UNIVERSITY OF CAPE COAST

TRADE OPENNESS, INSTITUTIONS AND INCLUSIVE GROWTH IN

SUB-SAHARAN AFRICA

BY

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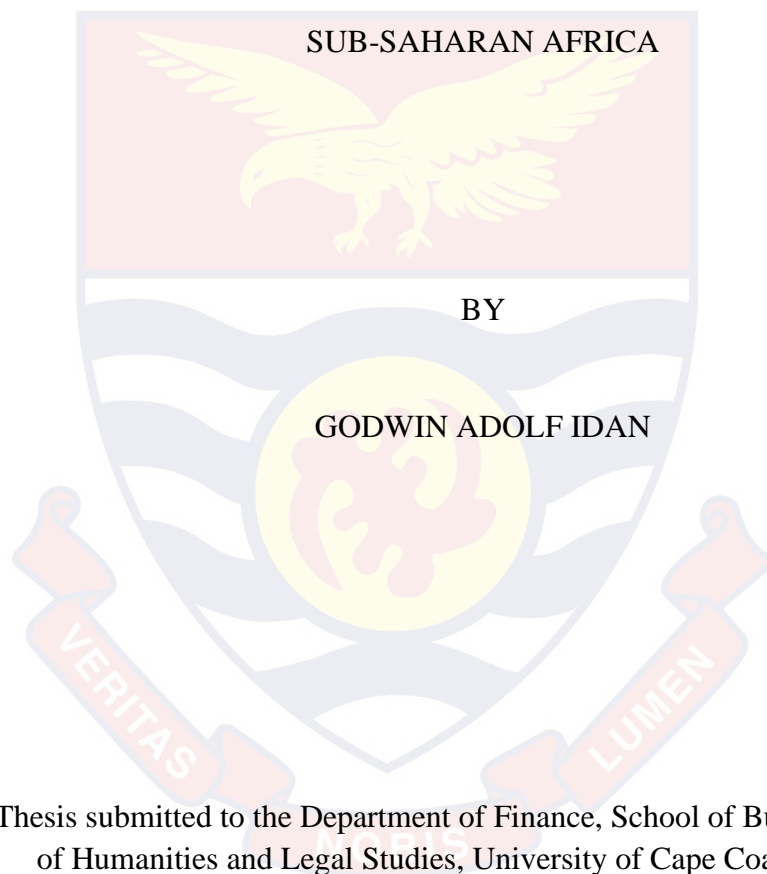
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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: ……………………………. Date: ……………….............

Name: Godwin Adolf Idan

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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ABSTRACT

Inclusiveness of growth of many developing countries has been slow with sub-Saharan Africa at the bottom irrespective of increasing economic growth over the years resulting in high poverty rate and inequality issues. Trade Openness has emerged in several empirical literature as a key factor that could contribute to inclusive growth in emerging economies. However, evidence in literature indicates that trade openness will be more relevant to spur inclusive growth of economies that have strong institutions. Thus, by using system General Method of Moment estimation technique, this study examines how institutional quality and trade openness affect inclusive growth and growth volatility in Sub-Saharan African economies. The study finds that the quality of a country's institutions enhances the effect of trade openness on inclusive growth of Sub-Saharan African economies. It is therefore recommended that economies in the sub-region should put in measures to strengthen their institutions so that level of trade openness could spur inclusive growth. Specifically, trade can better enhance inclusive growth by creating an environment of responsible institutions, transparent business, protected civil liberty, respected political rights, control of corruption and political stability which promote the expansion of international trade by reducing transactional cost and risk related to trade. This would increase participation of the minor and also create opportunity of growth for all.

KEY WORDS

Inclusive Growth

Institutions

Trade Openness

General Method of Moments

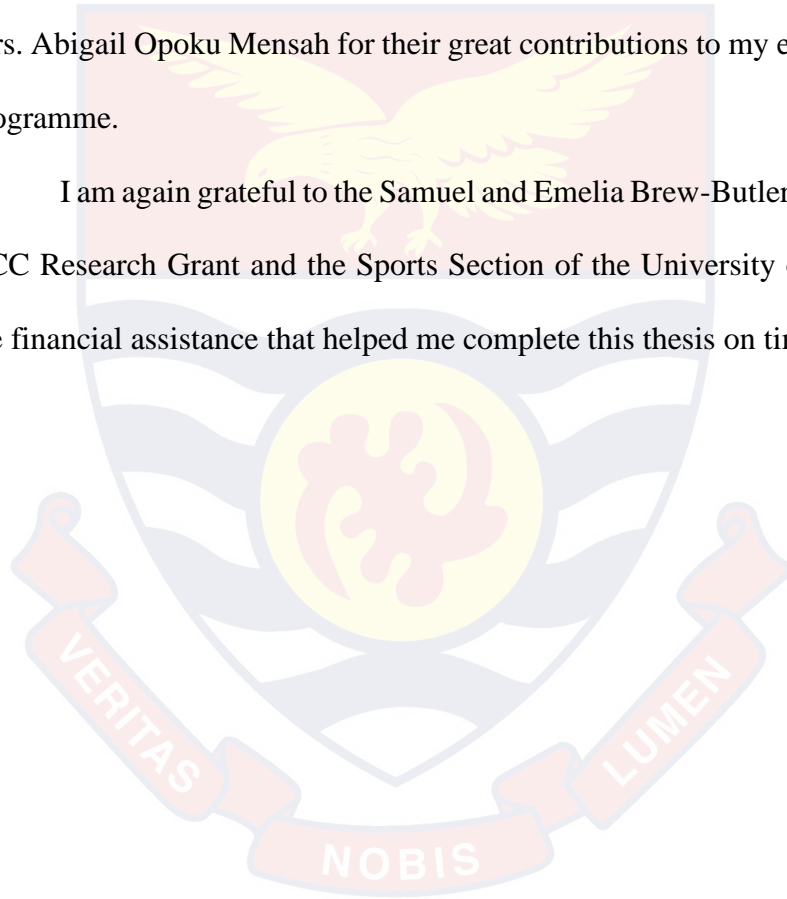Moderating Effect

Sub-Saharan Africa

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DEDICATION

To my family

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LIST OF ACRONYMS

ADB	Asian Development Bank
AfDB	African Development Bank
CPI	Corruption Performance Index
DFID	Department for International Development
EPI	Environmental Performance Index
FD	Financial Development
GDP	Gross Domestic Product
GII	Gender Inequality Index
GMM	General Method of Moment
IGI	Inclusive Growth
IMF	International Monetary Fund
INF	Inflation
INSTI	Institutions
OECD	Organization for Economic Cooperation and Development
SSA	Sub-Saharan Africa
TO	Trade Openness
UNDP	United Nations Development Programme
WD	World Bank
WDI	Worldwide Governance Indicators
WEF	World Economic Forum
WTO	World Trade Organisation

CHAPTER ONE

INTRODUCTION

Trade Openness has emerged as a key factor that contributes to inclusive growth in emerging economies. However, empirical works on the relationship between trade openness and inclusive growth have presented mixed results even though different estimating techniques were used. These mixed results could emanate from differences in institutional quality in economies. Thus, this work provides an evidence on the role of institutions in the relationship between trade openness and inclusive growth in Sub-Saharan Africa.

Background of the Study

Poverty remains common, predominantly in developing countries. Nonetheless there have been recent progress. While the aggregate worldwide poverty rate was reduced by about half between 1990 and 2015 mainly thanks to robust growth, the World Bank estimated that more than 736 million people lived with less than $1.90 a day in 2015 (Dabla-Norris, Kochhar, Suphaphiphat, Ricka, & Tsounta, 2015). To contrast the encouraging dynamic in poverty reduction, income inequality has risen across the world over the last decades. How do these two divergent dynamics impact the income opportunities of the less fortunate, namely the poorest 20 percent of the population? Key to this is the increasing focus on achieving inclusive growth, which relates to poverty alleviation, employment generation, youth and women employment and development as well as even distribution of wealth (Ortiz & Cummins, 2011).

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The concept of inclusive growth plays an increasingly prominent role in steering the development debate in international policy circles, yet the concept proves fallacious when one embarks on defining it operationally (Ramos, Ranieri, & Lammens, 2013). The OECD defines inclusive growth as "Economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, fairly across society" (OECD, 2015, p80). Thus, the role of inclusive growth is to ensure the empowerment of weaker sections of society.

The concept of inclusive growth emerged in recent times. There is a slow understanding of it in the region of Sub-Saharan Africa (SSA). The inclusive growth and development report (2017) identifies SSA economies as the least region in the performance of growth for all. This awakens interest in the need to investigate factors that can speed up the rate of inclusiveness in the region. Again, there have been a significant improvement in the field of inclusive growth and some key factors identified as contributors to enhancing the rate of inclusive growth in SSA economies. Some of the factors found include trade openness, foreign direct investment, moderate inflation, financial developments, and effective institutions among others (Doumbia, 2019).

Among these factors, trade openness has been identified as a key tool for inclusive growth by global leaders. For example, in recent WTO meetings, the 47th WEF Annual Meeting (January 2017) and the WEF on Africa (May 2017) show how significant trade openness is to development. However, there are different views on the role of trade in driving inclusive growth. For instance, opponents of

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free trade doubt trade as an engine for inclusive growth and, in fact, view it as a threat to domestic jobs and firm productive capacity, and income growth (Irwin, 2015; Chang, 2010; Ulasan, 2012). These sentiments have caused some countries (e.g. Kenya, Nigeria, South Africa, the United States, Zimbabwe, and so on to implement inward-looking or protectionist policies with a view to protecting domestic jobs and firms (Asante, 2016).

On the other hand, champions of free trade, argue that trade is a key driver to achieve economic growth, prosperity and sustainable development for all (Bendell, 2017; Gilpin, 2018; Rodrik, 2014). Korinek (2005) in his paper: *Trade and Gender: Issues and Interactions*, finds that trade creates jobs, particularly for women in export-oriented sectors. Women comprise between 53% and 90% of the employed in many export sectors in middle-income developing countries. This supports the fact that trade inclusive growth is a way of empowering minors in society.

Like trade, institutions and their impact on the economy have become focal points in the economic growth literature and several studies have shown that the quality of institutions impact economic growth, which is a necessary condition for poverty reduction (Knack & Keefer, 1995; Beck, Levine & Loayza, 2000; Chong & Calderon, 2000; Henisz, 2000; Kakwani & Pernia, 2000; Acemoglu & Robinson, 2001; Dollar and Kraay, 2002; Easterly & Levine, 2003; Enders & Hoover, 2003; Ravallion & Chen, 2003; Durham, 2004; Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2004; Rodrik, Subramanian, & Trebbi, 2004; Klasen, 2008; Tebaldi and Elmslie, 2008). Institutions also affect the distribution of economic growth benefits

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across various social and political groups in a society, such that despite similar economic performance, poverty reduction differs substantially among nations (Glaeser, La Porta, Lopez-de-Silanes & Shleifer, 2004).

Most importantly, the effectiveness of trade openness will depend on institutional quality. Gani and Prasad (2006) explain that strong institutional quality is an integral part of enhancing the benefits of international trade for a country. Therefore, they argued that the level of international trade depends on the trade in six Pacific Island countries by using four indicators of institutional quality: government effectiveness, rule of law, regulatory quality and control of corruption.

Results from the study indicate that strong government effectiveness boosts imports while an improved regulatory quality facilitates increment in levels of trade. Furthermore, the deterioration in the rule of law negatively affects exports whilst the presence of corruption tends to significantly reduce imports (Gani & Prasad, 2006). This means that the extent to which trade openness limits the opposition of incumbents will depend on institutional quality structures that are put in place to ensure healthy completion in the financial sector.

Stylised facts on trade openness, Institutions and Inclusive Growth of SSA Economies.

Trend analysis of trade openness and inclusive growth in SSA economies.

Figure 1 below is constructed from the sampled data sourced from the World Development indicators dataset as well as the inclusive growth index constructed by the Author:

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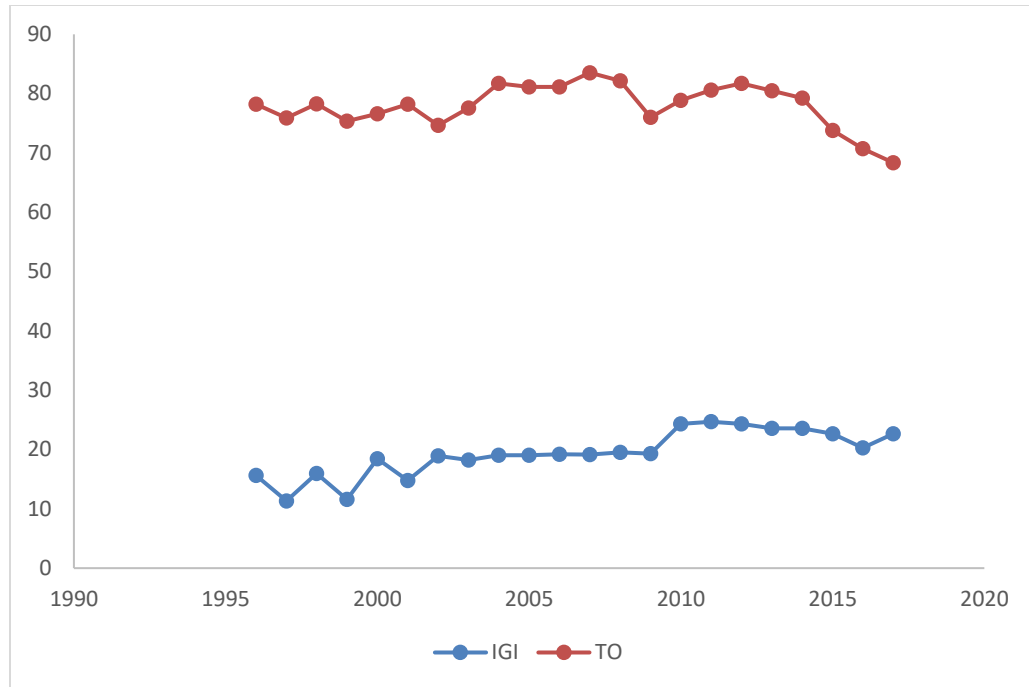
Figure 1: Trend analysis of trade openness and inclusive growth in SSA

Source: Field survey, Idan (2019)

From Figure 1, it can be seen that although there are fluctuations in the movement of inclusive growth (IGI) in SSA over the period of the study, it has generally depicted rising trend. Also trade openness (TO) in SSA over the years has depicted slightly falling trend from 2005 down to 2017. A comparative analysis of the trend in trade openness and inclusive growth reveals that over the years, trade openness has been above inclusive growth. However, trade openness and inclusive growth shows a similar trend as indicated on Figure 1. This gives an indication that trade openness may contribute much to inclusive growth in SSA economies.

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Trend analysis of institutions in SSA economies

Figures 2 and 3 below are constructed from the sampled data sourced from the worldwide governance indicators dataset:
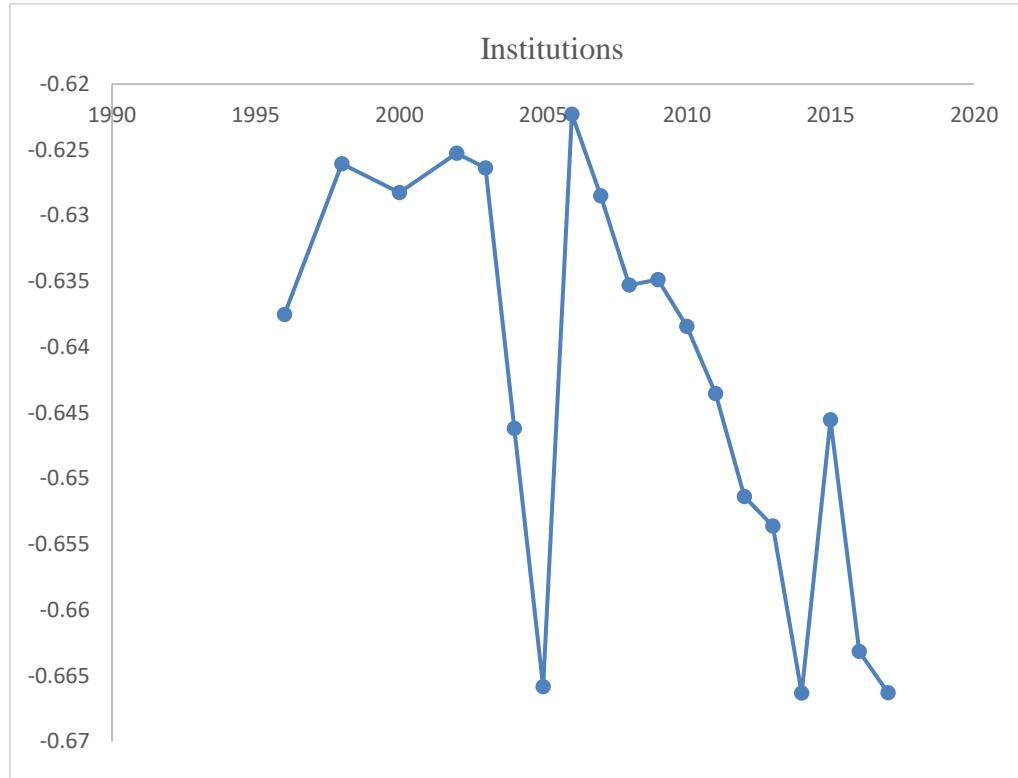
Figure 2: Trend analysis of composite institutional quality in SSA economies

Source: Field survey, Idan (2019)

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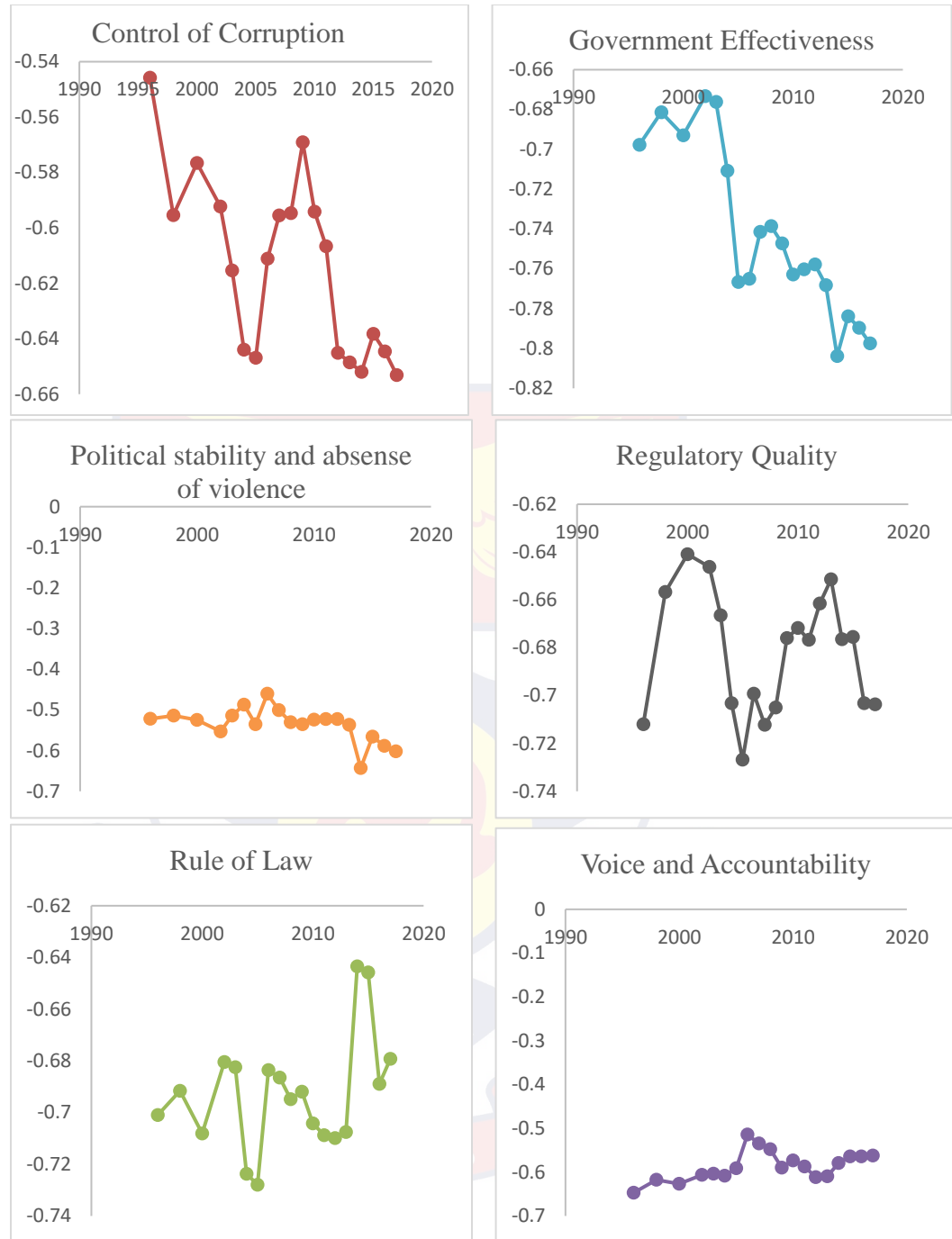
Figure 3: Trend analysis of institutional indicators in SSA economies

Source: Field survey, Idan (2019)

The trend in Figure 2 depicted a falling trend in institutional quality over the period. This shows that on average, SSA economies has a bad image when it

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comes to institutional quality. This is of the fact that there has been negative reporting of institutions concerning Sub-Saharan Africa. However, the individual institutional indicators from Figure 5 depict difference in trend with control of corruption showing a relatively falling trend. In a similar vein, government effectiveness also depicted a falling pattern over the period. These falling trends indicate that the perception that government officials make use of government power and public resources for their private gains increases over the period.

Again, the falling trend of government effectiveness in SSA economies indicates that government officials and government in power influence, mostly for their private benefits, policy formulation and implementation in the public and civil services. Political stability depicted a slightly falling trend over the period while voice and accountability depicted a slightly upward trend, which suggests that media freedom, freedom of association, freedom of expression, and the stability of citizens to elect their government have improved in SSA over the period of this study. Rule of law and regulatory quality depict a downward trend which shows that there is a legal and regulatory gap in SSA economies.

Given the evidence on trade openness, inclusive growth and institutional quality in SSA economies, it is fundamentally empirical to examine the role institutions play in the relationship between trade openness and inclusive growth in SSA economies.

Statement of the problem

Numerous empirical and statistical studies have identified economic growth as one of the main factors affecting poverty reduction (Dollar & Kraay, 2002;

Dollar, Kleineberg & Kraay, 2013; Hadhek & Mrad 2015). That notwithstanding, the recent economic growth over the decade shows that unemployment, income, gender inequality, poor industrial development and poverty continue to remain high in Africa (The African Economic Outlook, 2017). This clearly shows that irrespective of the recent economic growth increments seen by way of figures in most African countries, there is no corresponding or significant reflection in terms of development.

Dollar and Kraay (2002) argue that although growth may be good for the poor, high economic growth has not translated into poverty reduction in sub-Saharan Africa's human development indicators (Ngepah, 2017). The World Bank in 2013 also identify persistently high inequality as the underlying reason for the slow pace of poverty reduction and hence non-inclusivity of the recent growth. African Development Bank (2012) also reveals that Africa has become increasingly unequal, accounting for six of the world's ten most unequal countries. This clearly indicates that SSA is still lacking inclusiveness of the recent growth.

Meanwhile, most literature on inclusive growth, (Ali & Son 2007; Gupta & Jha, 2015; Stuart, 2011; African Development Bank (AfDB), 2012; Asian Development Bank (ADB), 2014; Kjøller-Hansen, & Sperling, 2013) limit the scope of research to capture, inclusive growth measurement indicators as well as how inclusiveness of respective regions have been so far. Again, there is a growing understanding that economic, political, legal and social institutions are critical for economic prosperity (Alesina & Rodrik, 1994) and this is less investigated in the extant literature.

There has been a significant improvement in inclusive growth literature with trade openness and its contribution showing a mixed result. For instance, Bendell (2017), Gilpin (2018) and Rodrik (2014) conclude in their respective studies that openness of trade contributes to a faster inclusive growth in emerging economies. Asante (2016), Irwin (2015) and Ulasan, (2012) on the other hand also conclude from their findings that openness of trade slow down inclusive growth. Institutions also affect the distribution of economic growth benefits across various social and political groups in a society, such that despite similar economic performance, poverty reduction differs substantially among nations (Glaeser, La Porta, Lopez-de-Silanes & Shleifer, 2004).

Most importantly, the effectiveness of trade openness will depend on institutional quality. Gani and Prasad (2006) explained that strong institutional quality is an integral part of enhancing the benefits of international trade for a country. This evidence that trade openness can better improve inclusive growth if there are strong rule-based trade governance in place (Chidede, 2017). However, there is little evidence in literature that affirms that trade openness will enhance inclusive growth if measures are put in place to improve the state of institutions in SSA economies.

Among others, Ross (2013) argue that oil hinders democratization and could even yield a "political curse" like it, for instance, allows the political elite to cultivate a culture of patronage. In that regard, international trade in such a resource could cause inclusive growth volatility since these resources deplete and or even more discovered. While the literature examines the relationship between openness

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and growth in detail, the openness and growth volatility relation has not been completely clarified (Haddad, Lim, Pancaro, & Saborowski 2013). Although many studies investigate the trade openness-volatility relationship (Easterly et al. 2001; Calderón et al. 2005; Cavallo, 2008; Malik and Temple, 2009; Haddad et al. 2013), trade openness remains the most controversial of all volatility determinants. However, no work has considered the effect of trade openness and institutions on inclusive growth volatility.

Another motivation for the revisiting this topic is methodology. Recent literature has acknowledged that all explanatory variables are assumed to be predetermined or suspected endogenous while only time-invariant variables or years are supposed to be strictly exogenous (Asongu & Nwachukwu, 2016). The reason is that it is not feasible for years to be endogenous in the first difference (Roodman, 2009b). Therefore, a robust methodology needs to be used to validate the findings in literature.

On these remarks, this study examines the interactive role of institutions in the relationship between trade openness and inclusive growth in Sub-Saharan Africa. Also, the study adopts the Roodman (2009a, 2009b) extension of Arellano and Bover (1995), which has been established to restrict over-identification and limit the proliferation of instruments (Love & Zicchino, 2006; Baltagi, 2008). Hence, the corresponding specification is a two-step GMM with forward orthogonal deviations instead of differencing. The two-step to the one-step procedure because the latter is homoscedasticity-consistent while the former controls for heteroscedasticity.

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Purpose of the Study

The purpose of this study is to examine how institutional quality and trade openness affect inclusive growth and inclusive growth volatility in Sub-Saharan Africa economies.

Research Objectives

1. Assess the relationship between trade openness and inclusive growth in Sub-Saharan Africa.

2. Assess the relationship between institutions and inclusive growth in Sub-Saharan Africa.

3. Determine the role of institutions in the relationship between trade openness and inclusive growth in Sub-Saharan Africa.

4. Assess the relationship between trade openness and inclusive growth volatility in Sub-Saharan Africa.

5. Assess the relationship between institutions and inclusive growth volatility in Sub-Saharan Africa.

Research Hypothesis

H_1:**.** There is a positive relationship between trade openness and inclusive growth in Sub-Saharan Africa.

H_2:**.** There is a positive relationship between institutions and inclusive growth in Sub-Saharan Africa.

H_3:**.** Institution quality moderate the relationship between trade openness and inclusive growth.

H_4:. There is a positive relationship between trade openness and inclusive growth volatility in Sub-Saharan Africa.

H_5:. There is a positive relationship between institutions and inclusive growth volatility in Sub-Saharan Africa.

Significance of the Study

This study contributes to the recent and growing literature on inclusive growth. It also investigates the main structural factors that impact inclusive growth with particular attention to trade openness and institutional quality. The study also would inform policymakers about the focal area in the economy that much attention needs to be given to ensure fast and even distribution of growth in SSA economies.

Delimitations

The study is delimited to Sub-Saharan Africa due to high inequality, unemployment and poverty cases in the region yet the region recording increased growth. Also, this region is identified with characteristics which are different from the few Arab countries in the continent of Africa. The study is delimited to a sample 39 economies out of the 48 countries in the SSA region due to data availability in the sampled areas. The study also used the sum of import and export (% of GDP) as a proxy for trade openness and also measured institutions as the aggregate of the six institutional indicators. These measures were used because they are widely used extant literature compared to other measures.

Limitations

The study is limited in the use of Generalized Methods of Moment in its estimation although other panel estimation techniques such as the fixed effect

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model and the pooled ordinary least squares estimation techniques exist. Nonetheless, the two step Generalized Methods of Moment is more efficient in analyzing panel data and also addresses endogeneity problems associated with panel data estimations. Again, the study is limited to the period under review due to data availability. However, generalization can be drawn from the findings to other periods with similar characteristics.

Definition of Terms

Inclusive Growth

The AfDB in 2012 defines inclusive growth as 'economic growth that results in wider access to sustainable socio-economic opportunities for a broader number of people, regions or countries while protecting the vulnerable, all being done in an environment of fairness, equal justice, and political plurality'.

Trade Openness

Mputu (2016) define trade openness to measure the extent to which economic policies restrict and invite international trade. This definition emphasized the fact that the more open the trade of an economy is, the more the economic policies invite international trade.

Institution

This refers to the quality of governance in each economy. Kuafmann et al. (2010) define institutional quality as 'the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state

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for institutions that govern economic and social interactions among them'. The six indicators incorporated in the WGI are the following:

1. Voice and Accountability: the freedom of association, expression, and the press, as well as the degree to which people can be involved in the selection of their government.

2. Political Stability and Absence of Violence: the probability that terrorism, violent or unconstitutional means result in the destabilization of the government.

3. Government Effectiveness: the capability of the civil and public service, the quality of policy formulation and implementation, as well as the independence from political pressures and the credibility of the government to commit to the policies.

4. Regulatory Quality: the capability of the government to make appropriate regulations and policies that promote and enable private sector development.

5. Rule of Law: the degree to which the rules of the society are supported and followed by the citizens, which includes the quality of the police, property rights and the risk of crimes.

6. Control of Corruption: this index indicates the degree to which public power is used for private gain, as well as the extent to which the state is captured by an elite.

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Organization of the Study

The study would be put into five sections as chapters, and each section will take precedence from the previous. Chapter 1 will include the background, problem statement, purpose, hypotheses, delimitations and limitations. Chapter 2 will include reviewed literature based on, theoretical, conceptual and empirical frameworks. Chapter 3 will include research design, population, data collection, ethical issues and data analysis procedures. Chapter 4 will include analysis and discussions and Chapter 5 will include summary, conclusions and recommendations.
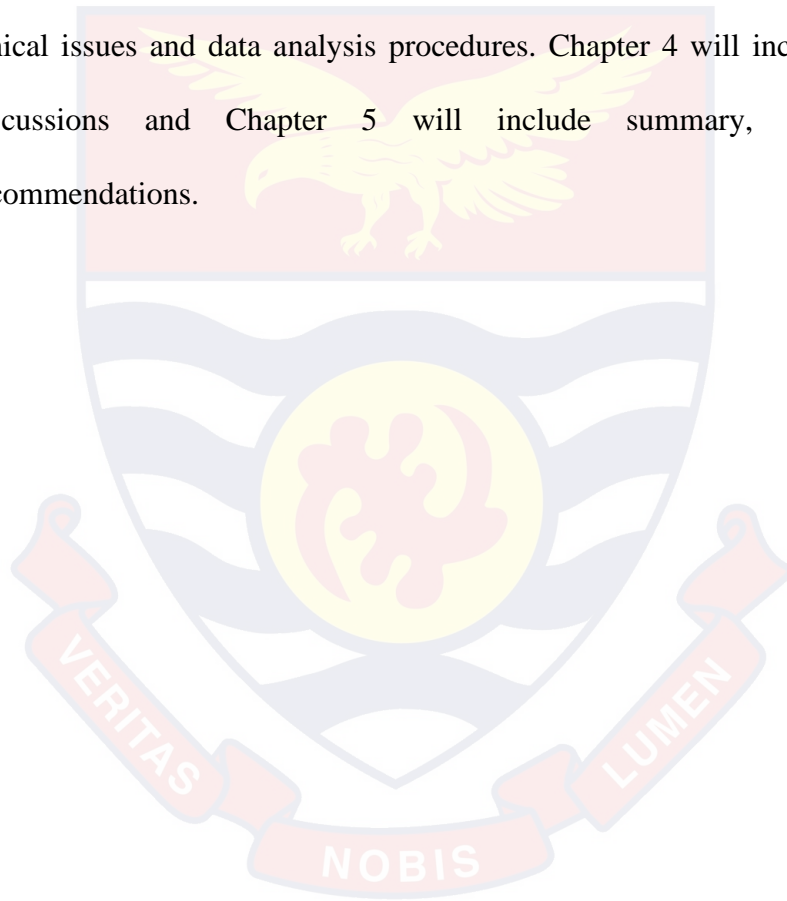
CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter reviews related work with regards to 1) how trade openness influences inclusive growth, 2) how institutions affect inclusive growth and 3) how institutions moderate the relationship between trade openness and inclusive growth. It first reviews the theories underpinning this work. Thereafter, empirical works related to these relationships are reviewed then finally, the summary of the chapter is presented.

Theoretical Review

Utilitarian Social Welfare Theory

Utilitarian Social Welfare Theory outlines how political and economic forces shape the structural institutions of social welfare. The theory puts emphasis on the role of interest groups such as the government in defining social welfare and explain why some interest groups remain marginal to the welfare enterprise. The theory builds on the social welfare function by way of inclusiveness of all factors needed to expand the income growth of a state and also the fairness of income distribution to benefit these structural interest groups.

The theory combines both the brain behind the new endogenous growth factors that aim to increase the overall income of a state as well as the requisite and enabling environment expressed in LaPorta et al.'s (1999) Theories of Institutional Development. Utilitarian Social Welfare Theory is used in the context of inclusive growth to explain how a nation's growth in domestic product is first arrived at and

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sustained as well as how that growth is fairly distributed with enabling institutions. This goes down to solving inequality and accounts for the use of GDP per Capita which ensures wellbeing of all in the society.

New Endogenous Growth Theory

The New Endogenous Growth theory explains the long-run growth rate of an economy on the basis of endogenous factors as against exogenous factors of the neoclassical growth theory. This theory is of the view that the growth in gross domestic product (GDP) is a natural consequence of long-run equilibrium. The theory explains both growth rate differentials across countries and a greater proportion of the growth observed. Endogenous growth theory discards the neoclassical assumption of diminishing marginal returns to capital investments, permitting increasing returns to scale in aggregate production and frequently focusing on the role of externalities in determining the rate of return on capital investments.

Assuming that public and private investments in human capital generate external economies and productivity improvements that offset the natural tendency for diminishing returns, endogenous growth theory explains the existence of increasing returns to scale and the divergent long-term growth patterns among countries. Thus, the theory emphasizes technical progress resulting from the rate of investment, the size of the capital stock and the stock of human capital (Todaro & Smith, 2011).

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Theories of Institutional Development

This study is also based on LaPorta, Lopez de Silanes, Shleifer, and Vishny (1999)'s theories of institutional development which centres on factors that can lead to the formation and persistence of a given institutional framework in a society. The theories of institutional development can be classified into three based on their structural composition namely: economic, political and cultural institutional theories. The economic theory of institutional framework believes that institutions are essentially crafted when it is efficient to create them. The connotation of this is that institutions are mostly created by economic actors when the perceived social benefits of such creation significantly exceed the perceived transaction costs that are associated with their creation.

The political theory of institutional development hinges fundamentally on redistribution of societal resources much more than economic efficiency. The basic maxim of the political institutional development is that institutions are fashioned by those that have political powers in such a way that they can stay in power with a view to extracting economic rents (Adewole & Osabuohien, 2007). On the other hand, cultural theory of institutional development postulates that a given society will usually hold beliefs that can shape collective actions of the constituting human agents.

Relation of theories to the research

This study is based on three main theories, first is the Utilitarian Social Welfare Theory which explains inclusive growth to depend on two factors: income growth and income distribution (IMF Report 2013). The second is the new

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endogenous growth theory which was developed as a reaction to omissions and deficiencies in the Solow neoclassical growth model (Mathew & Adegboye, 2013). The third, LaPorta et al. (1999)'s theories of institutional development which centre on factors that can lead to the formation and persistence of a given institutional framework in a society.

The Utilitarian Social Welfare theory combines both the brain behind the new endogenous growth factors that aim to increase the overall income of a state as well as the requisite and enabling environment expressed in LaPorta et al. (1999)'s Theories of Institutional Development. Utilitarian Social Welfare Theory is used in the contest of inclusive growth to explain how a nation's growth in domestic product is first arrived at and sustained as well as how that growth is fairly distributed with enabling institutions. This goes down to solving inequality and accounts for the use of GDP per Capital which ensures wellbeing of all in the society.

Again, the theories of institutional development motivate the examining of how institutions moderate the relationship between trade openness and inclusive growth in SSA economies as well as the separate effect of trade openness and institutions on inclusive growth in SSA economies. This is so because the main argument of the institutional development theories is that legal systems explain the legal origins, the rules themselves as well as the quality of their enforcement which foster inclusiveness of growth. Meanwhile, the new endogenous growth theory connects the trade openness to growth by first focusing natural endowment of each economy that promotes economies of scale and hence competing in the global

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market as well as trade that enhances the growth of the economy by way of improved job availability and industrialization.

Empirical Review

Trade Openness and Inclusive Growth

It is widely accepted that open economies grow faster compared to closed ones. The globalization movement, which accelerated especially in the 1980s, enforced this situation to come into view more clearly. According to Fischer (2003), globalization is defined as the "ongoing process of greater economic interdependence among countries reflected in the increasing amount of cross-border trade in goods and services, the increasing volume of international financial flows and increasing flows of labor".

It is key to admit that, there is a lack of a clear definition of "trade liberalization" or "openness". The two concepts while closely related are not identical. Trade liberalization includes policy measures to increase trade openness while increased trade openness is usually considered as an increase in the size of a country's traded sectors in relation to total output. Increased openness can, but need not, be the result of trade liberalization. Recently, the meaning of "openness" has become identical to the idea of "free trade" that is a system where all trade distortions are eradicated.

Pritchett (1996) simply defines "openness" as an economy's trade intensity. However, according to Pigka-Balanika, (2013), it would be more precise to define openness in relation to barriers to international trade imposed by governments. New economic geography models (NEG) specifically define international trade

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openness as low international trade cost which is an abstraction of transport cost, tariffs, subsidies taxes and non-tariffs barriers. Yanikkaya (2003) mentions that this definition has changed over time from one extreme to another. In it all, trade openness is relatively free trade among countries where barriers are reduced to the minimum, making it possible and easy for member countries to move goods and services.

Several studies (North, 1990; Aron, 2000; et. al.) have shown the positive effects of having strong and high-quality institutions and its repercussion in the economic development. Defenders of geographical conditions, like Folke, Hahn, Olsson, and Norberg (2005) argue that geographical location and natural resources have a direct repercussion during the growth process. Under this line of thinking, geographic conditions have favoured the agriculture, and consequently settlements. Nevertheless, even when the institutional view recognizes the importance of those two elements for economic development, institutionalism adduces that it is only through the institutions that this element can have any impact.

Below the threshold level, however, trade openness has detrimental effects on growth. Afzal and Hussain (2010) find no causal relationship between exports and growth development as well as between imports and growth in Pakistan. This finding has been challenged by Klasra (2011) and Shahbaz (2012) who confirm the trade-led growth hypothesis for Pakistan. Dufrenot, Mignon, and Tsangarides (2010) apply the quantile regression approach to explore the trade-growth nexus for 75 developing countries. Their results indicate that the effect of openness on inclusive growth is higher in low-growth countries relative to high-growth

countries. The low-growth economies include countries from all the continents, but a majority is in Africa (Benin, Cote d'Ivoire, Madagascar, and Zambia) and Latin America.

Kim, Lin, and Suen (2011) use instrumental variable threshold regressions to examine whether the trade-income relationship varies with the level of economic development. Their results show that trade openness has positive effects on financial development, capital accumulation, and economic development in high-income countries. In low-income countries, however, the effect is negative and significant. Kim et. al. (2011) shows that openness to trade has positive effects on economic growth and real income in developed countries but negative effects in developing countries. This is believed to also affect inclusiveness of growth by way of considering first, the growth aspect as spelt out in Ali and Son (2007)

Some studies suggest that trade liberalization is not associated with growth while others conclude that trade openness may even retard growth. For example, while Dollar and Kraay (2002) argue that trade openness helps to increase the speed of convergence, the evidence from the study by Easterly (2001) suggests that increased openness to trade has led to income divergence rather than convergence in African countries. In fact, Rodrik (2001) argues that, regarding trade openness and growth, the only systematic relationship is that countries dismantle trade restrictions as they get richer. The issue of whether trade and increased openness of trade would lead to higher rates of economic growth is an age-old debate between pro-traders and anti-traders over the years.

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Early proponents of free trade have lauded the gains from trade through the specialization of countries in the production of goods in which they have comparative advantage and engage in trade and exchange to meet their other needs. But the anti-traders see trade to be the main cause of dumping of goods that have affected the developing countries adversely. New development theorists contend that openness to trade stimulates technological change by increasing domestic rivalry and competition, leading to increased innovation; and that trade liberalization by allowing new goods to flow freely across national borders increases the stock of knowledge for technological innovations which spur growth (Alege, 1993; Ahmed & Sattar, 2004).

Trade Openness and Inclusive Growth in Africa

On the empirical front, a growing literature has examined the relationship between trade and growth. The evidence from this literature is mixed and conflicting across methodologies and countries. The studies by Bahmani-Oskooee and Niroomand (1999), Frankel and Romer (1999), Yanikkaya (2003), Dollar and Kraay (2002), Freund and Bolaky (2008), Marelli and Signorelli (2011), Nowbutsing (2014) and Zarra, Nezhad, Hosseinpour, and Arman (2014) confirm the positive impact of trade on inclusive growth.

In contrast, Rigobon and Rodrik (2005) find a significant negative impact of trade on income levels. Fenira (2015) finds a weak relationship between trade openness and inclusive growth. Rassekh (2007) investigates the trade-growth nexus for 150 countries and finds that lower income countries benefit more from international trade as compared to higher income economies. In a study of 82

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countries, Chang et al. (2009) report a positive relationship between trade openness and economic growth. Kim and Lin (2009) apply the instrument-variable threshold regression approach to 61 countries and find an income threshold level above which greater trade enhances inclusive growth.

Sub-Sahara African (SSA) countries have implemented a series of economic reforms, including trade liberalization, with the aim of improving on the level of their economic growth. The theoretical motivation for these reforms is that trade liberalization is expected to increase trade, which in turn raises the rate of inclusive growth. However, the empirical evidence from the large and growing literature on trade and growth remains mixed (Du, Bhattacharya & Sen, 2010).

Reduction in trade costs facilitates the expansion of regional and global value chains, which are strong drivers of productivity and manufacturing exports. They can also support economic diversification depending on the supply-response, skills and capabilities of the private sector. However, trade in Africa is met with high transaction, transport, customs and administrative costs, plus delays at ports, border posts and various roadblocks as well as inefficient payment systems. At this juncture, Africa's trade facilitation performance could be enhanced quickly by implementing the WTO Trade Facilitation Agreement, albeit with challenges, (Batibonak, 2017), which is expected to greatly reduce trade costs and facilitate trade. To date, only a few African countries have ratified the Agreement.

While the literature examines the relationship between openness and growth in detail, the openness and growth volatility relation has not been completely clarified (Haddad et al., 2013). Although many studies investigate the trade

openness-volatility relationship (Easterly et al., 2001; Calderón et al., 2005; Cavallo, 2008; Jansen et al., 2009; Malik and Temple, 2009; Haddad et al., 2013), openness remains the most controversial of all volatility determinants. It is well-known that trade exposes countries to external shocks (Di Giovanni & Levchenko, 2009) and that external shocks are a source of macroeconomic volatility (Easterly et al., 2001; Kose et al., 2003), yet greater openness decreases the sensitivity to internally induced shocks (such as domestic demand shortage), as more open sectors are less correlated with the rest of the home economy.

Sakyi, Villaverde, and Maza (2015) provide evidence of positive bi-directional causal relationship between trade and growth for a sample of 115 developing countries. Were (2015) finds that trade exerts a positive and significant effect on inclusive growth rate in developed and developing countries, but its effect is not significant for least developed countries which largely include African countries. In a study of China, Hye, Wizarat, and Lau (2016) show that trade openness is positively related to growth in the long and short run. Regarding the Sub-Saharan African countries, the evidence is also mixed.

Chang and Ying (2008) confirm the positive growth effects of trade and air freight for a sample of Economic Commission for Africa (ECA) countries. Gries, Kraft, and Meierrieks (2009) investigate the case of 16 Sub-Saharan African countries and do not find significant long-run relationships among the variables for most of the sample. They also provide evidence that economic growth causes trade openness in Ethiopia, Gabon, Kenya, Mauritius, Senegal, Sierra Leone, and Togo, whereas a feedback causal relationship exists for Cameroon, Cote d'Ivoire, Nigeria

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and Rwanda. On the contrary, no causal relationship between trade and growth was found for Burundi, Ghana, Madagascar, South Africa, and Gambia. For a sample of 34 African countries, Vlastou (2010) finds that openness to trade has a negative impact on economic growth. He also reports a causal relationship running from openness to growth.

In a study of 27 African least developed countries, Tekin (2012) finds no significant causality between foreign aid, trade openness and real per capita GDP. Asfaw (2014) analyses the impact of trade liberalization on economic growth in a sample of 47 Sub-Saharan African countries. The results reveal that openness to trade stimulates both economic growth and investment. Besides, trade policies such as average weighted tariff rate and real effective exchange rate affect economic performance through trade. Menyah, Nazlioglu, and Wolde-Rufael (2014) investigate the causal nexus among financial development, trade openness and economic growth for 21 Sub-Saharan African countries. They find limited support for the trade-led growth hypothesis. The trade-led growth hypothesis holds only for Benin, Sierra Leone, and South Africa.

In a more recent work, Brueckner and Lederman (2015) employ the instrumental variable approach to a panel of 41 Sub-Saharan African countries. They find that trade openness increases economic growth both in the short and long run. Musila and Yiheyis (2015) investigate the case of Kenya and find that trade openness has positive effect on investment ratio but not on the rate of economic growth. Polat, Shahman and Satti (2015) find that trade openness impedes economic growth in South Africa. Finally, Lawal, Nwanji, Asaleye, and Ahmed

(2016) apply the ARDL methodology to Nigeria and find a negative long-run impact of trade openness on economic growth but a positive growth effect in the short run. Further, a two-way causality was found between the two variables.

Institutions and Inclusive Growth

Institutions can be considered as the basic rules for involvement among humans. In the strictest sense, institutions have two main objectives: first of all, to economize, redistribute and promote the maximization of wealth. Secondly to guarantee property rights. However, in the real life the institutions are the rules that maintain the functioning of society (Olsson, 1999). It is possible to identify three main institutional dimensions: economic, political and social. The first ones are related with the economic freedom, they are in charge of guaranteeing the property rights and incentive innovation and investment.

The political institutions are measured in terms of political freedom, civil liberties, political rights and political stability. And finally, social institutions are the rules that can shape social values and ethical principles. Regarding these institutions, Putnam (1993) has coined the "social capital" term, referring to the rules and standards that shape the quality and quantity of the interaction of the members of the society. Following this argument, Putnam´s idea suggests that a society with high degree of cohesion will derive more investment. The main reason for this statement is that cohesive society will require less protection for the individuals, which represents less costs and, finally, can be understood as an incentive for investment.

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Acemoglu and Robinson (2012) state that if it is true that economical institutions determine the wealth of the nation, it is also true that the political institutions shape the economical ones. Political institutions are efficient if they can assure the participation of the individuals in the electoral process, providing them the faculty of renewing or removing its leaders. Political institutions can also be considered inclusive and exclusive. The first ones are based on a pluralist system and centralized power. On the other hand, a powerful elite that can extract resources from society characterizes the extractive economies. According to Acemoglu (2012) there is a strong relationship between pluralism and inclusive economies. But these economies are not pluralist, they also have a centralized backrest. For this economist, countries can fail when they have extractive economies supported by extractive political institutions.

Several academic efforts have tried to measure the relation between institutions and development. Krause (2009) has created an Institutional Quality Index, with the purpose of measuring the quality of economic and political institutions. The first ones are assessed through the evaluation of the market operations. The variables used are focused in elements that motivate the active participation of the individuals, conditions that reward the competitiveness; promote the economic freedom, currency stability and tax regulations. Regarding the political institutions, Krause considers relative terms for measuring intangible concepts like justice, democracy, transparency accountability and property rights.

Agyemang, Gatsi and Ansong (2018) contributes to the extant literature by using other financial market development variables, ease of access to loans and

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venture capital availability, that have not before been used to analyzed how institutional structures influence the level of financial markets development in the context of Africa. This study employed a two-step generalized method of moment estimator with corrected standard errors to examine this. The result demonstrate that a high-quality institutional environment is relevant in explaining ease of access to loans and venture capital availability in Africa which on a long improve inclusive growth.

In a similar way, Kuncic (2012) developed the institutional quality dataset, establishing institutions as the core stone of economic and social activities. He has created a World Institutional Ranking using indicators of formal institutions. Thanks to this ranking, it is possible to string along the changes of a certain country through the years. In a like way, Eicher and Röhn (2007) have published the Institutions Climate Index (ICI); with the intention of exploring the institutional clash in the economic growth. Contrasting with the first two proposals, the ICI propose a more extensive view. Constructed by several variables aggregated in seven categories, the ICI is not only focused on marketing a formal political variable, it also measures social conditions.

Probably, the biggest contribution of this index is the two categories measuring potential events. The first one can be related with social stability because it considers the potential conflict, either between nations, inside the same country or between two different religious groups. In addition, it makes an approach to the potential conflict if the military force has participation in the political arena. The second category of potential events is about the innovation potential. The pattern

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register and the number of the published journals are two variables that feed the index.

Trade Openness, Institutions and Inclusive Growth

It is important to note that trade alone cannot ensure inclusive growth, other complementary policies aimed at giving equal opportunities in areas of business, education, employment and information are equally important. Domestic policies and governance matters: education, labour market, intellectual property, investment, competition policies are important to support trade policy. All of these are necessary to promote inclusive growth. Empirical studies demonstrate that, protectionist measures hurt those they are supposed to protect. For example, the OECD study shows that protectionism makes domestic firms less competitive in the export market and stunts economic growth. Hufbauer and Lowry (2012) observe that the imposition of additional tariffs by the US on Chinese imports in 2009 contributed to great job losses in the country.

Chidede (2017), discusses how trade and integration can be used to facilitate Africa's quest for inclusive growth and point out that, building strong rules-based trade governance is also key to ensure inclusive growth. For example, transparent, robust, well-enforced trade rules help to promote healthy competition and to provide remedies in cases of unfair trade practices. Upholding the rule of law in trade can help protect countries, businesses and people against the abuse of barriers to trade and subsidies. In similar vein, the rules-based trade that allows individuals or private parties' participation in trade activities, including dispute settlement, will enable them to reap the full benefits of trade. In the face of on-going trade

negotiations such as the CFTA, TFTA and Economic Partnership Agreements with the European Union, it is important for African countries to ensure that they adopt rules-based mechanisms necessary to achieve inclusive growth.

A joint publication by the WTO, IMF and the World Bank (2017) provides empirical evidence of how trade has created jobs, growth and development in both developing and developed countries, at the same time leaving out many individuals and communities. The publication notes some downside effects brought by trade such as dislocation of firms and workers. Be that as it may, the downside effects of trade should not be overstated to undermine the benefits of trade. According to the WTO and others, with appropriate supporting policies, the downside effects of trade can be offset, thus lifting those left behind and enabling them to reap fully the benefits of trade. Trade reform and facilitation policies, global and regional integration plus rules-based trade governance are some of the things that are needed to ensure that trade benefits are inclusive.

Trade facilitation measures are key to achieve inclusive growth. The measures simplify trade procedures, reduce trade costs, and enhance access and efficiency of trade-related services. The simplification of procedures benefits SMEs through creating a level playing field for them and encouraging their participation in regional and global trade. Other trade facilitation measures such as access to finance and trade-related information benefit SMEs and may encourage or enable women and the youth to actively participate in trade. SMEs are very important because they account for most jobs, even in Africa, and if they boost export potential, competitiveness and connect to value chains, they generally register

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particularly high productivity, wage, and employment gains (Marakbi, & Turcu, 2016).

It has been observed from literature that one of the causes of the limited growth effects of trade liberalization is the weakness of institutions. Indeed, one strand of the literature on growth has argued for the primacy of institutions in economic growth (Easterly & Levine, 2003; Dollar & Kraay, 2003; Rodrik, Subramanian & Trebbi, 2004). Findings from empirical studies have concluded that institutions are crucial for the success of economic reforms in developing countries (Acemoglu, Johnson & Robinson, 2003; Dollar & Kraay, 2003; Addison & Baliamoune-Lutz, 2006). This evidence suggests that the failure of trade reforms to promote trade and growth in sub-Sahara African countries may be attributable to the poor quality of institutions. In a study by Addison and Baliamoune-Lutz (2006) on North African countries, the results from their study show that the growth effects of economic reforms depend to a large extent on the quality of institutions.

Matthew and Adegboye, (2013) examined the influence of trade openness and institutions on growth using a sample of thirty (30) countries in SSA for the period 1985-2012 to empirically evaluate the role of institutions and trade openness on economic growth in sub-Saharan Africa. The major findings from this study revealed that while institutions have significant impact on growth, trade openness does not have as much significance. For these SSA countries to harness maximum gains from international trade, there has to be the presence of strong institutions. Conclusively, the study has made contribution by increasing the level of empirical

researches that have been carried out on the link between trade liberalization, institutions and economic growth especially in SSA (Matthew & Adegboye, 2013).

In Ianchovichina and Lundstrom (2009), the analysis suggests that income growth in Zambia is constrained by poor access to domestic and international markets, inputs, extension services, and information. High indirect costs, mostly attributable to infrastructure service-related inputs in production including energy, transport, telecom, water, but also insurance, marketing, and professional services, undermine Zambia's competitiveness, limit job creation, and therefore serve as a major constraint to inclusive growth. It is also observed that weak governance effectiveness is an evidence behind the market coordination failures and the identified government failures, and are as such major obstacles to inclusive growth in Zambia (Ianchovichina & Lundstrom 2009).

Trade Openness and Inclusive Growth Volatility

Employing industry-level panel data-set of manufacturing production and trade from 1970–1999, Giovanni and Levchenko (2009) found that the positive and significant relationship between trade openness and overall volatility. Openness increases an economy's susceptibility to external shocks and could lead to higher volatility in trade flows and economic growth. Contrary, Cavallo (2008) concludes that trade openness reduces growth volatility. By reinforcing this argument, Calderon and Schmidt-Hebbel (2008) reveal a negative relationship between openness and volatility only when export is diversified. The authors also established that countries with higher trade openness were less prone to output drops, and countries with higher financial openness were more likely to experience

sharp drops in real output only if their external liabilities are more biased towards debt than equity.

Razin Sadka and Coury, (2003) argue that trade openness is associated with economic growth instability and as a result can lead to economic recession. Calderon and Yeyati (2009) find strong varying effects of openness towards external shocks on growth and volatility. Kose et al. (2003) show that trade openness increases the volatility of output and consumption growth in emerging market economies and reduces the volatility of consumption growth relative to that of income growth. Easterly, Islam, and Stiglitz (2001) conclude on bidirectional effect of trade openness on economic growth. The authors reveal that whilst trade openness enhances growth and specialization, shocks from terms of trade may exacerbate the economies vulnerability thereby raising growth volatility. Employing data on 85 countries, Kose, Prasad, and Terrones (2006) find positive relationship between economic growth volatility and trade integration. However, the authors found no relationship between financial integration and economic growth volatility from period 1960–2000. Similarly, using data from the period 1996–2009, Fujii (2017) finds significant positive association between trade openness and output volatility in Japan.

Institutions and inclusive Growth Volatility

Previous literature provides evidence that there is a positive effect of institutional quality on economic growth, while higher levels of institutional quality seem to decrease measures of macroeconomic volatility. Whitford (2014) in her paper performs a panel data analysis to examine the impact of institutional quality

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on economic growth and macroeconomic volatility measured as inflation as well as the GARCH variance of real GDP. The Kaufmann World Governance Indicators (WGI) are used as a proxy for institutional quality and the sample includes 214 countries covering the years 1996-2012. The results shown that higher institutional quality increases economic growth. In addition to that, there seems to be a significant negative effect of institutional quality on macroeconomic volatility, as measured by inflation in the panel fixed effect least squares regression. On the contrary, institutional quality has no statistically significant effect on output volatility in the instrumental variable regression for the full set of countries. However, there seems to be a more significant negative effect of institutional quality on output volatility in the panel least squares as well as the TSLS estimation of Latin American countries as compared to the full sample.

Again, Valeriani and Peluso (2011) investigated the impact of institutional quality on economic growth at different stages of development and tested on a panel data containing observations from 1950 to 2009 referring to 181 countries through a pooled regression model and a fixed effects model. The overall evidence showed by the regressions is in line with the hypothesis that institutional quality has a significant positive impact on economic growth. This is true both for developing and developed countries. Of course, the model is relatively basic and additional factors may change the results, nevertheless, there is at least some indication that the institutional indicators withstand robustness checks as they performed quite similar results under different economic conditions.

Gaps in existing literature

The theoretical and empirical review generally gives an indication that trade openness and quality of institutions matter for inclusive growth in SSA economies. Again, the review of literature explains that institutions moderates the relationship between trade openness and inclusive growth in SSA economies. This is because the effectiveness of trade openness will depend on the quality of institution of each economy (Gani & Prasad, 2006). Again, there is little evidence in literature that affirms that trade openness will enhance inclusive growth if measures are put in place to improve the state of institutions in SSA economies. The study by Doumbia, (2019) and Khan, Khan, Safdar, Munir and Andleeb (2016) as well as and the joint publication of WTO, IMF and the World Bank (2017) come close to this current study however, there were no interaction terms of trade openness and institutions in their studies. Meanwhile the reviewed literature evidenced that trade openness can better improve inclusive growth if there are strong rules-based trade governance in place (Chidede, 2017).

Contribution to existing studies

The current study employs a broad measurement of institutions to capture the moderating effect of institutions on the relationship between trade openness and inclusive growth in SSA economies. This contributes to the existing studies on inclusive growth ang again fills a gap in literature by including an interaction term of trade openness and institutions in a regression equation that assesses the moderation effect of institutions on the relationship between trade openness and inclusive growth in SSA economies.

Conceptual Framework
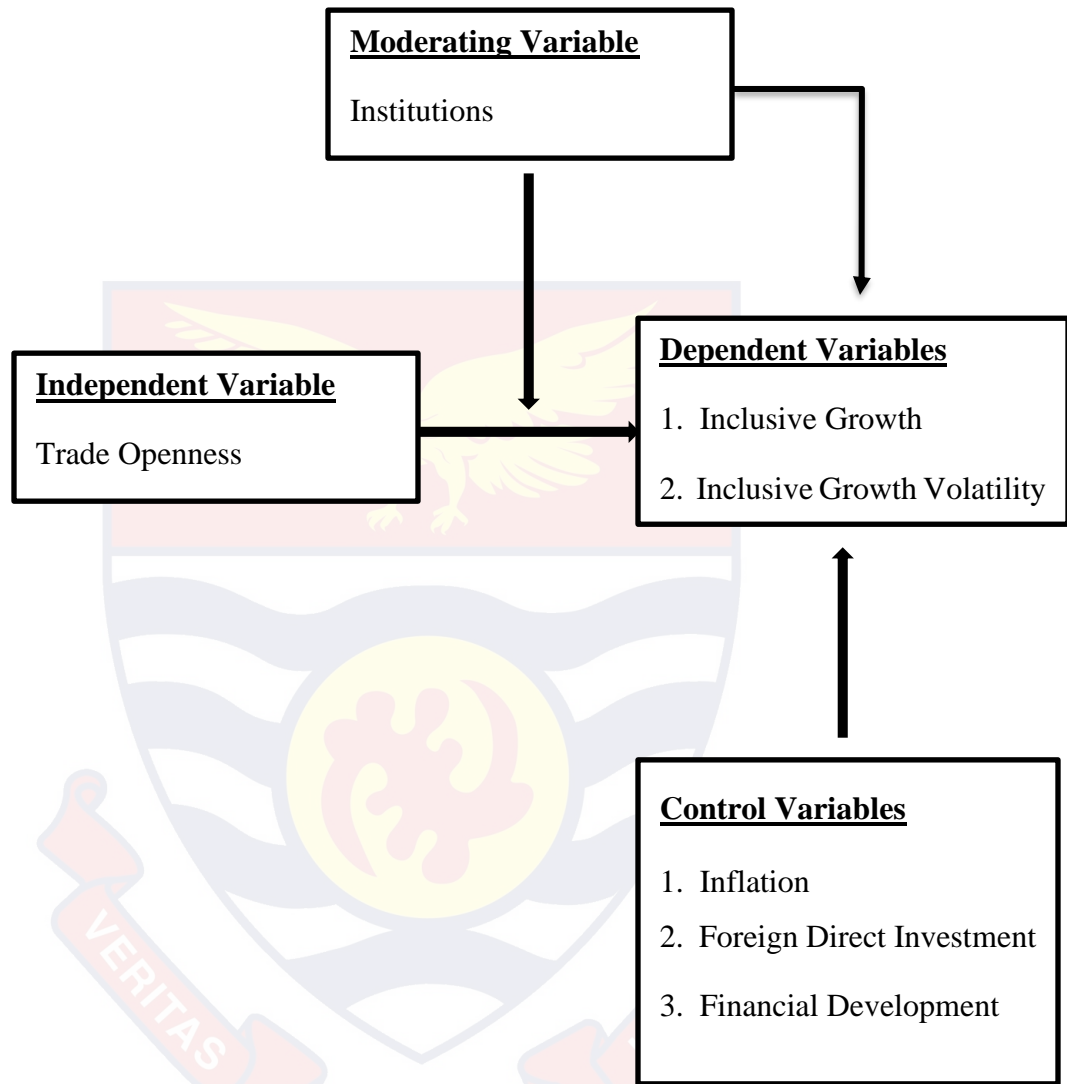
Figure 4: Conceptual framework

Source: Author's own construct

       Figure 4 above shows how trade openness and institutions affect inclusive

growth and inclusive growth volatility in SSA economies. Figure 4 further shows

the interaction role played by institutions in the relationship between trade openness

and inclusive growth in SSA economies. Finally, Figure 4 shows the direct link of

the control variables (Inflation, Foreign Direct Investment and Financial Development) and the dependent variables (inclusive growth and inclusive growth volatility). The justification for the control variables is discussed in subsequent paragraphs.

Control Variables

Ali and Ahmad's (2013) co-integration analysis shows inverse influence of growth on income inequality whereas foreign aid, foreign direct investment and labour force participation rate have positive influence on inequality. A vector error correction model result confirms long run causality for Pakistan from 1972–2007, as the coefficient of error correction term is significantly negative. Asghar and Javed (2012) found that larger education and employment opportunities are inclusive but distributed inequitably over the time period of 1998 to 2008 for Pakistan. However, Thorat and Dubey (2012) found that few communities get more advantages from poverty reduction strategies and inequality negatively influence poverty reduction in urban areas of India. Morgan (2007) affirm the findings and explain that FDI can encourage future social progress while, in turn, elements of social progress such as infrastructure, education, and personal and political security can help attract foreign investment.

Rahul, Saurabh, and Shanak (2012); Rahul, Saurabh, and Shanak (2013); Rahul, Saurabh, and Shanak (2014); and Wieland, Afanasyeva, Kuete, and Yoo, (2016) explain in their research findings that higher inflation is associated with less poverty reduction, through lower average welfare growth as well as with an adverse contribution to distributional effects. In particular, poor households are usually

more affected by food price inflation as they need to spend disproportionately more on food, and substitution possibilities are limited. Also, financial development, measured by the credit to private sector, is very important for inclusive growth. Khan et al. (2016) explain that the improvements in the financial sector make easy access to a loan for investment. In previous findings such as Levine (2005) financial development is positively linked to growth. Again, Anand et al. (2013) affirm that financial development positively and strongly affects inclusive growth in emerging economies.

Chapter Summary

This chapter presented the literature review of the study. The chapter begun by explaining the theories and concepts employed in the study. The study employed first, Utilitarian Social Welfare Theory which explains inclusive growth to depend on two factors: income growth and income distribution, Then, new endogenous growth theory which was developed as a reaction to omissions and deficiencies in the Solow neoclassical growth model as well as LaPorta et al. (1999)'s theories of institutional development which center on factors that can lead to the formation and persistence of a given institutional framework in a society. The chapter again reviewed the related literature on trade, institutions and inclusive growth in SSA economies.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter explains the procedures and measure systematically used to explain the role of institutional quality and trade openness on inclusive growth is SSA. The chapter begins with the research paradigm. Research design and approach, followed by data collection procedure, models specification, data processing tool and analytical technique. It is then followed by measurements of variables and finally the chapter summary.

Research Paradigm

This study follows the positivism approach to research paradigm which allow the researcher understand the topic within the descriptive casual frameworks (Aaker, Kumar, George & Day, 2001; Yilmaz, 2013; Hays & Wood, 2011). Proponents of positivism paradigm explains that this approach involves researching into an observable social observation and coming up with conclusions and generalizations (Cooper & Schindler, 2008). Specifically, positivism paradigm involves the collection of data, analysis of collected data by use of statistical test of significance and finally present findings which are quantitatively reported. This design is adopted because the study involves collection of data on trade openness, institutional quality as well as inclusive growth indicators in SSA. These data are further analyzed to test for significance to accept or reject formulated hypothesis.

Research design

Research have affirmed that experiments, surveys, grounded theory, ethnography and case study are the prominent research designs to help a researcher approach a study (Creswell, 2009). Du Toit and Mouton (2003) defined a research design as a plan that illustrates the course of the research project. Research design can either be explanatory, descriptive or exploratory (Yin, 2017).

According Burns and Bush (2006) exploratory research design is referred as gathering information in an informal and unstructured manner. The exploratory research design is proper when the researchers know small about the opportunity or issue. Exploratory research design is not limited to one specific paradigm but may use either qualitative or quantitative approaches Exploratory research design does not aim to provide the final and conclusive answers to the research questions, but merely explores the research topic with varying levels of depth. It has been noted that exploratory research design is the initial research, which forms the basis of more conclusive research.

Morris, Allen, Kuratko, and Brannon (2010) describe that descriptive research as the name suggests describes descriptive data about the population being studied and does not try to set up causal relationship between events. It is used to explain happening, an event or to offer accurate and factual description of the population being studied. Descriptive research design needs a clear specification of what, who, where, when, how and why the research is to be done formal design is needed to ensure that description encloses all phases. The main deference between

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descriptive and exploratory research is that unlike, exploratory research, descriptive research formulates a hypothesis in advance.

Explanatory Research is conducted for a problem which was not well researched before, demands priorities, generates operational definitions and provides a better-researched model. Explanatory research is to increase the understanding of a researcher on a certain subject and also, investigation of cause-and-effect relationships. To determine causality, it is important to observe variation in the variable assumed to cause the change in the other variable(s), and then measure the changes in the other variable(s). It does not provide conclusive results because of the lack of its statistical strength. It affects what information is collected. This study employs explanatory research design since its purpose is to examines how institutional quality and trade openness affect inclusive growth and inclusive growth volatility in Sub-Saharan Africa economies.

Models Specification

Model 1: **How trade openness and institutions affect inclusive growth in SSA**

Model 1 is the regression equation for the first and second objectives and was adopted from the regression equations of Rahul, Saurabh, and Shanak (2013) as adopted by Khan, Safdar, Munir & Andleeb (2016). This study explained that trade openness, institutions, the lag of inclusive growth, financial development and moderate inflation are key indicators of inclusive growth. However, modifications are made to their baseline model to control for other macroeconomic variables with their justifications in chapter 2. A lag of the dependent variable was allowed for partial adjustment to the long run equilibrium value.

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Baseline model

$$G_{it} = \beta_0 + \beta_1 G_{it-1} + \beta_2 FD_{it} + \beta_3 TO_{it} + \beta_4 DCPI_{it} + \mu_{it}$$ -------------Baseline model

of Khan, Safdar, Munir & Andleeb (2016).

Where G is the inclusive growth index

FD is financial development

TO is trade openness

DCPI is the change in CPI based inflation

Model 1:

$$IGI_{it} = \beta_0 + \beta_1 IGI_{it-1} + \beta_2 lnTO_{it} + \beta_3 INSTI_{it} + \sum_{i=3}^{n} \beta i Z_{it} + \mu_{it}$$ ----------- (1)

Where IGI is the inclusive growth index

IGI_{t-1} is the lag of inclusive growth index

lnTO is the natural log of trade openness

INSTI is the composite of the institutional quality variables

lnZ represents the natural log of all control variables

β denotes the regression coefficient

μ also denotes the error term

Model 2: **The moderating role of institutions in the relationship between trade openness and inclusive growth in SSA**

This model focus on the third objective of this study. Thus, examine the role played by institution in the relationship between trade openness and inclusive growth. Trade openness and institution index were interacted and entered into the model as a separate independent variable. The interaction term could give an

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indication that institutions enhances the level at which trade openness affect the current level of inclusive growth. Model 2 is given as:

$$IGI_{it} = \beta_0 + \beta_1 IGI_{it-1} + \beta_2 \ln TO_{it} + \beta_3 INSTI_{it} + \beta_4 (\ln TO * INSTI)_{it} + \sum_{i=3}^{n} \beta_i Z_{it} + \mu_{it} \text{-----------------(2)}$$

Where;

IGI is the inclusive growth index

IGI_{t-1} is the lag of inclusive growth index

lnTO is the natural log of trade openness

INSTI is the composite of the institutional quality variables

lnTO * INSTI denotes the interacting term of the natural log of trade openness and the institution index

lnZ represents the natural log of all control variables

β denotes the regression coefficient

μ also denotes the error term

Model 3: **How trade openness and institutions affect inclusive growth in SSA**

Model 3 focuses on the fourth and fifth objectives of the study. Thus, the regression equation which examines the effects of trade openness and institutions on inclusive growth volatility in SSA economies. Again, Model 3 also controls for FDI, financial development and moderate inflation as discussed in chapter two A lag of the dependent variable was allowed for partial adjustment to the long run equilibrium value.

Model 3:

$$IGV_{it} = \beta_0 + \beta_2 \ln TO_{it} + \beta_3 INDEX_{it} + \sum_{i=3}^{n} \beta_i Z_{it} + \mu_{it} \text{----------- (3)}$$

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Where;

IGV is the inclusive growth volatility index

lnTO is the natural log of trade openness

INSTI is the composite of the institutional quality variables

lnZ represents the natural log of all control variables

β denotes the regression coefficient

μ also denotes the error term

Expectations

Table 1 depicts the expected signs of the independent variables based on the

theoretical and empirical literature discussed in Chapter 2.

Table 1: An expected sign of the independent variables

Variables	Expected sign Model 1	Expected sign Model 2	Expected sign Model 3
TO	Ambiguous	+	Ambiguous
INSTI	+	+	+
LnTO * INSTI		+	

Source: Author's own construct

Measurement of inclusive Growth

The measurement of variables in the study was chosen on the fact that those

measures are widely used in literature. Inclusive growth, the dependent variable

was measured by a composite of a five-dimension index developed by AfDB

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working paper in 2016 prepared by Hakimian (Ngepah, 2017). This dimension cover areas of economic, social, special, political and environmental issues which will explain both participation of the majority in economic development process, as well as the even distribution of same economic development. This dimension is further developed to capture eight broad components captured in table 2. The selection of these components justified in AfDB (2016) and sited in Ngepah, (2017). The measure of inclusive growth is so adopted because it explains the African geographical context of the concept.

For instant, Growth captured as the real per capita GDP growth is included in the index to reflect economic performance taking into account population growth. Again, labour force and employment as another component, contains three individual indicators to reflect on the structure of employment and to capture the scope and extent of job creation in each economy. The first indicator under the labour force and employment is the Wage and Salaried as % of total employment indicates the extent to which employment are located in the formal sector and covered by contracts rather than working in family and or private businesses. The other two, adults and youth employment to the proportion ratios, refers to the population of the country's population employed and also serve as a proxy for the extent of national and youth employment rates in a country.

Gender as a component also considered the composite Gender Inequality Index which uses a number of carefully chosen indicators to reflect women's reproductive health status, their empowerment and labour market participation relative to men's (Branisa, Klasen, Ziegler, Drechsler & Jütting, (2014). Inequality

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and poverty are also captured and measured by the Gini index and poverty gap at $2 a day (PPP) respectively. The later reflect the depth as well as the incident of poverty measured as the mean shortfall from the poverty line, expressed as a percentage of the poverty line.

Another key component to the index is the Environment which is also another composite index, Environmental Performance Index (EPI), captures the various and multifaceted aspect of a country's environmental performance. This is preferred to other indicators due to its focus on performance rather than selected aspects of climate changes or environmental risk. EPI uses a number of detailed indicators to measure performance across two main categories: Environmental health with a weight of 40%, and Ecosystem Vitality which also take a weight of 60% (Zhang et al. 2015).
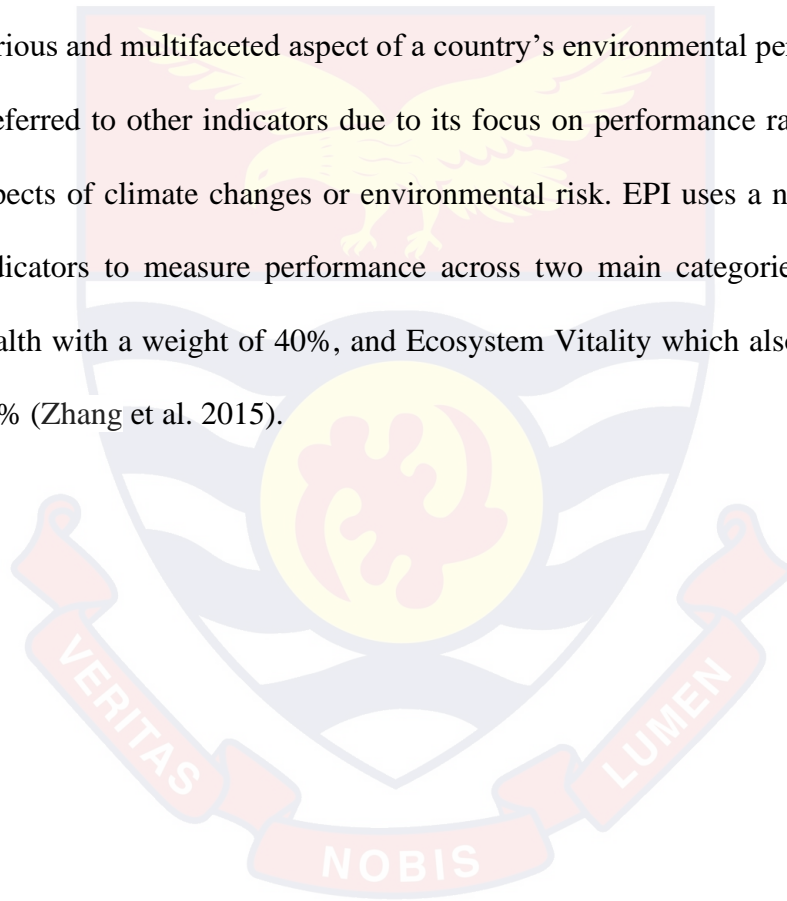
Table 2: Description of dependent variable measurement and data source

Components	Individual indicator(s)	Data source
Growth	Real per capita GDP growth.	WDI, 1996-2017
Labour Force	Wage and salaried (% of total employment).	WDI, 1996-2017
&	Employment to population ratios (% of 15+)	WDI, 1996-2017
Employment	Employment to population ratios (% of 15-24)	WDI, 1996-2017
Health &	Life expectancy at birth	WDI, 1996-2017
demographics	Mortality rate Under-5 (per 1,000)	WDI, 1996-2017
	Public health expenditure (% of GDP)	WDI, 1996-2017
Education	Ratio of female to male secondary enrolment (%)	WDI, 1996-2017
	Public spending on education (% of total)	WDI, 1996-2017
Gender	Gender inequality index	GII, 1996-2017
Environment	Environmental performance index	EPI, 1996-2017
Inequality &	Gini index	WDI, 1996-2017
poverty	Poverty gap at $2 a day	WDI, 1996-2017
Governance	Corruption perception index	CPI, 1996-2017

Source: Author's own construct

Aggregation, Weighting and Scoring Based on different indicators

Addictive or multiplicative aggregation methods have been much discussed and widely used in literature to construct an index (Garriga & Foguet, 2010). The multiplicative method computes an overall inclusive score for each country as a geometric mean of all its different indicators whereas the addictive method

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considers the arithmetic mean. Based on intuition, the arithmetic mean approach is adopted in computing the inclusive growth index. The arithmetic mean approach is computed by averaging the sum of the normalized values of each indicator Sj county i, each component and each indicator within that component are equally weighted.

$$IG_i = \sum_{i=1}^{m} W_j * S_{ji}$$

Where:

i=1…, m: country i included in the dataset

j=1,…, n: indicator j included in the data set

The overall goal of inclusive growth index is set as 100 as illustrated in table 2a. The closer to 100 the result is, the higher the degree of inclusiveness of economic growth is. A composite index that is based on a scoring methodology and a weighting scheme implicitly involves value judgments. The composite index is constructed on a weighted average score of 0–100, based on country performance on each of its components. Equal weight is applied to all eight components with each scoring 12.5%. components with more than one indicator then spread the allocated score. For instance, Growth, Gender, and Environment all with a single indicator will score 12.5% score each whilst Health and Demographics, and Labour Force and Employment with three indicators each share the 12.5% evenly among the three indicators to obtain 4.17% each.

Table 2a: Aggregation methods based on different indicator weights.

Components	Individual indicator(s)	Weights (%)
Growth	Real per capita GDP growth.	12.5
Labour Force	Wage and salaried (% of total employment).	4.17
&	Employment to population ratios (% of 15+)	4.17
Employment	Employment to population ratios (% of 15-24)	4.17
Health &	Life expectancy at birth	4.17
demographics	Mortality rate Under-5 (per 1,000)	4.17
	Public health expenditure (% of GDP)	4.17
Education	Ratio of female to male secondary enrolment (%)	6.25
	Public spending on education (% of total)	6.25
Gender	Gender inequality index	12.5
Environment	Environmental performance index	12.5
Inequality &	Gini index	6.25
poverty	Poverty gap at $2 a day	6.25
Governance	Corruption perception index	12.5
Total		100

Source: Author's own construct

Measurement of Independent Variables

Trade openness, the independent variable was measured by the ratio of sum of imports and exports to GDP. This measure of trade openness is widely used and accepted in literature (Yucel, 2009; Haddad, Pancaro & Saborowski, 2013). Institutions simply access the quality of institutions at the country level and was

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measured by the simple average of the six worldwide governance indicators namely; rule of law, regulatory quality, control of corruption, government effectiveness, political stability and absence of violence and the final, voice and accountability. The six indicators of the intuitions are further simplified by the World Bank and explained in next paragraphs.

Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police, and the courts as well as the likelihood of crime and violence. Government effectiveness captures perceptions of the quality of public services, quality of civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation and the credibility of the government's commitment to such policies. Voice and accountability capture perceptions of the extent to which county's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and the free media.

Political stability and absence of violence measures perception of the likelihood of political instability and or politically-motivated violence, including terrorism. Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Control of Corruption entails perception to which public power is exercised for private gain, including both petty and grand form of corruption as well as capture of the state by elites and private interests. The study

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controlled for three macro-economic indicators made up of foreign direct investment, inflation and financial development.

Table 3: Description of independent variable measurement and data source

Variable	Measurement	Data source
Trade Openness	Sum of Exports and Imports (% of GDP)	WDI, 1996-2017
Institutions	Simple average of the estimates of the six WGI	WGI, 1996-2017
Control of corruption	Estimates ranging from approximately -2.5 to 2.5	WGI, 1996-2017
Government effectiveness	Estimates ranging from approximately -2.5 to 2.5	WGI, 1996-2017
Political stability and absence of violence	Estimates ranging from approximately -2.5 to 2.5	WGI, 1996-2017
Regulatory quality	Estimates ranging from approximately -2.5 to 2.5	WGI, 1996-2017
Voice and accountability	Estimates ranging from approximately -2.5 to 2.5	WGI, 1996-2017
Rule of law	Estimates ranging from approximately -2.5 to 2.5	WGI, 1996-2017
Inflation	Changes in consumer price index	WDI, 1996-2017
Foreign Direct Investment	Net inflow (% of GDP)	WDI, 1996-2017
Financial Development	Credit to private sector as a % of GDP	The global economy, 1996-2017

Source: Author's own construct

Data Collection Procedure

The study obtained Secondary annual data on trade openness, and inclusive growth indicators were obtained from World Development Indicators data sets. Again, institutional data indicators were also obtained from Worldwide

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Governance Indicators data sets. The data were screened to select 39 countries from the 48 SSA countries due to quality and availability. The study finally spans from the year 1996 to 2017 and the reason for the that is almost all the indicators for all institutional quality were available for the period whiles indicators of inclusive growth and trade openness as well as the other control variables also available for the period.

Data Processing Tool and Analytical Technique

The data were processed by Stata version 14.0 and the study employ Two Step system GMM panel estimator to estimate the Models. This original GMM estimator, difference GMM, was propounded by Arellano and Bond (1991). Arellano and Bond (1991) estimate panel data equations by using the first differences of the variables and level of the lagged values of time-varying variables as instruments for the equation in differences which was effective at removing country fixed effects and eliminating unobservable simultaneity bias respectively (Law & Azman-Saini, 2012)

However, Arellano and Bover (1995) argue that the difference GMM may lead to wrong estimations especially when the regressors are consistent. This is crucial for this study specifically because, the institutional quality indicators are likely to remain unchanged when it becomes established in the society (Acemoglu & Robinson, 2008). Therefore, Blundell and Bond (1998) argued that lagged levels of the variables were weak instruments for the equation in first differences and then introduced system GMM estimation which combines the equation in levels with

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those in first differences whilst using the lagged differences of the regressors as additional instruments for the levels equation to estimate the system.

Another reason why system GMM is suitable for this study is that it extracts the exogenous components of the endogenous variables or variables that have simultaneity bias to address the issue of reverse causality (Miletkov & Wintoki, 2012). The GMM estimator deals with potential endogeneity problems between the independent variable and the dependent variable by extracting the exogenous components of the endogenous independent variables and using them as instruments to represent the independent variables.

There are two variants of the system GMM: the one step estimator and the two-step estimator. This study employs the two step GMM estimator because it is theoretically proven to be more efficient than the one step estimator. Notwithstanding, a main disadvantage of the system GMM estimator is that since it uses the lags of the dependent and independent variables as instruments, there could be a problem of instrument proliferation especially when there is a small time series dimension as compared to the cross-sectional dimension (Roodman, 2009). Since the panel data consists of 39 countries and a 22-year time span, the study employs the approach of Roodman (2009) to reduce the possibility of a bias from instrument proliferation by restricting the moment conditions to maximum of two lags of the dependent variable. As a rule of thumb, the number of instruments must be less than or equal to the number of groups to avoid instrument proliferation (Mileva, Bruhn & Weickert, 2007).

To ensure the model is adequate, diagnostic tests are carried out. The GMM estimator required two main diagnostics: the tests of serial correlation using Arellano and Bond serial correlation and the test of validity of the instruments using the Sargan test. According to Mileva, Bruhn & Weickert, (2007), the Arellano-Bond test for autocorrelation has a null hypothesis of no autocorrection and is applied to the differenced residuals. It is normally expected that the null hypothesis for the test for AR (1) process in first differences is rejected.

However, the test for AR (2) in first differences is more important because it will detect autocorrelation in levels and therefore its null hypothesis be accepted. The Sargan test of over identifying restrictions has a null hypothesis of "the instruments as a group are exogenous" and it is worth nothing that a rejection of this null may be inappropriate. Therefore, the higher the p-value of the Sargan Statistic, the better because it is an indication that the instruments employed in the GMM estimation are valid and exclusion restrictions for these instruments are appropriate.

Chapter Summary

This chapter presented the research methods employed in the study. The study is based on the positivism research paradigm and the quantitative research approach. The study also employed explanatory research design as it seeks to explain the relationships among trade openness, institutions and inclusive growth in SSA economies. 39 out of the 48 SSA economies were included in the study due to data availability and quality and two baseline models developed. The first model specification sought to establish a relationship among trade openness, institutions and inclusive growth in SSA economies. The second examined the role played by

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institutions in the relationship between trade openness and inclusive growth in SSA

economies.

CHAPTER 4

RESULTS AND DISCUSSION

Introduction

This chapter presented and discussed results obtained from the empirical analysis. First, descriptive statistics on all the variables is discussed to give an idea of the state of trade openness, institutional quality and inclusiveness of SSA economies. The chapter then presents a correlation matrix which aids to avoid issues of multicollinearity in the empirical specification. Subsequently, the chapter presents the formal discussions on the various models estimated in the study. The latter is systematically achieved by following the respective objectives of the study.

Descriptive statistics

The descriptive statistics is presented on a sample of 39 SSA economies out of a total of 48 SSA economies due to data unavailability of some economies in the region. The list of the sample SSA economies included in the study is shown in appendix A. The descriptive statistics presented include the mean, which is the measure of average, the standard deviation which is the measure of degree of variability, the minimum and the maximum values for each variable, as well the number of observations.

Table 4: Descriptive statistics

Variable	Observation	Mean	Standard deviation	Minimum	Maximum
IGI	858	18.74	7.019	3.179	42.86
TO	848	78.16	48.69	17.86	531.7
INSTI	741	-0.662	0.658	-2.566	0.963
CoC	741	-0.630	0.633	-1.869	1.217
GovE	740	-0.761	0.631	-2.446	1.049
PS	741	-0.538	0.945	-3.315	1.282
RoL	741	-0.712	0.674	-2.505	1.077
RQ	741	-0.703	0.641	-2.645	1.127
VaA	741	-0.599	0.754	-2.226	1.007
FD	787	15.45	14.15	0.410	106.3
FDI	850	4.607	10.18	-8.589	161.8
INF	817	16.05	149.0	-8.975	4,145

Source: Field survey, Idan (2019)

Note: IGI represent inclusive growth measured by the composite of the five-dimension index developed by AfDB. TO represents Trade openness as measured by the Trade (imports and exports) as a percentage of GDP. INSTI represents institutions which are measured by the average of the six worldwide governance indicators. The six worldwide governance indicators include control of corruption (CoC), government effectiveness (GovE), political stability and absence of violence (PS), Regulatory quality (RQ), Rule of Law (RoL) and voice and accountability (VaA) as shown in Table 1. INF represents Inflation. FD represents financial development which is measured by domestic credit to private sector as a percentage of GDP. FDI represents foreign direct investment measured by net inflow as a % of GDP.

From the descriptive statistics in Table 4, average inclusive growth index was 18.74% within the ranges of 3.179% and 42.86%. This confirms the report by the IMF (2016) which stated that the inclusiveness of growth of most SSA economies has not been able to match up with other regions in the world. Trade openness recorded an average of 78.16% within the limits of 17.86% and 531.7%. This depicts that although most SSA economies have engaged in greater openness of trade over time, the trade openness is not contributing much to inclusive growth. Concerning institutions, the aggregate institutional quality indicator, had an average of -0.662 within the limits of -2.466 and 0.963. This suggests that

institutional quality in SSA is weak because even the best economies in terms of institutional quality have an average of 0.963.

To aid a thorough understanding of the precise state of the institutions in the sample SSA economies, the study also presented the descriptive statistics of each of the six institutional indicators. Control of corruption and Government effectiveness have averages of -0.630 within the limits -1.869 and 1.217 as well as -0.761 within the limits -2.446 and 1.049 respectively. Political stability & absence of violence and regulatory quality recorded averages of -0.538 within the limits -3.315 and 1.282 as well as -0.703 within the limits -2.645 and 1.127 respectively. Furthermore, rule of law and voice & accountability recorded averages of -0.712 within the limits -2.505 and 1.077 as well as -0.599 within the limits -2.226 and 1.007 respectively. Together, these statistics on the various governance dimensions reveal that government effectiveness is the weakest dimension of institutional quality of most SSA economies whilst political stability and absence of violence is the strongest.

Financial development, measured as the domestic credit to private sector (% of GDP) recorded an average as low as 15.45% within the ranges of 0.410% and 106.3%. This confirms the report by the IMF (2016) which stated that the financial development of most SSA economies has not been able to match up with other regions in the world. Inflation recorded an average of 16.05% within a range of -8.975 and 4145. The extreme nature of this is as a result of the crises faced by Angola from 1996 to 2000. Hence, inflation transformed to eliminate extreme values. Finally, foreign direct investment measured as the net inflow (% of GDP)

recorded an average of 4.607% within a range of -8.589% and 161.8%. This also

exhibited similar outliers' characteristics of that of inflation.

Table 5: *Correlation Matrix*

	IGI	LnTO	INSTI	CoC	GovE	PS	RoL	RQ	VaA	LnFD	LnFDI	LnINF
IGI	1											
LnTO	0.151***	1										
INSTI	0.623***	0.243***	1									
CoC	0.619***	0.227***	0.899***	1								
GovE	0.617***	0.166***	0.944***	0.879***	1							
PS	0.445***	0.424***	0.847***	0.745***	0.704***	1						
RoL	0.594***	0.203***	0.973***	0.891***	0.913***	0.800***	1					
RQ	0.587***	0.188***	0.894***	0.782***	0.805***	0.675***	0.853***	1				
VaA	0.619***	0.0885*	0.910***	0.808***	0.899***	0.636***	0.877***	0.771***	1			
LnFD	0.191***	-0.0548	0.181***	0.201***	0.137***	0.157***	0.181***	0.140***	0.214***	1		
LnFDI	0.129**	0.485***	0.0954*	0.0835*	0.0489	0.184***	0.108**	0.0332	0.0411	-0.0333	1	
LnINF	-0.126**	-0.0331	-0.121**	-0.0821*	-0.0722	-0.155***	-0.106*	-0.100*	-0.111**	-0.234***	0.00758	1

Source: Field survey, Idan (2019)

Note: IGI represent inclusive growth; lnTO represents log of Trade openness; INSTI represents institutions; CoC is control of Corruption; GovE Government Effectiveness, PS is political stability and absence of violence, RQ is Regulatory Quality, RoL represent Rule of Law and VaA is voice and accountability. lnINF represents lag of Inflation. lnFD represents lag of financial development. lnFDI represents lag of Foreign Direct Investment. *** represents significant at 1%, ** represents significant at 5%, * represent significant at 10%.

Table 5 presents the pairwise correlation matrix for all the variables in the study. Predictability, the collective institutional index depicts a high pairwise correlation among the six indicators. This does not pose multicollinearity problem because the aggregate index does not enter the same model with the six indicators. Again, there is no issue of multicollinearity in the pairwise matrix because the other variables do not score correlation coefficients more than 0.90 (Brooks, 2019).

Regression results on the relationship among trade openness, institution and inclusive growth in SSA.

This subsection presents and discusses the results for objectives one and two of the study. The regression results are presented in Tables 6 and 7. Table 6 presents the results of the separate effects of trade openness and institutions on inclusive growth in SSA economies. Table 7 presents the results for moderating role played by institutions in the relationship between trade openness and inclusive growth in SSA economies. Again, the column labelled Model 1 of Table 6 depicts the results of the effects of trade openness and institutions on inclusive growth in SSA economies, which is in line with the first objective of the study.

Table 6 further present the effects of each institutional indicator on inclusive growth of SSA economies in a sub-model 1a to sub-model 1f with sub-model 1a indicating the separate effect of control of corruption and trade openness on inclusive growth whilst sub-model 1b indicating the separate effect of government effectiveness and trade openness on inclusive growth. Also, the column labeled Model 2 of Table 7 depicts the results of the moderating role played by institutions by the aggregate institutional variables in the relationship between trade openness

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and inclusive growth in SSA economies. The sub-models in Model 2 depicted a model 2a – 2f shows the moderating role played by each institutional variable in the relationship between trade openness and inclusive growth in SSA economies.

Table 6: Separate effect of trade openness and institutions on inclusive growth in SSA economies

Dependent variable: Inclusive Growth

	Model 1	Model 1a	Model 1b	Model 1c	Model 1d	Model 1e	Model 1f
IGI (-1)	0.230***	0.223***	0.218***	0.253***	0.250***	0.199***	0.251***
	(0.0207)	(0.0232)	(0.0211)	(0.0215)	(0.0209)	(0.0229)	(0.0214)
LnTO	1.278**	1.565***	1.462**	0.767	1.068*	1.467**	0.647
	(0.627)	(0.564)	(0.641)	(0.591)	(0.628)	(0.624)	(0.586)
INSTI	0.104***						
	(0.0192)						
CoC		0.110***					
		(0.0160)					
GovE			0.0854***				
			(0.0141)				
PS				0.0319**			
				(0.0121)			
RoL					0.0569***		
					(0.0204)		
VaR						0.0883***	
						(0.0150)	
RQ							0.0598***
							(0.0193)
Control							
LnFDI	0.431***	0.374***	0.437***	0.405***	0.395***	0.361***	0.412***
	(0.0960)	(0.0915)	(0.0922)	(0.0986)	(0.0956)	(0.0985)	(0.0967)
LnFD	0.919**	0.944**	1.004**	0.615*	0.705*	0.976**	0.299
	(0.407)	(0.379)	(0.382)	(0.327)	(0.372)	(0.408)	(0.359)
LnINF	-0.246*	-0.246**	-0.289**	-0.265**	-0.227*	-0.221*	-0.226*
	(0.123)	(0.118)	(0.135)	(0.122)	(0.124)	(0.122)	(0.120)
Diagnostic							
Wald Chi2	771.60	1007.02	881.71	794.41	781.25	612.61	732.36
P(Wald)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AR(1):z	-4.00	-4.01	-3.98	-4.04	-4.03	-3.96	-4.05
P-values	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR(2):z	-1.57	1.61	1.58	1.60	1.61	1.47	1.60
P-values	0.117	0.108	0.114	0.109	0.108	0.143	0.109
Sargan Chi2	26.09	27.03	27.38	27.64	27.07	26.57	27.09
P(Sargan)	0.248	0.210	0.197	0.188	0.208	0.228	0.208
No. of grps	39	39	39	39	39	39	39
No. of inst	29	29	29	29	29	29	29
No of Obs	507	507	507	507	507	507	507

Source: Field survey, Idan (2019)

Note: IGI (-1) represents the first log of inclusive growth lnTO represents a log of Trade openness. INSTI represents institutions, CoC is control of Corruption, GovE Government Effectiveness, PS is political stability and absence of violence, RQ is Regulatory Quality, RoL represent Rule of Law and VaA is voice and accountability. lnINF represents lag of Inflation. lnFD represents lag of financial development. lnFDI represents lag of Foreign Direct Investment. Apart from the diagnostic section, all values in bracket represent the standard errors of the coefficient's values and the values other than those in bracket represent the coefficient values; *** represents significant at 1%, ** represents significant at 5%, * represent significant at 10%. The diagnostic section represents the values the Wald test, probability values of the Wald test, z values of AR (1), probability of z values AR (1), z values of AR (2), probability of z values AR (2). Probability of the Sargan test, number of groups, number of instruments, number of observations in order as shown in the diagnostics section of Table 5.

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Trade openness and inclusive growth in SSA economies

Model 1 in Table 6 present the results on the relationship among trade openness, institutions and inclusive growth in SSA economies. The results from the model depict that, trade openness has a 5% significant positive effect on inclusive growth of the sampled SSA economies. The coefficient of 1.278 shows that a percentage increase in trade openness will lead to a 1.278% increase in inclusive growth of SSA economies. Hence the results affirm the hypothesis that there is a significant effect of trade openness on inclusive growth in the region. This is because intense trade openness through technology leads to the economies of scale and generates a virtuous circle between the reduction of structural differences as well as the growth that improves the wellbeing of a majority and reduces inequality. This ultimately increases the inclusive growth. (Khan, Khan, Safdar, Munir & Andleeb 2016).

The result is in line with the findings of Chidede (2017), as well as a joint publication by the WTO, IMF and the World Bank (2017), who discusses that trade and integration can be used to facilitate Africa's quest for inclusive growth. They explain that trade openness has created jobs, growth, and development in both developing and developed countries. They further articulate that trade openness reduces trade costs and facilitates the expansion of regional and global value chains, which are strong drivers of specialization, productivity, and manufacturing exports. They can also support economic diversification depending on the supply-response, skills, and capabilities of the private sector.

However, the study is inconsistence with Irwin (2015) who doubt trade as an engine for inclusive growth and, in fact, view it as a threat to domestic jobs and firm productive capacity, and income growth in developing economies. The study is also inconsistent with Asante (2016) who share the same sentiment with Irwin (2015). According to Asante (2016), these sentiments have caused some countries (e.g. Kenya, Nigeria, South Africa, the United States, and Zimbabwe, etc.) to implement inward-looking or protectionist policies with a view to protecting domestic jobs and firms.

The result is also consistent with Gilpin (2018) and Bendell (2017) who opined that trade creates jobs, particularly for women in export-oriented sectors. Women comprise between 53% and 90% of the employed in many export sectors in middle-income developing countries. Thus, trade openness increases the level of inclusiveness of growth by way of empowering minors in society. They argue that trade is a key driver to achieve economic growth, prosperity and sustainable development for all. The result is further consistent with González (2016) who says, trade facilitation measures such as access to finance and trade-related information benefit SMEs and may encourage or enable women and the youth to actively participate in trade. SMEs are very important because they account for most jobs, even in Africa, and if they boost export potential, competitiveness and connect to value chains, they generally register particularly high productivity, wage, and employment gains.

Institutions and Inclusive Growth.

Model 1 of Table 6 again present the results on the effect of institutions on inclusive growth of SSA economies. The result from model one in Table 6 indicates a positive significant effect of institutions on inclusive growth at 1% significant level showing a coefficient of 0.104. This is in line with porta et al. (1998) which explains that legal origins, the rules themselves as well as the quality of their enforcement foster inclusiveness of growth. The result is in line with Lopez (2004) who opined that Institutions affect the distribution of economic growth benefits across various social and political groups in a society, such that despite similar economic performance poverty reduction differ substantially among nations.

The result is also consistent with Acemoglu and Robinson (2012) who explain that economical institutions determine the wealth of the nation, political institutions are efficient if they can assure the participation of the individuals in the electoral process, providing them the faculty of renewing or removing its leaders. He further explains that a powerful elite that can extract resources from society characterizes the extractive economies. Also, the result is in line with Acemoglu (2007) affirm that institutional quality is an essential element in the enabling environment that drives long term economic progress. He emphasized that societies with the worst institutions, the property rights of the elite are often secure, but the vast majority of the population enjoys no such rights and faces significant barriers preventing their participation in many economic activities. Although investments by the elite can generate economic growth for limited periods, for sustained growth property rights for a broad cross section seem to be crucial (Acemoglu, 2007).

Results from sub-models 1a – 1f of Table 6 reveals that each of the six institutional indicators has a significant positive effect on inclusive growth of SSA economies. Besides Political Stability which is significant at 5%, the remaining 5, Control of Corruption, Government Effectiveness, Rule of Law, Voice and Accountability as well as Regulatory Quality were significant at 1% within their respective models. Although significant, all these indicators show a very weak effect on inclusive growth.

The results in model 1a and model 1b of Table 6 are consistent with Khan et al. (2016) who found control of corruption and government effectiveness to have a positive effect on inclusive growth in emerging economies. Result in model 1c is also consistent with Willis (1990) who found that political instability reduces economic growth and also poverty levels of SSA economies in the long run. Therefore, any policy action taken by decision makers in Sub-Saharan Africa concerning inclusive growth would have to address the problem of political instability.

Results from model 1d are consistent with Dollar and Kraay (2002) who found that greater rule of law is associated with a larger share of the growth dividend accruing to the poorest 20 percent of the population. The model is also consistent with Kraay (2004) who shared a similar finding. Kraay (2004) found that better rule of law and enhanced accountability are both positively correlated with higher growth. Again, the result in model 1d is consistent with White and Anderson (2001) who argued that civil liberties and political freedom are pro-poor and that political freedom has a much larger impact on inclusive growth. Again, the results

in sub-model 1e and sub-model 1f are consistent with Doumbia (2019) who found that liable and transparent public administration, effective government policies, and confidence in the rules of society, could lead to a nondiscriminatory redistribution of the gains of growth.

Results of the control variables for the models assessing the separate effects of trade openness and institutions on inclusive growth in SSA economies

All models in table 5 controls for three variables consisting of financial development, foreign direct investment, and inflation. In line with model 1 of Table 6, there is a negative link between inflation and inclusiveness with a coefficient of -0.246 and significant at 10%. This is consistent with Rahul, Saurabh and Shanak (2012), Rahul, Saurabh, and Shanak (2013), Rahul, Saurabh, and Shanak (2014), Wieland, Afanasyeva, Kuete, and Yoo (2016). They explain that higher inflation is associated with less poverty reduction, through lower average welfare growth as well as with an adverse contribution to distributional effects. In particular, poor households are usually more affected by food price inflation as they need to spend disproportionately more on food and substitution possibilities are limited. Therefore, they are generally more affected by inflation (Rahul et. al., 2012; Rahul et. al., 2013; Rahul et. al., 2014; Wieland et. al., 2016). This negative effect is throughout the remaining models in table 6.

Also, Financial development, measured by the credit to private sector, has a positive and very significant impact on inclusive growth in SSA as shown in model 1 through to sub-model 1f of Table 6. This shows the importance of financial development for inclusive growth. This finding is in line with Khan et al. (2016)

who explains that the improvements in the financial sector make easy access to a loan for investment. In previous findings such as Levine (2005) financial development is positively linked to growth. Again, Anand et al. affirm that financial development positively and strongly affects inclusive growth in emerging economies.

Significant at 1%, Foreign direct investment fosters inclusive growth with a coefficient of 0.431 in model 1 of Table 6. This explains that a percentage change in FDI leads to 0.431% increase in inclusive growth of sampled SSA economies. This is consistent with sub-model 1a through to sub-model 1f. Rahul et al. (2013); IMF (2007); Morgan (2007) affirm the findings and explain that FDI can encourage future social progress while, in turn, elements of social progress such as infrastructure, education, and personal and political security can help attract foreign investment. In effect, the study goes with literature and affirms the significant and positive effect of FDI on inclusive growth in SSA economies.

Diagnostics on the models assessing the separate effects of trade openness and institutions on inclusive growth in SSA economies.

According to Mileva (2007), the null hypothesis for the test for AR (1) process in first differences usually should be rejected and most importantly, the null hypothesis for the AR (2) should not be rejected. From Table 6, all the p values of the AR (1) showed a rejection of the null hypotheses of no autocorrelation process, at 1% significance level. Again, the p-values of the AR (2) showed no rejection of the null hypotheses of no autocorrelation. This indicates that there is an absence of autocorrelation in all the models. The Wald test also depicted a rejection of the null

hypotheses that the coefficients of the regressors are simultaneously zero as shown by the p-values. This means all the independent variables together adequately explain the dependent variable. Finally, the p-values of the Sargan test depicted no rejection of the null hypotheses that the instruments as a group are exogenous. This means all the instruments used for each of the models in table 5 are valid and that instruments employed in the GMM estimations have appropriate exclusion restrictions.

The moderating role of institution in the relationship between trade openness and inclusive growth in SSA economies

Table 7 shows the results of model 2 and again, shows the results from the sub-models labelled model 2a – 2f. Model 2 depicts the moderating role played by institutions by the aggregate institutional quality variables in the relationship between trade openness and inclusive growth in SSA economies. Again, the sub-models of model 2 depicted as model 2a – 2f shows the moderating role of each of the institutional indicators in the relationship between trade openness and inclusive growth in SSA economies.

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Table 7: The role of Institutions in the relationship between trade openness and inclusive growth of SSA Economies

Dependent variable: Inclusive Growth

	Model 2	Model 2a	Model 2b	Model 2c	Model 2d	Model 2e	Model 2f
IGI (-1)	0.229***	0.221***	0.227***	0.224***	0.227***	0.200***	0.215***
	(0.0245)	(0.0234)	(0.0237)	(0.0204)	(0.0227)	(0.0225)	(0.0223)
LnTO	1.386*	1.355*	1.892**	1.370**	1.495**	1.385*	1.624**
	(0.527)	(0.583)	(0.754)	(0.628)	(0.728)	(0.614)	(0.631)
INSTI	-0.600*						
	(0.407)						
CoC		0.0984**					
		(0.0599)					
GovE			0.0461**				
			(0.0447)				
PS				0.135***			
				(0.0245)			
RoL					0.119***		
					(0.0305)		
VaA						0.0391	
						(0.0327)	
RQ							0.194***
							(0.0438)
Interact	0.168**	0.0238*	0.0466*	-0.00618	-0.00518	0.0153**	0.0208**
	(0.0988)	(0.0124)	(0.0285)	(0.00395)	(0.00787)	0.00626)	(0.00963)
Control							
LnFDI	0.409***	0.387***	0.434***	0.414***	0.426***	0.392***	0.458***
	(0.108)	(0.100)	(0.0889)	(0.0907)	(0.0949)	(0.104)	(0.100)
LnFD	0.984**	0.933**	1.047***	0.826**	1.008*	1.005**	0.935**
	(0.431)	(0.385)	(0.395)	(0.411)	(0.515)	(0.416)	(0.405)
LnINF	-0.281**	-0.246**	-0.230*	-0.235*	-0.248**	-0.230*	-0.267**
	(0.137)	(0.125)	(0.132)	(0.123)	(0.124)	(0.120)	(0.121)
Diagnostic							
Wald Chi2	692.27	902.23	854.83	718.00	785.18	627.38	736.16
P(Wald)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AR(1):z	-4.05	-4.02	-4.01	-4.01	-4.02	-3.98	-3.99
P-values	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR(2):z	1.57	1.60	1.59	1.56	1.56	1.49	1.52
P-values	0.116	0.109	0.112	0.118	0.120	0.137	0.130
Sargan Chi2	26.67	27.07	27.08	26.22	26.24	26.57	25.88
P-values	0.182	0.169	0.168	0.198	0.198	0.187	0.211
No. of grps	39	39	39	39	39	39	39
No. of inst	29	29	29	29	29	29	29
No of Obs	507	507	507	507	507	507	507

Source: Field survey, Idan (2019)

Note: IGI (-1) represent the first log of inclusive growth lnTO represents log of Trade openness. INSTI represents institutions, interact represent the interactive term, CoC is control of Corruption, GovE Government Effectiveness, PS is political stability and absence of violence, RQ is Regulatory Quality, RoL represent Rule of Law and VaA is voice and accountability. lnINF represents lag of Inflation. lnFD represents lag of financial development. lnFDI represents lag of Foreign Direct Investment. Interact represents the interaction of Trade Openness and Institution variables.

Table 7 presents the results of the moderating role of institutions in the relationship between trade openness and inclusive growth. This is seen by the introduction of the interaction term of trade openness and institutions observed in aggregate institutions as well as each of the institutional indicators. The results from model 2 in Table 7 explains a very interesting phenomenon. The coefficient of the interaction term between trade openness and institutions is 0.168 which is significant at 5%. The introduction of the interaction term causes the trade openness variable to attain a coefficient of 1.386 as compared to 1.278 in model 1 of Table 6. However, the coefficient of institutions attained a negative coefficient in Table 7 as compared to a positive coefficient in Table 6. This means that the interaction term reveals the true nature of institutional quality in SSA. That is, although the weak nature of institution in SSA may impede inclusive growth, it compliments trade openness to contribute better to inclusive growth.

The net effect of trade openness on inclusive growth is estimated from the partial differential of inclusive growth with respect to trade openness. The net effect of trade openness on inclusive growth is 1.386 + 0.168*INSTI, which is 1.2852 (computed as 1.386 + 0.168*-0.600). The net effect of trade openness is 1.2852 as compared to the coefficient of 1.278 in model 1 of Table 6 shows an improvement on inclusive growth because of the complementing role of institutions. This explains that trade openness in isolation may not contribute much to inclusive growth in SSA economies unless stronger institutional structures are put in place. The results are consistent with Hadhek and Mrad (2015) as well as Gani and Prasad

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(2006) who explained that strong institutional quality is an integral part of enhancing the benefits of international trade for a country.

Again, Hadhek and Mrad (2015) explained that low quality of domestic institutions reduces trade because it increases the risk and uncertainty associated with international transactions. Baliamoune-Lutz and Ndikumana (2007) explains their empirical results to suggest that institutions have an important influence on the effectiveness of trade policy, assuming that trade policy is strongly correlated with the volume of trade. This is consistent with the findings from empirical studies that conclude that institutions are crucial for the success of rapid inclusive growth enhanced by trade openness in developing countries.

The results also affirm literature which explains that the weak institutions in SSA economies causes limited inclusive growth powered by trade openness. According to Easterly and Levine (2003); Dollar and Kraay (2003) and Rodrik, Subramanian and Trebbi (2004), trade openness is likely to boast inclusive growth in SSA economies when there is strong institutional improvement. This explains that trade openness and its effect on inclusive growth has argued for the primacy of institutions. Findings from empirical studies have concluded that institutions are crucial for the success of trade reforms in developing countries. This evidence suggests the poor quality of institutions in SSA economies attribute to the failure of trade reforms that promote trade and growth the region. The study is finally consistent with Addison and Baliamoune-Lutz (2006) who in a study by on North African countries, showed that the growth effects of economic reforms depend to a large extent on the quality of institutions.

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The introduction of the interactive term of trade openness and control of corruption causes the trade openness variable to attain a coefficient of 1.355, shown in model 2a of Table 7, as compared to the coefficient of 1.278 in model 1 of Table 6. The interaction term between trade openness and control of corruption a positive coefficient of 0.0238 which is significant at 10%. This result is also consistent with Doumbia (2019) who found institutional indicators to have a complementary effect on the variables that affect inclusive growth with emphasis on trade openness.

Results from sub-model 2b of Table 7 depict the moderating role of government effectiveness in the relationship between trade openness and inclusive growth of SSA economies. The introduction of the interaction term of trade openness and government effectiveness causes the trade openness variable to attain a 5% significant coefficient of 1.892 in sub-model 2b as of Table 7 compared to a coefficient of 1.278 in model 1 of Table 6. The interaction term between trade openness and government effectiveness attained a positive 0.0466 which is significant at 10% level. This shows that strong government effectiveness will be needed to compliment trade openness in order to further promote inclusive growth in SSA economies.

Results from sub-model 2c of table 7 depicts the moderation role of political stability and absence of violence in the relationship between trade openness and inclusive growth in SSA economies. The interaction term between trade openness and political stability and absence of violence was insignificant however the coefficient of trade openness attained was 1.370 in sub-model 2c as compared to a coefficient of 1.278 in model 1. Again, results from sub-model 2d depicts a similar

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dynamic in sub-model 2c but show the interaction role of rule of law in the relationship between trade openness and inclusive growth in SSA economies. The interaction term between trade openness and rule of law was also insignificant however the coefficient of trade openness improved from 1.278 as shown in model 1 to a coefficient of 1.495 as shown in sub-model 2d. this result is consistent with the result of Hadhek and Mrad (2015)

The results from the moderating role of voice and accountability in the relationship between trade openness and inclusive growth in SSA economies is shown in sub-model 2e. The interaction term between trade openness and voice and accountability had a positive coefficient of 0.0153 which is significant at 5% level whilst the coefficient of trade openness was 1.385 and significant at 10% level. This result is in line with Rodrik, Subramanian and Trebbi (2004), trade openness is likely to boast inclusive growth in developing economies when there is strong institutional improvement.

Finally, results from sub-model 2f shows the moderating role of regulatory quality in the relationship between trade openness and inclusive growth SSA economies. The results depict that regulatory quality enhance the effect of trade openness on inclusive growth in SSA economies with coefficient of trade openness increase from 1.275 in model 1 to a coefficient of 1.624 which is significant at 5% level as shown in sub-model 2f. Again, the interactive term of trade openness and regulatory quality shows a coefficient of 0.0208 and significant at 5% level.

Results of the control variables for the models assessing the moderating role of institutions in the relationship between trade openness and inclusive growth in SSA economies

All the models in Table 7 controlled for same control variables as controlled for in Table 6. With respect to model 2 of Table 7, there is a negative link between inflation and inclusiveness with a coefficient of -0.281 and significant at 10%. This means that a unit increase in inflation will lead to a 0.281 decrease in inclusive growth in the SSA economies. Similar results were obtained in sub-model 2a – 2f of Table 7 and consistent with Rahul et al. (2012), Rahul, Saurabh, and Shanak (2013), Rahul et al. (2014), Wieland, Afanasyeva, Kuete, and Yoo, (2016). They explain that higher inflation is associated with less poverty reduction, through lower average welfare growth as well as with an adverse contribution to distributional effects. In particular, poor households are usually more affected by food price inflation as they need to spend disproportionately more on food, and substitution possibilities are limited. Therefore, they are generally more affected by inflation, (Rahul et al., 2012; Rahul et al., 2013; Rahul et al., 2014; Wieland et. al., 2016).

Also, Financial development, measured by the credit to private sector, has a positive and very significant impact on inclusive growth in SSA as shown in model 2 of Table 7 with a coefficient of 0.984 and significant at 5% level. This means that a unit change in the level of financial development in SSA economies will lead to 0.984% increase in inclusive growth. This result is consistent through sub-models 2a – 2f with sub-models 2b, 2d and 2e of Table 7 obtaining a coefficient greater than 1% respectively. This shows the importance of financial development

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for inclusive growth. This finding is in line with Khan et al. (2016) who explains that the improvements in the financial sector make easy access to a loan for investment. In previous findings such as Levine (2005) financial development is positively linked to growth. Again, Anand et al. affirm that financial development positively and strongly affects inclusive growth in emerging economies.

Finally, model 2 indicate that Foreign direct investment fosters inclusive growth with a coefficient of 0.409 and significant at 1% level. This again, indicate that a unit change in the level of foreign direct investment will lead to a 0.409% change in inclusive growth in SSA economies. The result is consistent throughout sub-model 2a – 2f with each significant at 1% level. This is consistent with sub-model 1a through to sub-model 1f. Rahul et al. (2013); IMF (2007); Morgan (2007) affirm the findings and explain that FDI can encourage future social progress while, in turn, elements of social progress such as infrastructure, education, and personal and political security can help attract foreign investment. In effect, the study goes with literature and affirms the significant and positive effect of FDI on inclusive growth in SSA economies.

Diagnostics test on the models assessing the moderating role of institutions in the relationship between trade openness and inclusive growth in SSA economies.

At 1% significant level, all the p-values of AR (1) showed a rejection of the null hypothesis of no autocorrelation process whilst the p-values of the AR (2) process showed no rejection of the null hypothesis of no autocorrelation as depicted in all models in table 7. This indicates that there is an absence of autocorrelation in

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all the models in Table 7. Also, the Wald test also depicted a rejection of the null hypotheses that the coefficients of all the independent variables are simultaneously zero as shown by the respective p-values. This means all the independent variables together adequately explain the dependent variable. Finally, the p-values of the Sargan test depicted no rejection of the null hypotheses that the instruments as a group are exogenous. This means all the instruments used for each of the models in table 6 are valid and that instruments employed in the GMM estimations have appropriate exclusion restrictions.

Regression results on the relationship among trade openness, institution and inclusive growth Volatility in SSA.

This sub-section presents and discusses the results for objectives three of the study. The regression results are presented in Tables 8 presents the results of the separate effects of trade openness and institutions on inclusive growth volatility in SSA economies. Again, the column labelled Model 3 of Table 8 depicts the results of the relationship among of trade openness, institutions and inclusive growth volatility in SSA economies, which is in line with the third objective of the study. Table 8 further present the effects of each institutional indicator on inclusive growth of SSA economies in a sub-model 3a to sub-model 3f with sub-model 3a indicating the separate effect of control of corruption and trade openness on inclusive growth volatility. Sub-model 3b indicate the separate effect of government effectiveness and trade openness on inclusive growth whilst sub-model 3c depicting the effect of political stability and trade openness on inclusive growth volatility in SSA economies. This order continues to sub-model 3f which depict the

effect of trade openness and regulatory quality on inclusive growth volatility in SSA economies.

Table 8: Separate effect of trade openness and institutions on inclusive growth volatility in SSA economies.

Dependent variable: Inclusive Growth Volatility

	Model 3	Model 3a	Model 3b	Model 3c	Model 3d	Model 3e	Model 3f
L.IGV	0.067***	0.056**	0.0667***	0.0826***	0.0669***	0.0454*	0.078***
	(0.023)	(0.023)	(0.0229)	(0.0245)	(0.0239)	(0.0233)	(0.023)
LnTO	0.0016	0.0030	0.000503	0.00242	0.00102	-0.000094	0.0019
	(0.006)	(0.0062)	(0.0054)	(0.0058)	(0.0054)	(0.00593)	(0.0064)
INSTI	0.001**						
	(0.0004)						
CoC		0.0009**					
		(0.0003)					
GovE			0.0006**				
			(0.0002)				
PS				0.000151			
				(0.00013)			
RoL					0.000507		
					(0.00035)		
VaA						0.000515	
						(0.00035)	
RQ							-0.00021
							(0.00043)
Control							
LnFDI	0.006***	0.0052***	0.0059***	0.006***	0.0056***	0.0045***	0.0055***
	(0.001)	(0.0011)	(0.00119)	(0.00126)	(0.00124)	(0.00135)	(0.0013)
LnFD	0.00068	0.0013	0.000936	0.00174	9.37e-05	0.00453	0.00173
	(0.0054)	(0.0053)	(0.0055)	(0.00518)	(0.00565)	(0.00533)	(0.0053)
LnINF	-0.004**	-0.005***	-0.004***	-0.004**	-0.0041**	-0.0034**	-0.005***
	(0.0017)	(0.00168)	(0.0016)	(0.0017)	(0.0017)	(0.00163)	(0.0017)
Diagnostic							
Wald Chi2	71.54	91.00	62.20	57.50	60.98	35.97	55.08
P(Wald)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AR(1):z	-2.51	-2.51	-2.49	-2.51	-2.49	-2.48	-2.51
P-values	0.012	0.012	0.013	0.012	0.000	0.013	0.000
AR(2):z	0.44	0.44	0.45	0.57	0.45	0.28	0.55
P-values	0.658	0.660	0.651	0.568	0.649	0.781	0.585
Sargan Chi2	25.27	25.60	26.04	24.67	24.92	24.59	25.31
P(Sargan)	0.284	0.269	0.250	0.313	0.301	0.317	0.283
No. of grps	39	39	39	39	39	39	39
No. of inst	29	29	29	29	29	29	29
No of Obs	507	507	507	507	507	507	507

Source: Field survey, Idan (2019)

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Note: IGV (-1) represent the first log of inclusive growth volatility, lnTO represents log of Trade openness. INSTI represents institutions, CoC is control of Corruption, GovE Government Effectiveness, PS is political stability and absence of violence, RQ is Regulatory Quality, RoL represent Rule of Law and VaA is voice and accountability. lnINF represents lag of Inflation. lnFD represents lag of financial development. lnFDI represents lag of Foreign Direct Investment. Interact represents the interaction of Trade Openness and Institution variables.

Model 3 in Table 8 present the results on the relationship among trade openness, institutions and inclusive growth volatility in SSA economies. The results from the model depict that, trade openness, though not significant, has positive effect on inclusive growth volatility of the sampled SSA economies. The coefficient of 0.0016 shows that a percentage increase in trade openness will lead to a 0.0016% increase in inclusive growth volatility of SSA economies. This result is in line with the findings of Jansen et al. (2009); Giovanni and Levchenko, (2009) who explain that trade exposes countries to external shocks and that external shocks are a source of macroeconomic volatility. The result is also consistence with Easterly et al., (2001) and Kose et al. (2003) who explain that greater openness decreases the sensitivity to internally induced shocks (such as domestic demand shortage), as more open sectors are less correlated with the rest of the home economy.

Model 3 of Table 8 again present the results on the effect of institutions on inclusive growth volatility of SSA economies. The result from model 3 in Table 8 indicates a positive and significant effect of institutions on inclusive growth at 5% significant level showing a coefficient of 0.001. This means that a percentage change in institutional quality of the SSA economies lead to a 0.001% increase in inclusive growth risk. This is in line with porta et al. (1998) which explains that legal origins, the rules themselves as well as the quality of their enforcement foster inclusiveness of growth. The result is in line with Whitford (2014) who opined that

Institutions affect the distribution of economic growth benefits across various social and political groups in a society, such that despite similar economic performance poverty reduction differ substantially among nations.

Agglomerating effect in the models

The lagged form of inclusive growth variable was included in all the models in Table 6 and Table 7 to allow for the partial adjustment of inclusive growth to its long run equilibrium value. This is because inclusive growth is a process, and thus previous levels of inclusive growth affect the current levels. It can be seen in all models in Table 6 and Table 7 that the coefficient of the lag inclusive growth variable was positive and significant at 1% level. The positive sign of the coefficient of the lag inclusive growth variable in all the models means that inclusive growth of SSA economies in previous periods contribute positively to that of the current periods. The significance of the lagged inclusive growth variable also implies that the system GMM is an appropriate estimator and the empirical results can be relied upon for statistical inference.

Chapter Summary

The chapter discussed the separate effects of trade openness and institutions on inclusive growth in SSA economies. From the discussion, it is established from the data that both trade openness and institutions are essential to ensuring enhanced inclusive growth in SSA economies. The chapter also discussed the moderating role of institutions in the relationship between trade openness and inclusive growth in SSA economies. Finally, the chapter discussed the relationship among trade openness, institutions and inclusive growth volatility in SSA economies.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the major findings obtained from the entire study. This chapter further presents the major conclusions and finally gives suggested recommendations for further research.

Summary

SSA economies over the years have attained a relative improvement in economic growth contrarily, poverty continue to be more than expected in the region. The consistent economic growth however is a potential indication to steering the fight for poverty and equality in the region. Key to this is the increasing focus on achieving inclusive growth, which relates to inter alia, poverty alleviation, employment generation, youth and women employment and development as well as even distribution of wealth. Literature suggests that various forms of factors could spur up the level of inclusive growth with focus on the absorptive capacity role played by institutions in the relationship between trade openness and inclusive growth in SSA economies. This is because, trade openness as a major contributor to inclusive growth in emerging economies, is not contributing much to inclusive growth in SSA economies as a result of weak institutions in the region.

The Literature review provided supporting theories as well empirical evidence on the relationship among trade openness, institutions and inclusive growth in the context of SSA economies. The main theories of the study are the utilitarian social welfare theory, new endogenous growth theory as well as the

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theories of institutional development. The empirical review suggested that there is inconclusiveness of findings on the relationship between trade openness and inclusive growth in SSA economies while institutions proved to have a positive impact on inclusive growth in SSA economies. This study however interacted trade openness with institutions to emphasize that the quality of institutions complements the relationship between trade openness and inclusive growth in SSA economies.

The study was based on the positivism research paradigm and the quantitative research approach. The study also employed the explanatory design to estimate the various models. Again, the study included 39 economies out of the total of 48 SSA economies due to data quality and data availability. The study developed three models with the first specification investigating the separate effect of trade openness and institutions on inclusive growth of SSA economies. The second model specification determined the moderating role played by institutions in the relationship between trade openness and inclusive growth in SSA economies. The final model sought to establish the separate effect of trade openness and institutions on inclusive growth volatility in SSA economies. The study employed the System GMM estimation technique to estimate all the models.

Results of the study show an insightful and have good significant implications. The first objective of the study examines the separate effects of trade openness and institutions on inclusive growth in SSA economies. The second objective examined the moderating role played by institutions in the relationship between trade openness and in inclusive growth of SSA economies whilst the third

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objective investigate the separate effects of trade openness and institutions on inclusive growth volatility in SSA economies.

The results of the study affirmed the first hypothesis that both trade openness and institutions affecting inclusive growth positively in the sampled SSA economies. Again, the second hypothesis was affirmed by the results of the study thus, the quality of institutions compliments trade openness and enhances the effect of trade on inclusive growth in the sampled SSA economies. The results further partially affirmed the third hypothesis that there is a positive effect of trade openness and institutions on inclusive growth volatility. The partial affirmation is because only institutions showed a positive significant effect on inclusive growth volatility whilst trade openness showing a positive but insignificant effect of the sampled SSA economies.

Conclusion

Based on the results of the study, the conclusions on the three hypotheses are trade openness is required to increase inclusive growth in SSA economies and also effective institutions are also essential to increase inclusive growth in the sampled SSA economies. Also, it is evidenced from the results of this study that strong institutions at the country level will be required to improve the effect of trade openness on inclusive growth in SSA economies. Again, the quality of every country's institution affects inclusive growth volatility in the sampled SSA economies. The study finally concludes that inflation has an inverse relationship with inclusive growth since a percentage increase in inflation leads to a reduction in inclusive growth in SSA economies whilst financial development and foreign

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direct investment having ensuring an improvement in inclusive growth in SSA economies.

Recommendations

In accordance with the results of the study, it is recommended that SSA economies should continue to institute economic policies that invites international trade so as to increase the level of inclusive growth. Again, policy makers in general and the governments in particular should make efforts to improve quality institutions in SSA economies. Specifically, trade openness can better enhance inclusive growth by improving government effectiveness, reducing corruption, enhancing regulatory quality, abiding by the rule of law, and allowing voice and accountability. Environment of responsible institutions, transparent business, protected civil liberty, respected political rights, control of corruption and political stability promote the expansion of international trade by reducing transactional cost and risk relate to trade. Corruption and financial misappropriation should be eradicated, the policies to eradicate corruption should be taken seriously by the governments of these countries and anyone found liable should be prosecuted no matter his/her position in the society.

Again, SSA economies should find ways that will be geared towards improving the stock of human capital in the SSA region. Some of these include the training and retraining of experts such as lawyers, economists, accountants, among others, in SSA countries and their respective ministries such as trade, justice, commerce and industry. This is because a well informed and trained crop of persons that control policy formulation and implementation in these institutions are

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essential and at the end this will enable poorer people to compete in a globalized world market by increasing their productivity ensuring that poor people, women and other disadvantaged groups can draw benefits from exports.

Stable macroeconomics is important for inclusive growth, thus indirectly affecting income inequality. Government need to prevent the occurrence of high inflation and also provide financial backing in form of easy accessibility to loans (credit facilities to investors) so as to boost local investment coupled with the fact that foreign investors should also be attracted to invest in the country via improving on the state of security and embarking on conducive policies that supports investments. It is when there is huge investment in the economy that the country can experience growth which will improve on the quality of institutions in the SSA countries.

Suggestions for Further Research

Further studies can extend this current study by examining the moderating role played by institutions in the relationship between trade openness and inclusive growth and inclusive growth volatility of other developing economies. Also, other measurement of institutions such as the World Bank's Country risk policy could be employed as proxy to either affirm the results of this study or otherwise. Further studies can examine the effect of trade components (Export and Imports) that affect inclusive growth and how interact with institutions to affect inclusive growth.

Again, relationship between fiscal consolidation and inclusive growth is an area worthy of study. The availability of more granular data will be important to analyze the evolution of inclusive growth at the national and subnational levels by

providing a local lens to view inclusive growth. Secondly, regarding job creation, it will be important to understand the links between unemployment and labor market institutions that foster inclusive growth; for example, the design of collective bargaining programs and rights for workers might play crucial roles in reaching inclusive growth goals in both advanced and emerging markets. Lastly, the speed of technological advancement, its reach and access, and the channels through which it can foster or hinder inclusive growth, are additional areas for future research.

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APPENDIX

A – A list of the 39 sampled SSA economies

Angola	Lesotho
Benin	Liberia
Botswana	Madagascar
Burkina Faso	Malawi
Burundi	Mali
Cameroon	Mauritania
Cape Verde	Mauritius
Central African Republic	Namibia
Chad	Niger
Comoros	Nigeria
Congo (Brazzaville)	Rwanda
Congo (Democratic Republic)	Swaziland
Cote d'Ivoire	Senegal
Equatorial Guinea	Seychelles
Gabon	South Africa
The Gambia	Tanzania
Ghana	Togo
Guinea	Uganda
Guinea-Bissau	Zambia
Kenya	