Acemoglu, Johnson, and Robinson, 2005; Chang, 2011; D.North, 1989) have pointed out the importance of institutions in promoting growth and development. And (Baldacci, Clements, Gupta, and Cui, 2004; and Tolmie, 2007) specifically linked government expenditures and human capital to growth, a wide research gap still exist on the additional effect of institutions on growth. Although most sub-Saharan countries seem to be experiencing remarkable GDP growth above 4 percent in 2015, second only to south Asia at 7, income gap has widened (Oxfam, 2016) and per capita GDP in sub-Sahara is disproportionality skewed (WDI, 2015). Like Dias and Tebaldi, (2011), most research reveal the

existence of a long run positive relationship between health outcomes and growth. However, in SSA, while the region is experiencing high economic growth, people's health outcomes continue to deteriorate

In this line, this research intends to examine the effect of institutions on health expenditure, health outcomes and economic growth in Sub-Saharan Africa. A wider range of institutions quality will be examined as they involve the capacity of government to effectively in formulate and implement good policies, manage resources and provide services efficiently, the process that allows citizens the freedom to select, hold accountable, monitor and replace governments, the respect of rule of law which guides people and government to respect the institutions that govern economic and social interaction (Kaufmann, 1999).

In this line this research seeks to answer the following questions.

1.4 Research questions

The main question this research seeks to answer is: Does the quality of institutions have any effect LTH EXPENDITURES, HEALTH OUTCOMES AND ECONOMIC GROWTH IN THE SUB-SAHARAN AFRICAN COUNTRIES

In order to examine this, we will answer the following specific questions;

- 1. How does the quality of institutions affect health expenditures in sub-Saharan Africa
- 2. What impact does the quality of institutions have on health outcomes in sub-Saharan Africa?
- 3. How does the effect of the quality of institutions, health expenditures and health outcomes affect economic growth in sub-Saharan Africa?

1.5 Objectives

The general objective of this study is to evaluate the impact of quality of institutions on health expenditures, health outcomes and economic growth in the sub-Saharan African countries.

Specific objectives meanwhile are:

- 1. To examine the effect of institutions on health expenditures in sub-Saharan Africa
- 2. To assess the impact of institutions on health outcomes in sub-Saharan Africa
- 3. To determine the effect of institutions, health expenditures and health outcomes on economic growth in sub-Saharan Africa

1.6 Significance of the study

Despite the unprecedented increase of health budget in Sub-Saharan Africa, health outcomes have remained poor. Most research have concentrated on social and economic determinants of health outcomes and health expenditures. Researching into the determinants of both health expenditures and health outcome from an institutional view might present applicable ideas and points of action for policy makers and relevant authorities in the region.

This study will unearth the impact that quality of institutions have on health expenditure effectiveness – particularly public and donor funds, health outcomes and economic growth in Sub-Saharan Africa.

To the best of my knowledge, few studies in the existing literature have conducted such research, this research will defer mainly by looking at the problem from an institutional perspective to growth and development outcome.

There is an increasing interest among researchers, governments and non-governmental organizations in understanding the relationship between institutions and growth and whether health and health expenditures are vital components in this relationship. The relationship between the two variables is seen in the same spot light as technology was seen to influence growth over half a century ago. For this reason, the research perceives this growing debate as a compelling quest to contribute to the literature on this growing link.

Almost two decades now, world leaders have sat and constituted Millennium Development Goals to be achieved by 2015. The general aims of these targets are to control poverty and promote economic development. Three of these targets are health related focusing on 1) Reducing child mortality by two thirds, between 1990 and 2015 – MDG 4; 2) Reducing maternal mortality ratio by three-quarters, between 1990 and 2015 MDG 5; 3) Combating HIV/AIDS, malaria and other diseases MDG 6. in developing countries and particular where Sub-Sahara Africa that has poor health indices in the world is geographically located. Human, financial and technical resources were deployed to Sub-Sahara Africa from all over the world in a bid to meet the MDGs. Though improvements have been made in health generally, the health-related targets have not been met. In line with various governments initiatives targeted at meeting the SDGs by 2030, it has become eminent to understand the reasons for the failure and suggest alternative strategies for achieving the health-related SDGs by 2030.

In the same line, this research will help in enlightening policymakers on the risks associated with poor quality of institutions, its impact on health related SDGs and its consequence on the region's growth by 2030. This idea will not only streamline policy debate in meeting health targets in SSA, but development in general.

While research conducted on the impact of institutions on development outcomes in Organization for Economic Cooperation and Development (OECD) countries is well documented, wide research gap is evident in developing countries and Sub-Saharan Africa in Particular. Again, most evidence based research are mostly views of the development partners and might not necessary reflect African perspective. For this reason, it has become important for African researchers to conduct an unbiased research to investigate the findings of development partners and other researchers.

Findings from WHO (2011) have shown increase in SSA's population and in just about two decades from now, more than a third of the world's children will be born in SSA. Lest efforts are increased, the regions determination to improve health outcomes could either halt or get worsened. In this line, findings from this research will be helpful to various authorities and policy makers so new strategies for improving health outcomes will be introduced.

Lastly, the study will contribute to the literature in both method and approach. While most studies concentrate on either corruption, accountability (Hu and Mendoza, 2013) government effectiveness (Ssozi, 2015) or transparency (Tolmie, 2007) as a proxy for institutions, this study will broaden this and include other institutional quality indicators like quality of regulation, political stability, violence, terrorism and rule of law. Similarly, there is methodological shift from using descriptive statistics and traditional pooled OLS in the existing literature, to the use of dynamic panel framework in this study. This study therefore is timely particularly in sub-Saharan African region where communicable diseases seem to be on the rise.

1.7 Scope of the Study

The geographical focus of this study is Sub-Saharan Africa covering 45 countries over a period of 9 years ranging from 2005 - 2013. The choice of this period is informed principally by data availability.

1.8 Organisation of the study

This section summarizes the contents of each of the chapters in this study. This permits readers to know what information comprises each chapter without searching page by page.

Chapter 1 presents the introduction and background of the study discussing health outcomes, health expenditure, institutions and economic growth and their link to quality of institutions. The chapter further outlines the research questions and research objectives and discusses the research problem, the scope of the study and finally organization of the study. Chapter 2 is the literature review. This chapter is divided into two sections. First the introduction and second, the literature review. The second section is further divided into three sub-sections with each section reviewing theoretical and empirical literatures. However, to link the three objectives perfectly, no sub-headings where given while moving from one objective to the other but the first row of the next objective is indented to the right for easier boundary identification

Chapter 3 is the methodology. This chapter is divided into five. The first section introduces the chapter, the second section draws the theoretical Framework and model specification for each objective in 3.2.1 - 3.2.6. The third section discusses the estimation methods. The fourth section specifies sources of data and justifies the use of each variable in the study. Finally the last section summarizes the chapter

Chapter 4 presents and discusses result of the study. Firstly, a general preliminaries of the estimations for the three objectives where presented which include – diagnostic tests and descriptive analysis were presented. Secondly, each objective presented diagnostic test, descriptive analysis, then presents and discusses the results.

Chapter 5 is the summary, conclusion and recommendation of the study. First we summarize the study, second we provide policy implication and recommendation and third enumerate limitations of the study and recommendations for future studies.

The last part is appendix where correlation matrix and collinearity diagnostics are presented and then finally references.

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