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Africa’s March Towards Prosperity Understanding the role of gender equality, human capital and fertility in securing Africa’s promising future

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Approval of the Dissertation Committee

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Norvell Thomas as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Political Science.

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ABSTRACT

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Developing countries are often at risk of falling into a poverty trap, whereby economic growth and prosperity is thwarted due to both endogenous and exogenous factors, including limited access to capital, poor infrastructure, low education levels, corruption, and many others. This is particularly true for many African nations that are now emerging from centuries of colonial rule and are attempting to find a path forward to obtain peace, economic growth, and overall prosperity. The goal of this dissertation is to identify the principal factors of what can assist poorer nations in becoming more prosperous. Based on the neoclassical economic growth model (Barro & Lee, 2015)), I developed a model to account for the effect of multidimensional factors of gender equality, fertility rate and Africa's specific opportunity to economic growth. The model will be helpful to explain how gender equality, human capital, and fertility rates serve as essential factors in economic growth and prosperity for African states. Based on this model, I attempt to provide a path forward for African countries to allocate resources to those components that will maximise their chances of success in achieving overall prosperity. Based on this model, gender equality and a high fertility rate provide an opportunity for prosperous African countries. I also offer an in-depth analysis of cases of Rwanda, Uganda, Ethiopia, and Zambia in qualitative support for my argument.

Dedication

This comprehensive research is dedicated to my parents, friends, and colleagues, who encouraged me to begin this crucial work, manage it, and finally publish it. To my dear David, thank you for being such a bright light in my life and being the primary source of inspiration for me to return to graduate school. Although you were gone too soon, your spirit lives on and is watching over me. To my niece, Chrystal please know that you can do anything you set your mind to. I am very proud of you and wish you all the good things in life. Finally, this research is dedicated to all of the African diaspora across the world. Africa's time to shine is upon us, let us work to ensure the people will continue to thrive and flourish.

Acknowledgments

This thesis is based on research conducted on Africa's march towards prosperity and understanding the role of gender equality, human capital, and fertility in securing Africa's promising future. I want to acknowledge with gratitude, the support, and guidance from mycommittee members including Dr. Yi Feng who has been instrumental in my understanding of political economy. Dr. Melissa Rogers, who has dedicated her life to understanding root causes of inequality and social justice; and finally to Dr. Sallama Shaker, with whom I owe a great deal of gratitude in guiding me along this path. I also would like to acknowledge all of my friends and family whose support was unwavering. They all helped me to keep going, and therefore, this work would not have been possible without their support.

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Chapter 1: Introduction

1.1 Background

Much research has been conducted in political science that attempts to understand the underlying factors of how and why the least developed countries (LDC's) can achieve economic growth without falling back into a poverty trap. Economic growth by itself has long been considered an easy way to gauge whether a country is on the right path to move along the progression towards development, from 'least developed countries' (LDC) to advanced developed countries. Setting GDP growth as a marker for success, however, has attending validity issues in terms of how to ascertain the fundamental questions of where, what, why, and how a state should allocate its resources and spending, and how to maximise its return on investments.

Most African states fall into the category of developing nations, and researchers are starting to recognise the importance of the intricate details of how to achieve economic growth and prosperity for this region of the world. Due to an unusually high fertility rate, within the next 60 years, there will be more Africans on this planet than any other racial/ethnic group. As developing states, the opportunity for rapid economic growth and development presents a golden opportunity to harness the continent's vast natural resources to compete on the global stage and propel itself into middle-income status. Investments in technology, education and medicine can potentially help to lift hundreds and millions of people out of poverty within a few decades if done right with the opportunity to gain significant economic growth and prosperity. However, there is also the possibility that many African states could fall behind if certain conditions are not achieved. Modern approaches in development economics focus on a "Big Push" of intense capital infusion in developing nations to help spur investment. It is thought that providing foreign direct aid and foreign investments will increase the savings rate of a state’s economy and thus free up other resources for a state to escape the poverty trap and achieve greater economic growth and development (Easterly, 2006).

1.2 Principal Variables That May Positively Impact Economic Growth

In this dissertation, I focus on three principal variables that have a positive impact on economic growth. I start with the notion that a developing state only has a finite amount of resources from which they can draw upon to move their country towards more prosperity. In line with the literature that explains a base model for economic growth and development, I further add dimensions of gender equality, as measured by women’s overall health, employment, education, and other factors. I then consider the role of a state’s aggregate fertility rate that, over time, may develop into a youth bulge, which could either be a boon to a state's overall economic growth and development or cause lowered economic growth and higher levels of political instability. A third factor is the role of education and human capital on a state’s economic growth and development. Taken together, these components form what I believe to be a prosperity model, which could then provide a roadmap for African states to properly harness internal resources and allocate spending and investments to maximise its chances to become more prosperous.

The first component I look at is the impact of a fast-growing young population have on a country’s path towards prosperity. More specifically, I would like to determine what effect a state’s **fertility rate** has in terms of overall prosperity. In the short term, I expect a state’s fertility rate to have negative consequences for a state’s overall economic growth and prosperity. However, in the long-term, I expect, given certain conditions, a high fertility rate may lead to a disproportionate level of young people entering the workforce within the following 20 years. According to Karra (2017), a decrease in fertility rates supplements the latter stages of the demographic evolution particularly in sub-Saharan Africa and has the potential to promote economic growth. Moreover, an elevation in the income from the decrease in the rate of youth dependency and the share of working-age in the population and the decrease in the fertility enhances the alteration on the behavior promote the high income. Consequently, a decrease in the rate of youth dependency contributes to the elevation of investment in the department of health and education of children that will ultimately promote the productivity of children when they will start to earn. The results of the cross-country regression model highlighted the positive impact of age and fertility on economic growth (Karra, 2017). Therefore, I will be exploring the influence of the “Youth Bulge” on prosperity through a cross-national lens. Within the right context, I should expect to see a positive effect on a state’s prosperity components. This positive impact will likely be attributed to the overabundance of productive members of the workforce and thus, my research is based on examining the relationship between youth bulges and level of growth and prosperity.

The second component focuses on the levels of **gender equality** and its effect on a state’s economic growth and prosperity. According to Moorhouse (2017), the diverse nature of gender equality may act as a stimulus on economic growth throughout the 64 states from the year of 2000–2011. By means of an endogenous growth model and after regulating for standard growth correlation, the empirical outcomes illustrate that states that defend the financial rights of female experience have high GDP for every capita growth rate (Moorhouse, 2017). Various other researches also have shown that high levels of gender inequality, whereby men possess a disproportionate level of the total wealth, power, and resources in a state, tend to be associated with lowered levels of economic performance. This is primarily because there is less money flowing through the economy from an under-utilized tax base, and thus less tax revenue collected by the central government for government consumption and investments. If women are not full participants in the workforce, and therefore not providing tax revenue for a government, then this naturally leads to a higher level of dependency for a state, which is a higher level of government consumption, which leads to lower levels of economic growth. High levels of gender inequality also tend to be associated with high levels of citizen dissatisfaction and lowered prosperity.

I then look to the role of education as a primary measure of **human capital** that could help propel African states' economies and allow their workers to compete on the global stage. Ogundari (2018) studied the impact of human capital on economic growth in the regions of Sub-Saharan Africa by focusing on human capital and, health and education. Ogundari (2018) introduced a dynamic model related to the "System Generalized Method of Moments" to analyze stable panel data based on 35 states. The empirical results of the study depict that human capital has a positive correlation with economic growth, though the influence of health is comparatively superior to the influence of education on economic growth. The results of this study introduce the huge importance of human capital including health and education on economic growth (Ogundari, 2018). By raising the level of knowledge and education amongst a state's working population, this increases its human capital and subsequently improves its rate of economic growth. It stands to reason that increasing education for women in unequal societies has greater marginal returns than a similar investment for only men. Therefore, by investing in women's education a state can see substantive economic growth. (Knowles, Lorgelly, & Owen, 2002).

1.2.1. Prosperity vs. economic growth

It is important to pause here and make a very clear distinction between prosperity and economic growth, as the two are sometimes used interchangeably. Historically, economic growth was seen as the primary indicator of a state’s ability to be “doing well” by providing its citizens with the basic necessity of life and securing its borders. By focusing on expending resources to achieve economic growth, a state would maximise its overall security, which, of course, is the fundamental argument of the realist school of thought in international studies. According to realism, the primary function of a state government is to maximise its security (Waltz, 1979). To that end, economic growth was seen as the primary goal for a nation’s leaders to accumulate more relative power on the world stage.

With more recent arguments in favor of sustainable development, however, some political scientists are rethinking the notion that a state has to have economic growth solely for power’s sake. A central argument in sustainable development literature is that a relentless focus on achieving continuous economic growth can lead to a worsening of a state’s real prosperity when viewed through the angle of health, happiness, and even peace and security. In this dissertation, I define prosperity as a state’s ability to provide for its citizens overall well-being, which naturally includes economic growth and development.

1.2.2. United Nations Sustainability Goals

The United Nations, luckily, has a well-defined infrastructure in place that helps to identify goals and metrics for African nations in pursuit of economic growth and overall prosperity. These Sustainable Development Goals (SDG’s) serve as a coordinate, global response to address the needs of the most vulnerable populations. The main objectives of these goals are to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.” [1] For this dissertation, I use 5 of the 17 sustainable development goals as guideposts for determining overall prosperity for the African States.

Sustainable Development Goal #1: Eradication of Poverty **-** The first sustainable goal is to end poverty existing in any form or region throughout the world by 2030. Poverty is categorized by the level of income a person lives on usually less than $1.25 dollars a day, and is highly correlated with disease, famine and other morbidities. According to the UN report (2018), goals of sustainable development designates that if the overall population ignores the issues of poverty, health and education consequently, around 167 million youngsters will reside in unbearable effects of poverty by 2030 (Kyeyune, 2020). It may lead them to early death due to the inability to buy food and necessities. Their report also included that 11% of the overall global population (700 million individuals) are living in extreme poverty fighting to cover the basic needs. In contrast, 50% of global wealth is under only 1% of the overall population. According to the one of the informative video titled as “2030- SDG 1- No Poverty- Ted talk”, 1 out 3 children have stunted growth issues due to improper diet, 1 out of 10 children who belongs to extremely poor families die before they reach the age of 5 and 1 out of 4 of them are unable to study in high school due to unaffordable school fees (Kyeyune, 2020). Additionally, around 70% of extremely poor individuals with incomes of $1.90 per day reside in sub-Saharan Africa and southern Asia. However, in the developed regions, around 30 million children grow in poor families. Each day around 830 females

[1] https://www.undp.org/content/undp/en/home.html

die each year throughout the globe from preventable pregnancies and delivery related difficulties (Kyeyune, 2020).

Sustainable Development Goal #4: Quality Education **-** According to Taysum (2019), the main right of humans that has high importance is education, as it serves as a process for peace and sustainable development throughout the globe. Each agenda or goal of the United Nations by 2030 needs proper education to strengthen individuals with knowledge, values, or skills to have a successful life and to contribute to the growth of society. More than 262 million young people and children are out of school, 750 million adults are illiterate consequently, the level of poverty has been increased (Taysum, 2019). Sustainable Goal 4 (2030-agenda) has also raised the significance of quality education and promoted long-life learning facilities for every individual. The roadmap to achieve this goal is based on guiding the bureaucrats and associated persons to turn words into action by focusing on collaboration, policy guidelines, monitoring, advocacy, and development. Moreover, the government has to implement the guidelines to ensure quality education and by collaborating with the United Nations, youth, public or political sectors, and multiple agencies. It will also help to monitor and implement the alterations that will require with time according to the global development (Taysum, 2019).

Sustainable Development Goal #5: Gender Equality **-** On October 31, 2000, the United Nations Security Council adopted resolution 1325, which represented a significant shift towards prioritizing the involvement of women across nations in advancing peace and security. The resolution *“reaffirms the important role of women in the prevention and resolution of conflicts, peace negotiations, peace-building, peacekeeping, humanitarian response and in post-conflict* *reconstruction and stresses the importance of their equal participation and full involvement in all efforts for the maintenance and promotion of peace and security."* This resolution was profound in that it was one of the first times the international body had noted the impact that women and gender equality that has helped shaped peaceful solutions in both inter-state as well as intra-state conflicts. The resolution calls upon all nations to foster policies and procedures to incorporate the role of women in both domestic and international conflict, as well as post-conflict rebuilding efforts.

Sustainable Development Goal #8: Decent Work and Economic Growth **-** Sustainable development goal 8 promotes inclusive, sustained, and sustainable economic growth by focusing on productive employment and decent work for every individual. It also has highlighted the significance of labor rights for every citizen and prompted some significant tensions to be considered. The focus of these goals remains intact on GDP and per capita development despite several issues of narrow financial measures of growth. Rai (2019), argues that it is an issue because the productive limit of GDP excludes many of the socially reproductive work. It leads to tension in the SGD-8 with SGD-5 that calls for the identification of the value related to voluntary care or domestic work. It also has been noticed that the rate of working women in the informal or formal sector has been elevated. Although, there is no gender shift while working on social reproductive tasks. Therefore, by 2030, it is required that there must be decent work assigned to both males and females based on the sufficient cost and value of social reproduction (Rai, 2019).

Sustainable Development Goal #16: Peace, Justice and Strong Institutions **-** is titled officially as "*Promote peaceful and inclusive societies for sustainable development, provide access to justice* *for all and build effective, accountable and inclusive institutions at all levels*". It is based on reducing corruption, bribery, violence in the nations, providing legal identities to the citizens, enforcing laws based on non-discrimination laws, promoting justice, providing freedom to the citizens under legislation and policies.

1.3. Endogenous Factors Inhibiting a Big Push

Unfortunately, there is ample research to support the notion that many endogenous factors thwart the overall impact of big push initiatives. Corruption, for example all too often plays an outsize role in stymieing efforts to invest large sums of money earmarked for investment. A large-scale study on corruption in African countries shows that systemic corruption decreases the economic growth directly and indirectly through reduced investment in physical capital hampering and income distribution, leading to worsening the income inequality (Gyimah-Brempong, 2002)

The cost of education – Many developing countries find it challenging to invest in proper education as it is seen as a long-term investment, without any immediate returns. Uniforms, textbooks, teachers' salaries, building infrastructure all takes a concerted effort on behalf of the central government to provide these things to ensure low-cost or free education. When faced with these costs, families in African tend to send male children to school and keep females at home to do manual labor and other chores.

Distance to school – Although there has been much improvement in African states' physical infrastructure, there remain many areas where schooling is simply too challenging to get to. It is not uncommon for school children to walk several miles each way to attend a classroom. Without buses or cars to ferry students from home to school, many parents simply decide the distance is too great and keep their children at home.

Violence at school – Sadly, women and girls often face harassment and sexual violence at the hands of student peers, teachers, and others within the school setting itself. Many families may opt to remove their children from school altogether rather than violence occur.

Gender inequality – As mentioned previously, in many African societies, women's education is simply not considered as important as educating males in the family. Girls are expected to do "household" chores such as assisting in raising siblings, cooking, and cleaning. Challenging the cultural norms will be a laborious exercise, to be sure. However, governments can provide incentives to families to allow their girls to attend school for the betterment of the family and society as a whole when given a proper understanding of the role education plays for both boys and girls.

Poverty – In many parts of Africa, people do not have enough money to enjoy the necessities of life such as food, shelter, clothing, etc. For many families, education is a luxury that they simply cannot afford. If students are not adequately fed, clothed and sheltered, it would be challenging to attend school and focus on learning. However, according to recent work done by Banerjee and Duflo, the Nobel prize-winning duo, eradicating poverty and increasing prosperity can be done by implementing smaller changes that can have a much larger impact on improving growth (Banerjee & Duflo, 2011). For example, the researchers discuss the micro-politics of education for many low-income families. Frequently, all of the family's resources are directed to the oldest (male) child in the family in hopes that he will be financially successful and will support the family financially later. This is done at the expense of providing education for any of the other children in the household, as it is seen as a waste of financial resources. Naturally, educating women is not seen as particularly crucial despite the evidence that girls can equally contribute to a family’s fortunes.

Early marriage and pregnancy – It is quite common in many African societies that parents are willing for their young girls to be married off by older men. This is problematic on many levels, including the fact that many girls become mothers at an abnormally young age, forcing them to forego education and keeping them mired in poverty. Child brides in this fashion have little decision-making authority over their own lives and usually fail to produce any substantial wealth for themselves or their families. According to a recent report by the Organisation for Economic Cooperation and Development (OECD), increased educational attainment accounts for about 50 percent of the economic growth in OECD countries over the past 50 years, but for developing countries, education attainment by women are far behind (OECD, 2012).

Move Towards a “Small Push” in Gender Equality, Human Capital and High Fertility

My dissertation focusses on three important variables that I believe will support an alternative “Small Push” in African states to witness robust economic growth and overall prosperity. By looking at state’s overall **gender equality**, I find evidence to support the idea that when a state promotes women’s equality in government, business and society, this has both direct and indirect impacts on overall economic performance. Secondly, I look to the role of **human capital** as a means to improve a state’s overall economic growth. Many African states score low on the human capital index, but steady improvement in this area will allow for a more educated workforce to compete for jobs on the global stage, thus helping African states achieve middle income status more quickly. Lastly, I look to the role of **fertility** as an attending factor to show that African states could capitalize on the “Window of Opportunity” that high fertility rates may yield since this could result in a larger working-age population that could support a state’s efforts in increasing savings rates, and invest in infrastructure, education, technology and other sectors that will help support overall economic growth and prosperity.

1.3 Research Problem

According to the UN, many developing countries in Africa are struggling to reach their sustainable development goals by 2030, the year that the international body has placed as a timeframe for countries to meet. In order to sustain the path of success, additional factors beyond traditional economic policies are required to be implemented to overcome multiple endogenous factors that inhibit a “Big Push”.

1.4. Aims and Objectives of the Research

The aim and objectives of the research dissertation are:

- To identify the principal factors that can assist LDC nations to increase economic growth and become more prosperous.
- To examine the relationship between youth bulges and the level of growth and prosperity.

African states have faced many ups and downs in the growth of their respective economies. Therefore, it is required to understand how certain endogenous factors can be harnessed to contribute to the growth of the economy. Considering the significance of this fact, this dissertation has highlighted the principal factors that have to be considered to increase the overall economic growth in terms of gender equality, human capital and fertility rates.

Chapter 2: Literature Review

2.1 Africa’s Colonial History

Africa has a long colonial history starting from the 19th century when many European countries were in direct competition with each other to achieve greater power and relative wealth upon the global stage (Bulhan, 2015). Faced with endless wars over land, labor and natural resources. These Imperial powers looked south to the continent of Africa as a way to expand their empires and extract more resources to fuel their economic development. This period from 1880 through 1923 was known as the “Scramble for Africa”, and would have long-lasting effects on the continent for a full century to come. The height of European colonization of African lands would reach its peak after World War 1. After World War 2, however, the quest for independence by African states forced the Imperial powers to withdraw their forces and recede from the continent. By 1980, the last European colonist gave up control over British South Rhodesia, which is now called Zimbabwe today.

Before colonialism, the African continent largely consisted of a collection of tribal communities with ill-defined borders, each with different traditions, ruling systems, and economies. Each tribe, kingdom or state possessed their own rules, values and unique culture that was very different from European standards, but nonetheless, successful on its own terms.

Pre-colonial Africa was well known for its use of iron tools, which was a turning point in African Civilization and march toward economic prosperity (Berg, Ostry, & Tsangarides, 2014) (Fagan, 1961)The utilisation of iron tools took place in clearing dense forests for the cause of farming and enhancing their daily lives. By the time of the “great acceleration” where colonization was rapidly spreading among imperial powers, more developed countries were using novel innovations such as cotton mills, telegraphs, and steamships, to improve their local economies and expand their global reach. To source raw materials, labor, and natural resources, Imperial powers rapidly expanded into African colonies to find cheap and easy ways to sustain their growth (Lindner, 2009). The rush was on to carve up the continent of Africa by Imperial powers with the British, French, Dutch leading the efforts of colonizing the lands, and a newly formed America massively expanding the slave trade to meet the demands of its growing economy (Fig: 2.1). In Africa, natural resources were abundant such as oil, ivory, rubber, palm oil, wood, cotton, and gum, which were drivers for the potential industrial revolution that Europeans were looking to obtain (Lindner, 2009)

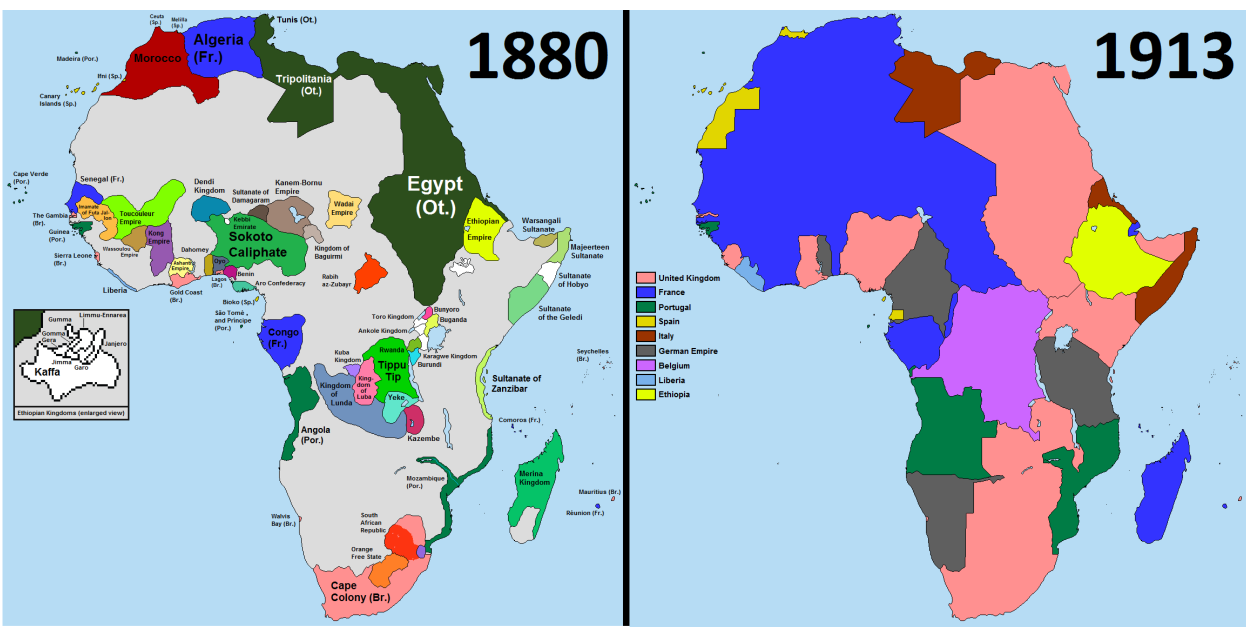


Figure 2. 1: Colonization of lands from 1880 to 1913

Formalization of the European penetration into Africa began with the “Berlin Conference” that took place in 1884. Before the conference, European countries were witness to multiple social and economic problems such as high unemployment, social displacement, and poverty within their borders. It quickly became apparent that a way to fix these domestic issues would be to expand a foreign policy that exploited the resources that Africa had to offer (Shepperson, 1985). In the Berlin conference, Great Britain, Spain, Portugal, France, and Germany were the dominant nations and all met to carve up the continent according to the demands of their local leaders. The main task of the conference was to make both Congo and Niger rivers open to international trade, however quickly escalated to include all land areas within the African continent, thus known as the African Scramble (Shepperson, 1985). At this time, Europe had only nominal control over small coastal areas in Africa and faced many barriers for expanding further deep into the interior sections of the continent due to cultural and language barriers, as well as strong resistance from tribal leaders.

The Kingdom of Belgium began the "scramble" by announcing their intention to annex the Congo in 1884, much to the alarm of the United Kingdom, France, Germany, Portugal, Spain, the Netherlands and many European nations. Weary of fighting more wars over foreign soil, many of these countries simply decided to formally agree to carve up the African continent in a formal agreement. Britain, already controlling the southern tip of the African continent wanted more control of the land around the Guinea coast. France, meanwhile, laid claims to Algeria and Senegal and all land between these two areas; in addition to expanding their presence into Cameroon. Germany claimed most of East Africa, while Italy demanded Tunisia, Libya and parts of Guinea. At this time, Italy's request ran into a major obstacle in that the territories were part of the Ottoman Empire, which by design, did not get invited into the Conference. Seeing that there was very little opposition from other world powers, Britain claimed all of Egypt as its territory, representing a major expansion into African lands by the Europeans. France and Spain sparred over who would take over Morocco, with the winner being the stronger country able to take it by force. After an unsuccessful invasion by Spanish forces, Morocco believed it had escaped colonization. However, per the Berlin Conference agreement previously set forth, France would try its hand at colonizing the country. France, of course, would eventually conquer the country and lay claim to its people and resources. Even the United States got in on the action by staking claims to what is now Liberia. The US, of course, was very interested in mining resources from Africa to fuel the slave trade and to extract valuable resources for its growing economy.

By the end of the conference, European powers eventually divided the continent into more than 50 countries or territories without any regard for native historical land rights and tribal heritage. By the beginning of the 20th century, the entire continent of Africa had become mostly colonized by European countries (Lindner, 2009). However, there still was the issue of the Ottoman Empire which controlled vast swaths of territories that were claimed by European powers. France, Great Britain and Italy decided to declare war on the Ottoman Empire in a series of wars labeled the “Ottoman Wars in Africa.” Egypt, Tunisia, Libya, Morocco, Algeria were all previously controlled by the Empire. Faced with a united Europe, the Ottoman Empire eventually ceded control over these territories. The Turks correctly concluded that it did not possess the finances, skill or political will to continue a prolonged war against multiple European armies over lands in Africa. The cost to maintain military force and the rule proved to be a severe financial strain on the country’s budget, and thus the Ottoman Empire’s rule in Africa had come to its conclusion.

The task of colonization was made relatively easy with the help of dissension amongst the various African tribal leaders, most of whom were not prepared to fight a unified European power that had advanced weaponry and naval capabilities. To be sure, many African tribes and communities had skilled warriors that had successfully fended off many attempts at takeovers by rival tribes, and other European powers. However, without the aid of advanced artillery and other weaponry, these Africans were simply outmatched in battle. The European armies were then able to quickly establish colonial rule throughout the newly formed African states with the use of a combination of military power, political violence, and spread of disease that destroyed the lives of millions of Africans across the entire continent (Shepperson, 1985).

Bulhan describes this period in the early 1900s as "Classical Colonialism" whereby European countries obtained geopolitical advantages using power and weapons to take over African lands and exploit both human and natural resources (Bulhan, 2015). To justify and sustain the colonization, European countries started to use religion and the Catholic church to satisfy their goals, an argument of forgiving natural sins used by the Catholic church and Christian missionaries were critical factors that further helped the process of colonization by Imperial powers. To exert more control and extract increasingly valuable resources from African states, the colonists turned to journalists, scientists, and elites to sustain the colonial missions using a combination of propaganda, pseudoscience, and political levers to control the daily lives of African people. (Bulhan, 2015)

Concurrently, new opportunities in the Americas and Caribbean nations during the Industrial Revolution required massive labor resources that were cheaply obtained via the slave trade, which further exacerbated the destruction of African societies. (Bulhan, 2015). Economically, Europe started to have several benefits out of slavery by developing new technologies to serve an increasing population (Rodney, 1974); however, when it became economically prohibitive, the once-lucrative slave trade from Africa to Europe began to wane (Bulhan, 2015).

2.1.1 Independence and Neo-Colonialism

After Imperial powers slowly began to withdraw from their colonial missions, the era of neo-colonialism began to take place. Starting with the independence of Ghana from British rule in 1957, many other African colonies began a series of rebellions in pursuit of their autonomy and freedom. A period of anti-colonialism rapidly swept through the continent of Africa, with many African leaders calling for a unified “Pan-African” government that would unite the once divided continent with economic and government ties that simultaneously removed colonial powers from their sovereign lands (Bulhan, 2015)Despite their efforts, Europe, America, and newly formed USSR were able to exert control over Africa economically, socially, and politically behind the scenes as the battle for global dominance, spurred by the Cold War, escalated across the world (Amin, 1973).

Using prominent African politicians via bribes and other corruption as well as covert military action via coups and other subversive techniques, the US, USSR, and Europe continued to exert significant control over the domestic and foreign policies formed by the erstwhile African governments. As a result, these superpowers continued to exploit African natural resources and exert more power and domination over the daily lives of African citizens. The drawdown of the cold war and retreat by the major world powers ushered in a new post-colonial era, which Bulhan labels “Meta-colonialism” (Bulhan, 2015).

During this Meta-colonialism era, some studies have shown that globalization benefits some African countries more than others, depending on their historical ties to various colonial powers. (Pheko, 2012)argues that imperialism has damaged Africa geographically and divided it into artificially constructed nation-states with widely different cultural and social characteristics, which have weakened the countries politically and economically. Only elite Africans who would ostensibly serve the interests of European powers were able to reap some of the benefits from the newly formed governments (Bulhan, 2015).

2.1.2 African Unity and the Quest for Regional Economic Cooperation

Today, the entire continent of Africa is now comprised of 55 countries, with wildly different cultures, climate, religion, topography, ethnic groups, tribes, languages, and, of course, colonial history. African countries that were formerly ruled by British, French, and Dutch imperial powers, for example, underwent radically different directions in terms of economic and political institutions post-independence. For example, some studies find that African nations that were formerly under British control tend to be more prosperous than those under French colonial rule. This may be partially attributed to the distinct styles of colonial rule, whereby the British implemented an "indirect" approach to colonization, which essentially allowed for local African rulers to decide how to best tend to their own needs. The French method of colonization, on the other hand, would require much more direct control over the colonies and thus ensure more reliance on the central French government for resources, military aid, etc.

Kathryn Firmin-Sellers noted the distinct differences between the Ivory Coast, a former French colony, and Ghana, a former British colony, for example. Both countries had primarily focused on cocoa and coffee production as a primary source of economic activity but quickly diverged in terms of economic output and domestic institutional design. Following independence, the Ivory Coast promoted more capitalist structures and focused on trade and market-oriented policies, whereas Ghana shifted towards most socialist policies and protectionist measures. She notes that each country's institutions that were initially established by colonial powers helped limit, shape, and formulate each state's economic and political policies. (Firmin-Sellers, 2000).

Following the period of decolonization from 1945-1960, many African states began the process of establishing their forms of government that were far removed from the reach of the Imperial powers in Europe and elsewhere. As with any young country struggling to create a form of government that serves the needs of its people, the search for peace and stability for African states would not come easily nor without substantial cost. War, disease, famine, and other societal ills have long been markers of African states' fragility. Extraordinary high rates of HIV transmission, abnormally high levels of infant and child mortality, and constant war and conflict between rival ethnic tribes have resulted in an entire continent that has been in turmoil over the past 60 years. Using data from the Correlates of War dataset from the years 1960-2016, I compared the incidents of the intra-state war in Africa compared to the rest of the world. I found that roughly 43% of all intra-state wars have occurred in Africa during this time frame.

It is within this context of state security, domestic and international stability, and economic growth opportunities, that government leader spanning the entire continent of Africa started to call for a unified Africa, with some advocating for a complete political union as in a 'United States of Africa.' Still, others were more content to have a loose federation of regional economic cooperation agreements between the states reserving higher levels of state autonomy. The Organisation of African Unity (OAU) was the precursor to today's African Union and was formed during the period following decolonization. The primary purpose of the OAU was to fight against apartheid and help the African States gain their political independence from European powers. Kwame Nkrumah, a primary figure in the Pan-Africanism movement and President of Ghana (1957-1966), not only led the independence of Ghana away from British rule but went on to become a leading voice calling for a strong, unified Africa that could exert economic and military might upon the world stage. He, along with other influential African leaders, determined that the best way to realise each country's dream of political and economic independence was to become politically and economically interdependent.

Over time, the original purpose of the OAU was discarded, and a new entity took its place. Today, the African Union is seeking to realise the goals of a unified African continent by supporting the regional integration of various African nations. The stated mission of the African Union is for "An integrated, prosperous and peaceful Africa, driven by and for its citizens and representing a dynamic force in the global arena" (African Union, 2019).

The African Union (AU) today recognises eight (8) distinct Regional Economic Communities (RECs) each with varying levels of economic integration. The ultimate goal for the AU is to combine these RECs into a singular unified economic union. Some RECs have had considerable success with integration (Fig: 2.2), while others are struggling to maintain its unity.

(1) Arab Maghreb Union (UMA)

(2) Common Market for Eastern and Southern Africa (COMESA)

(3) The community of Sahel-Saharan States (CEN-SAD)

(4) East African Community (EAC)

(5) Economic Community of Central African States (ECCAS)

(6) Economic Community of West African States (ECOWAS)

(7) Intergovernmental Authority on Development (IGAD)

(8) Southern African Development Community (SADC)

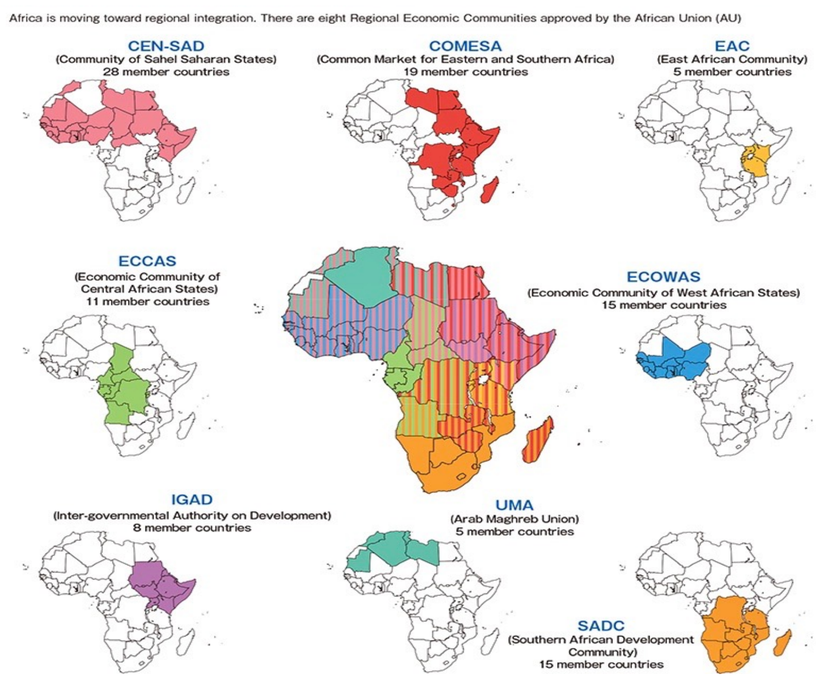


Figure 2. 2: Regional Economic Communities (RECs)

Most of the nations in Africa are relatively small in terms of the total market area, with many of them landlocked by multiple surrounding countries. In this case, it would make financial and political sense for African nations to promote economic interdependence to become competitive on the global stage. Following the path of a linear market integration, whereby states first develop a free trade area between two or more economies, then followed by a customs union; a common market; and finally, into a full, robust economic union with all the attendant benefits of a single bloc of fiscal and monetary policies that could potentially help promote peace and stability as well as sustained economic growth.

Feng and Genna provide additional research about the effects of economic institutions and their role in fostering regional integration. The researchers argue that “the formation of an economic union requires that the homogeneity of domestic economic institutions and the process of regional integration reinforce each other” (Feng & Genna, 2003). They believe that economic institutions must be sufficiently homogenous, i.e., culturally, physically, with similar objectives in achieving economic growth. The interaction between these domestic institutions and the process of integration works as a functional spillover effect whereby mutual trust and cooperation is further facilitated, leading to ever-increasing political and economic ties between states. Free, liberal trade has winners and losers but benefits all parties involved, nonetheless. Thus, economic interdependency and regional integration help thwart a state’s grievances, which may otherwise lead to interstate war. It also further helps to normalize relations and promote general cohesion. Regional integration, therefore, is a critical component in boosting GDP growth and economic prosperity for African nations.

It is clear then that for regional cooperation to occur, all African countries must be sufficiently uniform in its domestic institutions to foster economic and political ties with other nations. As the saying goes, a rising tide lifts all boats. For the continent of Africa to become prosperous, each African nation must adopt a set of uniform rules, processes and attributes that are similar enough to foster cooperation and trust. According to the UN Sustainability Development Goals, each country is tasked with a set of goals to reach a particular outcome. However, in the pursuit of these goals, it is important to remember that there must be harmony and inclusion between African states to help foster economic cooperation, otherwise economic cooperation will likely not be as robust.

For example, let’s say Country A decided to tackle gender equality as a top priority and worked to include women in key leadership roles in top governmental and economic institutions in their country. Country B, on the other hand, does not work as hard to include women in key decisions, and their institutions remain dominated by men. As I will show later in this dissertation, there is evidence to suggest that women in key government roles are more likely to vote on domestic concerns and for the benefit of society and families; whereas men tend to vote on war, military and other pursuits. It is hard to reconcile how the two countries would be able to forge economic alliances when their native institutions are so vastly different in terms of culture, policy and decision making.

Men are shown to be far more prone to this political violence effect with some studies concluding that the role of testosterone and overconfidence could be a significant factor in increased aggression. Women, on the other hand, are less likely to engage in political violence as non-government citizens; and if they are elected to state governments, are shown to craft legislation that addresses social concerns and domestic priorities over military and war expenditures. When women’s representation in parliament approaches parity, African states are significantly more likely to experience higher levels of regional integration, and fewer episodes of political violence and social instability. As we keep an eye on the future state of African prosperity, these governments as well as their international institutions need to include female representation in all levels of government.

Critics argue that most of the exports come from oil and petroleum by-products, with a smaller percentage coming from raw goods like cocoa beans, tea leaves, and textiles (Kimenyi, 2015). Africa lacks quality infrastructure in many areas is no doubt an impediment to facilitating the stronger and more diverse goods into the US market and beyond. The result is that although African nations are now able to compete in the global marketplace, they lack the institutional support and physical infrastructure in place to be a true trading partner with the West. This has led many experts to believe that AGOA and similar development programs have not yet fully lived up to its stated promises of economic diversification and growth within these countries.

The US Congress extended the AGOA initiative for an additional 10 years and is currently set to expire in 2025. The European Union, one of Africa’s leading traditional export markets, has its economic partnership agreements with the various nations in Africa. However, the issue of sustainable development and building of quality infrastructure to facilitate robust trade remains a thorny issue for political leaders across both sides of the Atlantic. It is also important to note that participating countries in AGOA are required to support US international trade policies, which may or may not be in the overall best interests of those participating countries.

2.2 Important Factors in Africa’s Economic Growth and Prosperity

African states have faced many ups and downs in the growth of their respective economies. Therefore, it is required to understand the lacking and implement new strategies that are recognized worldwide to effectively contribute to the growth of the economy. This study highlights the principal factors that have to be considered to increase the overall economy. Most of the prior research on this topic has capitalized on the interest to study how the economy of a country can be developed. Rostow (1959) proposed the stages of economic growth model (Fig. 2.3) which suggests that any society can move from a traditional stage (that can be characterized by an absence of technology, lack of focus on science developments, dependency on cultivation, and an elevated level of poverty) to an industrialized, modernized, and established economy. Rostow (1959), contends that by elevating investment and fluctuations in traditional values and culture, civilizations would increase economic development as compared to previous growth. During the development of the economy of any state, there is an option that this development may affect the demographic factors in the country undergoing economic development. Depending on various economic development levels that a nation is at, the population tends to behave differently at different levels and remain consistent with changing their behavioral factors as they switch from one economic situation to another. Hence, the state must be an active participant in implementing factors including gender equality and controls for fertility rates because they will not only be helpful for the growth of the economy but also will help to bring a change in behavior and lifestyle of citizens (Koch & Fulton, 2011).

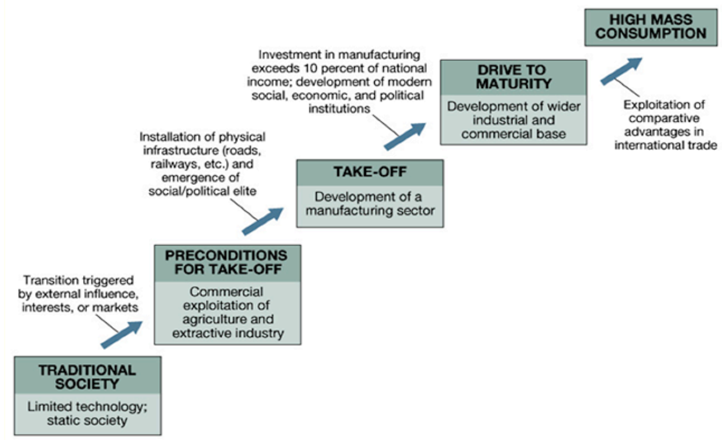


Figure 2. 3 Rostow's Stages of Economic Growth (Source: Rostow, 1959)

2.2.1 Gender Equality as a Variable on Economic Growth

Much research has been conducted to understand in what ways gender equality has positively impacted a state's economic growth. According to Kabeer & Natali (2013), there is evidence that gender equality, predominantly in employment and education, helps promote economic growth within a state. (Kabeer & Natali, 2013). In line with this thinking, this dissertation discusses several direct and indirect ways in which women help increase a state's economic growth, promote peace and increase overall prosperity. But first, we must understand the historical context for why women have an unequal place in African communities.

2.2.1.1 Historical Representations of Gender in Society

From the earliest depictions of gender and war, classical literature and religious texts have portrayed men to be the aggressors in military pursuits with their matter-of-fact calculations on issues of life and death; and their seemingly ruthless pursuit of conquering and killing. Women, on the other hand, are often depicted as the dutiful, loving earth mother that seeks to protect the innocent and nurture the young. In classic Roman mythology, Mars, the strong and powerful God of war, has long been represented as a reflection of man’s innate desire to conquer and destroy other lands and people, albeit in the pursuit of peace. Venus, on the other hand, was the Roman Goddess of love and fertility. Her role was to balance the innate warlike tendencies of Mars and offer love, sex, beauty, and desire to pursue a state of peaceful existence. According to Staples, 1998, Venus is said to “absorb and temper the male essence, uniting the opposites of male and female in mutual affection” (Staples, 1998). That these two lovers represented the dual nature of humanity as represented between the two sexes has long been explored throughout history.

The oft-used phrase, “Men are from Mars, women are from Venus,” has several layers of meaning that, when explored carefully, can yield some surprising empirical truths. Quite literally, men could be said to be the offspring of the Roman god Mars. This genetic trait is passed down into the DNA of men all over the world as something unchangeable and merely a matter of fact. Likewise, women are said to be descendants of Venus, and similarly, her traits are represented in the genes of women all over the world. Popular media continues to explore this idea that both sexes have fundamental differences in their genetic makeup that helps explain their decision-making capabilities.

Metaphorically speaking, poets and philosophers throughout time have lamented that the male and female genders are like two distant planets, Mars and Venus, circling each other but having no idea how each other processes information and makes decisions accordingly. Mars is said to be cold and distant towards others, perhaps even indifferent to the pain and suffering of other people.

Venus, on the other hand, is portrayed as warm and emotional, full of compassion and connectedness.

That modern planetary scientists have labelled these planets as such is undoubtedly by no accident. Yet, the stereotypes long-held between men and women seem to hold some inherent truths, insofar as the field of gender and international relations is concerned. There has been considerable research over the past several decades that have explored the role of women in the promotion of peace and stability within states, particularly with the pioneering work of Mary Caprioli, who notes a strong relationship between gender equality and lowered incidences of state militarism (Caprioli M. , 2000).

2.2.1.2 Gender, War & Peace

Today, political scientists continue to debate the root causes of war and conflict and the conditions in which peace and economic prosperity could occur. Researchers have begun using a positivist approach to understanding gender roles in promoting peace and stability with the focus on empirical testing and analysis. They find much support for the supposition that women are instrumental in helping a state to achieve peaceful solutions to conflict and the promotion of political stability and avoidance of interstate conflict (Reiter, 2015).

In many African societies, the role of women as powerful matriarchal figures and pursuers of peace over fighting has helped propel women to several positions of leadership. In her book "Women of Power: Half a Century of Female Presidents and Prime Ministers" by Torild Skard (Skard, 2014), the author describes the 'Big Chiefs' of Sub-Sahara Africa as being particularly effective in bringing peace and prosperity to war-torn regions. After years of infighting and civil war, Ruth Sando Perry rose to the top leadership spot of Liberia, beating out two male contenders for the title of the head of state. The regional leaders of the Economic Community of West African States convened a peace conference in 1996, determined to find a peaceful solution to Liberia's long-suffering civil conflict. Perry proved to be a highly capable leader, forging peace agreements among various warlords, and along the way, help resettle populations that were displaced during the war, offer repatriation and organise democratic elections. That she was largely successful in these efforts speak to her natural leadership abilities, but also her skill in forging alliances and tending to domestic concerns to appease various factions within the country.

During the early 1990s, the civil war between the Tutsis and Hutus in Rwanda resulted in the mass extermination of the country's population; with over a million Tutsis and moderate Hutus were massacred during this heinous genocide. As a result, women became the majority of the population and started to assume leadership roles that had previously been conducted by men. According to Skard (2014), Agathe Uwlingiyimana, the short-lived prime minister, was instrumental in helping forge a lasting peace in the war-torn nation, leaving a lasting imprint on her role in advancing women's rights, education, and national reconciliation to Rwanda (Skard, 2014).

Most political observers would agree that war is immensely costly, and the benefits of winning a war are not always apparent from the outset. In fact, a central puzzle of war is that generally speaking, neither party is better off having engaged in combat. In line with realist and rationalist assumptions on state behaviour, competition is seen as a driving force for states to engage in adversarial behaviour. However, other ways of accomplishing goals and averting conflict could include negotiation, bargaining, and even cooperation.

All of the former methods of resolving conflict are vastly less expensive than arms buildup and belligerent activity by states. Any game theorist would say that states would choose those options for which the state would maximise their choices in light of what their opponent would do. Similarly, expected utility theorists posit that states would choose those options that yield the maximum payoff given certain constraints, dubbed ‘bounded rationality.’

In either case, states would be far better off to include the cost of bargaining and negotiation into their calculations and simply avoid the cost of war altogether by accurately assessing a state’s internal capability as well as the relative strength and capabilities of its opponents. In his seminal article on the causes of war, James Fearon labelled this conundrum as a “war puzzle” as to why states choose to go to war when the underlying assumptions would predict abstaining from such modes of competition (Fearon, 1995). Fearon asserts that although power and preference, according to rationalist orthodoxy, may account for how and why and under what terms states choose to negotiate settlements, it does not readily account for why states choose to go to war given proper communication strategies. Within this framework, Fearon argues, state leaders would have a strong incentive to share information that could help forge a settlement within the bargaining range that would avert war. To that end, rationalists cannot explain why such information sharing and bargaining would fail to occur, since again, it would be in both parties’ best interest to do so.

Fearon goes on to suggest several alternative explanations for why states may choose to go to war. One of these reasons is that a state may have a strong incentive to mispresent information against its opponent in order to achieve the best possible outcome. This act of 'bluffing' can be seen as an attempt by a state to either exaggerate its strength and capabilities or to hide its internal weaknesses. The effect is thought to try and persuade the other to yield to its demands, through false information. That leaders would choose to go to war, even in the face of profound uncertainty about the chance of actually winning, displays a surprising amount of overconfidence in a state's ability to be the victor in a conflict (Johnson, et al., 2006).

2.2.1.3 Gender and the Role of Hormones in Risk Taking Activities

In 2006, a team of researchers conducted a series of war games aimed at shedding light on human cognitive functions as it pertains to risk-taking manoeuvres. Johnson and his team of researchers looked into the role of testosterone levels as a proxy for levels of aggression and as a marker for risk-taking and overconfident behaviour. In this experimental study, they found that males made significantly more unprovoked attacks than females and were significantly more likely to either attack or retaliate rather than never fight at all. Although done in a controlled laboratory environment, the study does support claims by prior research that men are more prone to overestimate their abilities and engage in risk-taking at a higher rate than their female counterparts. Other research has found a shown a significant relationship between women in parliament and intrastate armed conflict. Erik Melander, for example, found that by using a variety of measures of gender inequality, he could predict the likelihood of a state engaging in conflict. His findings mirror other researchers' findings in that states with high gender inequality tend to be involved in more political violence (Melander, 2005).

2.2.1.4 Women and Conflict

Still, other researchers have found encouraging results of the role of women in states following the end of belligerent activity by a state. Shair-Rosenfield and Wood argue that the relatively higher proportion of women in national legislative bodies bodes well for that state's propensity to incur longer periods of peace and stability (Shair-Rosenfield & Wood, 2017). Countries with higher representatives of women in parliament are less likely to relapse into conflict. The researchers found that overall, there were two distinct reasons why women play a significant role in creating conditions for peace and stability. The first is that women tend to vote on domestic concerns at a much higher rate than their male counterparts. Specifically, the researchers found that women prioritize government spending on social welfare programs that benefit the majority of citizens. In comparison, men tended to spend more money on military expenditures, including heavy arms, artillery, troop recruitment, etc.

Research has shown that a good indicator for a country to engage in conflict is by investing heavily in military expenditures, which naturally diverts resources from domestic spending and investments in things like education. The second mechanism that Shair-Rosenfield and Wood found was that the increased representation of female legislators and their broader focus on social welfare spending helped increase public perceptions of good governance by the political elites. This, in turn, helped foster a sense of legitimacy upon the government and institutions in a positive feedback loop that further helped promote peace and stability within the state. Michael Koch and Sarah Fulton analyzed over 22 democracies between 1972 and 2000 and found that there was a significant relationship between the percentage of female political leadership and interstate conflict (Koch & Fulton, 2011). For women in legislative bodies, they found that more women in government generally led to decreased levels of defence spending and conflict. However, the researchers also found that female heads of state were more likely to promote higher defence spending and engage in interstate conflict. These effects are mitigated by a variety of endogenous factors, including the overall makeup of the legislative bodies within the state, degree of party control within the political system, among other factors.

In their book, Bare Branches, Valerie Hudson and Andrea den Boer explore the relationship between gender inequality and high social instability. They argue that societies such as in China, where there exists a higher proportion of young men vs. women, this tends to trigger domestic and international violence. The underlying root of this being that young, unmarried men often lack stable social bonds and thus resort to political violence to achieve personal and societal goals. (Hudson & Boer, 2004). This mirrors the findings by Henrik Urdal’s work on youth bulges, where he argues that when an abnormally large youth cohort (age 15-24) exists within a state and in the absence of gainful employment (particularly for males), there is an increased risk of political violence occurring (Urdal, A Clash of Generations? Youth Bulges and Political Violence, 2006).

2.2.1.5 Women and Commerce

One of the primary targets that any government should look for to achieve prosperity and development is gender equality in areas of finance and commerce Today, we consider gender equality in terms of access to formal education, equal employment in the local economy, participation in government and leadership, and equal justice in legal, social, and community matters. Sadly, women by and large are systematically excluded from participating in economic activities taking place in African countries (Odhiambo & Asongu, 2019). According to research conducted by Odhiambo & Asongu (2019) that most women were not aware of the opportunities in different economic sectors and activities where they can participate in them. Although some data shows that women are increasing their participation in the African labor-market, they are still working in small trade activities such as agriculture and domestic trade, which are underpaid compared to men's wages (Odhiambo & Asongu, 2019).

According to the study conducted by Seery (2019), roughly 75% of women in Africa are employed in the agriculture sector, or work in other informal sectors including unpaid care and domestic work that offer little to no pay at all. For example in Malawi, women spend seven times the amount of time spent by men in unpaid care and domestic work (UCDW), while in South Africa, females along with children spend about 230 minutes daily working in UCDW, not like men who spend less than 100 minutes daily in same industries (Seery, Okanda, & Lawson, 2019).

For private enterprise, women continue to face significant obstacles to obtain leadership positions in corporations, and thus often miss out on higher-paying salaries compared to their male counterparts. Researchers conducted a recent survey of private businesses in African countries and found that approximately one-third of African companies did not hire women into senior leadership positions (Seery, Okanda, & Lawson, 2019). When African women entrepreneurs do decide to start their businesses, they disproportionally face obstacles in obtaining microfinancing and loans needed to begin (Kim & Watts, 2005). Without access to capital, women entrepreneurs are not able to participate in extensive trade activities that could contribute to their families, communities, and the nation as a whole.

Compounding this problem is the issue of access to education for girls and women, which is a fundamental human right according to the United Nations declaration of rights. Research conducted by Njoh (2018) has shown that in African countries, women are far less likely to attend primary and secondary school than men, and the percentage of illiterate young women is much higher than its counterpart in young men (Njoh, et al., 2018). According to the literature put forth by the UN Sustainability Development Goals, gender inequality and the systematic exclusion of females from economic activities tend to have a negative impact on a country’s overall development and prosperity; specifically, SDG-5, which aims to ‘achieve gender equality and empower all women and girls’ and SDG-8, which is to promote ‘decent work and economic growth’ (Odhiambo & Asongu, 2019).

By denying women, who represent 50% of a state’s total population, access to the necessary capital to create jobs and build systemic wealth, a country’s gross economic performance will be underutilised. Gender inequality also prohibits a country's access to domestic innovations, technological advances, and overall economic productivity. However, while presenting all the occurring problems and drawbacks regarding gender inequality in African states, there is still an opportunity to achieve UN-SDG’s and increasing overall economic performance and prosperity. Firstly, women empowerment and gender equality must take place within all aspects of society, particularly in education, business, and politics.

Kim and Watts (2005), argue that by granting women access to credit facilities and expanding the opportunities for microfinancing, women will be able to start new businesses and achieve greater economic freedom for themselves and their families (Kim & Watts, 2005). This, in turn, allows additional opportunities for women to leverage critical business skills to obtain leadership roles in large corporations and potentially serve as role models for other young girls and women. Promoting gender equality for women may offer unique innovations in business, science, government, and other areas, as well as help a state government in its overall economic development and prosperity. Moreover, when women generate income from business projects that are financed by microfinancing programs, the aggregate poverty rates in those countries are more likely to decrease, since women tend to prioritize spending on their families and children (Kim and Watts, 2005).

Banks and micro-financing activities are not limited to large trade industries, as women that participate in agricultural farming and crop trades can have such opportunities as well. Giving women more opportunities to work in the farming sector allows them to have more access to credit facilities, new technologies, and marketing support to help increase their chances of financially growing and guarantee their food security as well. The research conducted by Baliamoune-Lutz (2007) and Agbodji (2015) offered a slightly different take on financial inclusion, which is "formal credit facilities" (Baliamoune-Lutz, 2007), (Agbodji, Batana, & Ouedraogo, 2015). They show that when women have access to formal credit facilities, this tends to enhance their opportunities in various societal areas such as illiteracy, poverty, and reduction in domestic violence. Before giving women access to formal credit facilities, they need to have more awareness in how to develop strategies, find opportunities and mitigate the inherent risks of starting new businesses (Agbodji, Batana, & Ouedraogo, 2015). This is particularly challenging in export-oriented countries, where the productivity of inelastic goods is higher, but wages remain low; and much less so in import-oriented countries, where workers find challenges to compete with imported crops (Balimane and Luiz, 2006).

2.2.2 Human Capital as a Variable on Economic Growth

Peter Drucker, the esteemed management consultant, author, and professor coined the term "Knowledge Economy" in 1969 (Drucker, 1969) to help explain how some countries were transitioning away from manufacturing economies, where the main factor of production was in creating goods like textiles, machinery, etc.; and even away from service-based economies, whose main drivers of input were focused on services such as arts and entertainment, medical delivery, etc. With a knowledge-based economy, Drucker argues that the main driver of input is human knowledge, which can manifest itself in multiple ways that help create robust growth for a country's economy. In today's interconnected world with a relentless focus on globalization, societies that focus on human capital will be well-positioned for sustained growth and economic development.

Endogenous growth theory implies then that developing societies would do well to encourage innovation, risk-taking, competition, entrepreneurship, and economic freedom. All of these factors will help to promote economic growth, as they are all critical factors that are unique to the aggregate makeup of that country. Many African states receive FDI and other investments designed to has had a healthy public-private partnership between government expenditures and private businesses since its founding. The higher education system in African universities has a long way to go to offer the training and knowledge needed for its citizens to compete as qualified labor on the global stage. Governments can do well to continue its investment in education, research, and development. Then, African nations can begin to offer incentives for innovation by private firms and other interest groups.

Under the exogenous growth model, a later version offered by Mankiw, Romer, and Weil of the Solow-Swan model, suggests that by adding human capital as a factor of production, this could help explain the convergence of country's economies while holding labor and capital steady (Mankiw, Romer, & Weil, 1990). One thing to note, however, is that under the exogenous growth model, human capital is treated as a depreciating asset, much like other capital. In addition, human capital is treated as something one can accumulate incrementally, which has inherent logical fallacies. Nonetheless, the researchers were able to introduce the idea that human capital is a factor of production and can be measured as such.

By combining the newly added human capital component to the Solow-Swan model, researchers believed this new model would explain economic convergence, where developing countries will eventually reach parity with more prosperous nations due to the latter's diminishing returns on capital. Under both models, therefore, human capital would be a significant determining factor in economic growth in many African states.

Several policies related to education have been implemented and new investments are going into the projects related to education in children and improving literacy rates among adults. Adu (2017) investigated the impact of education on the growth of the overall economy. And used the auto-regressive dispersed lag approach to co-integrate. He found that in the short-run, primary education has a positive significant relationship with the economic growth in the state. Whereas, for the long-run, both the levels of education including secondary and primary education have a significant positive relationship with the growth of the economy. However, the tertiary level of education has no significant relationship with the economic growth whether considering the short-run or long-run (Adu, 2017). Additionally, government spending on education has statistically no significant relationship with the growth of the economy which depicts that the spending of money is not heading for the education quality instead of quantity or a high number of enrollments. Adu (2017) concluded that policies related to education must be focused on not only a primary and secondary level of education but also the tertiary education, integrating investigation, research, experiences and development into account, and administration expenditure must be headed for the excellence and quality education.

2.2.3 Impact of fertility rates and 'youth bulges' on economic growth

2.2.3.1 Youth Bulge & Economic Prosperity

Urdal (2006) conducted a study related to political demography which shows the relationship between a state's purported "youth bulge" and the likelihood of robust economic prosperity, given the conditions of low unemployment and an educated workforce. This so-called "window of opportunity" is a timeframe for states to capitalize on abnormally large cohorts as they reach the maximum production output. To harness the potential of a potential youth bulge, a government must be willing to expend resources for investments in education, have ample job opportunities, and provide access to education for women and young girls. Therefore, with youth bulges, a window of opportunity presents itself when the following conditions are met:

a) the youth bulge is on the horizon from ages 16-45

b) the state's population is both educated and employable

c) Women and young girls have more access to education and paid work opportunities.

Prior research from (Bloom, Canning, & Sevilla, 2004) indicates that a country needs the majority of its citizens to be gainfully employed for GDP growth. Also, a state with a large unemployed population is often subject to civil unrest and political violence, which disrupts and limits economic activity, thereby limiting growth. Further, countries with significant inequality between rich and poor citizens are also subject to lower GDP growth (Becker, 2005). In order to achieve economic growth, a state must first possess a sizeable working-age population relative to its non-productive cohorts. When the non-productive population far exceeds the working population, then they act as dependents and utilise more resources than are being produced by the employed citizens. This, in turn, negatively impacts GDP. While this is a necessary criterion for GDP growth, it is not sufficient on its own and requires other criteria to be met. With a larger proportion of a state’s total population being between the ages of 16-45, which is classified as productive age citizens, the opportunity for this cohort helps to accelerate economic growth by producing:

a) more taxes for government spending

b) more savings for investment.

This “demographic dividend” is a boon for a state’s economy and helps contribute to higher political capacity by the state, in turn increasing its relative power and influence. A large, young population has the potential to have a significant impact on a state’s GDP since more people could work and produce more taxes for the government. Given the right conditions, youth bulges can lead to an increase in a state’s wealth, along with a rise in citizens’ overall net worth. With this rise in wealth, a state would have more options to invest its newfound resources into domestic concerns, including infrastructure, healthcare, education, among other things. Additionally, a state may choose to increase its military power, arms, and other foreign investments to secure its position within the global power rankings. Therefore, a youth bulge could present an incredible opportunity for a state and its citizens to drastically improve its way of living and overall human and economic development, leading to conditions for further prosperity.

2.2.3.2 Youth Bulge and Economic Growth

The high fertility rate and subsequent demographic, therefore population distribution plays an important role in identifying the sustainable development of African Countries and the economic growth rates in the future. According to the demographic profile produced by the United Nations Economic Commission for Africa (UNECA) in 2016, the annual population growth rate between 1980 and 2015 is among the highest in the world (2.5%), which can negatively affect the process of economic development and growth. Lintelo (2014) conducted a study that has shown that youth between the ages of 20 and 30 currently represent 30% of the total African population, and 41% are between the ages of zero to 14 (Lintelo, 2011). Putting all these numbers together, we see that Africa is currently witnessing the formation of the “youth bulge” phenomenon as a result of the very high fertility rates taking place on the continent.

However, researchers continue to debate the leading causes of the high fertility rate in Africa, with several studies indicating it may be due to specific African culture, lack of education, or war and conflict. (Bongaarts, 2011) argues that the lack of quality education provided in Africa is one of the main reasons behind the high fertility rate. Essentially, he argues that less-educated individuals lack both the awareness of proper birth control and its effects on overall family planning.

One of the main actions taken by local governments, NGOs, and other organisations to lower the high fertility rate is by implementing family planning programs and campaigns aimed at reducing the overall fertility rate and lessen poverty. These family programs usually come in the form of awareness campaigns in blighted neighbourhoods and poor communities that show the economic and social benefits of birth control. Bongaarts (2011) argues that the African government’s reluctance to fund such efforts, due to prevailing cultural norms or other factors, is another reason why fertility rates continue to be so high relative to the rest of the world (Bongaarts, 2011).

According to Bongaarts (2011), the high infection rate of AIDS in Africa is considered a reason behind less investment by the government in such programs as combating this disease costs the governments in Africa a lot, while African governments investment in family planning programs is limited, the cultural bias towards forming large families in Africa will still exist (Bongaarts, 2011)

Economically, youth bulges can cause severe unemployment in Africa, where many of the youth will not have the opportunities for landing new jobs. Africa has a large and growing labor supply that will only continue to increase in the coming decades. This poses a problem for African leaders since many states don’t currently have the resources in place to ensure full employment for its young, burgeoning population. Due to a lack of critical investments in infrastructure, education, health, and gender equality, the labor market itself is rather static. Thus, with the existence of youth bulges and such a rigid labor market, the current market cannot absorb such labor supply (Fluckige and Ludwig, 2018).

Families with high fertility rates are also less likely to have savings or able to make investments for the future (Urdal, A Clash of Generations? Youth Bulges and Political Violence, 2006). It has been reported that families with a high fertility rate, families have to spend the same amount of money on a higher number of dependents. Therefore, each family member will have fewer resources from the total family income, which then leads to fewer opportunities for education, health, food, and other critical needs.

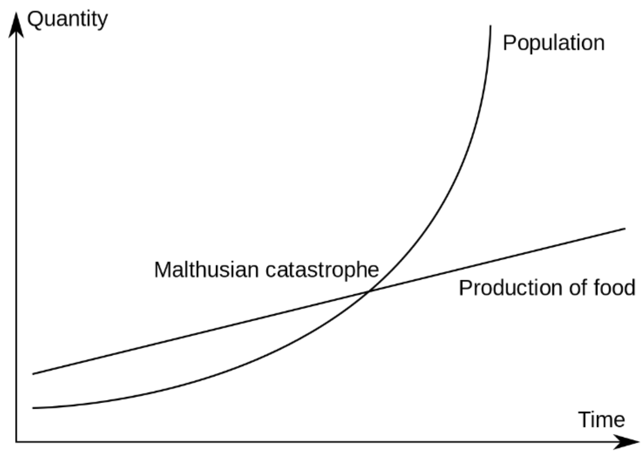
In terms of health care, the higher the dependents in each family, the higher the mortality rate can occur (Urdal, A Clash of Generations? Youth Bulges and Political Violence, 2006). If fertility rates remain high, the demand for health institutions and hospitals will be higher, which means these institutions will not be able to accommodate the large number of children that need critical health services, leading to worse health outcomes. Similarly, high fertility rates affect the quality of education as the demand for educational institutions for children are likely to be higher (Urdal, A Clash of Generations? Youth Bulges and Political Violence, 2006) by the increasing number of children in school, the equal opportunities for children to have good education will not take place.

Another important issue that is present in many African communities is the prevalence of domestic violence and sexual assault as it relates to high fertility rates (Caprioli M. , 2005). According to the World Bank, one-third of African women have been victims of domestic violence or some form of sexual assault. Although these are reported cases, the true number of victims will likely be much higher. Because many African women are poorly educated and have limited opportunities to create their sources of income, they are largely reliant on their male partners to provide for their necessities. Under these circumstances, women may feel obliged to submit to sexual activities under the threat of being beaten or mistreated by their partner. Women also cannot usually demand their male partners to use birth control, so naturally, this results in a high level of unplanned pregnancies.

Women's education can also reduce the rates of domestic violence that lead to high fertility rates, according to world bank reports. A highly educated woman is 31% less likely to be a domestic violence victim, and if she gets at least primary school education, she is 16% less likely to be affected by domestic violence. The studies have shown that family planning programs and campaigns have a role in enhancing fertility rates, however, (Bongaarts, 2011) argues that government-supported programs are more effective and efficient in achieving such targets. "The overall costs (including social, economic and health) of regulating fertility are high, the demand for fertility limitation is weak because there is little point in aiming for a goal that cannot be implemented without great difficulty (e.g., by abstinence). In contrast, reduced costs allow couples to reassess, reaffirm, and more readily attain their fertility preferences." Urdal stated.

2.2.4 Population Growth and fertility levels as variables on Economic Growth

Kumar (2015) conducted a recent study that has gained attention of many researchers and has led to various research approaches in understanding the implications of population growth as an important variable on economic growth. The study shows the implications of population growth has a tendency of suppress the underlying living standards if the resources to support this population growth are not present. Thomas Malthus, of course, identified this vexing issue by noting while technological advances could increase a society's supply of resources, such as food, and thereby improve the standard of living, the resource abundance would enable population growth. This in turn would eventually bring the state's per capita supply of resources back to its original level. Thus, a state could never really escape levels of overall poverty, known as the Malthusian Trap (Malthus, 1798), or alternatively a "Sustainability Trap".



According to Malthus, when human beings will be restricted to harm the environment, it will recover to its nature as fast as possible otherwise, it will be destroyed. This approach raises the underlying fears of a sustainability trap in relation to the possible harm related to the increased demand levels on the scarce and limited natural resources like clean drinking water and air (Lahart, 2008). For instance, mounting excessive pressure on the available land space and soil leads to the depletion of the available resources needed to sustain population growth. The underlying figure is aimed at depicting the underlying relationship between the population growth levels in diverse developing nations about the per capita GDP.

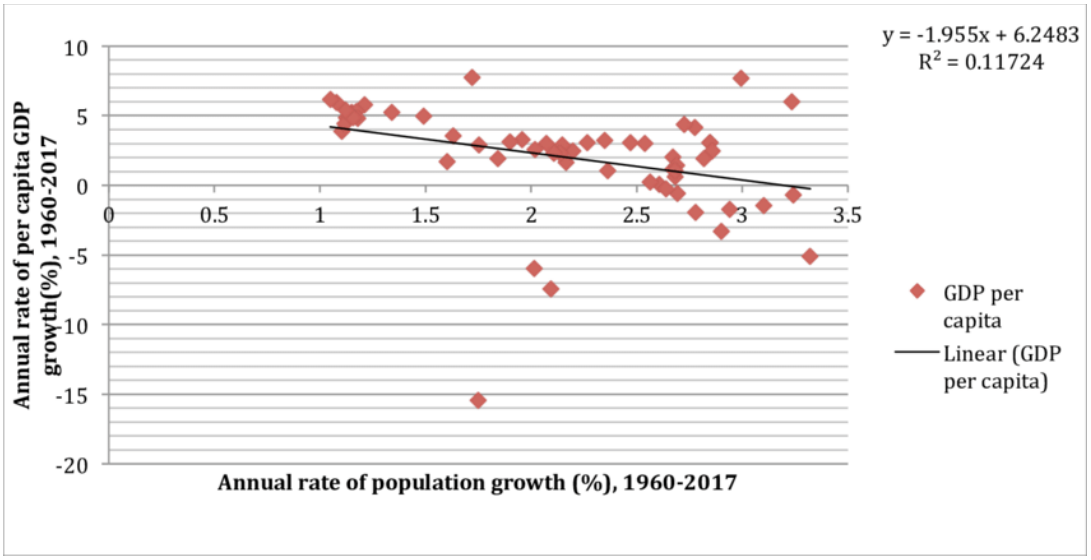


Figure 2. 4: Population growth rates and GDP per capita growth rates (1960-2017). (Source: World Bank Data Bank).

Fig. 2.4 illustrates a cross-sectional association between economic growth and population growth. It shows a negative association among population growth besides economic development on non-industrialized nations when it is considered on a long-term basis between 1960 and 2017. The argument has been extended to depict that educated women are also empowered; thus, they have opportunities to work away from home, hence leading to a reduction in the fertility rate. The Malthusian Growth Model describes this phenomenon using the function

$y = -1.965x + 6.3483$ $R^2 = 0.11824$

The function above states that economic growth in terms of GDP between 1960 and 2017 for various developing countries was at 0.11724 %. This means that developing countries through public education stressed the importance of controlling their population growth, which is seen to drop by half, and a country whose total population is now finding it easier to feed and educate the population. Such a population is also healthier compared that a high population that scrambles for the available resources on hand. Several research studies on birth control and fertility rates show that developing countries have been at the forefront in taking preventive measures using a community-based approach by recruiting village women to help in training the public on simple medicine and family planning consisting of a variety of birth control methods (Drucker, 1969).

2.2.4.1 Potential for Social Instability and Political Violence

A country with a young population may also have the potential to do harm to a state's overall prosperity, particularly if members of this cohort are not employed and thus not producing tax revenue for the government to collect. Young, unemployed citizens are classified as state dependents, since the central government is ostensibly responsible for the citizens' everyday basic needs, including food, shelter, water, etc. Having to provide for more dependents without collecting the necessary revenue naturally leads to a decline in GDP and an overall worsening situation for a country's citizens. According to Bloom et al. (2004), nations with larger dependent populations need to dedicate more resources to support those individuals, which can, in turn, slow economic growth. Therefore, in order to combat this potential delay, a highly educated and primarily employed working-age population needs to exist. Without this high return on capital, the resources required by the dependent population will exceed what is being provided, and economic growth cannot occur.

Furthermore, research has shown that a large, unemployed population (particularly among young males) has the potential to resort to political violence in order to change the status quo and demand better living conditions. High levels of unemployment, coupled with the fervent energy of youth, is a recipe for social unrest and a potential threat to the legitimacy of a state's government. The larger the number of youth in a society, the higher the risk that those young people could potentially be recruited into a rebel army or other terrorist organisation. Most of the combatants in African armies are between the ages of 14 and 24 years old, which is a prime age for recruiting vulnerable youth who face otherwise bleak job prospects. Fluckige and Ludwig show that large youth populations can boost the risks of base-line conflicts between rival political groups, whereby rebel leaders can easily exploit regional, tribal, ethnic differences between the different groups, then use clashes and armed conflict to settle their differences.

2.2.4.2 Arab Uprisings

It should be noted that in recent times, and with the rise in social media, voices of dissent are not the exclusive domain of young, restless men. During the last few months of 2010 and through the Spring of 2011, many young women activists heralded the call for upending the current status quo in many Arab countries. From Tunisia to Egypt, Syria to Yemen, young women across the globe were demanding an end to oppressive regimes, fair treatment and equality, social justice, and action on democratic reforms (International Federation of Human Rights). In Tunisia, women were instrumental in igniting the initial wave of protests within the Arab world. One blogger, Lina Ben Mhenni, helped shed light on the death of Mohamed Bouazizi, who lit himself on fire in protest against perceived harsh treatment by government officials. This vital work helped spread the word to other activists who rallied behind the cause of Bouazizi and which eventually led to the toppling of the Ben Ali government in Tunisia.

Social media, without a doubt, has helped fuel the rise of ‘cyber-activism,’ which helped activists across countries organise, mobilize, and coordinate calls for action against their respective governments. In Egypt, following the massive protests in Tunisia, a young, charismatic woman named Asmaa Mahfouz posted a short video to Facebook calling for massive protests against the Mubarak regime in Cairo. Within days the video went viral and sparked an enormous call to protest across the entire country, helping further fuel the fight against oppressive regimes across other nations in the Middle East.

Unfortunately, those early calls of democratic change led by women did not translate to more representation in leadership roles after Mubarak was deposed. During the interim, government members of the Muslim Brotherhood effectively co-opted the nascent movement and asserted itself into power. The resulting Constitutional Committee task force, which was designed to build a new government in Egypt, failed to include any female members. Resulting elections in Egypt following the fall of Mubarak, women only made up 2% of the parliament. However, some seeds of progress stemming from Egypt’s uprising are starting to bear fruit. The 2014 Constitution states in Article 11 that "the state shall ensure the achievement of equality between women and men in all civil, political, economic, social and cultural rights in accordance with the provisions of this Constitution.[i]

In Yemen, Tawakkol Karman, another female activist, is often called the “Mother of the Revolution” in that country by scores of activists and journalists for her role in helping to organise protests against the ruling government. In all cases, women can be seen protesting in the streets and helping organise rallies to upend decades of oppressive rule.

2.2.5 Endogenous Factors Inhibiting Economic Growth

2.2.5.1 Social Inequality and Prosperity

Empirical studies have shown a strong negative correlation between inequality and GDP growth, which in turn could inhibit a state from becoming prosperous. The larger the difference in income and wealth within a society, the lower their GDP growth. When more people have far less money, this decreases their level of personal investment in terms of education, health, housing, among other things. This, in turn, means less overall investment within the state, which leads to lower GDP growth. Massive inequality also means far fewer people are spending money on goods and services. Having less velocity within the system means less economic activity, which again leads to lower GDP growth. Whereas unequal societies need to spend more time redistributing resources the lower inequality of more developed societies leads to quicker and more stable growth (Berg, Ostry, & Tsangarides, 2014). Therefore, it is crucial for high employment rates and education levels to exist, as those are indicators of a nation's thriving and development. Without these constituents, a country's GDP may be negatively impacted by a youth bulge due to inadequate resources and human capital preventing the state from investing in its growth substantially.

When a state has less taxable revenue, it is forced to choose among which constituents would benefit most from its dwindling treasury. Should the government redistribute its wealth into the hands of a very few, yet influential members of society? Or should it redistribute it for the benefit of everyone? With a small number of resources, choosing a proper path forward is no easy task given that competing political cleavages will force demands from its government that are often at odds with each other. Therefore, it is easy to see how a government may find itself directly or indirectly increasing the levels of inequality within its country. By focusing on distributing resources to the very few, at the expense of the masses, for example, a state would directly set the conditions for systemic wealth inequality. By not focusing on building schools to provide education, hospitals to control disease and promote health, or build infrastructure to help facilitate trade; a government will indirectly create the conditions for lasting inequality as well.

2.2.5.2 Wage Inequality

Research has shown that wage inequality leads to negative consequences for GDP growth, which in turn leads to overall economic and political instability. In general, women's economic empowerment tends to boost productivity, increases economic diversification, and income equality in addition to other positive development outcomes (International Monetary Fund, 2018). More economical and political instability naturally leads to lower GDP growth inhibits the goal of prosperity, which in turn leads to a vicious cycle in which states can find themselves mired in political paralysis and dysfunction, seemingly with no easy solution. Other attempts to quantify the economic loss of gender inequality yielded startling results. Bandara (2015), conducted a recent study that shows African women held only 40% of the formal jobs in her survey, which indicates a labor gender gap of approximately 54% (Bandara, 2015). Having such a large disparity in the workforce means African states lost roughly $255B in economic growth in 2015 alone due to women being absent in the labor pool.

Wallerstein has pointed to one of the primary causes of inequality being income disparity. Freeman further adds that the loss of power among labor unions is a driving force in ensuring workers are not compensated about their productivity. We have seen this in the US, where labor-power has systematically been reduced through various political and economic measures to limit their collective powers across a wide range of industries. This loss of power and coordination from aggregate labor has led to wage stagnation, which in turn has led to severe inequality. Severe inequality, as stated above, tends to have a negative impact on GDP growth and increase political instability.

Rudra explains that for Less Developed Countries, we should expect wage inequality to occur because labor-power is substantially weak in those nations. I strongly suspect that her data, as of that time, did not show that developed countries have experienced the pitfalls of globalization as drastically as LDC's. I am arguing here, however, that it is only a matter of time before she is proven right. According to Rudra's research, welfare spending across all states should go down because:

- Social benefits are not good for markets (raise labor costs, reduce work incentives)
- Governments are constrained from raising revenue because higher taxes reduce their attractiveness to business

Rodrik presents evidence of a positive correlation between trade and the size of government, suggesting that Rudra's concerns about a race to the bottom are unfounded. High-income countries tend to have bigger governments that spend more on social welfare, he posits. Garret offers us an even rosier view of globalization by arguing that globalization has been good for labor and left-wing parties because they promote social stability by spending more on healthcare for citizens, providing a higher educated/skilled workforce, among other redistributive efforts.

Businesses are attracted to states that have political stability, an educated workforce, healthy citizens, and good infrastructure. Therefore, governments would do well by investing in more generous social welfare spending, he argues.

Thankfully, Allan and Scruggs offer evidence to the contrary and state that despite those earlier claims, advanced nations do witness a decline in social welfare spending. It was only a matter of accurately measuring these things. According to their research, retrenchment is happening just as Rudra expected it would. However, when leftist parties are in power, they tend to try and halt the overall retrenchment as much as possible, but rarely if ever, can expand it. When rightist parties are in power, they consistently and deliberately cut welfare spending. If Allan and Scruggs are right, then we will start to see a slow, yet steady decline in social welfare spending by states even in advanced developed economies.

According to Democratic theory, if the mass population does not like a particular set of policies the government is administering, they can organise and vote those politicians out of the office and elect new representatives to meet their needs. According to research presented by Iversen and Soskice, in majoritarian systems with two parties, middle-class voters are more likely to coordinate with the rich in rightist parties. In liberal Democracies, voters tend to elect representatives who promise to “bring home the bacon” with targeted redistribution. This form of social welfare is, by design, very limited and targeted toward a select few and at the expense of overall social spending on mass populations. To that end, the middle-class and poor often get short-changed with government redistribution overall.

Apart from gender inequality, African countries suffer from high rates of social inequality, and it is considered the continent that has the highest levels of social inequality in different fields and aspects of society. Social inequality takes place in wealth, lands, and farming. One of the major aspects of social inequality that Africa suffers from is wealth inequality. According to a report by the United Nations Development Program (UNDP), “10 of the world’s 19 most unequal countries are in sub-Saharan Africa.” Wealth inequality is defined when most of the county’s wealth is under the control of certain groups. At the same time, the majority of people are suffering from poverty and do not have the same financial opportunities, which creates an “income gap” between the wealthiest and poorest. Numbers show that the wealthiest 0.0001% of Africa’s people have disproportionate control over society and own 40% of the continent’s wealth (Seery, Okanda, & Lawson, 2019). Another aspect of social inequality in Africa is present in unequal land distribution, where access to land is critical to most of the African people as they depend on farming to satisfy their basic life needs. African farmers typically work in tight lands with high rates of unproductivity and are primarily used for family consumption. At the same time, these subsistence farmers are losing their rights to access lands and forests that are reserved for large multinational corporations collaborating with the national governments.

One main factor for unequal land distribution in Africa is attributed to the post-colonial era, where most of the colonizers continued to wield great authority over the agricultural lands. Before handing over the reins of government back to the African states, laws were written to ensure resource-rich land areas remained in the hands of the state, and thus effectively under the control of any future government with ties to the former colonists. According to Mayo (2015), the unequal distribution and cultivation of agriculture does not take place only on land but occurs in the water resources, farm assets, and livestock as well (Moyo, 2015). The investments in irrigation facilities are mostly limited to large scale farms and plantations owned by private corporations and government entities. In contrast, very little investment is allocated to small family farms that make up the majority of African farmers, which helps further perpetuate the unfair distribution of the ownership of agriculture machinery and systems (Moyo, 2015).

Social inequality also takes the form of personal income inequality, where the majority of a country's aggregate wealth is concentrated in the hands of a tiny elite portion of that society. Africa has a high rate of personal income inequality where employees across many different sectors find a massive gap between wages of lower-level employees and higher-ranking executives. In general, total GDPPC levels have increased in most African countries over the past several decades, primarily as a result of foreign direct investment efforts and increased investment in critical infrastructure, education, and health sectors by governments. Martins (2007), conducted a recent study on income inequality in South Africa and found that more than half of the families there suffer from income poverty, whereby they spend most of their total household income on food and basic life necessities (MARTINS, 2007).

Some of the key sources of income inequality in Africa is the under-employment and unemployment in more formal industries. Due to a lack of proper training and formal education, many African workers are forced to find employment doing menial tasks and performing odd jobs just to make ends meet. Although it helps provide some necessities for workers and their families, doing informal work may not provide for long term growth and economic stability. The average monthly wages for South African workers in informal industries, for example, is USD $203 per month. However, the average monthly wages in formal industries is equal to roughly USD $715 per month (Moyo, 2015). By not working in more formal jobs and careers, the income disparity continues to be a persistent barrier to overall economic progress and prosperity for African nations.

Low self-employment, along with a lack of access to capital needed for entrepreneurial ventures, is another factor contributing to income inequality in African states. South African youth often face many barriers to entering the market as entrepreneurs, including the usual culprits, lack of proper training and education, as well as systemic racism from lending institutions (Moyo, 2015). Lack of access to quality education in rural areas is one of the primary reasons behind overall income disparity. The research of Moyo (2015), showed that Southern Africans who live in rural areas are disproportionately affected by lack of education and training, and thus are not able to effectively start new businesses and create capital (Moyo, 2015).

However, with all the mentioned challenges and problems, there is a window of opportunity to achieve social equality in African countries. Prior research has suggested that by incorporating various economic and social reforms and policies, many of these issues associated with income disparity can be tackled and resolved. One remedy may be for African governments to allocate resources toward funding education and health (Seery, Okanda, & Lawson, 2019). African governments would also do well to focus on tax policies that benefit all sectors, not only the wealthiest and people who live in the most advantageous areas. In order to increase public spending, governments should look for solutions to solve their debt crisis and should cut the spending on fuel and gas subsidies (Seery, Okanda, & Lawson, 2019).

According to Seery (2019), there are several countries, including South Africa, Mauritius, and Tunisia, that have increased their public spending in these critical sectors and are starting to see a positive return on their investment (Seery, Okanda, & Lawson, 2019). Public spending is not limited to investing in health and education facilities but should also include investing in other sectors as well. Governments can increase their long-term economic performance by supporting infrastructure projects such as clean water, sanitation, sustainable energy, and childcare. Also, funding social protection programs that support individuals, especially females who are working in UCDW. The research of Seery (2019) will help increase overall productivity and economic performance. In order to tackle income inequality, a form of progressive taxation is one of the key economic solutions to solve the financial crisis taking place in many African countries (Seery, Okanda, & Lawson, 2019). Progressive taxation systems can be a great solution towards reaching social equality, by classifying the taxpayers according to their income. (Seery, Okanda, & Lawson, 2019) have also suggested that tax collection policies in Africa should be changed so that the government can collect more revenue from redistributing to various sectors for long-term growth. Almost half of the Sub-Saharan African countries offer some form of tax exemptions to large companies and investors, whereby no tax revenue is collected. According to some statistics, these tax incentives cause considerable financial losses to African countries (more than USD 15 bn per year) and put considerable constraints on governments to provide for social welfare programs that could increase prosperity in the long-term.

Government leaders in many African nations argue that policies designed to attract foreign investors with low tax rates are justified in that they bring jobs and critical infrastructure projects to their home states. However, a recent survey by the World Bank found that more than 90% of investors in African countries were willing to invest even if they were obliged to pay taxes.

Offering decent workplaces and wages would make a big difference in reducing the inequality and income gaps in Africa, by offering decent work opportunities, informal jobs will decrease. As informal jobs are considered reasons for poverty in countries because they are extremely underpaid compared to wages in formal and decent jobs (Seery, Okanda, & Lawson, 2019). Essentially, creating decent job opportunities requires following some labor rights rules that encourage labor to join the workforce, the descent policies are mainly "freedom of association and the effective recognition of the right to collective bargaining, the elimination of forced or compulsory labor, the abolition of child labor, and the elimination of discrimination in respect of employment and occupation." To guarantee equality inland distribution and the agriculture sector, theories suggest that governments should increase spending on land reforms and agriculture, but the spending should be focused on small-scale rural farmers (Seery, Okanda, & Lawson, 2019).

2.2.6 Corruption

According to transparency international, the average corruption perception index (CPI) in 2019 in Sub-Sharan Africa was 32.5, which is consistently near the very top of all rated countries. The CPI is a score that classifies the level of corruption in each country's public sector, as measured by surveys by the general population. Various social, economic, and political factors are measured each year to determine the perceived levels of corruption and its effect on society. As corruption begins to fester, it permeates throughout society and becomes a "natural way of doing business." Many African workers simply accept corruption as a way of life, for example, and will tend to engage in the same behaviour since seemingly everyone else is doing it (Forson, Baah-Ennumh, Buracom, Chen, & Peng, 2016).

2.2.6.1 Social Corruption

Social corruption is exhibited when employees that provide public services such as government-issued licenses, financial services, or social affairs, will choose which types of citizens will receive special access based solely on their native tribe, religion or other factors. In other words, government workers have a selective bias in their work in favouring their native to the tribe or religion over citizens, not in their preferred "group." Special services are then denied to outside groups, which hampers equality and legitimacy in the eyes of these 'non-favoured' citizens. As a result, the quality of services provided to all people is decreased, efficiency is thwarted, and economic growth is hampered due to this type of corruptive action (HopeSr, 2000).

Social corruption is further extended to the bureaucracy and massive inefficiencies of governmental operations in African countries; whereby the amount of time needed and the number of documentation and paperwork required allows employees to accept bribes and illegal payments to expedite certain processes (HopeSr, 2000). When both the service provider and the service receiver accept the fact that bribes can finish tasks faster, corruption becomes a way of life and a routine part of doing business. This further expands into other aspects of society, including business, non-profits, and community services, helping to entrench corruption as a way of life for African states.

2.2.6.2 Political Corruption

Forson (2016) states that government workers accept bribes because their level of income is very low about their daily expenses for their basic needs; thus, using cost-benefit analysis, the theory suggests that the higher one’s official wages, the less corruption could occur, as government workers will be more productive and willing to help the public since they will not need to have bribed to increase their income (Forson, Baah-Ennumh, Buracom, Chen, & Peng, 2016).

Nduku and Tenamwenye (2014) state that the history of colonialism in Africa has had a long-lasting impact on the corruption level and attitudes in the continent (Nduku and Tenamwenye, 2014). Some European countries instilled strong institutional systems and practices that were designed to halt corruption taking root in many African countries. However, some researchers have found that many colonizers have put numerous rules and regulations in place that allow for the transfer of ownership of lands, oil, gold, and other natural resources to private entities. This was designed to enrich the European powers by increasing their political control over the African people and their governments to extract crucial resources for their benefit. (Forson, Baah-Ennumh, Buracom, Chen, & Peng, 2016). By the end of the colonial era’s rules and regulations regarding private ownership of public resources continue to be used by other private groups and corrupt government leaders (Nduku and Tenamwenye, 2014).

Government leaders are quite adept at using their positions of power and control of media outlets to convince the public of their legitimacy in implementing policies designed to maintain control over public resources. These rulers, along with national elites, operate under the auspices of “defending the countries against external interference,” and “national sovereignty” in order to give themselves the right to impose the rules and regulations that serve their interests (HopeSr, 2000). Naturally, these elite rulers use the office of government to enrich themselves and their cronies to amass great wealth. At the same time, the much-needed funds for public redistribution are taken away, and as a result, overall economic performance decreases (HopeSr, 2000). All of the aforementioned political corruption is the result of several consequences. The first one is the lack of the ‘rule of law’; which, according to the United Nations, is “A principle of governance in which all persons, institutions and entities, public and private, including the State itself, are accountable to laws that are publicly promulgated, equally enforced and independently adjudicated, and which are consistent with international human rights norms and standards.”

Nduku and Tenamwenye (2014), argue that the rule of law is largely absent in African countries due to its colonial past by European powers. They state that during colonial times, the laws, as written, were never applied equally to all people, and, as a result, certain groups, tribes, and politically connected groups were more likely to gain wealth than others. The absence of the rule of law, therefore, made the officials and national elite unaccountable for their corrupted acts. Hench, corruption among African countries remains high due to this sordid history associated with colonialism (Forson, Baah-Ennumh, Buracom, Chen, & Peng, 2016).

Political corruption is further amplified by the absence of an independent media as well as a lack of press freedoms; that would be used as a safeguard against government wrongdoings. Many African countries impose strict laws and regulations that are designed to limit press freedom, which makes it all but impossible for journalists to accurately report on corruption by government officials and its adverse effects on the nation’s economy. At the same time, government officials and the elites will be the only entities that have full control over the media, so they can communicate only the messages they want to appear to the public (Forson, Baah-Ennumh, Buracom, Chen, & Peng, 2016). According to the latest reports by the Reporters Without Borders (RSF), almost 90% of the African countries are classified as a "difficult situation" in terms of press freedoms, while the vast majority is classified as either a "problematic situation" or a "very serious situation."

High levels of political corruption, limited press media freedom, and high poverty rates are a combustible mix of elements that could lead to riots, demonstrations and further political instability by the public against their government (HopeSr, 2000). Therefore, in order to make changes in all of these acts suggest that several political reform strategies should be imposed in order to guarantee that rule of law would be applied, in addition to domestic campaigns by media and national organisations to raise awareness against corruption and let citizens know about its effects. Moreover, efforts by international organisations could make a difference and apply international pressure against corrupt governments. All of the mentioned political and social reasons behind corruption are mainly caused by the economic problems and effects taking place in the African nations.

In many African countries, limited access to education has led to more illiteracy and less awareness against corruption by government officials and help give license to the nation's elite that there will be a little public outcry from these activities. The low-access to quality medical services has also led to increasing corruption within African countries, as only bribe payers or officials can have access to the available medical resources in the in a pay-to-play scheme. Studies show that political corruption and the elite's control over resources have led to monopolies across multiple industries. The availability of resources and goods, therefore, have become very limited to the consumers, which negatively affects internal trade rates and reduced economic efficiencies (Forson, Baah-Ennumh, Buracom, Chen, & Peng, 2016). Moreover, most African countries impose centralized economic decision-making policies that further contribute to corruption, as only rulers and elites have the power to put prices and trade policies in place that are not conforming to prevailing market standards. HopeSr (2000) shows that corruption in African countries has led to fewer foreign direct investments as the closed market policies will only limit the market entry to people who benefit from the system. In addition, trade prices will surge very high, which will mainly affect economic growth, efficiency, and balance of payments (HopeSr, 2000).

2.2.6.3 Unpaid Labor for Women

Unpaid labor includes childcare, cleaning, cooking, and farming; tasks which are mainly performed by women. This unpaid work is essential for households and economies to function. Still, it has less value than paid work and needs to be valued correctly in order to increase overall productivity and distribute fruits of labor, particularly for women. By assigning the real value of unpaid labor, this reduces the burden on women.

2.2.6.4 Women and Education

Giving financial opportunities to women cannot contribute alone in reaching the gender equality goal. Women need to have access to resources that can help them in educational development and training in the labor force (Kim and Watts, 2005). These resources can be in the form of primary education and training and access to information technology. As the world increasingly adopts new technology, it will be imperative for women to gain the necessary skills in these fields to be competitive on the global stage (Asongu and Odhiemb, 2019). The more science and technology education opportunities that are available for women, the more they have chances to learn, develop, and participate actively in the labor market now and in the future. Kim and Watts (2015) discuss the role of and sexual education against HIV is crucial for women’s equality. They argue that HIV is considered one of the main obstacles that women face when they try to enter the workforce or obtain an education. Therefore, raising awareness against HIV transmission and management is essential as the less HIV infections among women, the more their inclusion in development and participation in the workforce.

The UN considers education to be a fundamental human right that everyone should have easy access to obtain. Unfortunately, African women are deprived every day of having a formal education for a multitude of reasons. One of the most obvious reasons is due to poverty. Quite simply, not having the resources to attend school, if one exists nearby, means that for many women attending a formal school simply is not an option. Women are also deprived of education because they usually don't have the basic aspects of living conditions such as food, water, electricity, and proper sewage (Kim & Watts, 2005). Perhaps not surprisingly, access to electricity is also considered one of the main obstacles that women face to receive a formal education since the lack of electricity supply to households make the home tasks for females more challenging and more time-consuming. As primary caretakers of household chores, women cannot use any electrical supplies in basic home tasks such as cleaning and cooking (Njoh, et al., 2018). If a household has a supply of electricity, then basic chores that fall on women to perform become more simplified, which allows them to have more time to go to schools and receive a formal education (Njoh, et al., 2018).

Water supply has the same importance as electricity supply, as research shows that having access to clean water enhances the possibility of having a better education (Njoh, et al., 2018). Women in African countries consume a lot of time to search for potable water for their families and households; thus, having access to clean water allows women to have a good quality of education. Along with clean water, proper sanitization and cleanliness of education facilities are considered reasons for women not going for schools. They discussed that sanitized education facilities are essential for girls as it keeps the privacy of the students, and minimises human contact, which promotes safety and limits any spread of diseases. In addition, the amount of time women spend in UCDW restricts them from participating in any educational activities or skill training, so looking for financial activities that compensate families and decrease the time spent in UCDW is essential so females can have their basic rights (Seery, Okanda, & Lawson, 2019).

Politically speaking, some studies suggest that well established political countries enhance opportunities for having more gender equality in African countries. (Odhiambo & Asongu, 2019) discuss that well established and strong political governments encourage the private sector to invest within their countries, which allows for more job opportunities for both genders. Generally speaking, female political participation in African countries is meagre, only acquiring an average of 23% of parliament seats enhancing the opportunities for female participation in politics is essential for increasing gender equality within African societies (Seery, Okanda, & Lawson, 2019).

2.2.6.5 Technology

One fundamental difference between the endogenous growth model and exogenous growth model is that the former incorporates the role of technology and innovation into the factors of production as something that belongs to the state itself. Trade secrets, innovative business practices, medical patents are examples of technology that ostensibly resides within the confines of that country. This is not to suggest that technology cannot be easily copied or shared across artificial boundaries or passed along through other means. The endogenous growth theory recognises that each country has their own investment strategies in terms of education, research, and development, infrastructure, etc. that makes it possible for them to advance quicker than rival states and thus become technologically superior.

The exogenous growth model explicitly precludes technology from its formula, opting to consider the role of technology as a shared human enterprise in which all technology is more or less equally shared and easily transferable. As mentioned above, the standard Solow model predicts that in the long run, economies converge to their steady-state equilibrium and that permanent growth is achievable only through technological progress that sits outside of a country's control. In fact, according to this theory, technology is widely traded and freely available for adoption by any country.

All things equal, the last unit of accumulated capital will be less than the previous unit. This means that capital must be subject to diminishing returns when at some distant point in the future, a nation's economy will cease to grow. If labor were held static, and no new technological advances were adopted, then a country will approach a steady-state equilibrium which offers no real appreciation of income per capita.

The logic flows then that African countries should grow faster than other advanced economies since it's easier to double their output when it's very low. This leads to convergence theory, which suggests that all countries will eventually reach parity in terms of per capita income. Why, then, do some countries fail to achieve parity with regional neighbors? According to the law of diminishing returns in economics, in all productive processes, adding one or more additional factors of production such as land, labor, or capital, while holding all others constant, will eventually yield lower marginal per-unit returns. As developing societies, African states have very little in the way of strong institutions over patent laws that could offer protection over copyright infringement. However, with proper education and investment in human capital, many African states could become a central hub for technological prowess and export this knowledge to neighboring countries.

2.2.7 Poverty Traps

The question, which requires a lot of empirical evidence, is "do poverty traps exist?" remains one of the most controversial issues in the research world today. First and foremost, the term poverty trap can be defined as a set of self-reinforcing mechanisms, where the countries that initially started poor, especially the countries in Africa, remain poor. Therefore, the poverty trap is based on the fact that poverty invites poverty, and the economic situation of such a country in the future will still be poor. Past research has focused on the evidence from critical research on countries to have a clear conclusion that poverty traps do exist or don't exist. The scope of past research has been aimed at discussing how poverty, a self-sustaining cycle, has managed to remain intact despite the pass of time and if at all it can be ended or if there is proof that it is self-sustaining and cannot end. Various researchers have researched this topic heavily by saving very little amounts of money to view if the cycle was self-sustaining in 1956. Various aspects of poverty traps have been researched according to past studies. They include; the nutritional aspect of poverty traps, the evolutionary stability that is portrayed by poverty traps, and the poverty traps induced by crimes, among other aspects.

2.2.7.1 Causes of Poverty Traps

Microeconomic foundations are the first aspect that has been handled in many research studies, which many researchers have concluded that it leads to the poverty trap. This means that poverty at a national level is caused by the poverty of every household in the country, leading to an unending cycle of poverty. This feature seems to be true as the country's economy is built up by the rich, and a result of the roles each citizen in the country plays to ensure their economy is well-performing. However, the issue is under control as there is already an existing project which is aimed at getting rid of the poverty trap. Suppose there is any at all, by giving every household in Africa, where extreme poverty trap is reported to be, six thousand dollars to improve their way of life and set up small businesses which can lead to improvement of the economy of the country and get rid of the self-sustaining, poverty trap, cycle. Several models have been proposed by past studies that attempt to explain the concepts of the poverty trap. Economic theory is the first model that explains the concept. Despite the early models and theories explaining the poverty trap, contemporary research has focused on the modern era and how the various studies can be vital to economic development. A simple model that has been employed by past research approaches in explaining the poverty trap at a country level in the modern times is a model that is based on the explanation that if a country is poor, it will forever remain poor as won't have the ability to bring together capital for the incomes to be able to rise. Many models have been successfully invented, but the main one discusses the relationship between aggregate per capita production function, which directly depends on per capita capital and the technology level. The technology level in poor countries is low and not remarkable, meaning that it will decrease the first variable mentioned and, therefore, result in a situation of poverty traps.

2.3 Models for Economic Growth

2.3.1 Rostow's Five Stages of Economic Growth Model

A country's economy from the Rostow model of economic development undergoes five key stages (see fig. 2.3) (Berg *et al*, 2014). The first stage of economic development is when people are just satisfied with what they have at hand and are not interested in making any profit or might not have the means to multiply their wealth. In this stage, Rostow views it as the stage where the only economic activity people are engaged in is subsistence farming; thus they consume all that they produce from their farms. They do not engage in any form of economic activity as they have many locally challenged challenges, hindering them from realising opportunities that they can utilise for a more gain from the marketplace.

The initial stage of economic development is believed to be when the industrial revolution had not taken place. During this time, people had limited knowledge of the marketplace and how they could make their lives better by pursuing market opportunities. For that reason, at such a stage of economic development, people have low knowledge of how they can protect themselves against diseases, and thus birth rates and death rates are fairly the same and remain constant but dependent on war and epidemics (see fig. 2.3).

The second phase of economic development is the precondition for takeoff. This involves efforts by the developed economies to intervene in an economy that was only involved in subsistence farming, and they came in to remove or rather reduce barriers by introducing science and technology and incorporating it in this system to expand economic activities; they establish infrastructure and factories to process what is locally produced and to utilise locally available resources in this kind of economy. This stage is called the early expanding stage of demographic transition, and it was involved with the introduction of new medicine. People become more aware of health conditions, and due to this fact, birth rates remain high, and death rates are minimised as people can treat diseases. The third stage of economics is the takeoff stage, and at this stage, people start to take more risks, and they adopt more modern means of production. At this stage, people realise the need to inter-trade with the foreign nation, and at this stage, exportation is evident and more risks are taken to make a profit from the market place (see fig. 2.3).

At this stage of demography behaviors in the economy, people are more concerned with their economic well-being, making the population ready to sacrifice and summon all that it takes for their economic development. Therefore, they tend to decrease the levels at which they give birth to new children so that they can be able to afford the best lifestyle for their few children. The accessibility of contraceptives also promotes this. At this stage, the demography accepts the fact that women are not just objects of forgiving birth but can make a positive contribution to the development of the economy (see fig. 2.3).

In his theory of economic development, Rostow argued that the fourth stage of economic development is the drive to maturity stage, and this stage is marked by higher rates of economic investments and increased education. People are able to spot new opportunities and acquire the necessary resources to exploit these opportunities. Concerning demographic transition, people are more aware of common illnesses due to more medical officers' accessibility, leading to most births being successful, and people can live their lives free from diseases. This, therefore, implies reduced birth rates due to long life security and reduced death rates to proper health management. This stage, the economy is stronger and has a substantial number of women working towards the achievement of the goals for economic development.

The final stage an economy can achieve on its development is the fifth stage Rostow refers to as the age of high mass consumption. From him, when a country's economy is at this stage, its performance is equivalent to Western world economies' performance. However, the population is not composed of the productive population at this stage as most people in the population in such economic stages are old. These are people who can operate relatively lower than the younger generation, and in most times, they are past the fertility life stage. They cannot, therefore, give birth, implying that when the economy is at this stage, fertility is very much reduced below the replacement level of at least two children per woman.

2.3.2 The Exogenous Growth models

The exogenous growth models postulate that economic growth can be realized as a result of distinct exogenous factors. The Solow Model and the Harrod Domar model (fig:2.5) depict the most outstanding traits in relation to the underlying theoretical affirmations. The Harrod Domar model asserts that a country is bound to attain economic growth in relation to the savings levels and the capital-output ratios. The model affirms that the growth rate can be directly related to savings levels divided by the capital-output ratios. The saving levels are determined by the accruing average saving prosperity, while the capital-output levels are determined after the exclusion of the depreciation levels. The model depicts that lower economic growth rates that developing countries face is a result of the denoted low saving capabilities. LDC countries are bound to record a vicious cycle of low investment, leading to low output and saving abilities.

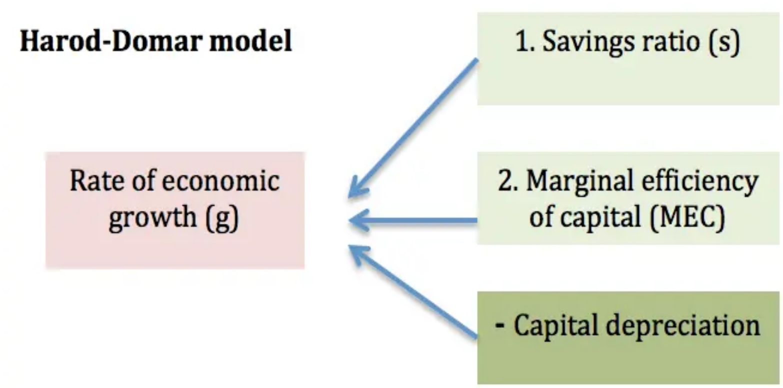


Figure 2. 5: Harrod-Domar model (Source: Singh, 2017)

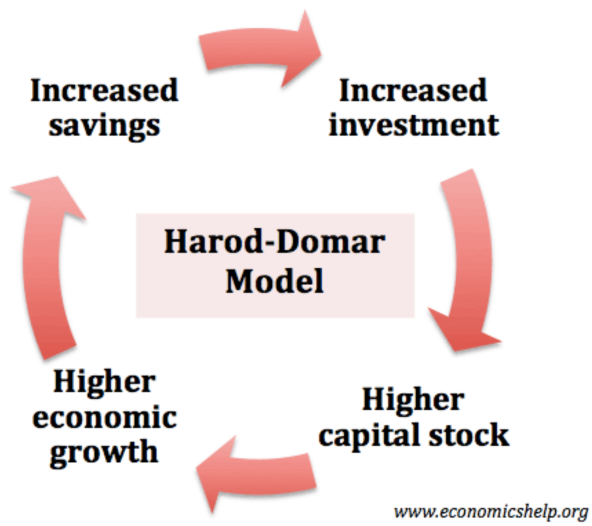


Figure 2. 6.1: Harrod-Domar model (Source: Economicshelp.org)

The most ardent approaches in breaking the cycle can be traced in the scope of increasing the basic domestic savings of soliciting capital injections from developed countries. The capital influx in the country aids in the attainment of higher growth rates leading to enhanced saving abilities and investment levels. The approaches employed in the Solow model were aimed at enhancing the observations proposed by Harrod Domar model. The employed approaches denote that the capital investment levels cannot lead to enhanced and persistent economic growth due to the overarching changes in the capital to labor ratios. The model proposes the adoption of advanced technology to ensure that a country attains persistent economic growth.

2.3.3 The Endogenous Growth Model

The models were introduced after the exogenous models failed to explain the underlying reasons that lead to economic growth. The overarching reason for adopting the exogenous models was to offer a detailed explanation of why advanced economies continue to grow. The proponents of the model assert that a country is bound to realize economic growth due to the diverse innovations and increase in the investment levels. The endogenous growth models indicate that there is a dire need for the government and the private sector to work closely in nurturing the scope of diverse innovation traits.

The government plays an active role in offering incentives aimed at stimulating the economy (Melander, 2005). The government should also offer subsidies to encourage overarching investments in research aimed at escalating the development levels. There is a dire need for the government to devise distinct approaches to encourage increased production levels and the adoption of new and innovative production approaches and methods. The approaches pose the need for the government to invest in distinct infrastructure improvement programs in relation to the diverse fields of health, education, and the telecommunication industry. The endogenous model proposes that there is an innate need to offer various subsidies in the education research programs to aid in the realization of the increased economic growth phases.

According to Sin (2016), the figure presented below maintains that the growth of the economy is primarily the outcome of internal forces instead of external ones. Moreover, the study argues that improvement in productivity is directly linked to positive innovation, thus, resulting in more investment within the human capital.

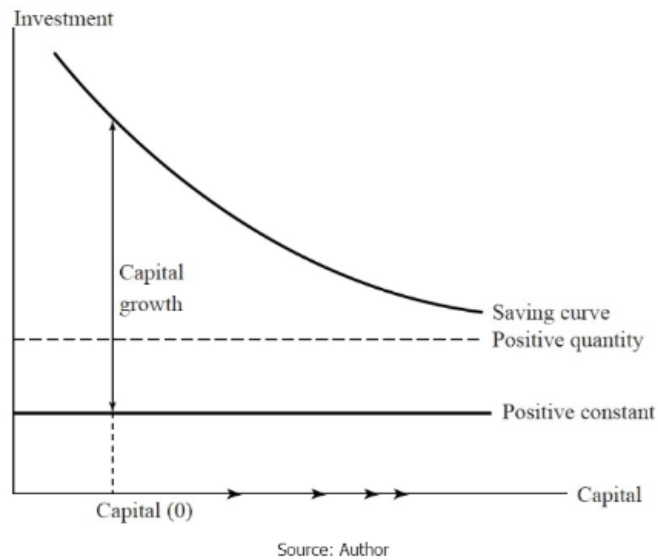


Figure 2. 7 Endogenous growth model (Source: Sin, 2016)

2.3.4 Human Capital on the Affirmations of the Malthusian Growth Model

Research has affirmed that the Malthusian Growth Model approaches are entrenched on two basic assumptions that entail the population development level and the postulated returns in labor (Skard, 2014). The population growth rate can be described as a state when the subsistence is above the underlying minimum standards. The model asserts that population growth rates are likely to increase quickly compared to food production levels and capabilities. The affirmations concur that the population growth rate levels are likely to increase at a very sharp rate if potent checks stop them besides the employed food production abilities. The food production is bound to increase indirectly relevant mathematical proportions.

The model depicts that each head's food is bound to increase with an increase in the population. The roles are employed to explain the underlying roles of decreasing returns in relation to labor capabilities. The model size is bound to emphasize on the development that is at times short term rather than the overarching long term development abilities. The scope of the short-term criteria aims to maximise the overarching conservation of the scarce human and natural resources compared to the long-term development criteria's. The Malthusian model employs a key focus on checking the processed capital in diverse developing nations. According to the arguments proposed by the Malthusian Growth models, there is a direct association between the human capital and the economy in development**.**

2.4 Models and framework to control for Gender inequality

2.4.1 The Affirmation of the Models in Relation to Gender Equality

The concept of gender equality and its impact on economic outcomes is one of the major emerging commitments in contemporary society. *Evidence shows that an expansion of opportunities among women encourages empowerment.* Due to the rising campaign on increasing gender equality, scholars developed the analysis tools that determine gender roles and participation among men and women (OECD, 2012). The Harvard Analytical Framework and Caroline Moser model explain gender roles in the present society and its impact on both men and women.

2.4.2 The Harvard Analytical Framework

The Harvard Analytical Framework is a toolset used in the identification of work, which should be accomplished by men and women in society. Specifically, it helps delegate specific roles to genders within the community, especially in matters that foster economic development. The framework aids in the documentation of various aspects in the control of the available resources. For instance, land and water. Regularly, the data collected from the Harvard Analytical Framework, also known as the Gender Roles Framework, is broadly reviewed by extension agents, who help to clarify the specific roles of men and women in the society. Besides, extension agents apply information collected by the toolset to restructure programs to ensure they meet community members' required needs and interests, especially women.

2.4.2.1 Components of the Framework

2.4.2.1.1 The Activity Profile

Research has affirmed that areas, where a project would directly impact would need more details in resource allocation and delegation of adequate labor (Reiter, 2015). For example, the activity profile of agricultural activity in a certain area would list each agricultural activity that would take place and labor division under gender. In such circumstances, activities that engage land preparation would require women to do lighter chores like clearing bushes, while the men till the hard surface. The activity profile may also include the specification of activity venue and time allocation.

2.4.2.1.2 The Access and Control Profile

The access and control profile entails the resources that would be required to accomplish the outlined tasks. Specifically, it refers to the activity profile and ascertains how men and women would obtain the necessary tools required to complete their tasks. Studies in the field postulate that this facet provides for guidelines on who should control the use of available resources, and who controls the benefits of a community's use of properties. For instance, women in a particular social setting might have access to local political processes but cannot control and deliberate on matters. Frequently, persons with control over resources are the final decision-makers. This framework is a success because it has enabled women's labor to be visible to those organisations involved in designing programs. Additionally, this framework shows in detail the inequality that women face in obtaining and control of resources.

The difference between accessibility and control shows that there is gender inequality when men can easily access resources compared to women. The structure of the Harvard Framework simplifies the complex procedures of social issues associated with gender development. It does not permit room where roles of men and women cooperate or interrelate. Grant & Nash (2019) has criticized this framework because it focuses on efficiency and material resources use similarly; it is insufficient in creating awareness of the social dynamics of gender and inequality. This framework does not provide many directions on ways to change the social inequality. Particularly, it relies on a detailed knowledge of a situation for its effectiveness; this may not be available during the initial stages. It can be difficult to use this framework over a large region in situations where circumstance differs (Grant & Nash, 2019).

2.4.2.1.3 Influencing Factors

This portion allows for determining factors, which influence access and division of labor, and control of resources. It consists of general economic conditions, for example, poverty levels, distribution of income and poverty levels, Institutional structures, for example, government and legal procedures, demographic factors, the culture of the community and social factors, the power structure of the community, and religion, and legal measures both internal and external. Particularly, the influencing factors facet helps administrators predict future trends. Through this characteristic, administrators would incorporate relevant strategies to avert any disaster. An empirical analysis of the studies in the field denotes that this part of the toolset helps identify women's barriers in meaningful development projects (Fancy, 2012). These factors include aspects that may determine various opportunistic constraints for men and women. They include demographic location, religion, technology, legal provisions, institutional structures, training, and education.

2.4.2.1.4 Checklist

The checklist's features of the Harvard Analytical Framework contain a series of questions specifically designed to aid administrators in examining project proposals. Besides, they help identify areas of concern that may need interventions in terms of gender considerations.

2.4.2.1.5 Activities Profile

The activities of men and women are listed in this profile. It also shows when and where these tasks are performed. Activities are combined into three areas; productive and reproductive activities, household activities, and finally, social religious activities.

2.4.3 Caroline Moser Analytical Model

The framework involves three basic concepts; there are triple roles of women in relation to the various practical and the implications of the underlying strategic requirements. The practical requirements are the ones aimed at helping women in meeting their current requirements and obligations. The scope of the strategic approaches and needs depicts that if they are met, they can transform the overarching balance between men and women, leading to gender equality. The model is one of the most important tools for understanding gender roles. It advocated for women in terms of equity, equality, and empowerment. Moser argues that women perform three important roles, namely, production in the farms, reproduction, and attending to the community affairs. On the contrary, men are rarely involved in house chores, as they highly participate in community management roles and production. For these reasons, the Caroline Moser model seeks to identify women's practical and strategic needs that help prevent gender inequality.

Moser developed the model during the development planning in the 1980s. The framework explains the importance of emphasizing gender relations' importance in defining gender roles (International Monetary Fund, 2018). Like the Harvard Analytical Framework, the Moser model entails the collection of data and utilising qualitative research methods. Besides, the model involves gender assessment, identification of roles, and decision-making. Additionally, the model recognises the significance of the role and the plight of women in the developed world. Today, men and women play different roles, thus the importance of analysis tools in understanding gender roles and factors that contribute to women empowerment. Arguably, women perform more roles, making it important to conduct a thorough analysis of women's roles compared to those played by men in the present society. This framework successfully makes all work visible to planners and the relationship between different kinds of work.

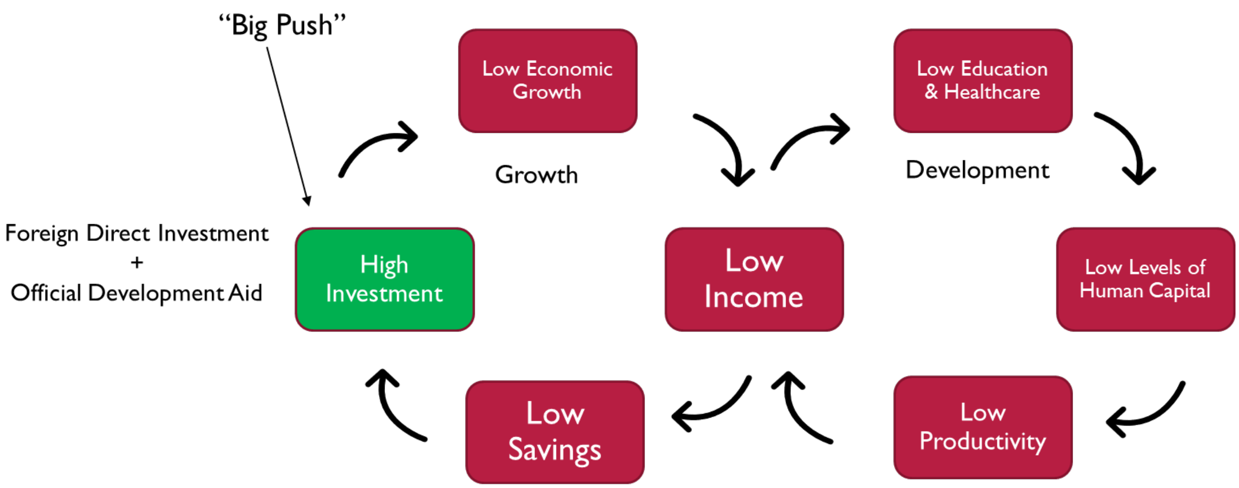
Similarly, this framework addresses social and political inequality issues by exploring certain gender needs and recognising the likelihood of political and institutional resistance to gender roles changes. The Harvard and Caroline Moser Analysis Frameworks explain the strategies for measuring gender roles in society. For a long period, people ignored the importance of women in society regarding social, economic, and political contributions. Moser and the Harvard frameworks help understand the significant roles played by both men and women in society.

Through adequate empirical research on both men and women's roles in contemporary society and understanding the economic rewards that ought to be accorded to each one of them. By employing the facets provided in both Moser and Harvard tools, policymakers achieve fair and just wage rates for both men and women.

2.5 Economic Models to control Poverty

2.5.1 Big Push Models

The second model is the big push models. This model explains its points from a view of two points, that is, the traditional and the modern sectors. The model attempts to explain the high returns that can be realised from the modern sector, which involves manufacturing activities, and the low and constant returns that can be realised from the traditional sector, which involves activities like agriculture (Easterly, 2006). This, therefore, explains that a country should make a big push to make sure that its resources are invested in the modern sector to be able to increase its returns, unlike the traditional sector where their returns will only remain constant without growth hence lead to the phenomenon of poverty traps. The third model is the model that was mentioned earlier, the nutritional approach to poverty traps. This theory attempts to explain poverty traps about nutrition levels. Developing countries usually don't have the most economic activities, so economy-boosting practices like agriculture are rare in such countries. Therefore, this means that there is a lack of food in these countries. Therefore, labor cannot be readily acquired.



2.6 Applicable variables to Africa Prosperity

The United Nations Sustainable Development Goals (SDGs), were “adopted by all United Nations Member States in September 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.” [2] The United Nations Development Programme, acting as the lead agency tasked with implementing the SDG’s across all countries, has identified a set of approaches for how to tackle these issues. Their ‘signature solutions’ include the following:

- Keeping people out of **poverty**
- **Governance** for peaceful, just, and inclusive societies
- Crisis prevention and increased **Resilience**
- **Environment**: nature-based solutions for development
- Clean, Affordable **Energy**
- Women's empowerment and **gender** equality

[2] https://www.undp.org/content/undp/en/home.html

Although there are 17 distinct goals the UN has articulated, the organization recognises the intersection of the initiatives and are working to address the goals in terms of root causes, systems and connections between the challenges. This dissertation shares the understanding that no one root cause can adequately explain how African states can become prosperous, but rather seeks to identify critical components that help aid in overall economic growth and sustainable development.

Out of the original 17 sustainable development goals the UN has put forth, I have identified five of which I believe touch upon the critical factors I am exploring in this dissertation; which include gender equality, human capital and fertility rates as important variables in helping African states achieve prosperity.

2.6.1 Sustainable Development Goal #1: Eradication of Poverty

By the year 2030, the UN has issued a bold vision of completely eradicating poverty amongst all nations in the world. According to the most recent statistics, more than 700 million people live on less than $2.00 a day, in extreme poverty usually without adequate access to basic life necessities including, water, food and shelter. This number represents 10% of the entire global population, the overwhelming majority of which live in Sub-Saharan Africa. Although much progress has been made over the last 5 years, much more still needs to be done. As of 2019, the UN estimates that roughly 55% of the world's population still do not have access to social protection programs administered from their governments. Unfortunately, the goal of eradicating poverty is proving to be an extremely difficult challenge to overcome. The UN projects that by 2030, roughly 6% of the global population will still be in extreme poverty, which means the world is currently NOT on track to meet this sustainability goal by that time.

Below is the list of targets the UN hopes to achieve by 2030:

- By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day
- By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
- Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
- By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
- By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
- Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions

- Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

2.6.2 Sustainable Development Goal #4: Quality Education

Part of this research is determining the role that education can play in preparing young adults for obtaining high-quality jobs, which would allow them to [hopefully] escape the cycle of poverty for themselves and their families. On a macro level, we know that education is a significant component in a state’s human capital index. Without proper education, a country will be mired in a poverty trap and low economic growth. Additionally, low education amongst a high proportion of young people can be a precursor to political violence and instability. To that end, I look to the several African States that score relatively well on education as a means to raise its human capital and thus raise its standard of living.

By the year 2030, the UN hopes to ensure inclusive and quality education for all and promote lifelong learning amongst the world’s population. Education is a critical factor in achieving other SDG’s as well, including helping to reduce social inequalities and reach gender equity. For example, research shows that one extra year of education is associated with a reduction of the Gini coefficient by 1.4 percentage points. Education helps to widen people’s perceptions of the world and introduces them to different cultures, ethnicities, and other societal values. This is crucial to fostering tolerance between people and contributes to more peaceful societies. Currently, more than half of the schools in Africa don't have access to basic life needs, including basic drinking water, handwashing facilities, access to the Internet; and computers

In 2020, the COVID Pandemic has rolled back many hard-won gains in enrolling students in primary education. By April 2020, close to 1.6 billion children were out of school, representing a massive blow to educational efforts worldwide.

By the year 2030, the UN has developed a list of targets to meet this goal:

- By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes
- By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.
- By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
- By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.
- By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.
- By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.
- By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a

culture of peace and non-violence, global citizenship and appreciation of cultural diversity and culture's contribution to sustainable development.

- Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all.
- By 2020, substantially expand globally the number of scholarships available to developing countries, in particular, least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries.
- By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states

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2.6.3 Sustainable Development Goal #5: Gender Equality

A major goal of the UN SDG's and a critical factor that intersects with all other sustainable development goals is to achieve gender equality and to empower all women and girls. Women and girls represent 50% of the total population, and therefore half of its potential. Women are underrepresented in political, business, and social leadership positions the world over, and are denied access to education, proper healthcare, and governance over their bodies, families and local communities. Women and girls' empowerment, therefore, is essential to expand economic growth and social development. The full participation of women in the workforce, for example, would add percentage points to most national growth rates. The UN states that investing in programs for empowering women business initiatives can return $7 for every dollar spent.

Globally, women only represent 25% of national parliaments and only 36% of local governments which is a small, yet still noticeable increase from 11% in 1995. In terms of education, a great deal of progress has been made in that approximately 66% of developing nations have achieved gender parity in primary education. However, according to statistics by the Africa Educational Trust many African girls face formidable obstacles in obtaining a proper education[3]. They found that:

- A girl in South Sudan is more likely to die in childbirth than to finish primary school.
- Fewer than 2% of girls in Somalia attend secondary school.
- By grade 5 only half as many girls as boys attend school in Uganda and Kenya.
- Only one disabled woman is educated for every five disabled men in East Africa.
- Fewer than 12% of teachers in Uganda are female, and only 3% in Somalia

According to UN Women, the entity dedicated to gender equality worldwide, several specific targets are identified in fulfilling the mission of SDG **5**[4]. Their stated aim is to:

- End all forms of discrimination against all women and girls everywhere.
- Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
- Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.

[3] https://africaeducationaltrust.org/girls-and-women/
[4] https://www.unwomen.org/en

- Recognise and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.
- Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life.
- Ensure universal access to sexual and reproductive health and reproductive rights
- Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.
- Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.
- Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

2.6.4 Sustainable Development Goal #8: Decent Work and Economic Growth

The UN has elevated the goal of promoting decent work for everyone in line with research that suggests meaningful work at fair wages help contribute to sustainable economic growth, resiliency to system shocks and overall social and political stability within nations. According to the UN, "Decent work means opportunities for everyone to get work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration." Unemployment, as discussed previously, can lead to social unrest, political instability and terrorism. This is especially important for African nations as most of the countries are facing economic stagnation as well as an ever-increasing labor force. By not having enough jobs for young people, a conflict that spreads across the continent is likely to ensue.

As of 2016, over 2 billion workers were employed in informal sectors, that accounted for 61% of the world's total population. Due to the increased population, the number of unemployed workers is expected to increase by over 1 million each year and reach 174 million by end of 2020.[5] It is estimated that over 470 million jobs will be needed globally for new entrants into the labor market by 2030.

The UN Development Programme has identified a list of targeted goals that address SDG #8:

- Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 percent gross domestic product growth per annum in the least developed countries
- Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors.
- Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

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[555] https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-8-decent-work-and-economic-growth/targets.html

- Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation.
- By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
- By 2020, substantially reduce the proportion of youth not in employment, education or training.
- Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms.
- Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular, women migrants, and those in precarious employment.
- By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.
- Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all
- Increase Aid for Trade support for developing countries, in particular, least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries.

- By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labor Organisation

2.6.5 Sustainable Development Goal #16: Peace, Justice and Strong Institutions

The UN recognises the importance of promoting peaceful and inclusive societies for sustainable development. This development goal seeks to provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

To advance the other SDGs, African states need to build effective and inclusive public institutions that can deliver quality education and healthcare, fair economic policies and inclusive environmental protection. Africa, in particular, has been hard hit by constant war, disease, famine and other ailments. Since the end of the colonial period when the first African states gained independence, war and conflict have been a constant mainstay with long-standing rival groups vying for control over borders, systematic violence against women and children, and weak institutions seemingly unable to bring about justice to promote peace and prosperity.

With the rise of 24 hours’ news media, more people across the globe are witnessing violence on a scale never imagined. However, despite the alarming images coming across news feeds, the global rate of homicide is slowly decreasing. Additionally, armed conflict is slowly on the decline as well. That said, we still have a long way to go to help African states reduce the levels of conflict and violence to help build peace and prosperous communities. This goal also addresses the issue of institutional integrity. Weak institutions are not able to uphold societal values of fairness, honesty and integrity in the public sphere. This invites high levels of corruption, bribery and tax evasion that has cost 1.26 Trillion dollars per year in developing countries.[6] African states must build strong institutions that will combat corruption, as it is one of the most damaging factors that thwart economic growth and overall prosperity.

The 2030 targets for SDG #16 are:

- Significantly reduce all forms of violence and related death rates everywhere
- End abuse, exploitation, trafficking and all forms of violence against and torture of children
- Promote the rule of law at the national and international levels and ensure equal access to justice for all
- By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organised crime
- Substantially reduce corruption and bribery in all their forms
- Develop effective, accountable and transparent institutions at all levels
- Ensure responsive, inclusive, participatory and representative decision-making at all levels
- Broaden and strengthen the participation of developing countries in the institutions of global governance
- By 2030, provide legal identity for all, including birth registration
- Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements

[6] https://www.un.org/sustainabledevelopment/peace-justice/

- Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime
- Promote and enforce non-discriminatory laws and policies for sustainable development

Many of these SDG’s are tightly interwoven and help to reinforce each other’s overall objectives. For example, African states need to build strong institutions to help bring about peace and justice for all of its citizens, but as my research shows, gender equality plays a significant role in helping to bring about political stability within nations. Government leaders may face a conundrum of figuring out which of these goals are to be implemented first.

The truth is, that all of these sustainable development goals need to happen simultaneously and to reinforce each other. By helping to build educational facilities, African states can then educate young boys and girls which will provide access to good-paying jobs and employment in future years. By promoting educated women into leadership positions within the government now, business and society, gender equity can help bring about social change and economic growth in the future. When more women enter government, it is shown that more attention is paid to domestic concerns for the betterment of all citizens. When more citizens are satisfied with their responsive governments that allocate resources for the greater good, satisfaction with government increases and political violence decreases which then leads to a more stable, prosperous society. When all citizens can access good jobs, healthcare, and other basic life needs, poverty is reduced greatly, which again leads to economic progress and prosperity. So all of these efforts are connected and have shown to reinforce each other. However, it is also true that without strong institutions helping to build the infrastructures in place to sustain these goals, none of these will materialize or offer long-lasting change.

Chapter 3: Research Design and Methodology

3.1. Background

The impetus of this research, then, is to seek a better understanding of how African countries can harness internal resources to gain economic growth and prosperity. I start specifying the relationship between Gender Equality and GDP Per Capita in the sample dataset (Fig: 3.1) by looking at the UNDP measure of Gender Inequality Index and its correlation. It is visually represented in the figure below, showing a strong negative correlation between Gender Inequality and the natural log of income per person in a universal sample of 145 countries between the period of 1990-2018.

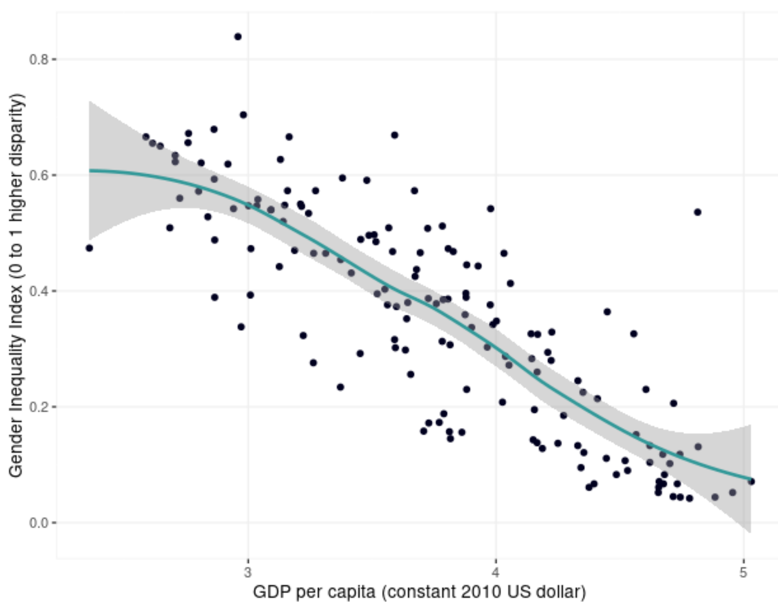

Figure 3. 1: Relationship between Gender Equality and GDP Per Capita in the sample dataset

Given the relatively young nature of many African states post-colonial rule, my model specification and results show a different outcome from the standard economic literature, indicating a negative relationship between fertility rate and GDP Per capita (Fig: 3.2). The figure below shows the general correlation between fertility rate and the natural log of income per person in a universal sample of 145 countries between the period of 1990-2018.

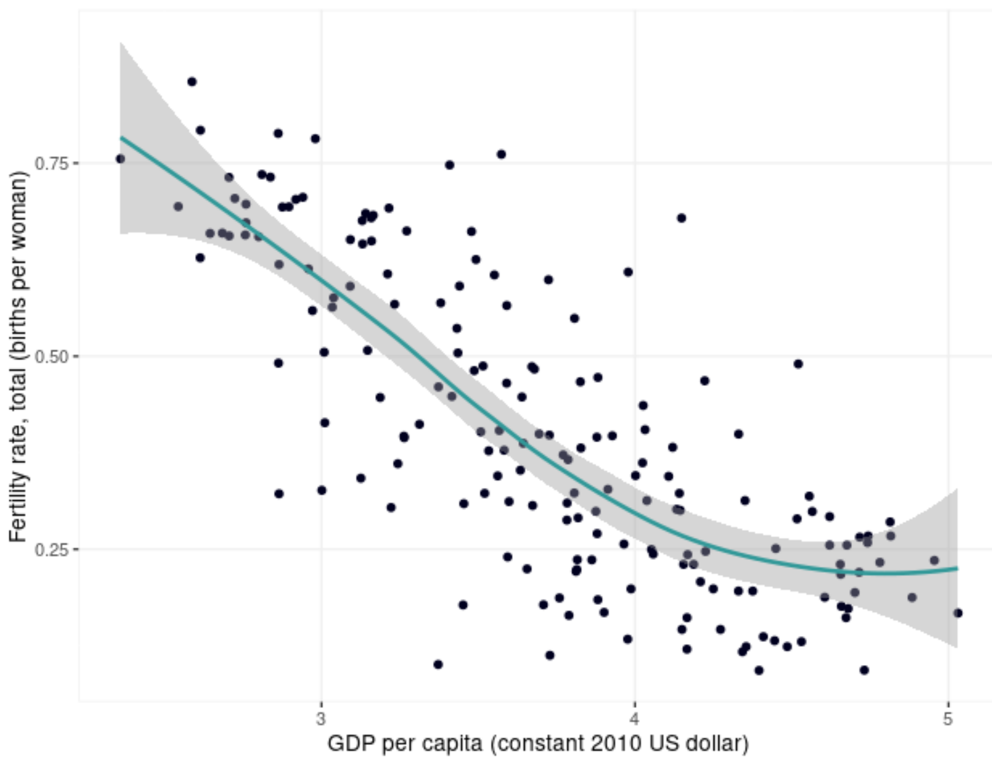

Figure 3. 2: Relationship between fertility rate and GDP Per capita

As expected, I see a positive relationship between the human capital index and GDPPC (Fig: 3.3). The figure below shows the general correlation between fertility rate and the natural log of income per person in a universal sample of 145 countries between the period of 1990-2018.

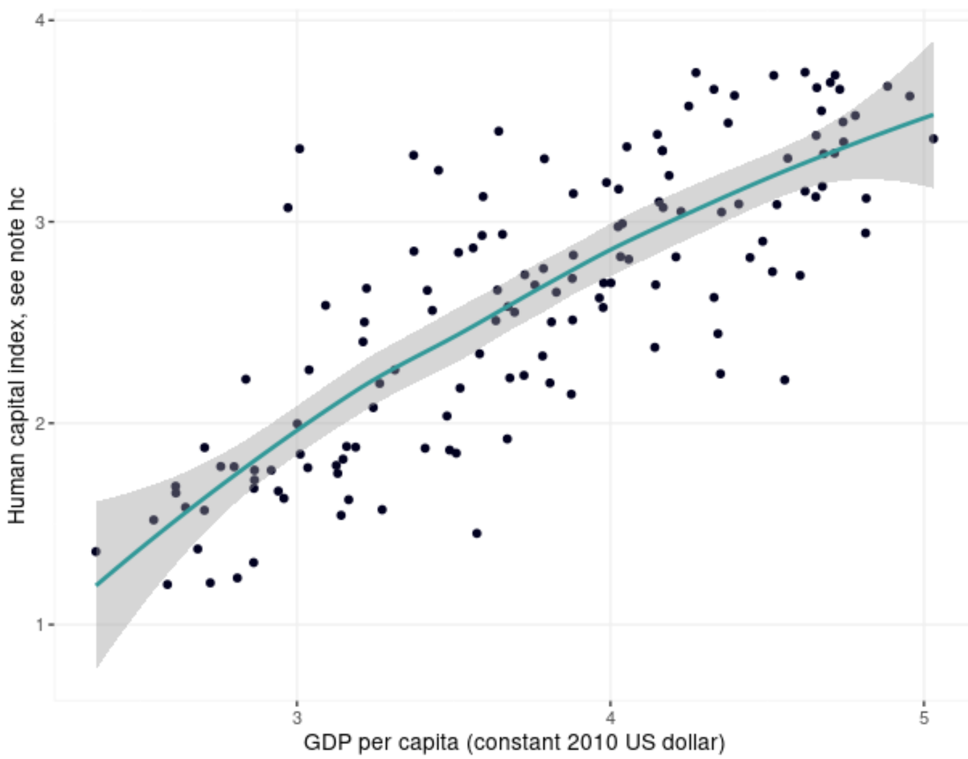

Figure 3. 3: Relationship between the human capital index and GDPPC

3.2. Model Specification

I test for the impact of Gender Equality and Fertility Rate indicating the younger population in Africa on economic growth in the context of neoclassical model Robert Barro 1991 and Robert J. Barro and Xavier Sala-i-Martin, 1995 with measures of gender equality, population, and Africa Opportunity: [7]

[7] Robert J. Barro, 1991. "Economic Growth in a Cross Section of Countries." *Quarterly Journal of Economics* 106(2): 407-443
&
Robert J. Barro and Xavier Sala-i-Martin. 1995. *Economic Growth*, (New York: McGraw-Hill).

$$(1)\quad Growth_{it} = b_0 + b_1 Growth_{it-1} + b_2 Capital\ Formation_{it} + b_3 Government\ Consumption_{it} + b_4 Human\ Capital_{it} + b_5 Gender\ Equality_{it} + b_6 Fertility\ Rate_{it} + b_7 Female\ Population_{it} + b_8 Tax\ Burden_{it} + b_9 Africa\ Prosperity_{it} + e_{it}$$

The annual growth rate of gross domestic product per capita (GDPPC) in constant 2010 US dollars is calculated for each country in the sample dataset (Table 3.1). I estimate an average of economic growth variable over five-year intervals and accordingly calculate the average five-year interval for other variables on the right-hand side of the estimation equation. Thus, I keep only non-overlapping five-year averages mapping the years that are divisible by 5. My final sample dataset has 1,140 observations for the five-year periods of 1990, 1995, 2000, 2005, 2010, 2015, reflecting 145 unique countries as reported in the summary statistics section.

Table 3. 1*:* The annual growth rate of GDPPC in constant 2010 US dollars is calculated for each country in the sample dataset.

Variable	**Mean**	**Std. dev.**	**Min.**	**Max.**
GDP Per Capita Growth Rate	2.058	4.295	-37.002	50.725
Share of Government Consumption	0.196	0.091	0.010	0.644
Share of Gross Capital Formation	0.217	0.092	0.002	0.650
Human Capital Index	0.408	0.196	0.00	1.00

Tax Burden	72.689	15.331	0	100
Gender Equality (Constructed)	-0.130	1.011	-2.337	1.762
Percent of Female Population	50.013	2.841	23.493	54.410
Fertility Rate	3.124	1.667	1.144	8.233

3.2.1. Controls of Economic Growth

Controls for Economic Growth include the growth per capita rate over the previous two periods reflecting the previous ten years of economic growth, Gross Capital Formation measured as a share of gross capital formation at current PPPs. Government Consumption is measured as government consumption at current PPPs, Tax Burden, which measures marginal tax rate on both personal and corporate income and the overall level of taxation. Human Capital is a composite index of four components, such as adult literacy rate, school enrollment ratio, expected years of schooling, and average years of education.

3.2.2. Augmented Measure of Gender Equality

I use an Index from the United Nations Development Program for Gender Inequality that measures three essential aspects of human development reproductive health measured by maternal mortality ratio and adolescent birth rates; empowerment, which is measured by the proportion of parliamentary seats occupied by females and the proportion of adult females and males aged 25 years and older with at least some secondary education; and economic status, expressed as labor market participation measured by labor force participation rate of female and male populations aged 15 years and older. This measure is normalized for standardized analysis and then reversed in terms of polarity so that the positive pole reflects higher Gender Equality, and this renders my newly constructed measure of Gender Equality.

3.2.3. Female Population Percentage

In this model, measures of the female population is the percentage of the population that is female. The population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship.

3.2.4. Africa Opportunity Measure

This measure is an interaction term of the dummy variable for Africa, Gender Equality, and Fertility Rates to reflect Africa's specific opportunity for economic development.

3.2.5. Econometric Technique

To test the model, I use a reversed normalized measure of Gender inequality estimated from the Gender Inequality Index (GII) in order to overcome the problems of the unidimensional aspect of measurements of gender equality on growth (Fig: 3.4). Many of the cross-sectional analyses of estimating the impact of gender equality on economic growth focused on specific measures such as education Hill and King paper on women's education and wellbeing in 1995. [8] Or other papers are concentrated only on employment such as Schober and Winter-Ebmer, but most of them employ separate regression models, other than the model put forward here.[9]

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[8] M. Anne Hill and Elizabeth King. 1995. "Women’s Education and Economic Well-Being." *Feminist Economics* 1(2): 21-46

[9] Thomas Schober and Rudolph Winter-Ebmer. 2011. "Gender Wage Inequality and Economic Growth: Is There Really a Puzzle? – A Comment." *World Development* 39(8): 1476-1484

Thus, the technique employed in this dissertation is aimed to reduce the omitted variable bias problem when using a single proxy for Gender Equality. Thus, the augment measure proposed here is a common technique on literature to avoid the problem of multicollinearity as well by augmenting many measures of gender equality into a unidimensional index as put forward by many economists at the UNDP Human Development Report Program. Hence, I see the methodological importance of augmented index over the dimensional aspect of gender equality, as shown in the figure below:

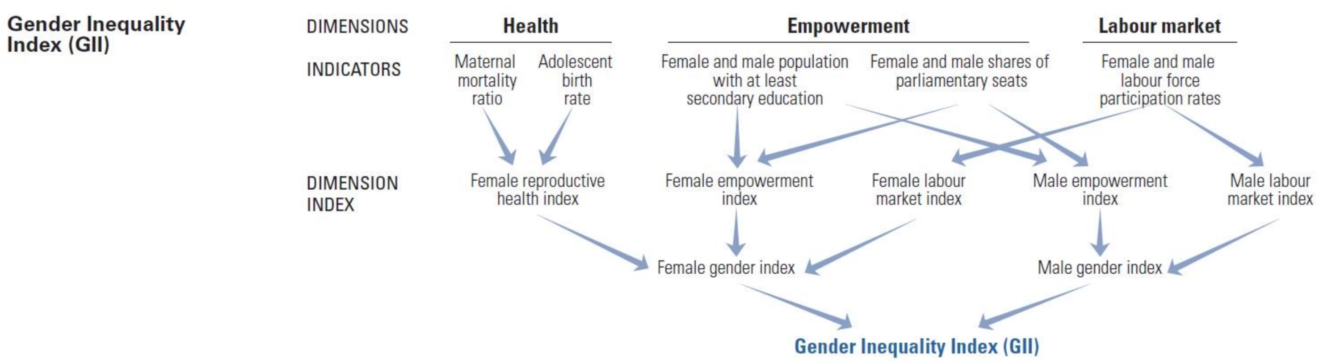

Figure 3. 4: Gender Inequality Index Technical Notes, Human Development Reports, UNDP, http://hdr.undp.org/en/content/gender-inequality-index-gii, Accessed 02/28/2020.

Turning to the econometric estimation technique, the main problem with the least square estimation is that it produces biased estimators if any of the regressors are endogenously correlated with factors of economic growth, adding to that the problem of serial autocorrelation and the unobserved entity heterogeneity across panel dataset. The sample was averaged in the first place over five-year periods to overcome the unbalanced nature of the data.

Given the estimation shortcomings of least squares, and with many techniques to avoid the endogeneity in economic growth regressions, the usage of a consistent Generalized Methods of Moments (GMM) estimator is a solution for the concerns above, developed by Manuel Arellano and Stephen Bond (1991)[10]. Thus, I address the problems of serial autocorrelation and endogeneity by two main strategies; first by considering non-overlapping five-year averages of the variables to filter out serial correlation, particularly in growth rates happening from short-term fluctuations attributed to changes in the business cycle and the usage of Arellano and Bond estimator to account for the endogeneity of regressors that account for economic growth. In order to deal with the biased coefficients, I use a default Arellano-Bond robust variance estimator for consistent standard errors in the function XTBOND in STATA 14.

[10] Manuel Arellano and Stephen Bond. 1991. "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations." *Review of Economic Studies* 58(2): 277-297.

Chapter 4: Data Results

4.1 Variables' names, description, and citations:

In this section, I describe the process of data collection concerning to answer the question of interest. The dataset constructed for this dissertation came from multiple data sources as listed below at the national level, and the time series spans the years from 1990-2018 (Table 4.1). Data query, storage, and manipulation were implemented detailed below.

Table 4. 1: Variables in the dataset

Variable in Dataset	Given label	Description	Source
ccode	ccode	ISO-3166-1 Numeric codes	United Nations
ccodealp	ccodealp	ISO-3166-1 Character codes	
cname	cname	Country Names	United Nations
year	year		
cname_year	cname_year	Country Name and Year	
continent	continent	World Development Indicators' Continents	World Bank
gii_gii	Gender Inequality	It measures gender inequalities in three important aspects of human development-reproductive health, measured by maternal mortality ratio and adolescent birth rates; empowerment, measured by the proportion of parliamentary seats	United Nations Development Program

Variable in Dataset	Given label	Description	Source
		occupied by females and proportion of adult females and males aged 25 years and older with at least some secondary education; and economic status, expressed as labor market participation and measured by labor force participation rate of female and male populations aged 15 years and older.	
ge_scale	Gender Equality	Reversed Normalized from Gender Inequality	United Nations Development Program (The Gender Inequality Index)
pwt_sgcf	Share of Gross Capital Formation	Share of gross capital formation at current PPP	Penn World Table (Feenstra, Inklaar and Timmer)
pwt_gc	Share of Government Consumption	Share of government consumption at current PPPs.	Penn World Table (Feenstra, Inklaar and Timmer)

Variable in Dataset	Given label	Description	Source
egov_hci	Human Capital Index	The Human Capital Index (HCI) consists of four components, namely: (i) adult literacy rate; (ii) the combined primary, secondary, and tertiary, gross enrolment ratio; (iii) expected years of schooling; and (iv) average years of schooling.	UN Department of Economic and Social Affairs
wdi_fertility	Fertility Rate	Fertility rate, total (births per woman): Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.	World Development Indicators (The World Bank Group)
wdi_gdpcapgr	GDP Per Capita Growth Rate	GDP per capita growth (annual %): Annual percentage growth rate of GDP per capita based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP per capita is gross domestic product divided	World Development Indicators (The World Bank Group)

Variable in Dataset	Given label	Description	Source
		by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources.	
wdi_popf	Percent of Female Population	Female Population (% of the total population): Female population is the percentage of the population that is female. The population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship.	World Development Indicators (The World Bank Group)
hf_taxbur	Tax Burden	The tax burden is a composite measure that reflects marginal tax rates on both personal and corporate income and the overall level of taxation (including	

Variable in Dataset	Given label	Description	Source
		direct and indirect taxes imposed by all levels of government) as a percentage of gross domestic product (GDP). With an equal weighting system, it allows a country to achieve a score as high as 67 percent based on two of the components even if it receives a score of 0 percent on the third. The country's fiscal freedom ranges between 0 and 100, where 100 represent the maximum degree of fiscal freedom.	

4.1.1 Data Analysis

Unbalanced Panel Results (Dependent variable = Per Capita Growth; Estimation Technique (Arellano-Bond Dynamic Panel Data Estimation – Consistent Difference GMM)) (Table: 4.2)

Table 4. 2: Implementing models for the set variables

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
$Growth_{t-1}$	0.331^{***} (0.083)	0.375^{***} (0.089)	0.432^{***} (0.082)	0.265^{***} (0.080)	0.252^{***} (0.075)	0.286^{***} (0.075)
$Growth_{t-2}$	-0.108^{**} (0.048)	-0.111^{**} (0.045)	-0.041^{**} (0.020)	-0.112^{**} (0.046)	-0.123^{***} (0.046)	0.119^{***} (0.045)
Gross Capital Formation	4.562 (3.636)	4.532 (3.704)	3.740 (3.270)	5.694 (3.604)	5.585 (3.598)	5.830 (3.619)
Government Consumption	-11.807^{**} (4.715)	-12.777^{***} (4.775)	-6.574 (5.157)	-11.302^{**} (4.577)	-12.370^{***} (4.462)	-12.443^{***} (4.517)
Human Capital	0.061 (2.496)	0.221 (2.391)	3.211 (2.400)	-2.134 (2.140)	-2.016 (2.328)	-1.957 (2.178)
Tax Burden	-0.068^{***} (0.025)	-0.067^{***} (0.026)	-0.052^{**} (0.025)	-0.046^{**} (0.021)	-0.044^{**} (0.021)	-0.046^{**} (0.021)
Gender Equality	2.150^{**}	1.840^{**}				

	(0.941)	(0.904)				
Female Population	0.408*** (0.133)		0.264* (0.147)	0.411*** (0.143)		
Fertility Rate	1.210* (0.722)		-0.426 (0.655)		0.793 (0.692)	
Africa Prosperity	0.144 (0.195)			0.167 (0.189)	0.316* (0.188)	0.167 (0.189)
Constant	-15.932** (7.409)	7.485*** (2.555)	-8.782 (7.883)	-12.967* (7.562)	5.621** (2.600)	7.566*** (2.349)
Observations	379	379	452	379	379	379
Number of Countries	145	145	145	145	145	145
Arellano-Bond Statistic	-4.26	-4.106	-3.666	-4.008	-4.033	-4.035
Sargan Over-ID Statistic	14.484	13.424	11.967	15.113	16.791	15.534
Wald Chi-	81.42	59.25	95.89	78.00	43.46	46.75

Squared						
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.1.2 Discussion

The Arellano-Bond consistent GMM estimation from equation (1) reported in Model 1 in the regression table above reinforces the hypothesis presented in this dissertation that the multidimensional gender equality measure has a significant effect on economic growth by 2.1 percentage points controlling for other factors constant at the 0.01 significance level, female population increases economic growth by 0.4 percentage points holding other factors constant where Africa prosperity is present in the model at the 0.01 significance level. The fertility rate in the model has a significant impact on the economic growth of 1.2 percentage points at the 0.1 significance level.

Standard controls of economic growth results yield the signs present in the literature, where the coefficients of government consumption are negative and significantly high across models, reflecting the negative impact of government expenditure on economic growth. Investment in terms of gross capital formation has a positive effect on economic growth, yet not significant in the sample. Human capital signs are varying, wherein the base Difference GMM model is positive but turns negative when the female population or fertility alone to be the sole controls for demographics. The tax burden is negative and consistently significant across all models.

Also, I report the Arellano-Bond statistic test the presence of first-order serial correlation in the first differentiated error. In all models, the statistic fails to reject the null of zero first-order correlation at the 0.05 significance level, but reject the null at the second-order correlation, where the second lag of economic growth variable works to test the long term effects of growth consistent with the neoclassical growth model.

In addition, since the usage of the Arellano-Bond estimator creates many instruments, I test for over-identification and report in the table, using the Sargan statistic for over-identification. Across all models, it fails to reject the null hypothesis, so there is no identification problem present in any of the models.

Gender Equality on its own has a significant and positive impact on Economic growth of 1.84 percentage points. As expected, the fertility rate would yield a negative sign in the general sample, and only in Africa, it has a positive impact, yet not significant in the results table above.

Africa prosperity has a strong positive impact across all models, and it gets highly significant when being controlled for fertility rate, indicating that the gender component of it is of the highest significance.

**Amended Table 4.2 Data Results Discussion

To simplify the original model, I removed the variable "Growth t-2" as it had attending collinearity issues with the variable "Growth t-1". For further explanation, "Growth t-1" represented a time lag of 5 years, whereas 't-2' represented a time lag of 10 years. The original assumption in the model was that population growth would take a significant amount of time before GDPPC growth to occur since the new entrants into an economic system would not begin until at least 15 years of age. Prior to this, people under the age of 15 would be classified as a government dependent and would require substantial resources from the central government, and thus a drain on economic growth. However, I decided to simplify this already complicated model to focus more on the core variables. I removed this variable for simplification, but also provide more qualitative discussion on the effects of the core variables in the case studies.

- **Capital Formation Variable Discussion**

Generally speaking, the higher the capital formation of an economy, the faster an economy can grow its aggregate income. When a country produces more goods and services this usually leads to an increase in national income levels, particularly if a country is able to generate enough savings for investment. Therefore, wealthier countries with a high rate of GDPPC can accumulate funds to produce capital goods faster than poorer countries. When a country cannot replace capital goods as they reach the end of their useful lives, then aggregate production declines.

- **Convergence Discussion**

According to the neoclassical growth model, LDC's should grow faster than developed countries with higher per capita income and over time will converge holding all other variables constant. However, empirical research and observations show that many richer countries continue to grow their economy with an influx of new ideas, technology and increased productivity. This reproducible capital also helps explain how rich countries continue to exhibit increased economic growth beyond what neoclassical growth models predict.

Poor countries that are able to escape the poverty trap could, in theory, exhibit a higher economic convergence path, while those that get stuck could exhibit a lower economic convergence path. However, as discussed in my research, it is incredibly difficult for LDC’s to reach convergence to a variety of factors that inhibit such growth to occur. According to research by Topcu, et. Al (Topcu, Altinoz, & Aslan, 2020) capital formation tends to have a positive effect on economic growth in rich countries, and have a negative impact on economic growth in poorer countries.

For convergence to occur, the African countries studied must consistently grow at a pace more rapidly than higher income nations. However, measurements of this factor varied quite considerably across nations and within nations over different time periods from one year to the next. As such, I do not find any convergence effects in this model, although more research into this phenomenon is needed for particularly for African countries.

- **Africa Dummy Regression**

After running the Random Effects Panel Model below, it shows that Africa dummy has a negative impact on economic growth alone, and when combined with Africa opportunity, it still maintains the negative direction, and decreases the effect of Africa opportunity. My analysis is that both variables are highly correlated so this must be explicitly stated in relation to the results achieved in this dissertation.

By including this Africa dummy variable, the effect of Africa opportunity decreased from 0.144 percentage points to 0.018 percentage points. While they are statistically insignificant, this shows that this model suffers from omitted variable bias.

```
Random-effects GLS regression                   Number of obs     =        538
Group variable: ccode                           Number of groups  =        149

R-sq:                                           Obs per group:
     within  = 0.0094                                         min =          1
     between = 0.1970                                         avg =        3.6
     overall = 0.1054                                         max =          4

                                                Wald chi2(8)      =      38.62
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =     0.0000
```

wdi_gdpcapgr	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pwt_sgcf	2.797199	1.689095	1.66	0.098	-.5133664	6.107765
pwt_gc	-1.20764	2.015009	-0.60	0.549	-5.156985	2.741706
egov_hci	.8632998	1.040509	0.83	0.407	-1.176061	2.902661
hf_taxbur	.0272319	.0111927	2.43	0.015	.0052946	.0491692
gi_scale	-.5149164	.2276778	-2.26	0.024	-.9611567	-.0686762
wdi_popf	.245842	.0469669	5.23	0.000	.1537885	.3378955
wdi_fertility	-.2736672	.2037183	-1.34	0.179	-.6729478	.1256133
africa	-.2286173	.52637	-0.43	0.664	-1.260283	.8030489
_cons	-12.25055	3.139289	-3.90	0.000	-18.40344	-6.097653
sigma_u	1.2681522					
sigma_e	2.1881447					
rho	.2514326	(fraction of variance due to u_i)				

```
Random-effects GLS regression                   Number of obs      =       538
Group variable: ccode                           Number of groups   =       149

R-sq:                                           Obs per group:
     within  = 0.0095                                         min =          1
     between = 0.1975                                         avg =        3.6
     overall = 0.1053                                         max =          4

                                                Wald chi2(9)       =     38.67
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
```

wdi_gdpcapgr	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pwt_sgcf	2.768865	1.698305	1.63	0.103	-.5597518	6.097483
pwt_gc	-1.231608	2.021112	-0.61	0.542	-5.192915	2.729699
egov_hci	.8473406	1.043746	0.81	0.417	-1.198364	2.893046
hf_taxbur	.0269155	.0114265	2.36	0.018	.0045199	.049311
gi_scale	-.5102631	.2288123	-2.23	0.026	-.9587269	-.0617994
wdi_popf	.2457887	.0469669	5.23	0.000	.1537353	.3378421
wdi_fertility	-.2531384	.237555	-1.07	0.287	-.7187377	.2124609
africa	-.1849307	.5863147	-0.32	0.752	-1.334086	.9642251
africa_oppurtinity	.0180402	.1077274	0.17	0.867	-.1931016	.229182
_cons	-12.24503	3.140552	-3.90	0.000	-18.4004	-6.089663
sigma_u	1.2640365					
sigma_e	2.1887659					
rho	.25010444	(fraction of variance due to u_i)				

Chapter 5 Case Study

5.1. Case Study #1: Rwanda

5.1.1. Country Statistics

Rwanda is a smaller-sized country in East Africa with a total population of around 13M people. The country has the curious distinction of having the world’s highest level of women’s participation in the national parliament and is a model for women’s empowerment in the political arena as roughly 61% of the national seats are occupied by women. Roughly 64% of the country’s parliament is comprised of women, and the government has made great strides in recent years in improving gender equality. Rwanda is considered one of the most progressive countries in the world in terms of female representation in the national government, largely as a result of the 1994 genocide that killed large portions of the Tutsi population, many of whom were men and young boys. Rwanda’s human capital index score is 0.54 as of 2019, which is still in the lower tier for rankings. However, this score has improved dramatically over the last several decades rising over 119% since 1990.

Rwanda has a relatively high fertility rate averaging around 4.1 births per woman as of 2018. The total population is increasing at 2.6% a year, which means its total population will double within the next 25 years. In terms of its economic outlook, Rwanda aspires to transform itself from a low-income, agriculture-based country into upper-middle-income status by 2035. From 2000 to 2019, Rwanda averaged an annual growth rate of 7.76%, making it one of the fastest-growing economies in Africa and the world[11]. Economists credit this remarkable growth to an increase in the Country’s

[11] https://www.worldfinance.com/markets/economic-growth-in-rwanda-has-arguably-come-at-the-cost-of-democratic-freedom

gender equality, which has seen more women own land, engage in commerce, and start their businesses.

5.1.2. Regional Economic Communities

5.1.2.1.1. ECCAS: Economic Community of Central African States

Rwanda Joined ECCAS in 1983 as a founding member. However, the country pulled out in 2015. Currently, the government in Rwanda decided to rejoin ECCAS for the following reasons. First of all, re-joining ECCAS allows the national airlines in Rwanda to travel among different countries in Africa which eases the free movement of people and trade, Moreover, it helps the country in encouraging two-sided attaches with singular part states to the coalition. Made in Rwanda products will have more publicity after Rwanda re-joins ECCAS.

5.1.3. EAC: East African Community

Rwanda joined EAC in July 2007 and is still a member of the alliance. Having various benefits out of joining EAC, the private sector in Rwanda will become more competitive in the East African Community as it should endeavour and make a substantial effort to accomplish or outperform the guidelines of part states as far as quality and amount. Moreover, few exchange boundaries are peeled off in different business exchanges completed among part nations. The country will also be able to benefit from the regional trading arrangements that are important since they adjust the costs of imports from individuals as duties are eliminated comparatively with imports from the rest of the world.

5.1.4. COMESA: Common Market for Eastern and Southern Africa

Rwanda joined COMESA in order to increase the country's competitiveness and attract several foreign investments as well. In addition, by joining COMESA, Rwanda is considered a part of the COMESA Customs Union that provides a larger market to encourage the expansion of its manufactured or non-traditional exports to the region.

5.1.5. UN Sustainability Goals

5.1.5.1 SDG Goal #1: No Poverty

After the conclusion of the civil war that ended in 1994, Rwanda started to record an increase in GDP per Capita that reached currently 5% per annum, and during this time the poverty rate fell from 78% to 45% in 2011. However, the 2.7% increase in population rates is considered a challenge facing the government in Rwanda to achieve sustained poverty reduction. The main challenges take place in its economy, where 30% to 40% of the country's budget is financed by foreign aid. Moreover, there are various barriers to the diversification of their economy. For one, Rwanda has a very low access rate to energy resources, with the highest cost in the African region. In addition, the transportation cost in Rwanda is relatively high in comparison to neighbouring countries; the cost of transportation accounts for about 40% of the cost of imported goods and 50% of exported goods.

Funded by the world bank's International Development Association (IDA), Rwanda has established a medium-term Economic Development and Poverty Reduction Strategy (EDPRS) that aims to reduce the poverty rate by increasing growth rates. And through raising the agricultural productivity and commercializing the production, that helps the government achieve the target of being a middle-income economy.

5.1.5.2. Rural Sector Support Project (RSSP)

The world bank started to implement a three-phase financing plan including the Rural Sector Support Project (RSSP). The RSSP focuses on intensifying production in the marshlands and developing crop production in the hillside. This program has also helped the government on its agricultural intensification objectives through investments in infrastructure for irrigation and erosion control. The program has contributed to developing the productivity of the farmers through the farmer-based extension model that resulted in producing larger volumes of rice.

5.1.5.3. Detailed results of RSSP:

- 7,500 hectares of marshlands have been rehabilitated or developed;
- Nearly 30,500 hectares of marshland and hillsides have been sustainably developed;
- Average crop yields on the developed marshlands and hillsides have increased by over 100% relative to the baseline at the beginning of RSSP1. Maize yields have improved from 1.6 tons/ha to nearly 5 tons/ha; rice yields have improved from 3 tons/ha to 6.30 tons/ha, and potato yields have improved from 7 tons/ha to nearly 20 tons/ha;
- Crop derived incomes have increased from a baseline of 73,000 Rwandan francs to over 156,000 Rwandan francs per farm household (for RSSP2 beneficiaries);
- Over 43% of the 340,292 beneficiaries from the three RSSP projects are women as are 49% of the 264,920 beneficiaries from LWH.

- Both projects have created 17,000 and 33,000 jobs, respectively. Preliminary results presented by the Government of Rwanda on the most recent household survey indicate that the reported poverty reduction of 11.8% between 2005/06 and 2010/11 is likely to be attributed in part to improved agriculture production, increased number of agro-businesses and increased farm wage employment;
- Between 2008 and 2011 agricultural exports (other than coffee and tea) increased on average by 46% annually; and
- Since 2010, Rwanda has maintained a positive food balance sheet and only imports those products that are not produced locally or that are consumed by the higher end of the market.

5.1.5.4. Poverty Reduction Strategy Support Program

The Poverty Reduction Strategy Support Program (PRSSP) sponsored by the African Development Bank (AFDP), has supported the government in Rwanda to create a strong base for an accelerated private sector establishment, the development of the business climate, the export sector, and the privatization of state-owned enterprises. The main objectives of the project are to create a good base for the private sector in order to increase the opportunities for access to credit and to improve public finance governance by strengthening Public Financial Management (PFM) and procurement practices.

5.1.5.4.1. SDG Goal #4: Quality Education

The average percentage of secondary education of the population is 40%, with women consistently achieving higher levels of education than their male counterparts in high school education. In tertiary education, the gross percentage of the population receiving tertiary education stands at 6.5% as of 2018, with women slightly underperforming men in this category. On the whole, the government of Rwanda spent 10.8% of its total spending on education as of 2018[ii12]. In 2018, Rwanda's GDP grew at 8.6% and is expected to continue with robust growth over the next several years[13].

5.1.5.4.1.1.The Rwanda Education Sector Program Implementation Grant (RESPIG)

The Rwanda Education Sector Program Implementation Grant (RESPIG) is premised upon the Education Sector Strategic Plan (ESSP 2018-2023) priorities and is based on four components. The very first one is training the teachers in order to enhance their curriculum delivery with a focus on English proficiency and inclusive education. This component will be achieved by providing multimedia equipment to the University of Rwanda College of Education and 16 education colleges, supporting the school-based mentorship programs, and teaching teachers in inclusive education in targeted schools. The second component is Curriculum development and procurement of teaching and learning materials, readers, and materials for learners in pre-primary and upper primary, including for children with special educational needs, through producing early childhood teaching kits, digitizing the learning process in both primary and lower secondary stages. In addition, targeted schools will be supported with digitizing materials and smart classrooms, while schools that are losing connectivity will be supplemented by alternative materials; head teachers and teachers will be inducted and supported with all the needed requirements to achieve an efficient digital learning process. The third pillar is to enhance Science, technology, engineering, and mathematics (STEM) in pre-primary, primary, and lower secondary schools. The program works by procuring science kits and laboratory equipment, providing the learners with disabilities with the needed kits, and training the educators on how to use the materials, and how to make use

[12] http://uis.unesco.org/en/country/rw
[13] http://pubdocs.worldbank.org/en/366631492188168425/mpo-rwa.pdf

of the available local resources in teaching science. The fourth pillar mainly focuses on enhancing the school's infrastructure, especially in the lower secondary schools.

5.1.5.4.2. SDG Goal #5: Gender Equality

In order to achieve the goal of gender equality, the government in Rwanda has set several objectives and key performance indicators that they have to reach. The very first thing needed to ensure that women are engaged and empowered in all programs and initiatives including programs involving management and response to environmental crises. In addition, the government seeks to decrease the barriers that women can face when seeking economic development or financing, another target is to increase capacity for a holistic understanding of gender that considers the impact and importance of an array of cross-cutting issues, and engaging males in the programs that support gender equality and raise awareness against gender-based and domestic violence.

5.1.5.4.2.1.Strategic entry points for the mobilization of boys and men in gender equality

As the government aims to engage boys and men in programs that support gender equality and awareness against gender-based violence, they started by hosting several workshops that counter issues like the role of men and their behaviour to achieve gender equality. In addition, offering legal help to women who were victims of gender-based violence and providing a legal framework to counter such problems. Also, training will be offered for men on sexual consent, concentrating on men's responsibility to eliminate sexual coercion. Relevant stakeholders like policemen and judges will work also on providing space platforms for victims of gender inequality and gender-based violence to report problems, and the government will work with them to provide the needed support and resolve such issues. Working with UNDP, the government will create an inclusive and gender-neutral parental leave that merges both maternal and parental leave in-country offices. Also, all staff members in the community will be allowed to use alternative work arrangements in order to achieve job satisfaction, especially among females. Lastly, the government will work with male members of the government to increase the representation of women in all jobs, senior positions, and decision-making bodies and to ensure that female voices are heard and taken into consideration.

5.1.5.4.3. SDG Goal #8: Decent work and economic growth

5.1.5.4.3.1.Five-Year National Employment Programme (NEP) for Rwanda

The NEP is designed to create new job opportunities and to develop the productivity of current jobs through supporting people with productive skills and promoting entrepreneurship and Small and Medium Enterprises growth. NEP aims to support youth with high employability potential with the skills needed in order to achieve their job needs. Moreover, training will be supplied in response to the needs of investment companies that have a special focus on producing local goods and engaging in the "Made in Rwanda" initiative. Youth who have graduated from Technical and Vocational Education and Training (TVET) will be also supported in order to enterprise their technical skills through the acquisition of startup toolkits for self-employment. Moreover, startups and Micro, Small and Medium Enterprises (MSMEs), especially initiated by females and youth will receive technical and financial support from the government through a collateral guarantee support.

5.1.5.4.4. SDG Goal #16: Peace, Justice and Strong Institutions

Rwanda has witnessed several political problems in its history, such as internal conflicts and civil wars that have negatively affected the political stability in the county. Thus, the government in Rwanda has started to work with international NGOs and human rights organisations to promote peace, justice, and equality among the country and to rebuild Rwanda’s political structure also in an effort termed “post-conflict peace-building”. Moreover, in order to develop the effectiveness and efficiency of the governmental institutions that provide services to the community, the government started to build information technology infrastructure in all institutions which will support the employees and all stakeholders and will enhance the quality of work produced by the governmental institutions in Rwanda. Finally, by raising the efficiency of the agricultural sector, the government will benefit economically and politically out of it and reach the stability targeted.

5.2. Case Study #2: Zambia

5.1.5.5. Country Statistics

Zambia, a former British colony, gained its independence in 1964 and is home to over 18 million people, comprising over 73 distinct tribes and multiple spoken languages. The country is considered to be one of the most highly urbanized countries in Sub-Sahara Africa with over 44% of its population living close to major transport corridors. Zambia has an HDI score of 0.59 which is below average in the medium human development group, but above average for other Sub-Saharan African countries. Zambia ranks relatively low on the Gender Inequality Index, with a score of 0.54 giving it a ranking of 131, placing it solidly in the lower tier of all countries. Roughly 18% of its national parliament is comprised of women[14]. Zambia has a national fertility rate of 4.6 births per woman as of 2019[15], making it one of the fastest-growing nations in Africa with a total population growth rate of 2.8%.

No data exists for the average percentage of secondary education of the population; however, for primary education, the rates were high, with roughly 99% of the total population enrolled per cohort. In tertiary education, the gross percentage of the population receiving tertiary education stands at 4% as of 2018, with women slightly underperforming men in this category. On the whole, the government of Zambia spent 17% of its total spending on education as of 2018. The average Zambian has 5.5 years of schooling.

[14] http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/ZMB.pdf
[15] https://www.macrotrends.net/countries/ZMB/zambia/fertility-rate

In 2018, Zambia's GDP grew at 3.8% and is expected to continue with robust growth over the next several years[16]. Zambia achieved middle-income status in 2011 and has enjoyed significant economic progress since gaining independence. However, in recent years the country has experienced uneven growth due to decreased agricultural output and falling demand for copper, a natural resource that is abundant in Zambia.[17] Politically, Zambia is considered a relatively stable country with a functioning democracy and regularly scheduled elections for local, regional and national governments.

5.1.5.6.Regional Economic Communities

5.1.5.6.1. SADC: Southern African Development Community

The main objective of joining SADC is the removal of non-tariff barriers which help in achieving higher rates of economic growth. By joining SADC, Zambia was able to increase regional integration, and facilitate trade and investment flows within the SADC region. Zambia now has granted duty-free and quota-free access to goods originating from the SADC region.

5.1.5.6.2. COMESA: Common Market for Eastern and Southern Africa

Zambia is affiliated to COMESA in order to ease trade by improving the business atmosphere and fitting investment approaches, policies and procedures between member states. Joining COMESA also helps Zambia's local currency to sustain that will enhance the economic stance and increase the number of foreign direct investors in the country.

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[16] http://uis.unesco.org/en/country/ug
[17] https://www.worldbank.org/en/country/zambia/overview

5.1.5.7. United Nations Sustainability Goals

5.1.5.7.1. SDG Goal #1: No Poverty

Zambia is Africa’s second copper producer, which has reflected on the economic growth with an average of 7.4% per year. However, economic growth did not positively affect the poverty rates and only benefited a small sector in the country. As of 2015, 58% of Zambians earn less than the international poverty rate (USD 1.9), causing a poverty rate of 54.4%. The geographical location of Zambia denies as a landlocked country, without access to any ports, limits the Country’s access to critical services and trade markets. As a result, fighting diseases and viruses are especially difficult for this country.

5.1.5.7.1.1. Social Cash Transfer (SCT) program

In 2003, Zambia established a ‘Social Cash Transfer (SCT) Program’ is administered by the Ministry of Community Development, Mother and Child Health. As of December 2014, the program serves over 150,000 families across 50 areas and there are solid plans to scale it up to other regions across the country soon. The primary goal of the SCT is to lessen extraordinary neediness and to forestall the transmission of cyclical poverty across generations. Results from the effect assessment completed by FAO, the United Nations Children's Fund (UNICEF), and the American Institutes for Research show that the program has positive effects, including: expanded food security, improved children’s health and wellbeing, improved day to day environments, expanded efficiency and responsibility for resources, in addition to an increase of asset ownership among households, which have a positive effect on family income generation.

5.1.5.7.1.2.National Social Protection Policy

The Government and its partners have been executing a few social assistance interventions focusing on explicit classifications of recipients reserved for the most indigent populations. These have appeared as non-contributory exchanges either in real money or in-kind, charge waivers and sponsorships with a perspective on lessening overall poverty. These interventions explicitly focus on those individuals who do not have the physical or mental ability to work, as opposed to those who are capable of working, yet choose not to for one reason or another. This type of assistance enables families to have safer admittance to food and other fundamental needs, and act as a social safety net for the most vulnerable in their society. Projects of this nature incorporate the Public Welfare Assistance Scheme (PWAS), Social Cash Transfer Scheme (SCTS), nourishment and value taking care of intercessions, for example, the Home-Grown School Feeding Program, bursaries and grants, and the resettlement and recovery of individuals with inabilities (PWDs) and Orphans and Vulnerable Children (OVCs).

5.1.5.7.1.3.Social Security

Zambia has a genuinely long history in the arrangement of standardized savings administrations offered through open and private plans. Nonetheless, the country does not have a public strategy in place to deal with systemic social security, and its legal systems tend to both formal and casual divisions. This has prompted the government disability framework to be slanted towards the conventional division.

5.1.5.7.2. SDG Goal 4: Quality Education

Zambia, unfortunately, has a poor track record of providing quality primary and secondary education to its citizens. According to a Public Expenditure Review (PER) conducted by the World Bank in 2016, Zambia faces several challenges in terms of providing quality education. The country faces a huge shortage in the overall supply of classrooms needed to meet the needs of its growing population. In addition, students that are able to attend school don’t have ready access to basic needs like textbooks, computers, and other supplies. All of these issues affect students' learning outcomes and negatively impact the efficient performance of the economic system.

5.1.5.7.2.1.Zambia Education Enhancement Project (ZEEP)

With an end goal to address these difficulties, the Government of the Republic of Zambia (GRZ), through the Ministry of General Education (MoGE) and the World Bank Group (WBG) have built up a medium-term program called the Zambia Education Enhancement Project (ZEEP). The painstakingly planned ZEEP tries to help MoGE accomplish its role in improving students' access to quality education needs and extensively add to the Seventh National Development Plan (7NDP) targets on the human turn of events. The proposed venture advancement objective (PDO) is to improve the nature of instructing and learning in arithmetic and science in focused essential and auxiliary schools and to increment impartial admittance to optional training. To ensure positive outcomes, three outcomes markers will be checked including:

4. Increase the level of instructors who meet the endorsed educational program capabilities and academic abilities prerequisites in math and science in Grade 5 and Grade 9 in focused schools.

5. An improved student reading material proportion in math and science for Grades 8–9, and arithmetic, material science, science, science, agrarian science, and science for Grades 10–12 in focused schools.
6. The number of understudies took on Grades 8–12 in the extended auxiliary schools with extra study halls and offices.

5.1.5.7.2.2.Additional Efforts

The Zambian Ministry of Education has started to offer programs and initiatives that meet the recommendations of the World Bank, UN, and UNESCO. They have first started to increase access, efficiency, and equity to quality early childhood education, primary education, and secondary education by developing integrated curricula and syllabi for such stages, reintroducing free and compulsory education for all learners, and strengthening out the gender equity and parity within the secondary school education system. The Ministry has also provided quality and development-oriented teacher education programs ensuring that graduates are adequately equipped with subject-knowledge and pedagogical skills and expanding teacher education capacity through the public sector and provide incentives for private sector participation. The Zambian educational officials have also increased access to science, technology, and innovation by prioritizing teaching science and technological subjects at all education levels. Lastly, the government aims to increase the adult literacy level by expanding vocational training and educational facilities for adults.

5.1.5.7.3. SDG Goal #5: Gender Equality

Gender inequality remains a formidable obstacle to achieving the overall development goals as set forth by the UN by 2030. With a population of around 17 million individuals, more women must have access to quality education, business opportunities, and government leadership. Should more vigorous efforts toward building gender equality fail to materialize, the administration's vision of Zambia turning into a centre pay nation by 2030 won't work out as expected.

The UNDP Gender Inequality Index (GII) reflects three components of sex-based imbalance: regenerative wellbeing, strengthening, and monetary action. In 2017, Zambia's GII score was 0.517, with 124 different nations positioning above it. Different measurements affirm the issue; for example, the absence of formal education is more typical among women than men. More than 1/4 of Zambian women (25.7 %) were enrolled at secondary level school training. Men, on the other hand, fared much better with enrollment at (44.2 %). According to UN statistics, women’s work market investment was 78.3 % in 2015, and for men, it was 95 %. It is common for parents to put their family’s resources into educating the oldest male child as they expect the return to be greater than for educating young girls. To that end, it is common for women and girls in Zambia to forego schooling and focus on household activities.

About 51 % of the population is female; however, women hold just under 12% of the seats in parliament. As indicated by the 2012 Labor Force Survey, roughly 66% of homestead work is performed by women, even though the majority of the land is owned by men. In terms of wages, women are relegated to the most minimal paying segments and non-specialized occupations. It is estimated that household labor by women accounts they are occupied for 12 to 13 hours out of every day (including weekends), while men's occupations are done following six to seven hours of the day. Family errands are indispensably applicable, obviously, yet they don't appear in public records.

Social standards add to gender inequality for Zambian women as well, since it is culturally accepted that women quit school in order to tend to family matters. Frequently, young women and girls are forced into an arranged ‘marriage’ to a much older male adult, so this is out of their control to decide their fate in terms of advancing themselves through education. Since child marriage is so prevalent, many young girls will have children early, which helps push the already high fertility rate upward. Another result of these types of arranged relationships is the age difference between young girls and their male partners, which limits their ability to take control of their bodies and demand for gender social equality.

Education goes a long way toward addressing some of the difficulties related to gender inequality. A recent study by the International Food Policy Research Institute (IFPRI) found that extending female instruction brought an improved quality of life measures. The research found that proper education led to a 40% decrease of poverty in the nations from 1970 to 1995, as better quality of education provides better knowledge and preparation for the public to participate in the labor market and have better opportunities by time.

After grade school, an extra year of education adds 12% to a woman’s salary, as per IFPRI, and decreases the likelihood of turning into an adolescent mother by 7.3%. The fact is that instruction assists women with settling on educated choices and engages them to partake in important manners in governmental issues, social issues, and financial turn of events – regardless of whether at the degree of the family, the network of the country. Also, better education empowers them to care more for their own wellbeing and the prosperity of their families as well. It is found that typically, women spend up to 90% of their income on family matters, whereas men usually spend an average of 30% to 40%.

5.1.5.7.4. SDG Goal #8: Decent work and economic growth

The government in Zambia has set priorities to achieve the goal of providing decent work and economic growth for its country. Most recently, the government has successfully implemented a set of basic standards and rights at work to help fair and comprehensive monetary development in Zambia. Compelling social discourse adds to sound mechanical relations and supported monetary development in Zambia, in addition, they are trying to offer better employment opportunities created, with a focus on targeted groups.

5.1.5.7.5. SDG Goal #16: Peace, Justice and Strong Institutions

Zambia is considered a stable country in Africa with successful democratic elections held every five years. The next elections will be held in 2021. The current President is Edgar Chagwa Lungu of the Patriotic Front was re-elected in August 2016, in a closely contested presidential race with his main rival, Hakainde Hichilema of the United Party for National Development.

However, some challenges face the political stability in Zambia, such as the high level of corruption taking place in the country, in addition to the inadequacies and inconsistencies in the regulatory framework and policy environment, access to justice, transparency and accountability, democratization and the relatively slow pace of implementation of decentralization reforms. To this end, the Zambian government is currently working on doing some amendments in the constitution and establishing small claim courts to guarantee justice and equality hence a stable economic and political environment.

5.3. Case Study #3: Uganda

5.1.5.8.Country Statistics

Uganda is a medium-size country in East Africa with a total population of around 46M people as of 2020. Roughly 35% of the country’s parliament is comprised of women, and the government has made great strides in recent years in improving gender equality. Uganda's human capital index score is 0.38 as of 2018; ranking it among the lower tier countries for this category. However, since 1990 to 2017, this score has increased over 66%, which suggests steady improvement has been made in this area[18] . The Country’s gender inequality index score as of 2018 was 0.53, also ranking in the lower tier amongst all nations. Uganda’s fertility rate as of 2018 was a very high 5.0, with a population growth rate of 3.7%, making it one of the fastest-growing countries in the world. The Country’s economy grew at 6.4 percent in 2019, up from 6.1 percent in the prior year.

No data exists for the average percentage of secondary education of the population; however, for primary education, the rates were high, with roughly 95% of the total population enrolled per cohort. In tertiary education, the gross percentage of the population receiving tertiary education stands at 5% as of 2018, with women slightly underperforming men in this category. On the whole,

[18] http://hdr.undp.org/sites/default/files/Country-Profiles/UGA.pdf

the government of Uganda spent 10.9% of its total spending on education as of 2018. The average Ugandan has 6.1 years of education

5.1.5.9.Regional Economic Communities

5.1.5.9.1. EAC: East African Community

Uganda hosts 3 institutions of the Community: the East African Development Bank (EADB) charged with promoting sustainable socio-economic development in East Africa by providing development finance, support and advisory services; the Civil Aviation Safety and Security Oversight Agency (CASSOA), which aims at making air transport services safe, efficient and profitable through the adoption of common policies for the development of civil air transport in the region; and the Inter-University Council for East Africa (IUCEA) that coordinates inter-university cooperation in East Africa.

5.1.5.10. United Nations Sustainability Goals

5.1.5.10.1. SDG Goal #1: No Poverty

Uganda suffers from very high rates of corruption that is causing insufficiency in the resources and finances in the country, scoring 28 in the corruption index, which is a major cause of the unequal distribution of government resources to its vulnerable citizens.

5.1.5.10.1.1. Limited Safety net programs

Safety net programs are of limited availability in Uganda, which increases the vulnerability of households to fall back into poverty. Only 1% of Uganda’s GDP is spent on the safety net and social security programs which have resulted in 35% of Ugandans rely on their life savings and 25 % rely on their families. This makes falling back into poverty highly likely for a majority of people.

5.1.5.10.1.2. Diseases

The spread of diseases in Uganda has also caused high rates of mortality rates and thus have negatively affected the productivity of the people and households especially working in the agriculture sector which is their main source of funding.

5.1.5.10.1.3. Lack of skilled labor

Due to a high dependency on work in agriculture and the informal sector, there is a lack of skilled labor among Ugandans. Without skilled labor, it is challenging for Uganda to obtain important non-monetary resources and narrow subsistence options. This also causes a deficiency in forwarding mobility, which preserves poverty.

5.1.5.10.1.4. Agriculture

The growth in agricultural incomes of households over this decade was driven by favourable food prices and good rainfall, which enabled small, local farmers to obtain higher incomes from their produce. The government's increased spending on road infrastructure, education, revitalization in urban centres, promotion of trade, and access to new regional markets, as well as the return of peace to the war-torn northern region, contributed significantly to further poverty reduction. Providing access to health care and early childhood development programs and promoting literacy programs to the poorest.

5.1.5.10.2. SDG Goal #4: Quality Education

Although there are improvements in the quality of education in Uganda, there are also some existing challenges that can affect the learning process and outcomes. Gender inequality, child labor, early marriages, less motivated teachers, and poverty are considered barriers to developing the quality of education. United Nations statistics show that children can be enrolled in schools but have no access to the educational premises. Although the enrollment rate has met the UN SDG goals reaching 90%, 68 % of the enrolled students drop out before completing their education. The reasons are mainly the high absence rate of children which have reached 56%. Moreover, data shows that primary education students in state-run schools cannot read basic stories or write basic words.

5.1.5.10.2.1. Early childhood development

UNICEF is partnering with the government of Uganda to strengthen the national capacity to coordinate, manage, and scale-up integrated early childhood care and development programs, with emphasis on the most deprived and vulnerable children. Their focus is on providing quality basic education, which enhances the national capacity to increase equitable access, quality, and sustainability of primary education that is inclusive and innovative. Additionally, the Organisation is working to improve adolescents' access to information, life skills, and essential services, to reduce their vulnerability to HIV, teenage pregnancy, and violence."

5.1.5.10.3. SDG Goal #5: Gender Equality

Women's economic development and gender equality in Uganda has been an ongoing challenge, as gender inequality rates continue to very high and gender discrimination is widespread throughout the Country. The gender inequality has resulted in unfair distribution of asset ownership and access to the means of production, including land, capital, finance, and equipment. Even in education, networking, and business skills, women have lower access to such facilities unlike men, which cause a huge gap in knowledge between the two genders. Even in agriculture, women are underpaid in comparison to men although they are producing with the same rates.

5.1.5.10.3.1. Needed Targets:

- Make sure that central and local government have strategies, systems, and staff capabilities to increase women's access to sustainable livelihoods and gainful employment;
- Put in place effective policies and strategies to reduce gender-based violence and increase women's access to justice;
- Ensure that policies, systems, and strategies are developed for citizens' active participation in politics and decision-making and accountability processes, including parliament, political parties, local government and community organisations that impact the advancement of gender equality;
- Develop strategies, plans, and capacities to reduce priority gender gaps in selected Millennium Development Goals-related programs.

5.1.5.10.4. SDG Goal #8: Decent Work and Economic Growth

The Government in Uganda has set various priorities in order to achieve such a target. First of all, they are working on improving the labor administration to basic rights and labor standards, in addition to enhancing the youth employment and improving the social protection for workers in both formal and informal sectors.

5.1.5.10.4.1. Recommendations:

- Supporting the entrepreneurial culture to produce more ‘employers’.
- Participating in skills development programs like the Skills Development Fund and Skills Development
- Facility Both of which gives special consideration to skilling women.
- Identifying child labor and forced labor in supply and value chains and continued lobbying for remediation of abuses.
- Improving the proportion of employees covered by trade unions and similar bodies as well as collective bargaining agreements.
- Developing comprehensive employment policy frameworks, including support to labor market institutions.
- Championing the effective enforcement of the Minimum wage bill.

5.1.5.10.5. SDG Goal #16: Peace, Justice and Strong Institutions

Uganda continues to lose the opportunities of making use of the available resources because of corruption. Because of corruption, all public resources are used and taken by the public sector, which has raised the cost of providing public services and became a barrier against development initiatives and good governance for the majority of Ugandans. In 2012-2015, Uganda’s Corruption Index oscillated between 0.29 and 0.25, which shows that Uganda is perceived as highly corrupt. There is slow progress with the way corruption cases are investigated and prosecuted before the courts of law. In addition, there is little or no money recovered despite the enormous amounts that were misappropriated. Civil society calls for full adherence to the principles of transparency and accountability in the use of public resources and plugging the revenue leakages to curb corruption. Domestic accountability should form the core of governments’ responsibility towards their citizens in the implementation of the SDGs.

5.1.5.10.5.1. Recommendations:

Recommended Actions that should be taken by the Civil Society:

- SDG Awareness Building
- Advocacy for Country Level Prioritization
- Promoting domestication of SDGs at national and local level Participatory Citizen Monitoring of SDGs within the context of National Development Plan II
- Supporting Implementation through resource mobilization for SDGs

5.4. Case Study #4: Ethiopia

5.1.5.11. Country Statistics

Ethiopia’s location gives its strategic dominance as a jumping-off point within the Horn of Africa, near the centre East and its markets. Bordering Eritrea, Somalia, Kenya, South Sudan, and Sudan, Ethiopia is landlocked and has been using neighbouring Djibouti's main port for the last twenty years. However, with the recent peace with Eritrea, Ethiopia is about to resume accessing the Eritrean ports of Assab and Massawa for its international trade.

With about 109 million people (2018), Ethiopia is that the second most populous nation in Africa after Nigeria, and therefore the fastest-growing economy within the region. However, it's also one among the poorest, with a per capita income of $790. Ethiopia aims to achieve lower-middle-income status by 2025.

Ethiopia's economy experienced strong, broad-based growth averaging 9.9% a year from 2007/08 to 2017/18, compared to a regional average of 5.4%. Ethiopia's real gross domestic product (GDP) growth decelerated to 7.7% in 2017/18. Industry, mainly construction, and services accounted for many of the expansion. Agriculture and manufacturing made a lower contribution to growth in 207/18 compared to the previous year. Private consumption and public investment explain demand-side growth, the latter assuming an increasingly important role.

The higher economic process brought with it positive trends in poverty reduction in both urban and rural areas. The share of the population living below the national poverty level decreased from 30% in 2011 to 24% in 2016. the government is implementing the second phase of its Growth and Transformation Plan (GTP II) which can run to 2019/20. GTP II aims to continue expanding physical infrastructure through public investments and to remodel the country into a producing hub. GTP II targets a median of 11% GDP growth annually, and in line with the manufacturing strategy, the commercial sector is ready to expand by 20% on average, creating more jobs.

Ethiopia's main challenges are sustaining its positive economic process and accelerating poverty reduction, which both require significant progress in job creation moreover as improved governance. The government is devoting a high share of its budget to pro-poor programs and investments. Large scale donor support will still provide a significant contribution within the near-term to finance the value of pro-poor programs. Key challenges are related to:

- Limited competitiveness, which constrains the development of manufacturing, the creation of jobs, and the increase in exports.
- An underdeveloped private sector, which would limit the country’s trade competitiveness and resilience to shocks. The government aims to expand the role of the private sector through foreign investment and industrial parks to make Ethiopia’s growth momentum more sustainable.
- Political disruption, associated with social unrest, could negatively impact growth through lower foreign direct investment, tourism and exports.

5.1.5.12. Regional Economic Communities

5.1.5.12.1. COMESA: Common Market for Eastern and Southern Africa

Ethiopia is still not a member of the COMESA free trade area, however, it’s trade volume among the other members is growing well as Ethiopia started to trade and increase economic relations with other countries in terms of the importing of various goods like petroleum, fertilizers, tobacco, soap and polish.

5.1.5.13. United Nations Sustainability Goals

5.1.5.13.1. SDG Goal #1: No Poverty

The new Ethiopia Poverty Assessment by the world bank shows that the national poverty rate has declined amid challenging climate conditions and recommends areas for further attention to sustain and deepen gains. The assessment, Harnessing Continued Growth for Accelerated Poverty Reduction, identifies the key drivers of progress across the country, which include the agriculture sector, but notes that growth has been uneven between urban and rural areas. According to the analysis, poverty decreased from 30% of the population in 2011 to 24% in 2016, the year of the most recent survey on household living standards. However, the report points out that the poorest 10% of the population did not experience any growth in income since 2005. As a result, poor people in 2016 were on average poorer than the poor in 2005.

5.1.5.13.1.1. The assessment identified challenges to sustain progress

Ensure that the poorest and most vulnerable members of the population are also able to enjoy the benefits of continued economic growth. The poorest 10% of Ethiopia's population has not experienced any growth in consumption since 2005. Many of these households are chronically poor, and tend to be larger, less educated, and have fewer productive assets than other households. Improve human capital outcomes for young Ethiopians. Less than 20% of children from very poor households finish primary school and less than 25% receive all basic vaccinations. Although the country has made solid progress on the supply-side of public service delivery, usage of those services by the poorest is however lagging, which is partly explained by financial barriers and opportunity costs. Incentives to extremely poor rural households to keep children in school or complete critical health actions may be important policy tools for breaking the intergenerational poverty trap.

Ensure that vulnerable children are not left behind. Children from poor households and children in rural areas have far worse access to key services like education and clean water and are at risk of being left behind (compared to children in urban areas or from better-off households). If left unaddressed, this can be expected to drive up economic inequality sharply in the coming decades, negatively affecting inclusive growth.

5.1.5.13.1.2. Productive Safety-Net Program

The Productive Safety-Net Program, launched in 2005, is an important policy initiative by the government and donors to shift millions of chronically food-insecure rural people from recurrent emergency food aid to a more secure and predictable, and largely cash-based, form of social protection.

Although the program has reached a lot of people in Ethiopia, not all of them are completely food secure. However, the program has achieved the following, households receiving program benefits working in agriculture have more access to better seeds and fertilizers, households can start off-farm business activities at least two years after receiving program benefits, Households receiving program benefits, men were more likely to undertake wage work, and children in households receiving program benefits ate more meals per day at the height of the hungry season.

5.1.5.13.2. SDG Goal #4: Improving the Quality of Education

The total enrolment in higher education increased more than tenfold from 2004 to 2014. Despite encouraging results and enormous effort by the Government, it is acknowledged that the higher education sector still faces serious challenges. The main ones are Ethiopian public universities providing generic supply-driven technical studies and research without clear linkages to labor market requirements, existing institutes working with inadequate facilities and limited staffing, curricula are not updated or enriched by recent research, and the quality improvement initiatives in the Ethiopian Higher Education sector failing to meet international standards.

The Ethiopian Ministry of Education developed a strategy prioritizing among others the following aspects of the Centers of Excellence:

- Equip the Centers with equipment and teaching materials for high-quality education and research
- Enhance the educational management and leadership skills of universities
- Strengthen the operational maintenance of the Centres of Excellence
- Develop and implement research plans
- Stimulate mentoring and twinning with international universities
- Establish an educational monitoring and information system

5.1.5.13.2.1. The results

- Institutional development plans will have been implemented, evaluated and 'lessons learned' will have been drawn for further expansion to other universities
- Strengthened good governance, management, and leadership capacity at the systems and institutional levels for enhanced performance and accountability of universities.
- Improved teaching-learning processes and employability through SDG Goal 5: Gender Equality High-quality education with equitable participation of both sexes.
- Enhanced capacity of academic institutes for knowledge creation and transfer, as well as community and consultancy services to the economy and broader society in line with the country’s socio-economic needs.

5.1.5.13.3. SDG Goal #8: Decent work and economic growth:

Ethiopia is doing great in such an SDG. Ethiopia is doing major enhancements in the key SDG indicators such as poverty reduction and productive employment. Against this backdrop, the present study explores the main challenges ahead. However, for more enhancements and more creation of productive jobs, economic transformation is a must. Economic diversification, horizontal and vertical economic integration and more dynamic development of Small Medium Enterprises are key aspects that the government should work on in order to achieve such SDG.

5.1.5.13.4. SDG Goal #5: Gender Equality

Ethiopia is the second-most populous country in Sub-Saharan Africa, with a population of more than 105 million. Despite many efforts and some progress, there are still challenges for ensuring inclusive development. Women have not benefited equally from development as they have less access to economic opportunities, education and skills training. As a result, cultural, social, and structural challenges for women continue to exist at individual, community, institutional and policy levels. These limitations negatively impact women’s empowerment and their access to key services.

Most parts of Ethiopia are rural and have enormous potential for agricultural development. However, rural women are especially vulnerable as they have limited access to skill training, formal education, innovative agricultural inputs, and finance. They also have limited ownership and control over productive assets and technologies. While women farmers perform up to 75% of farm labor, they hold only 18.7% of agricultural land.

Despite recent policies strengthening the position of women, rural women still have restricted access to agricultural inputs, fertilizers, finance, credit, extension services, technology and information. These factors limit their contributions to household food security and household income. They also face challenges when it comes to diversifying their work and building productive assets to deal with droughts and other shocks due to climate change.

Another challenge for women's empowerment is weak institutional structures, including cooperatives, micro-finance institutions, and government bureaus that do not adequately address rural women's needs. Because of their limited capacity, these institutions are not able to appropriately integrate gender into planning and implementation of activities to support rural women's empowerment. Additionally, only a small number of women hold leadership positions at such institutions.

5.5. Results and Impact

The joint program targeted 2,500 rural women, who benefited from increased agricultural production and improved their food security and nutrition. Indirectly the joint program impacted 12,000 household members, more than 14,000 community members, 80 producers' cooperatives run by rural women for a total of 5,000 members, and 3,000 female members of Rural Saving and Credit Cooperatives (RUSACCOs). As a result of the program, rural women and their families improved their food and nutrition security. They participated in training on agricultural production, households' food reserve management and control, and cattle fattening and rearing. Technical capacity building was supported through innovative agricultural inputs and technologies. Rural women in Oromia region achieved yields of 40 quintals of wheat, 45 quintals of maize and 20 quintals of Teff (an annual bunchgrass) per hectare, showing 100%, 125%, and 83% increases in production, respectively. Eighty percent of the rural women (1,997) are now able to feed their households three times per day with a diversified diet. Rural women also increased their income, which helped them improve their livelihoods.

Rural women participate in local Rural Saving and Credit Cooperative (RUSACCO) to receive loans and increase savings to start income-generating activities. The joint program supported rural women’s businesses and entrepreneurial projects, as well as their leadership and literacy skills. It also created access to market information, gender-sensitive financial and non-financial services, and improved access to productive resources (land, time and labor-saving technologies). This greatly improved their income. Out of 2,500 rural women in the programme, 1,066 are now able to create sustainable and diversified income sources. This helped them have personal savings ranging from $14 to $508. These women are engaged in income-generating activities that include small ruminants and oxen fattening, irrigation, livestock and crop production, dairy petty trade, sales of handicraft, textile, food and hot drinks (tea, coffee) and transportation services by mule/donkey and horse carts. More women participated in producer associations with the aim to access the markets and improve their incomes. For instance, the Bekelcha Beri Milk processing cooperative was able to supply milk and butter to hotels in the district town. Grain producers from the Bedhatu cooperative in Dodola district now supply improved seeds to the Oromia Grain Trade Enterprise through unions.

The program helped address gender inequality and strengthened women’s involvement in decision-making, focusing on sustainable social change in communities and within households. As a result, 53% (1,335) of women are now able to jointly make decisions with their spouse about household resources and matters involving sales of assets like cattle and rental of land. 15% (368) of rural women now participate in decision-making in rural institutions, including RUSACCOs. When the program started, no rural women were participating in the decision-making processes of rural institutions, so the impact of the program has been significant. In the public sphere, 108 rural women (96 in Oromia and 12 in Afar) assumed positions in their cooperatives’ administrative, auditing, control and loan committees. No woman held such a position in either of the regions before the program started. Moreover, 24 cooperative leaders, 54 women association leaders and 112 rural women received training on leadership and management, family law and economic rights. In addition, 2,127 rural women (1,793 in Oromia and 334 in Afar) gained access to credits/loans through their RUSACCOs. Out of 900 women who received loans in the first round, 744 rural women have already repaid their loans and accessed additional ones to support their income-generating activities

The joint program also supported gender-responsive policies and an institutional environment that fosters women's economic empowerment. A National Network for Gender Equality in Agriculture was created to support gender-responsive agricultural sector policies, strategies and programs, and to increase national ownership. Through this network, the joint program advocated for gender-sensitive national plans and policies. The joint programme in Ethiopia also supported two evidence-based studies, “Costing the Gender Gap in Agricultural Productivity in Ethiopia” and “Budget Tracking of Agriculture Sector from the Gender Perspective” to inform policy development and enhance awareness about gender gaps. A notable result is the “Cooperative Strengthening Manual of Federal Cooperatives Agency (FCA),” which is now more gender-sensitive. This manual aimed to strengthen the cooperatives nationwide and incorporated women-specific access indicators, including the tracking of women’s membership and participation in leadership.

Chapter 6: Policy Implications

6.1. Develop and Sustain Initiatives to Increase Gender Equality

Reimagining the role women traditionally play in society is crucial for African states to achieve prosperity and economic growth. Women have made substantial gains over the past several generations in terms of education attainment, leadership in government, land ownership, starting new businesses and engaging in commerce and participation in civic life. As a result, we see enormous benefits for states that work to achieve gender equality. As shown in the literature, women in parliament tend to devote more legislation on domestic matters such as providing for healthcare, education, fair taxation over policies directed toward conflict and war activities. This builds a more peaceful state by not engaging in the build-up of war, but also by attuning to domestic matters, the population tends to be much more responsive to the government in a positive manner. This reduces internal conflict within a state since more people are generally satisfied with how they perceive the government is responding to their needs.

Additionally, it has been shown that gender equality bodes well for a state's economy due to women spending more on family needs that spur investment and further economic activity within their communities. Therefore, women are essential to building an economic ecosystem based on trust and reciprocation that benefits their immediate families as well as their larger communities. Many studies have shown the effects of micro-financing programs targeted toward women entrepreneurs as having a much larger return on investment than when given to men in similar amounts. African states should place aggressive targets on ensuring gender equality to help propel their countries' economic prosperity.

6.2. US, EU and China Should Offer Robust Support for a Strong African Union

The US and EU must redouble its efforts to re-engage with leading African states to help ensure economic growth and prosperity by offering political, economic and military support for a unified African Union. For its part, China has invested significant resources into the various countries in Africa; including infrastructure projects, such as roadways, bridges, ports etc., which have totalled over USD 211 Billion from 2003-2016. In many of these countries, local government officials work in tandem with Chinese firms. The US and EU should increase its efforts to foster robust and sustained support for a much stronger African Union that ultimately will help pave the way for economic interdependence and a strong federation of African States. By fostering a climate of economic interdependence, the EU and US can begin the process of helping to strengthen economic ties and facilitate trade between African states as well as with partners outside of the region. International organisations like the WTO, World Bank, IMF and other institutions would play a vital role in building strong economic ties and increasing overall prosperity.

6.3.Regional Integration of African States

I have identified several countries that currently possess the right ingredients for robust economic growth and have the potential to become regional powers in the formation of a stronger African Union. I look for African states that have a high proportion of youth entering the workforce; relatively high education attainment; strong political capacity; and relatively low unemployment. On these metrics, I have identified the countries of **Nigeria, Rwanda, Uganda, Ethiopia, Ghana, Kenya, Zambia, Senegal, Cameroon,** and **South Africa** as being suitable for leading the way for African economic growth and development (Table: 4.3). In particular, I provide case studies for

Uganda, Ethiopia, Rwanda and Zambia as examples of how African states can achieve economic prosperity.

Table 4. 3: Youth bulge percentage and youth unemployment in several countries

Country Name	Education Score	RPE (gdp)	Youth Bulge Percentage 2018	Youth Bulge Percentage 2028	Youth Unemployment
ANGOLA	NA	2.036	18.30%	20.40%	11.16
BENIN	4.4	1.097	20.60%	21.30%	1.75
BOTSWANA	9	0.992	18.70%	17%	33.29
BURKINA FASO	1.1	0.959	20%	20.10%	3.05
BURUNDI	3.3	1.097	19.20%	19.70%	3.05
CABO VERDE	NA		19.70%	16%	17.47
CAMEROON	6.7	1.063	19.60%	20.30%	6.90
CENTRAL AFRICAN REPUBLIC	4.9	0.663	19.90%	19.90%	11.88
CHAD	2.3	0.480	21.70%	20.90%	9.00
COMOROS	NA	0.756	19.90%	21.50%	38.07
CONGO, DEM. REP.	4.1	0.731	17.00%	20.30%	6.52
CONGO, REP.	6.7	0.263	21.50%	21.00%	NA
COTE D'IVOIRE	5.4	0.986	20.90%	19.90%	NA
EQUATORIAL GUINEA	NA	0.376	19.80%	19.90%	12.91
ERITREA	NA	0.740	20.00%	21.10%	NA
ETHIOPIA	3.6	0.817	20.20%	20.30%	8.07
GABON	6.4	0.850	20.60%	21.00%	39.66
GAMBIA, THE	3.6	0.880	20.30%	19.90%	43.81
GHANA	**8.1**	**0.893**	**18.60%**	**18.70%**	**11.52**
GUINEA	2.6	0.616	19.80%	19.60%	11.42
GUINEA-BISSAU	3.4	0.606	20.20%	20.10%	11.53
KENYA	7.1	1.313	19.60%	23.40%	22.17
LESOTHO	4.6	2.434	19.30%	19.10%	37.34
LIBERIA	5.6	1.320	19.90%	20.30%	4.64
MADAGASCAR	5.6	0.817	20.20%	19.80%	3.36
MALAWI	5.1	1.645	20.60%	20.10%	9.15
MALI	2.6	0.871	18.90%	19.70%	10.34
MAURITANIA	4.9	0.924	19.80%	19.40%	18.91
MAURITIUS	9.1	1.113	14.60%	12.90%	24.36
MOZAMBIQUE	1.7	1.236	21.60%	21.10%	41.41
NAMIBIA	6.1	1.613	20.40%	19.60%	NA
NIGER	2.1	0.925	19.40%	21.00%	4.71
NIGERIA	**6.3**	**0.480**	**19.80%**	**20.20%**	**7.84**
RWANDA	3.6	0.995	19.40%	21.30%	3.30
SAO TOME AND PRINCIPE	5.5	1.105	21.00%	22.00%	24.33
SENEGAL	5.6	1.245	20.30%	20.30%	13.10
SEYCHELLES	NA	1.568	12.90%	11.10%	NA
SIERRA LEONE	3.8	0.728	18.60%	19.60%	4.46
SOMALIA	NA	0.281	19.30%	19.70%	11.09
SOUTH AFRICA	10.1	1.567	17.20%	17%	52.29
SOUTH SUDAN	NA	NA	20.80%	21.50%	NA
SUDAN	3.8	0.408	21.30%	20.60%	22.41
SWAZILAND	6.8	0.852	22.00%	20.90%	52.85
TANZANIA	5.8	0.943	20.00%	20.60%	NA
TOGO	6.7	1.041	19.10%	19.50%	11.68
UGANDA	6.4	0.810	21.10%	20.90%	4.01
ZAMBIA	7.2	1.156	20.00%	20.50%	13.98
ZIMBABWE	7.8	1.665	20.50%	18.10%	10.12

6.4.Prepare for Looming Youth Bulge and Dependent Populations

For governments to achieve economic growth, the states must first possess a large working-age population relative to its non-productive cohorts. When the non-productive population far exceeds the working population, then they act as dependents and utilise more resources than are being produced by the working citizens. This, in turn, negatively impacts the overall Gross Domestic Product. While this is a necessary component for GDP growth, it is not sufficient on its own and requires other criteria to be met. With a larger proportion of a state’s total population being between the ages of 15-45, which is classified as productive age citizens, the creation of quality jobs for this cohort helps to accelerate economic growth by producing a) more taxes for government spending and b) more savings for investment. Researchers label this phenomenon a “demographic dividend”, and if handled properly, could potentially be a boon for a state’s economy and help contribute to higher political capacity by the state; and in turn increasing its relative power and influence.

We can point to India as a good example of a state that currently has a very large working-age population, but uneven GDP Growth (World Bank Group). India currently has a GDP growth rate of 1.8% over the past decade, with an unemployment rate of 3.5%. The working-age population of India is roughly 57% of the total population, of which only 53% are actively employed. The total percentage of literate Indians represent 74% of the total population. These figures help illustrate that a state needs more than simply a large working-age population for GDP growth. Conversely, China, India’s neighbour to the North, has similar population statistics but substantially higher educated adults aged 16-45. We believe China’s ascent onto the world stage is marked by its extremely large working-age population coupled with a larger proportion of this cohort to be educated. In contrast, China has a growth rate of 1.4% over the past decade with an unemployment rate of 3.9%. Their working-age population is 70% of their total population. The distinguishing factor, as we hypothesize, is that their percentage of educated Chinese is 97% percent of their total population.

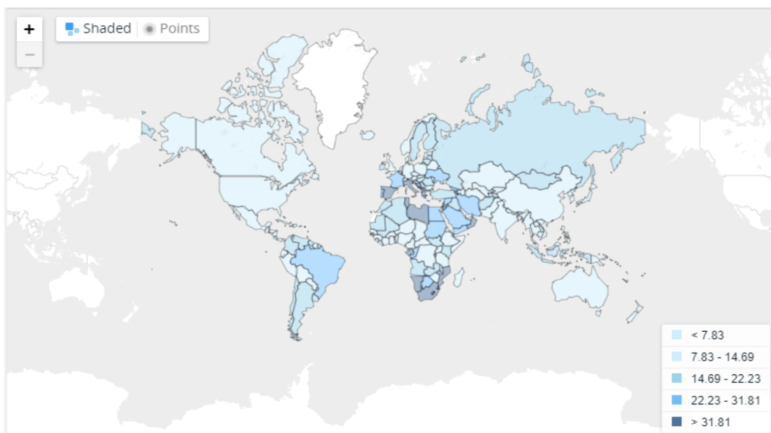

Figure: 4. 1: Map of youth unemployment in 2017. Source: International Labour Organisation, ILOSTAT database.

Fig: 4.1 above displays a map displaying the levels of youth male unemployment recently in 2017. As we can see, levels of youth unemployment are very high in developing regions such as in Sub Sahara Africa.

According to Bloom et al. (2004), nations with larger dependent populations need to dedicate more resources to support those individuals, which can in turn slow economic growth. Therefore, to combat this potential delay, a highly educated and largely employed working-age population needs to exist. Without this high return on capital, the resources required by the dependent population will exceed what is being provided and growth cannot occur. Whereas unequal societies need to spend more time redistributing resources (Berg, Ostry, & Tsangarides, 2014) the lower inequality of more developed societies leads to quicker and more stable growth. Therefore, it is important for high employment rates and education levels exist, as those are indicators of a nation's thriving and development. Without these constituents, a country's GDP may be negatively impacted by a youth bulge, due to inadequate resources and human capital preventing the country from investing in its growth substantially.

6.5.Invest Heavily in Educational Programs for the African States

Both the US and EU would do well to help supplement education costs for developing African countries to help jumpstart economic development. Education is a major cost for any government to undertake, and for many African countries, education for women in particular yield's mixed economic results. Investing in education is a decades-long effort, and the results of this may not be apparent until well after a current political regime has ceded power. The focus on more immediate, short-term economic solutions oftentimes preclude long-term education expenditures. However, the dangers of having a largely uneducated workforce that is not competitive with international market demands, could spell a disaster for African countries and lead to prolonged periods of political turbulence and decreased economic performance.

The coming youth bulge of sub-Sahara Africa will most certainly demand more jobs and economic security, which is only possible with proper investment in education. The EU is already experiencing waves of migrants from African states that are reaching its shores in search of better job opportunities than they can find within their own countries. We should expect to see even more immigration crises hit Europe in the coming decades if education funding is not a priority for African states. It should be noted that an educated working-age population is necessary but not sufficient for GDP growth. Here, I can point to Cuba as a good example of a state that currently has a population with a relatively high level of education but relatively low GDP Growth. Cuba currently has an average GDP growth rate of 1.55% from 1991-2016 and an average youth unemployment rate of 7.67% (World Bank). The employment-population ratio of Cuba is roughly 53%. Cuba also enjoys very high literacy rates and a very large educated population. These figures help illustrate that a state needs more than simply an educated working-age population for GDP growth.

Researchers Robert Barrow and Jong-Wha Lee have created a comprehensive dataset on educational attainment measures on 146 countries from 1950-2010 (Robert Barrow and Jong-Wha Lee, 2013). By using this dataset, I have ranked each African country by the percentage of the population that is educated. Additionally, I have combined the dataset from the Relative Political Capacity Index, again choosing RPE for each African country and ranked accordingly. Lastly, I looked at each African country’s youth bulge as a percentage of the total population. With this data, I can establish which African countries are most likely to take advantage of the window of opportunity given their continued high fertility rates; levels of political performance; and levels of education.

6.6.Create Incentives for Good Government Measures and Reduce Corruption

None of the above policy initiatives can be achieved without the support of a strong centralized government. Political Capacity, which is a measure that calculates a state’s ability to control and exercise its legitimate authority is a necessary but insufficient element for GDP growth. Russia provides a great example of a country whose government has relatively high levels of political capacity, but weak GDP growth. Russia currently has a GDP growth rate of -0.38% over the past decade, with an unemployment rate of 5%. The working-age population of Russia is approximately 71% of the total population, of which only 62.5% are actively employed. These figures help illustrate that a state needs more than simply high levels of political capacity for GDP growth, it also needs to curb high levels of corruption. As in the aforementioned, China also has high Political Capacity but substantially higher GDP Growth. This leads us to conclude that a state must have more than simply high levels of political capacity to achieve high GDP growth rates.

6.7.China Investments in Africa

For its part, China largely approaches partnerships with African states with a hands-off mentality and does not seek to interfere with the internal machinations of these governments. However, the role of international institutions could help provide training and resources for states to adhere to international norms that would help with good governance practices that would increase their overall political capacity to govern. Any foreign aid or foreign direct investment must be accompanied by sustainable efforts to promote strong government capacity to mobilize resources for the betterment of their societies.

Chapter 7: Conclusion

My results find ample support for the notion that gender equality and high human capital are directly associated with a positive increase in overall economic performance. As with prior research, this dissertation also finds ample support for the idea that women play an important role in the promotion of peace and domestic stability within the various states of Africa. As an attending factor, the coming youth bulge for many African nations could potentially offer a window of opportunity for governments to increase their ability to invest and thereby increasing the overall wealth and welfare of its citizens. If not handled carefully, however, the increased supply of young people without both education and ample job opportunities could lead to more political violence and social instability and keep many African states in a perpetual poverty trap.

The necessary ingredients for robust economic growth are currently present in Africa, but for economic prosperity to take root, several important elements must be present. A state must have a large working-age population relative to its dependent population. In short, a country must take in more revenue from its productive citizens than paying out subsidies to non-productive citizens. Gender equality suggests that more women who enter the workforce, more tax revenue can be collected by the government for redistribution. Secondly, a state must have an educated workforce to compete with labor from other countries on the global stage. The coming decades will usher in rapid advances in new technology and necessitate the need for knowledge workers. African states will need to have education be a centrepiece for government efforts to provide well-paying jobs to meet the needs of global commerce.

The expected fertility model presented in this dissertation suggests that Sub-Sahara African countries will continue to experience exponential population growth, with a sizable portion of that population being between the ages of 15-45 for the foreseeable future and barring any major wars or catastrophes. This group of working age, productive citizens could have the potential to be an economic boon for states that properly prepare for the “Window of Opportunity” that this cohort could ostensibly provide. Although a burgeoning youth population is critical to the development prospects of a country, the accompanying demographic dividend is not necessarily a guaranteed outcome for GDP growth. In addition to having a large, productive age population, a state must also possess a strong political capacity to spur GDP growth. Lastly, the working-age population must be sufficiently educated to compete on the global stage.

An unutilised population bulge, where countries simultaneously observe high youth male unemployment and high population growth, reduces the opportunity for achieving higher levels of economic development. Previous empirical evidence suggests that countries with male youth bulges, lead to negative activities in countries such as increases in political instability and violence.

This research shows that when women’s representation in parliament approaches parity, African states are significantly less likely to experience episodes of political violence and social instability. As we keep an eye on the future state of global politics, African governments, as well as international institutions and their partners, need to encourage female representation in all levels of government, education, business and civic life. By promoting gender equality, investment in education, and harnessing the power of a youth bulge, many African states can witness extraordinary economic growth and sustainable prosperity.

Chapter 7: References

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