COMMODITY BASED SOVEREIGN WEALTH FUNDS:
AN ALTERNATIVE PATH TO ECONOMIC DEVELOPMENT

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By

OMOSALEWA OLUYINKA OLAWOYE

B.A., Laurentian University, 2009
M.A., University of Missouri, Kansas City, 2015

Kansas City, Missouri
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COMMODITY BASED SOVEREIGN WEALTH FUNDS: AN ALTERNATIVE PATH TO ECONOMIC DEVELOPMENT

Omosalewa Oluyinka Olawoye, Candidate for the Doctor of Philosophy Degree
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ABSTRACT

Natural resource producing countries struggle with issues about how to make use of their natural resources properly, allocate the funds from these resources and how to ensure continuity of these resources and their effects through the years. Commodity based sovereign wealth funds offer a channel through which these can be achieved. This dissertation studies these funds with respect to how they can be used to finance development in resource rich countries.

Each chapter examines natural resource funded sovereign wealth funds called commodity based sovereign wealth funds (CBSWF), from different angles. This includes analyses of what these funds are, how they are currently used, the dangers in the current savings-like investment strategy and then proposes new real investment strategies that can encourage growth for these countries. The aim of these analyses is to suggest these funds as an alternative path towards growth and development in natural resource owning economies.

To achieve this, we look at the pre- and post- CBSWF era of some CBSWF owning countries except for Iraq, Iran and Libya, which have recently experienced
wars that have disrupted these economies and countries. Some of the countries being studied have recently adopted these funds or have not done anything with these funds. Thus, it is difficult to analyze the effects of these funds in these countries. We compare these countries’ Gross Development Product (GDP) and their Human Development Indicators (HDI). We analyze these data before and after these funds were adopted in these countries to see how effective these funds have been with respect to economic growth and development. We take a look at the failures of the current savings led investment strategy of some countries that have adopted these funds. Then we propose alternative real sector development financing that ensures sustainable growth in these countries. This is done in order to advocate for a real investment led growth in natural resource owning countries.
The faculty listed below, appointed by the Dean of the School of Graduate Studies, have examined a dissertation titled “Commodity-Based Sovereign Wealth Funds: An Alternative Path to Economic Development,” presented by Omosalewa Oluyinka Olawoye, Candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

**Supervisory Committee**

Mathew Forstater, Ph.D., Committee Chair
Department of Economics

Jimmy Adegoke, Ph.D.
Department of Geosciences

Douglas Bowles, Ph.D.
Social Science Consortium

Stephanie Kelton, Ph.D.
Department of Economics

Scott Fullwiler, Ph.D.
Department of Economics
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DEDICATION

Dedicated to the memories of my father, Raphael Iranola Olawoye, and my brother, Oreoluwa Olawoye.
CHAPTER 1
AN INTRODUCTION

1. Introduction

Economic development and growth are integral to the continuity of a society and thus have to be encouraged. To achieve this, 193 countries around the world have adopted the Millennium Development Goals of the United Nations. These goals include, among others, the plans to eradicate extreme poverty and hunger, to improve maternal health, to reduce child mortality, to promote gender equality and women empowerment, to ensure environmental sustainability and to achieve universal primary education.

The United Nations set up these goals to ensure sustainable development in countries. By sustainable development, we mean the ability to ensure growth and meet the needs of the present without compromising that of the future (World Commission on Environment and Development 1987, p. 40). However, for this development through the Millennium Development Goals to take place, funds are required. Some sources for funds include external funds like loans and donations and internal funds like receipts from natural resources. Commodity based sovereign wealth funds are an example of the latter.

These funds are a by-product of national surpluses gotten from the receipts of natural resource sales and are then available for diversification into other assets and projects (El-Erian 2010, Kimmit 2008, Makhlov 2010 and Rozanov 2005). This
in turn means that funds are available to ensure sustainable development and also to provide citizens with a better quality of life.

The purpose of this chapter is to provide an introduction and a background to sovereign wealth funds in general and show the benefits these funds pose to countries that adopt them. The chapter will also highlight several definitions for sovereign wealth funds and provide a unified definition for these funds. Here, some literature on sovereign wealth funds and the sources of funding for these funds will be reviewed. These will in turn provide a background into how these funds are gotten and reasons why natural resource owning countries adopt these funds. Overall, this chapter will act as a background to subsequent chapters on how these funds are used and recommendations on how to improve the usage of these funds.

To introduce this topic, we will provide a history into sovereign wealth funds and some literature on these funds in the next section. Section three will provide some components and policy objectives of the funds. Section four will talk about natural resource owning countries and these sovereign wealth funds. It also addresses the benefits these funds provide for countries that adopt them. Finally, section 5 will provide a concluding paragraph to this chapter.

2. Historical Introduction

The first known sovereign wealth fund was set in the United States. It is the Texas Permanent School Board. Founded in 1854, it was set up to via funds from natural resources like oil and public lands. The goal was to provide returns that will be used to finance public primary and secondary school education in the state of Texas. Subsequent sovereign wealth funds have been set up since then with a
majority of these funds being set up through revenues from natural resources, especially oil.

However, the term *sovereign wealth fund* was not formed till 2005. Andrew Rozanov coined the term in order to explain the increasing phenomenon of state-funded investments set up in order to insulate the economy from revenue volatility and as a savings avenue for future generations (Rozanov, 2005). This term has been defined in different ways, thus creating a need for a consensus in its definition.

2.1. What are Sovereign Wealth Funds?

In Rozanov (2005) where the term sovereign wealth funds was coined, it is defined as “a by-product of national budget surpluses, accumulated over the years due to favorable macroeconomic, trade and fiscal positions, coupled with long term planning and spending restraint (and used to) insulate the budget and economy from excess volatility in revenues, help monetary authorities sterilize unwanted liquidity, build up savings for future generations or use the money for economic and social development.”

The United States Department of the Treasury defines these funds in a similar way as “a government investment vehicle which is funded by foreign exchange assets, and which manages those assets separately from the official reserves of the monetary authorities”

These funds have also been defined as government-controlled investment vehicles (Reisen 2008). Schubert and Barenbaum (2010) define these funds as “government owned investment funds

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1 Rozanov 2005, p. 1 ---Words in parentheses are mine.
typically funded by foreign currency reserves, which are managed separately from official currency reserves.” Similarly, the Sovereign Wealth Funds Institute defines sovereign wealth funds as a “state-owned investment fund or entity that is commonly established from balance of payment surpluses, official foreign currency operations, the proceeds of privatizations, governmental transfer payments, fiscal surpluses, and/or receipts resulting from resource exports.”

More so, Makhlouf (2010) provides an introduction and overview of sovereign wealth funds. He does this in order to raise concerns about these funds based on the attitudes of those who own them. In order to achieve this, he provides 6 criteria for a fund to be classified as a sovereign wealth fund. They include:

- It must be state owned.
- It must be managed separately from other government funds/asset.
- It must avoid having “explicit pension obligation”.
- It must invest in a variety of classes of assets.
- It must direct its investments from the realization of financial returns.
- It must commit a significant part of its capital to global investments.

These criteria define sovereign wealth funds based on ownership and usage. In order to provide a more rounded definition, this dissertation defines sovereign wealth funds as state-owned investment funds that are a by-product of national budget surpluses gotten via revenue generated from the export of natural resources and managed transparently and separately from the official currency reserves for economic growth, development and stability purposes (El-Erian 2010, Kimmit 2008,

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3 Sovereign Wealth Funds Institute http://www.swfinstitute.org/sovereign-wealth-fund/
Rozanov 2005). By virtue of this definition, a sovereign wealth fund has various components that determine its nature. These funds are state-owned yet managed independently from the excess reserves account. This way, a country funnels funds for development through a more secure and transparent avenue with domestic and international scrutiny. As a result, accountability is fostered and developmental goals can be achieved more quickly.

Sovereign wealth funds help a country diversify its revenue streams and devote a portion of its reserves in investing in other sectors and assets. This protects the economy from risks associated with the main contributor to the sovereign wealth fund. An example is the United Arab Emirates investment in tourism, using oil funds, as a protective mechanism against oil-related risks. These funds support development projects in capital short developing countries.

In addition, these funds help an economy invest in well-established corporations outside their domestic markets and this could bring higher returns and carry lower risks. This could be used to reduce domestic spending so as to avoid hyperinflation like Norway but this only happens after proper domestic development investments and growth have taken place (Bayulgen, 2010; and Holden, 2013). Otherwise, it is not advisable to invest in foreign countries at the expense of the domestic economy. This investment strategy diverts funds that could aid in the domestic developmental process to other countries. So, sovereign wealth funds should not only be seen as funds for foreign investments.

\footnote{Makhlouf 2010 p. 39}
Rozanov (2005) points out three reasons why close attention should be paid to sovereign wealth funds: (1) As the asset pool continues to grow in size and importance, the resulting potential impact on various asset markets would also continue to grow. (2) Sovereign wealth funds have certain qualities that help in achieving public policy and macroeconomic goals. It helps in providing and transferring funds from booming sectors to struggling sectors. (3) The relationship between central bank reserves and sovereign wealth management. Though liquidity management and wealth management are two different disciplines, they have to be merged in such a way that they avoid the risk of the classical conservative central banking view by providing more risky assets for investment. It also serves as a means of saving for the rainy day to avoid the risk associated with the source of the funds. This research focuses on the second and third reasons especially with regards to real savings in people and real assets.

However, the impacts of sovereign wealth funds depend on their size, location and type of investment they make. Some of these funds diversify from the typical foreign government bonds to private equity, hedge funds, commodities, real estate and infrastructural projects. These diversification methods are country specific and they depend on the need or achievement goal of each country. Depending on the goal, sovereign wealth funds provide some benefits to countries that own them. According to Makhlouf (2010) these include;

- Providing the needed capital for some companies and financial institutions.
- Long term benefits from investment and thus a contribution to stability, and
- Supporting development projects in capital short developing countries.

Another benefit will be the diversification of stream of funds that it provides with a reduced dependence on a particular sector or natural resource or an increasing external debt. As a result, it is recommended for Organization of Petroleum Exporting Countries (OPEC) member countries (Makhlouf, 2010). This is because it offers a way of diversifying natural resource funds into other sectors and assets thereby reducing resource dependency and the possibility of the Dutch disease. All these are made possible because of the way sovereign wealth funds are set up and the guidelines that govern them.

3. Components of Sovereign Wealth Funds

A sovereign wealth fund is made up of various components that serve as guidelines and determine its nature. These components include how these funds are gotten, what makes up the funds and how they are spent. As a result, they provide deeper insights to the workings of a sovereign wealth fund, the different types of these funds and various investment strategies of these funds.

3.1. Ownership and Sources of Funding

One major thing that all definitions of sovereign wealth funds have in common is the specification of state/government ownership (El-Erian 2010, Kimmit 2008, Makhlouf 2010, Reisen 2008, Rozanov 2005, Schubert and Barenbaum 2010). By nature, these funds are not private funds rather the government owns them and
they are funded through excess foreign reserves or receipts from natural resources. Avendaño, R. and J. Santiso (2009) compares these funds to mutual funds but unlike mutual funds, sovereign wealth funds are only financed through state funds. These funds do not differ greatly from those of other wealth managers and when analyzed on a geographical and sector basis as well as political profile, sovereign wealth funds and mutual funds are not radically different. Therefore, a unique characteristic that a sovereign wealth fund has is the *state ownership*.

As state owned funds, sovereign wealth funds get their origin from two main sources: commodities and non-commodities. This means that these funds can either be commodity based or non-commodity based (Rozanov, 2008 and 2009; and Kern, 2008). Funds that are gotten from the receipts of exports such as natural resources are called commodity-based sovereign wealth funds. On the other hand, those funded through the transfer of assets from a country’s official foreign exchange reserves through the country’s central bank are called non-commodity based sovereign wealth funds (Kern, 2008).

Another difference between both sources of funds is the motives for current account surpluses that drive their creation. For commodity based sovereign wealth funds, the long-term motive is wealth substitution and diversification and that of the short-term is counter-cyclical price effects which cool down the economy in times of high commodity prices and stimulate the economy in times of a downturn, while for non-commodity based sovereign wealth funds, long-term current account motive is from resilient surplus and that of the short-term is for countercyclical volume effects (Griffith-Jones and Ocampo, 2009). However, both types of funds are built up
using U.S. dollars even though funding sources and economic motives differ between them.

3.1.1. Non Commodity Based Sovereign Wealth Funds

Non-commodity based sovereign wealth funds are debt-based funds that lead to currency and interest rate risks if excessive. These funds are called ‘debt-based’ because they are gotten from excess foreign currency reserves and future savings surpluses, a lot of which are forced out of the domestic economy. These are done through conscious and excessive savings schemes carried out at the expense of the domestic economy. In this case, a country makes a conscious effort to save in foreign currency thereby converting its domestic currency. Its market is thus tailored more towards production for the foreign market even in the absence of natural resources.

The monetary control can be lost due to exhausted sterilization capacity (Reisen 2008). Also, we are faced with the problem of the cost of local debt. By local debt, we mean situations where firms typically use debt instead of equity financing in order to reduce the income tax burden of building these sovereign wealth funds. This is because, taxes become too high and so affiliates take on more debts and their capital markets are undeveloped (Rogoff 1999). The expected appreciation of the local currency becomes a hurdle rate that the fund must overcome in order to be economically viable. These forms of sovereign wealth funds are characterized by a tendency towards excessive savings as opposed to current consumption.

One of the funding sources for non-commodity sovereign wealth funds is through the undervaluation a country’s currency (Ferguson 2007). In the case of China, the undervaluation of the Chinese Yuan leads to China’s current account
surplus and corporate savings. This depresses imports and expands exports. State owned corporations gain more US dollars from increased exports. All these then create funds for non-commodity based sovereign wealth funds.

Along this line, many Asian central banks have accumulated a lot of official foreign reserves and have begun to invest these reserves in other aspects of the economy as sovereign wealth funds (Sen 2007). However, this form of investment strategy is not without its risks as the excessive funds promote riskier investment positions. Young (1995) explains some risks associated with non-commodity based sovereign wealth funds using the example of East Asia. Here, we see factor accumulation leading to growth in East Asia but not to productivity gains. This is because factor accumulation tends to be self-limiting as a country can run out of labor eventually. This is evident from the limited immigration in East Asia and rapidly ageing populations thus creating a need for high savings levels to sustain future consumption level. We see diminishing returns from a fall in labor and a rise in capital. This results in inefficiency.

3.1.2. Commodity Based Sovereign Wealth Funds

Commodity-based sovereign wealth funds, on the other hand, are equity-like funds that target returns in foreign currency, mostly US dollars. They are created through commodity exports that are either taxed or owned by the government. In this case, countries fund their sovereign wealth funds, and thus development, internally with what they have. The receipts from commodity exports are then invested in other sectors of the economy to encourage a unified form of economic growth without the negative effects of resource dependency. They give the benefit of
transforming oil or other of natural resources into other forms of wealth rather than just consuming them without gaining any economic growth or development.

Here, a developing country uses what it has to get what it needs. This is beneficial as it leads to a reduction in resource dependency through vertical and horizontal sector diversification. Some countries in the Middle East like Qatar, the United Arab Emirates (UAE) and Saudi Arabia have been able to foster economic growth and development using their Sovereign Wealth Funds through sector diversification (Shihab, 2001; Makhlouf, 2010; Ghanem, 2001; and the UNDP HDR 197 and 2011).

Reisen (2008) provide other benefits of commodity based sovereign wealth funds. They include;

- It allows for economic diversification and efficiency gains.
- It limits unwarranted currency appreciation and protects against “Dutch disease”.
- It allows for technology transfer and network benefits from one sector to the other.
- It bridges a gap for the future by smoothing inter-temporal consumption levels for future generations if and when the “resources are exhausted”.

These funds can be invested in other sectors through investments in financial, physical and/or human capital based on the country-specific need of the country that is creating these funds. They are then mainly used for fiscal revenue stabilization, intergenerational wealth transfer, strategic development planning and
to prevent foreign exchange fluctuations. For countries that lack basic needs such as food, clothing, shelter, education, electricity and other forms of infrastructure, heavy emphasis should be placed on real investments in these sectors that reduce the dependence on a volatile revenue stream for the present generation, which will then flow to the future generation (Van der Ploeg and Venables, 2010). Policies on how to invest these funds will take country-specific needs into consideration in their formation.

3.2 Policy Objectives of Sovereign Wealth Funds

Policy objectives and motives for the creation of sovereign wealth funds are important. Also, these objectives and motives differ from country to country. They are based on the sources of these funds and the individual country’s need at the point of setting up these funds. The Sovereign Wealth Funds Institute lists six policy objectives for sovereign wealth funds. They are:

- **Stabilization Funds** – These funds are used to ensure stability in an economy and reduce the dependence on funds from a particular sector through inter-sector diversification. This serves as a protective measure in case the resources from that sector are depleted or in the event of supply and demand shocks for these sectors.

- **Savings/Future Generations Funds** – These funds are set up for usage by the future generations. They act as an intergenerational wealth transfer especially in countries with natural resources.

- **Strategic Development Funds** – These funds are used to meet developmental objectives such as the provision of basic needs and various other infrastructures
that a country, especially a developing country, lacks but needs. Here, investments are made in the domestic market and priorities are given to infrastructure.

- *Pension Reserve Funds* – These funds are set up to meet pension obligations for the older generation and retirees.

- *Reserve Investment Funds* – These funds are set up as currency reserves especially as foreign currency reserves to be used for various policy objectives by countries that set them up.

- *Backing Funds* – These funds are set up in countries with fixed exchange rate systems to be used to defend the domestic currency. They are used for central bank commitments in buying or selling foreign currency at a fixed value in other to ensure the value of the domestic currency is maintained. For instance, Hong Kong Monetary authority Investment Funds invest in some sovereign wealth funds as a means of holding U.S. dollar denominated assets to provide full backing of the domestic currency as required under the Currency Board arrangements.

The first three are usually associated with the goals for setting up commodity based sovereign wealth funds while the last three are usually associated with the goals for setting up non-commodity based sovereign wealth funds (Kunzel et. al. 2011).

**4. Natural Resources Owning Countries and Sovereign Wealth Funds**

Countries with natural resources are faced with the dilemma of depending solely on the natural resource sector or using these funds gotten from the natural resource to develop the other sectors. Sovereign wealth funds can partly serve long-term development objectives as well as good returns if these returns are perceived
as more important than liquidity. However, natural resource funds and thus sovereign wealth funds are faced with political issues on spending and the possible role of the central bank in the inclusion of professional and independent management (Griffith-Jones and Ocampo, 2009). These issues and how to address them are largely dependent on the institutions in place in a country. With bad institutions, countries experience stagnation or inverse growth with natural resource dependency. Sovereign wealth funds provide a better and more transparent institution, which is beneficial for the proper management of resource funds and thus economic growth and development in countries with natural resources.

4.1. Natural Resource Led Development

Over the years, some countries with natural resources have adopted sovereign wealth funds as a defense mechanism against natural resource dependency. It has been argued that natural resource dependency can cripple an economy especially in a case of oil price volatility (Karl, 2007) and also through its negative impact on democracy (Mavrotas et. al. 2011). The argument for sovereign wealth funds is that the revenue gotten from oil is recycled in a properly managed sovereign wealth fund to encourage other sectors of the economy to grow and to get to a level of economic development. Having a comparative advantage in oil production over many countries does not mean that a country should put all her eggs in one basket and watch other sectors in the economy wither away. Rather, countries can channel these natural resource receipts into obtaining materials from
the international market that it cannot readily produce and then using these funds to foster domestic growth and development.

Kern (2008) advocates for commodity based sovereign wealth funds as an alternative to resource dependency through vertical and horizontal sector diversification. These natural resource receipts are recycled through sovereign wealth funds and then put back into the economy through investments in other sectors of the economy that are lagging behind growth wise.

In countries that lack basic needs such as infrastructure, food and clothing, these funds can be used to purchase inputs needed to develop these sectors that are not readily available in the country. These inputs are gotten internationally and then used to encourage the domestic industries. As a result, the hitherto lopsided system of development that had led to problems such as the Dutch Disease, where the increase in the natural resource sector leads to a decrease in the manufacturing or agricultural sector, is addressed. Instead, a country experiences a more rounded and even system of economic development and growth. All these can be gotten in developing countries while avoiding the paradox of thrift associated with just saving these funds (Keynes, 1936).

4.2. Public Accountability and Transparency

Sovereign wealth funds are different from excess reserve accounts because they are managed separately from the latter. In addition, these funds are managed in a more transparent manner, which is advantageous to developing countries that struggle with lack of transparency and issues of corruption. Through allocation disclosures, sovereign wealth funds foster transparency and is thus encouraged in
developing countries especially those facing corruption issues (Avendaño and Santiso, 2009; and Griffith-Jones and Ocampo, 2009).

Obviously, adopting Sovereign Wealth Funds will increase foreign exchange reserves. The aim is to maintain a stable and competitive currency and to ensure ‘self-insurance’ in the face of crisis, thus, smoothing adjustment to shocks. These reserves help in macro support and development of finance.

Griffith-Jones and Ocampo (2009) point out that sovereign wealth funds create a call for transparency and thus an opportunity for the proper usage of these funds. This is because of the public accountability characteristic put in place as a condition for adopting these funds. This is especially useful in combating corruption in developing countries. The transparency benefit is made possible through the internationally accepted guidelines that govern these funds called the Santiago Principles (Avendaño and Santiso, 2009). These are a list of 24 Generally Acceptable Principles and Practices (GAPP) of sovereign wealth funds. The principles were set up by the International Working Group (IWG) of sovereign wealth funds which was established in Washington D.C. so as to identify a prudent and sound framework of generally accepted principles and practices (GAPP) that would reflect the appropriate governance, accountability arrangements and conduct of investment practices by sovereign wealth funds (IWG, 2008). These principles cover issues such as the legal framework, specification of policy purpose, data availability, objectives, governing bodies and implementation of sovereign wealth funds. They also call for higher transparency and accountability of these funds. It stresses that these funds should demonstrate the financial orientation of their decisions. It also states that all
relevant financial information and investment strategy should be publicly disclosed by participating countries.

As a result, countries that adopt sovereign wealth funds adhere to these Santiago Principles and give up some level of autonomy in exchange for efficiency and transparency. This provides countries struggling with high levels of corruption with a more transparent system of allocating funds for economic development purposes. Transparency is important in development because the alternatives, corruption and bureaucratic inefficiency, are negatively related to investment and thus economic growth. This happens because corruption and bureaucratic inefficiency impedes economic growth directly through the lowering of investment rate and indirectly through the misallocation of investment among sectors (Mauro 1995, and Bhattacharyya and Hodler 2009). A more transparent system with more accountability can help reduce the effects of corruption and bureaucratic inefficiency. Therefore, the Santiago Principles provide a country that adopts sovereign wealth funds with a better institutional framework for economic development.

Mehlum et al (2006) and Boschini et al (2007) provide empirical evidence to show that countries with good institutions receive a modest growth rate effect from resource dependence and the reverse is the case for countries with bad institutions. Sovereign wealth funds thus serve the purpose of a more transparent system of recycling resource finance to ensure economic growth and development and also using these funds for vertical and horizontal diversification so as to reduce dependence on these resources. The GAPP provide guidelines and backings for
better institutions to ensure efficiency in the use of resource funds for development and growth.

However, in addition to the international guidelines that govern sovereign wealth funds and make them more suitable for funding developmental projects than simply mismanaging natural resource revenue directly, other steps have to be taken domestically. North (1990) stresses the importance of an effective judicial system that will enforce contracts as a vital part of economic growth and performance. In the same vein, sovereign wealth funds should have an effective and separate part of the judicial system that will enforce contracts and real investments not just a reliance on the international body and press. It is one thing to have a more transparent system that encourages accountability and better data collection; it is another thing to ensure that contracts are being adhered to. So countries with these funds have to be committed to ensuring economic development.

5. Conclusion

Countries that own natural resources are saddled with the issues related to owning these resources such as the Dutch disease, corruption from all parties and mismanagement of funds. Sovereign wealth funds provide a more transparent way of recycling these funds to provide economic growth in all sectors and thus increasing the sources of revenue for that country to more sectors than the resource sector. As state owned funds, these funds can then be invested into basic needs that a country lacks, which is beneficial to all while providing the added benefit of a better institution that ensure economic growth and development. Through proper management, these funds provide the added advantage of a country using what it
has to get what it needs without being saddled with the debt of international loans and the conditions attached to these loans such as austerity that could cripple the economy or other forms of dependence on the international body.

Thus, a country can use commodity based sovereign wealth funds to acquire materials and resources that it cannot easily acquire domestically and reinvest it into physical capital that will ensure sustainable development. This way, natural resource funds are used to ensure even development not the lopsided form of development that can occur from dependence on the natural resource sector. These funds are recycled through sovereign wealth funds. These are then used to acquire capital and ensure development that benefits the present generation and the future generations as well. With the added benefit of accountability and more transparency, commodity based sovereign wealth funds help a country use what it has to get what it needs thus ensuring continuity of consumption from one generation to the next.
CHAPTER 2
HOW THEY ARE SPENT

1. Introduction

The increasing number of natural resource owning countries that adopt sovereign wealth funds speaks to the benefits these funds provide when implemented properly. The institutional framework given as a result of the Generally Acceptable Principles and Practices that govern these funds provide a more transparent system of reinvesting natural resource funds in other sectors. Thus, countries that adopt these funds can avoid cases of a Dutch disease or other risks involved in overdependence on the natural resource.

Here, we analyze the effects of these funds on countries that have adopted them excluding countries that have engaged in wars in recent years – Iraq, Iran and Libya. Specific emphasis has been placed on four sub-Saharan African countries – Angola, Equatorial Guinea, Gabon and Nigeria. This is because these are developing countries with natural resources that make about 50 percent of its GDP. Also, these countries are part of the Sub-Saharan African countries where human development has been low when compared to other regions in the world (Human Development Report, 2015). Emphasis is also placed on Algeria because it has the biggest CBSWF in Africa and about 95 percent of its exports are natural resources. We also closely examine Norway because it is a widely accepted model country successful in
achieving natural resource led economic development (Bernstein, et al., 2013; Cappelen et al., 2000; Eika and Magnussen, 1998; and Roed Larsen, 2004).

To properly understand why the CBSWF investment strategies are important, real variables for development in these countries will be reviewed. This will be done using data from the United Nations Human Development Index (HDI), the Organization of Petroleum Exporting Countries (OPEC) and the World Bank's World Development Indicators (WDI). The aim is to provide a report of how these countries are really doing with respect to human development and the economy. This will serve as a precursor into analyzing what could be wrong with the current investment strategies and how to better invest these funds in order to achieve development that will benefit people and the economy.

We compare these countries and some of their recipes for development using Qualitative Comparative Analysis (QCA) (Ragin, 1987; Ragin and Rihoux, 2004; and Rihoux, 2003). Through the QCA, we get a truth table of what is actually happening in these countries with respect to expenditures and outcomes.

The rest of this chapter is divided into three more sections. Section two provides a brief background into the measurements used and the countries being analyzed. Then, we look at the purpose of setting up these funds, how they are set up and how they are invested. This is done in order to provide a quick understanding of these countries and to show that when compared, no two countries are the same. This section will also provide background information into these CBSWF of these countries and how each individual fund is invested. Section three takes these further by examining the effects of these funds by analyzing socio-
economic indicators in these countries. Here, we will provide a qualitative comparison analysis truth table about some recipes and results for development in these countries. The aim is to show development results and see if some changes have occurred since the adoption of CBSWF. Section four points out non-socio-economic effects of these funds and section 5 draws some conclusions from the analysis in the previous sections.

2. **Background**

2.1. **Background into Measurements**

In this and subsequent chapters, reported data from the World Bank, United Nations and OPEC are used to provide an idea into the socio-economic level of each country over time especially pre- and post-adoption of commodity based sovereign wealth funds. This in turn gives an idea into the reasons for the policy objectives of these funds and also reviews the effects the funds have had on these resource-rich countries that have adopted them.

We conducted a QCA to provide qualitative macroeconomic social comparisons among the countries with these funds. In this chapter, we review some socio-economic indicators in countries with these funds such as the debt level, governing system, poverty level and level of spending on social investments of these countries. These give an idea into how these countries are run and the institutions in place that create an environment for a successfully run CBSWF. Then we see the outcomes for development through a truth table. This lets us know if there have been slight changes the Human Development Index (HDI) components since the adoption of each fund.
We use these outcomes because they measure the quality of life using education level, income per capita and life expectancy levels of these countries. These indicate the qualitative level of development not just the quantitative measurement in variables such as the Gross Domestic Products. It achieves this by using the length and quality of health of life, knowledgeability of the people and the level of decency in the standard of living. The length and quality of life is measured by life expectancy. This measures the number of years a newborn would live at the prevailing patterns of mortality. To measure education and knowledge, the total number of enrolments into public and private secondary schools is used. For the standard of living, the Gross National Income (GNI) per capital is used as expressed in constant 2011 international dollars when converted to purchasing power parity rates. All these are used to show if there have been improvements and the level of improvements in development that these countries have experienced since adopting these funds. This way, the quality of life of these countries is measured, not just the quantity of the income level and GDP.

Overall, all these contribute to an understanding of the background and institutions needed for a successful CBSWF. It also provides an antecedent into the next couple of chapters which address the problems associated with the investment strategy (Chapter 3) and optimal investment strategies for these funds (Chapter 4). It does this by the reviewing the success stories post- CBSWF adoption through the truth tables.
2.2. A Background into CBSWF Countries

Different countries have adopted CBSWF for different reasons based on their needs and policy objectives. For most countries, especially developing countries, these funds have been set up to ensure fiscal discipline and to make it more difficult for the state especially the government in power to dip into oil funds and mismanage all of it.

By providing a background into each country in our sample and their funds, we address challenges each of them face with their funds, examine the current ways these funds are spent and then provide an overview of how each country spends with respects to the development outcomes they receive. This goes to show that no two countries are exactly the same, thus, investment strategies should be streamlined to fit each country. The one-size-fits-all policy approach is not suitable for CBSWF owning countries. Therefore, only general policy guidelines can be provided in this thesis.

A background into each individual country helps in buttressing the point that each country should pursue CBSWF policy options that will be beneficial for its people and domestic economy. This does not in any way diminish the role of international trade or the global economy as no country can survive alone. Rather, through its CBSWF, these countries can transparently use these funds to purchase materials for development from the global market. This goes without saying that these materials being purchased are materials that will cost the country far more to produce domestically or materials in which the opportunity cost of production are high (Van den Berg, 2014).
2.2.1 Algeria

Located in North Africa, the Democratic Republic of Algeria has a population of over 39.5 million people (CIA Handbook, 2015). Her natural resources include petroleum, natural gas, iron ore, phosphates, uranium, lead and zinc. Petroleum and natural gas makes up a significant part of Algeria’s exports. It is the 9th top producer of natural gas in the world (OPEC World Oil Outlook, 2014) and the economy is heavily reliant on petroleum.

The sovereign wealth fund in Algeria is called the Revenue Regulation Fund/Fund for the Regulation of Receipts. It was established in 2000 from surplus revenues gotten from taxes levied on the oil and gas reserves, that is, the difference between the price of oil sold on the market and the state reference price. This fund was set up as a stabilization fund to reduce the impact of oil and gas prices volatility on the Algerian economy. The 2004 Budget Law of Algeria also states that the fund can be (and has been) used to reduce the external public debt. It was part of Algeria’s plan to return to macroeconomic stability in 2000 while adhering to the principle of transparency.

Algeria, like a lot of resource led economies, struggles with issues of corruption. The 2004 International Monetary Funds Report on Algeria reports that no information is published on special Treasury account transactions in Algeria except for operations of the Revenue Regulation Fund. This goes to show that Sovereign Wealth Funds indeed aid in economic development through international and local transparency provided through the Santiago Principles governing these funds. This is especially useful for a country where even though a comprehensive
internal audit system has been set in place to supervise entities, no follow-up monitoring system has been set in place to review these findings. Therefore, without external reports on information, it becomes really easy for things to be swept under the rug regardless of audits carried out internally.

The Fund for the Regulation of Receipts is the biggest sovereign wealth fund in Africa and it has $77.2billion. The Central Bank of Algeria manages these funds so it is not as independent as sovereign wealth funds should be. However, the central bank in Algeria has had an increase in operational autonomy since 1990 when the Money and Credit Law No. 90-10 of April 14, 1990 was passed. The strategy of the funds is to make conservative investments.

As a stabilization fund, the Fund for the Regulation of Receipts accumulated foreign exchange reserves as a preventive cushion to soften the blows of oil and gas price crises. These foreign exchange reserves are then used to offset international debt so as to reduce interest rates. This is because the greater the debt on an economy, the greater the interest rate premiums on loans (Collier and Venables, 2008).

2.2.2 Angola

The Republic of Angola is in the southern part of Africa and has a population of 19.6 million people (CIA Handbook, 2015). Angola is rich in crude oil, diamonds, gold and copper. Petroleum products mostly drive exports. With a GNI per capita of $5,300 in 2014, Angola is considered an upper middle-income country. This is a great improvement from the 1990 GNI per capita of $590. By 2005, it became a low-

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5 Information gotten from Banque d'Algérie website http://www.bank-of-algeria.dz/
middle income country and by 2012, when the sovereign wealth funds fully began, Angola became an upper middle-income country.

Fundo Soberano de Angola (FSDEA) is the sovereign wealth fund of Angola. It was set up in 2012 in line with the international governance benchmarks of sovereign wealth funds. An autonomous Executive Committee manages these funds with independent auditors.

Angola’s goal is to save for the future and diversify by shifting from consumption. As a result, FSDEA aims to generate long-term and socially enhancing financial returns. These financial returns are targeted for social and economic development and as a way of generating wealth for the people of Angola. However, to get these financial returns, the investment strategy of FSDEA is to diversify its investment portfolio in public and private stocks, financial derivatives, commodities, treasury bills, real estate and infrastructure funds. About half of these funds are invested in financial assets domestically and globally.

However, FSDEA is not only making financial investments. It invests in domestic investment vehicles. The 5 priority sectors for these funds are training and education, access to healthcare services, access to electricity, access to water and autonomous income generation.

For the social economy and nurturing the future, FSDEA invests in about 7.5 percent of its assets on social development projects and investments. One of such investments is on an initiative called Kamba Dyami. This initiative promotes computer-based learning for school children. FSDEA invests in this by supplying laptops and developing teaching and maintenance capacity for this initiative. The
fund also runs an international university scholarship program in order to develop human capital.

2.2.3 Botswana

Located in Southern Africa, Botswana has achieved a steady growing GNI per capita since the 1960s. This growth has been due to a heavy reliance on mineral extraction, especially diamond mining. Due to commodity export reliance, Botswana's economy was heavily affected by the global crisis that started in 2007/2008. The economy experienced a sharp contraction and its official unemployment rate went up to about 18% in 2009. The economy also suffered from a declining demand of its diamond within the past seven years. As a result, the government decided in 2015 to use some of the country's excess amount of foreign exchange reserves on agricultural, manufacturing, tourism and construction development in the domestic market.

The Pula Fund was established in 1994 under the Bank of Botswana Act. The goal is to preserve a portion of diamond export income for the future generation. These funds are gotten through government budget surpluses and stored up in foreign exchanges. Reports of these funds are found in the annual financial statements of the central bank. Spending patterns include a substantial outflow of funds into the Public Officer's Pension Fund when it was established in 2001 and an outflow of funds used to maintain the liquidity portfolio after the global crisis. It is one of the sovereign wealth funds in Sub-Saharan Africa that has mostly adhered to the Santiago Principles. However, more work can be done using these funds in the domestic economy instead of storing them up in foreign reserves. Storing up these
excess reserves has not done much good to Botswana’s economy hence, the 2015 real diversification plans in Botswana.

2.2.4 Brunei

Brunei is a sultanate located in Southeast Asia. Its economy is heavily dependent on its petroleum and natural gas fields. Natural gas production accounts for about 70% of Brunei’s GDP. With a small population of about 429,646 people, Brunei has successfully used its natural resources to boost the welfare of its citizens. Citizens benefit from these resources directly through free medical services and free education up to the university level despite the fact that they do not pay taxes. The quality of life in Brunei has improved using funds from its natural resource for the development of its citizens.

The Brunei Investment Agency was set up in 1983 to store up foreign reserves. These reserves are diversified in foreign investments in the US, Japan, Western Europe and the Association of Southeast Asian Nations (ASEAN) countries. Details on the daily operations of these funds are not readily accessible and the daily operations are not transparent. Also, the Sultanate is involved in the operations of these funds. It is not an independent unit. As a result, these funds are not really considered sovereign wealth funds, in the real sense of the word.

2.2.5 Chile

The Republic of Chile is one of South-America’s most economically stable countries with a very high quality of life. Though it has the world’s largest copper mine, its copper mining accounts for only about 20 percent of its GDP. It is a market-oriented economy.
Chile currently has two CBSWF. The first is called the Pension Reserve Fund (PRF). It was established in 2006 as a pension savings fund for the future pension liability shortfalls. This fund has a longer-term goal. The second CBSWF is the Economic and Social Stabilization Fund (ESSF). Created in 2007, this fund has been used for macroeconomic stabilization objectives. It is used to finance fiscal deficits and amortize public debt. Both funds were created from the Copper Stabilization Fund established in 1985. However, these funds are stored up in foreign reserves in financial assets.

2.2.6 Equatorial Guinea

The Republic of Equatorial Guinea is a central African country. It has a population of about 741 thousand people. Equatorial Guinea is rich in natural resources such as petroleum, natural gas, timber, gold, bauxite, diamonds, tantalum, sand, gravel and clay. With a GNI per capita of $13,340, the Republic of Equatorial Guinea is a high-income country. However, these riches are only enjoyed by a small percentage of the country’s population.

This country’s sovereign wealth fund is called the Funds for Future Generations. So, its investments are not geared towards the current domestic economy. It was established in 2002 with a commitment to place 0.5% of all oil revenues in the Bank of Central African States (BEAS) for the future generation. This commitment has been followed through. However, these funds are not as transparent as sovereign wealth funds should be especially since the political structure in Equatorial Guinea is autocratic. The funds reflect global figures but not domestic breakdowns of how these funds are spent.
2.2.4 Gabon

Located in western coast of Africa, Gabon republic has a population of about 1.7 million people. It is a country rich in natural resources. These resources include petroleum, natural gas, diamond, niobium, manganese, uranium, gold, timber, iron ore and hydropower. With a GNI per capita of $9,320, Gabon is considered an upper middle-income country.

Gabon set up its Sovereign Fund of the Gabonese Republic in 1998. Its reserve for these funds are at the Banque des Etats de L’Afrique Central (BEAC). These funds were set up for the future generation. With these funds in place, Gabon still struggled with insufficient fiscal management and delays of payments on public building projects. In a bid to focus more on economic growth, the Gabonese government revamped its sovereign wealth fund in 2012. Since then, these funds have been managed by the Strategic Investment Funds (FGIS – Fonds Gabonais D’Investissements Strategiques). The primary objective of these funds has now been to focus more on domestic growth than external investments. The objective to preserve national wealth is still important to Gabon though as even the direct investments have been made on financial instruments.

As a result, Gabon has invested these funds both in Gabon and abroad. These investments have been made in strategic industries such as infrastructure, mining and port management. Domestically, infrastructure investment has been made through the indigenous Ports Development Company. The project is to build a shipping dock.
In 2013, the Gabonese government used part of these funds in a public-private partnership (PPP) with the Singapore Aman Resorts as a means of investing in infrastructure. It has also invested in agriculture through its Agriland Fund for poultry and Gabon Seafood investment for fishery. Through the Agriland Fund, Gabon’s 2013 investment aims to impact the entire food value chain from farming to distribution. In this case, the aim is to improve the poultry sector. With the PPP, Gabon targets economic and social infrastructures.

These oil funds have been used to increase public investment and drive the non-oil sectors such as wood processing and construction. This has led to a boost in real GDP since 2010.

2.2.8 Ghana

The republic of Ghana is a West African country with a market-based economy. Agriculture accounts for about a quarter of Ghana’s GDP and this sector employs about half of the workforce. Three main commodities exported in Ghana are gold, cocoa and petroleum products.

The Ghana Stabilization Fund and the Ghana Heritage Fund were established in 2011. They are collectively called Ghana Petroleum Funds. These funds have been put in Euro clear bonds and have not been invested directly in Ghanaian assets or the domestic economy. Also, the detail asset allocations for the specific assets have not been publicly specified. In order words, these funds are not really sovereign wealth funds in the real sense of the word. However, these funds were adopted to diversify oil receipts for developmental purposes.
2.2.9 Kazakhstan

This central Asian country has a population of over 18 million people. Kazakhstan is a landlocked country, which means that every trade in its natural resource has to go through a third party country, Russia, with a high sea and shipping infrastructure. Also, its major Eurasian Economic Union trading partner is Russia. As a result, the economy is heavily affected by the Russian economy.

The fiscal policy of Kazakhstan is conservative as government budget spending is controlled and a lot of its oil revenue is saved in its oil fund called Samruk-Kazyna. This national sovereign wealth fund was created in 2000 as a stabilization fund to protect the economy against oil price fluctuations. This fund financially diversifies the economy as a savings fund even though it was set up with infrastructure, regional development and social projects objectives at its inception. However, Kazakhstan is one of the few CBSWF countries that have withdrawn part of its funds in the face of this current oil crisis that started in 2014. About $19billion has been withdrawn from the fund to bail out the domestic financial sector and to aid government spending. However, the time of the event is too soon to the time of this research to determine the outcome of this event.

2.2.10 Kiribati

The Republic of Kiribati is a small island in the central Pacific Ocean with a population of about 100,000 people. Despite owning some natural resources like phosphate, Kiribati is still dependent on foreign aid from sources such as the European Union, the United Nations Development Program, Asian Development Bank, the World Bank and countries like Australia and Taiwan. Still, it has a low GDP
of about $164 million (World Development Index), a shortage of skilled workers and weak infrastructure.

Despite all these problems and dependence on foreign aid, Kiribati has a stored up savings of about $600 million in its sovereign wealth fund, Revenue Equalization Reserve Fund (RERF). This savings is more than three times the nations GDP. It is confusing to see a developing country rely on foreign aid while choosing to save up funds that could be used to aid development projects. The recent global financial crisis led to the RERF asset declining by over 10 percent between 2007 and 2009. This is a loss of amount that could have funded development projects in Kiribati. Yet, modifications to these funds still hinge on restructuring of the funds in stronger financial assets.

2.2.11 Mauritania

Mauritania is a North African country developing country with about 20% of its population living below the poverty line of $1.25 per day. The economy is driven by foreign debt and foreign investments in the mining and oil sectors. It is subject to natural resource price volatility as it is highly dependent on its natural resources.

The National Fund for Hydrocarbon Reserves was established in 2006 as a macroeconomic stabilization fund for Mauritania. It has a long-term goal of accumulating funds for the future generation. These funds are protected through reports by the National Council of Extractive Industry Transparency organization set up in 2006. However, reports on spending of these funds are not carried out according to the Santiago Principles. While reports exist on how Algeria withdrew

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6 Data gotten from the Sovereign Wealth Institute.
some of its investments in the Funds for the Regulation of Receipts to repay public
debt and fund fiscal deficits during the global financial crisis, reports on
Mauritania’s fund only shows that $45 million was withdrawn. No report exists to
show details on how they are spent.

2.2.12 Mexico

This North American country is a major trading partner with the United
States of America by virtue of location and the North American Free Trade
Agreement (NAFTA). As a result, its economy is affected by what happens in the
United States. Since the inception of NAFTA in 1994, the Mexican economy has
become increasingly geared towards manufacturing especially manufacturing for
trade. Unlike most of the CBSWF owning countries, Mexico’s dependence on the oil
sector is not so high because of its alternative manufacturing sector. This does not
mean that Mexico’s economy is not dependent on oil.

The Oil Revenue Stabilization Fund of Mexico was created as a stabilization
fund in 2000. It is funded by a special levy placed on oil revenue and 40 percent of
excess revenues when oil prices are higher than the budgeted prices. These funds
are saved and only used in periods where total revenue is falls well below the
predicted forecast. So far, these funds have been saved up without substantial
stabilization withdrawals despite the recent global recession. In Mexico, oil funds
are not used for investments; rather, they are used for budgetary purposes. Also,
like most of these CBSWF, the Oil Revenue Stabilization Fund of Mexico is only just
having talks of public declaration of financial statements and using these funds in
the appropriate way. According to the funds website, the fund was modeled after Norway’s sovereign wealth fund of savings.

As we shall show later, these funds and the countries that own them, model their funds after Norway’s funds without taking the right steps of real sector investment that Norway took before it created its funds. These countries also lack a clearly stipulated background for their funds or the right institutions. As a result, most of these countries, like Mexico, just store up their funds. Despite setting up these funds in 2000, Mexico did not begin operations till 2015. These funds were just saved, even in the period of a recession.

2.2.13 Nigeria

The Federal Republic of Nigeria is located in West Africa. With a population of about 182 million people, Nigeria is the most populous country in Africa and the seventh most populous country in the world. The GNI per capita here is $2,950. As a result, it is a low-middle income. It is a country heavily dependent on its natural resources, which include natural gas, petroleum, tin, iron ore, coal, limestone, niobium, lead, zinc, arable land. The most relied on natural resource among these is petroleum.

In order to combat the issue of mismanagement of natural resource funds, the Nigerian Sovereign Investment Authority (NSIA) was created in 2012. The goal of this fund is to properly manage excess crude accounts through three divisions. The first is the Future Generations Funds. This aims to save up funds for the future generations through long-term investments when the natural resources are depleted. The second division is the Nigerian Infrastructure Fund aimed at investing
in domestic infrastructure projects for economic development and financial returns. The third division is the Stabilization Fund aimed at being a buffer against short-term macro-economic instability. Quick liquidity is a requirement for these short-term investments.

The Future Generations Fund receives 40 percent of the general CBSWF. 50 percent are invested in equities and 25 percent in absolute return investments to ensure growth when the equity markets are in stress. 15 percent is invested equally among commodities, hard assets and cash, while 10 percent is invested in others such as royalties and direct lending.

The Infrastructure Fund is allocated 40 percent of the total CBSWF. The focus sectors for this fund are real estate, healthcare, power, agriculture and motorways. However, these investments are still at the appraisal and developmental stages.

The stabilization fund is the smallest of all three funds. It has only 20 percent of the allocation of funds. Of these 20 percent, 75 percent are invested in Absolute Return Fixed Income and 25 percent are invested in US Treasury Portfolio.

All three divisions are invested financially except for some of the infrastructure funds. A part of the infrastructure fund is invested in the Second Niger Bridge through a partnership with Motorways vehicle and Julius Berger Investment. While other infrastructure investments are still at the planning and negotiating stage. This is because the NSIA Act stipulates that a maximum of 10 percent of infrastructure funds has to be invested in social infrastructure projects in underserved sectors and regions. Plans have been made for investments in agriculture, real estate, healthcare and electrical power supply.
So far, $100 million USD has been invested in agriculture in partnership with the Ministry of Agriculture and projects like the Second Niger Bridge construction have started through a partnership with the private sector.

2.2.14 Norway

The Kingdom of Norway is a European country with a population of about 5.2 million people. With a GNI per capita of $103,050, Norway is a high-income country. Of all natural resource producing countries, Norway has the highest GNI per capita. As such, it is considered a good model country on how to use natural resources for economic development. Its natural resources include petroleum, natural gas, iron ore, copper, lead, zinc, titanium, pyrites, nickel, fish, timber, and hydropower. This constitutional monarchy has a very developed democracy with a parliamentary system.

Oil was discovered in 1960s. By this time, Norway already had a stable democracy, as it was over 55 years post independence. Through it’s oil sector, Norway conducted a Keynesian style development plan. Here funds from natural resource receipts were directly invested into other sectors to ensure a more unified growth. Oil receipts were used to pay off foreign debt and fund state financed industrialization. After these were achieved, then a sovereign wealth funds savings account was set up in 1990. This fund is called the Government Pension Fund of Norway. Before 2006, it used to be called the Petroleum Fund of Norway. These funds were set up in order to cushion the economy against a decline in oil and oil price fluctuations. The Norges Bank Investment Management manages it.
In the operation of these funds, the investment portfolio is limited to sectors that comply with investment ethics. It also has a strong independent citizen committee of 15 people who control these funds. The parliament and control auditing and approval of accounts appoint these people.

The goals of these funds are to generate strong returns for the present economy and to save oil receipts for the future generations. The investment strategy used for these funds is majorly financial. 60 percent are invested in equities, 35 percent are in fixed income investments and 5 percent in real estate.

2.2.15 Papua New Guinea

This developing country is heavily dependent on its natural resource sector, mostly copper, gold and oil. These natural resources account for about two-thirds of exports receipts. However, subsistence agriculture is a big source of livelihood for about 85 percent of Papua New Guinea (Babon and Gowae, 2013; and May, 2004). As a result, population feeding is the main basic need that has been taken care of in this country.

Although it is a relatively small country, Papua New Guinea is one of the few countries in the world that did not get heavily affected by the Global Financial Crisis of 2007/08. The chart of the economy’s GDP per capita is seen below in Figure 1 below. It shows a growing amount in the country's GDP per capita during this period of a global economic meltdown. This is as a result of the small level of exports, a bigger focus of domestic feeding due to high subsistence agricultural levels and a continued demand of its commodities.
The Papua New Guinea Sovereign Wealth Fund was established in 2011 to support long-term social and economic development, as a future savings fund and also a stabilization fund. However, operations have not begun with the funds yet nothing can be deduced from its investment strategy.

2.2.16 Russia

The Russia Federation is the largest country in the world, size-wise. It is also a high-income country with an eight-point HDI. Russia is susceptible to commodity price crises as it is one of the world’s leading producers in oil, natural gas, steel and aluminum.

Russia’s CBSWF is called the National Welfare Fund. It was established in 2008. It was set up as a Pension Fund. Though it has been invested in financial assets, it has the ability to lend money to Russian banks. Like Kuwait and Kazakhstan, the Russian National Welfare Fund is one of the few funds that have
liquidated some funds since the recent oil crisis to support the domestic economy. In Russia, the funds were drawn to buy local stocks.

2.2.17 Saudi Arabia

This Middle Eastern country is the largest oil exporter in the world with about 16 percent of the world’s oil reserves. As a result, it plays a leading role in the oil cartel, OPEC. This means that the Saudi Arabian is very susceptible to commodity price crises not unlike the recent oil crisis that started in 2014. This economy is largely dependent on revenue gotten from oil.

As a result, this economy is largely tied to the US petro dollar and oil receipts are deposited into the Saudi Arabian Monetary Agency (SAMA). Saudi Arabia has operated on a dollar pegged fixed exchange rate since 1986. Due to high reliance on the exportation of natural resources and to support its currency, SAMA is tasked with the responsibility of saving up huge amounts of foreign reserves. As a central bank, it must buy or sell currency to maintain the official value (Mundell, 1963). The SAMA foreign holding was established in 1952, long before adopting a fixed exchange rate regime. This CBSWF was set up manly to store up foreign reserves and not to diversify the economy.

2.2.18 Trinidad and Tobago

Located in South America, this twin island country that is heavily reliant on exports. Unlike other countries in this study, Trinidad and Tobago’s exports are not heavily reliant on only oil. From sugar, to tourism and even oil, Trinidad and Tobago has a more diversified export system.
With its oil proceeds, Trinidad and Tobago set up the Interim Revenue Stabilization Fund (IRSF) in 2000. This was later changed and transferred to the 2007 created Heritage and Stabilization Funds (HSF). This fund was set up as a savings and stabilization fund (HSF 2014 Annual Report). As a result, these funds have been saved up in foreign financial assets.

2.2.19 United Arab Emirates (UAE)

This Persian Gulf coast country is made up of seven emirates, which are individually governed by a monarch. It was established in 1971. For about three decades after its establishment, the economy of the UAE was driven mainly by oil. This natural resource contributed to its economic diversification so much so that oil and gas reliance as a contribution to its GDP has been reduced to about 25 percent. This diversification strategy involved job creation and infrastructure development. As a result, this country rapidly developed from an impoverished country to its current developed state over the past 30 years.

The UAEs excess oil reserves are saved up and financially invested in seven sovereign wealth funds. Of these seven, only one is a federal sovereign wealth fund for all emirates. This federal fund, the Emirates Investment Authority, was created in 2007 with the aim of diversifying the country’s portfolio of assets for financial gain. These funds are aimed at saving up these funds for the future generation.

2.2.20 Venezuela

This South American country has an economy that has been and is still heavily dependent on oil. Almost all of its export receipts are oil based. Yet, over 30 percent of its population lives below the poverty line and this country has a high
debt of over 50 percent of GDP. Its high dependence on oil led to a terrible case of Dutch Disease from 2000 to 2013 (Corrales, 2013).

The Macroeconomic Stabilization Fund (FEM) was set up in 1998 as a future savings funds. It was set up on advice from the International Monetary Funds to save up oil excess revenues in periods when the oil price is above the reference level. When prices fall below this reference point, these funds are withdrawn to cover the fiscal budget. Over 80 percent of these funds, over US$6billion were withdrawn in 2003 when the Venezuelan government needed funds to cover the fiscal budget. Since then, not much has been done with regards to the funds.

3. Measuring the Effects of CBSWF Comparisons

3.1. Sub-Saharan Country Comparison: Accumulation versus Reinvestments

Prior to the recent global financial crisis, a lot of developing countries, just like their developed counterparts invested heavily in financial capital. This global crisis questioned the heavy reliance on financial capital. Despite this, countries with CBSWF still invest their funds heavily in financial capital. Countries like Nigeria set up these funds for developmental purposes but these projects are still being reviewed and are in the preliminary stages. Only a few real investments through partnerships have been made. This is unlike the financial investments of accumulation that have already been made without such an intense review and scrutiny. A lot of these funds do not serve their defined purposes or meet the objectives for which they were set up. Thus, the objectives and investment strategies of these funds are very important.
The goals and investment strategies of CBSWF in these six countries vary. Equatorial Guinea has explicit future funds savings objectives. Norway's pension funds are also for future savings so as to reduce the effects of overconsumption in the economy. The others have split the goals of CBSWF among future funds, stabilization funds and infrastructure/development funds.

Equatorial Guinea’s Funds for Future Generations CBSWF benefits only a few people in the country. Despite being a high-income country, income inequality here is still very high. As an autocratic regime, the proper institutions for operating a CBSWF are not in place so these funds have not had any effect on the economy. In fact, its investment style and system of governance has contributed to its 5 position bumps down the HDI ranking just within the five years. Quality of life has been falling in an era where that of most countries in the world are increasing (Human Development Report, 2015). This decrease in ranking is also partly due to the Inequality-adjusted HDI ranking that the report introduced in 2010. So, not only does Equatorial Guinea lack the proper institutions for a healthy CBSWF, the level of inequality exaggerates the quantity of the economy’s performance with respect to its GNI per capita and GDP per capita.

This system of investing oil receipts, CBSWF, is very unlike the system in Algeria where less focus has been put on saving for the future and more focus has been put on reinvesting more funds into human development and the domestic economy. Algeria’s savings into its oil stabilization fund (CBSWF) slightly decreased in 2013, to 31.6 percent in 2013. Lesser focus was put on savings just for credit sake. Rather, Algeria’s investment strategy was more on reducing foreign debt and
reinvestments into the domestic economy. This has contributed to the country experiencing a four-position bump upwards in its world HDI ranking within the past five years. So, quality of life has improved.

Furthermore, the Angolan and Nigerian CBSWFs investment strategies tell a similar story to that of Algeria. While Angola’s CBSWF invests at least a small portion in domestic investment vehicles such as, training and education, access to healthcare services, access to electricity, access to water and autonomous income generation, Nigeria’s CBSWF has partnered with the Ministry of Agriculture and private sector companies like Julius Berger to invest in agriculture and road infrastructure respectively. As a result, when we compare the average HDI in the few years leading up to its CBSWF adoption in 2012 and in the years after, we see that the HDI in Angola has increased by about 3%. About the same percentage change increase, 3%, has been recorded in Nigeria, pre- and post- CBSWF adoption in 2012. These changes, albeit small, are worth noting especially when compared to the amount of real investments these countries have made with their funds.

The Gabonese situation is quite similar to that of Nigeria and Angola in terms of effects of CBSWF on the economies of these countries. So far, it has experienced an increase of about 2% since it changed the objectives of the funds in 2012. In a bid to focus more on economic growth, the Gabonese government started to focus more on domestic development in 2010 before it officially revamped its sovereign wealth fund to focus more on domestic strategic investments in 2012. This change in investment strategy has manifested in average annual growth rate before its adoption of a CBSWF in 1998, during the era where CBSWF investment was mostly a
savings for the future till this strategy changed in 2010. For the first period, the average annual HDI growth rate was 0.2, in the second period, it was 0.48 and the third period, it was 0.76.

This is very dissimilar to the reports in Equatorial Guinea where rather than an increase in average annual HDI growth; the country has been experiencing a negative (-0.18) average annual HDI growth in the past few years. Focusing on future funds, at the expense of current human and physical capital, is only leading to a decaying present generation and impeding real growth in Equatorial Guinea (Oketch, 2006).

Based on the Norwegian investment style of high level of real domestic investments and social development since its oil discovery, it is no wonder that by 2014, Norway had the highest Human Development Index based life expectancy, education and income per capita. Average life expectancy is 79 and unemployment rate as of 2014 is as low as 3.5 percent. As a result, more domestic real investments and paths for social development are being encouraged for these natural resource producing Sub-Saharan African countries.

Hence, the way natural resource receipts and CBSWF are spent go a long way in determining the effects they have on the countries that adopt them. The more a developing country focuses on accumulation of saving for the future, like Equatorial Guinea and pre-2010 Gabon, the lower the HDI growth of that country experiences. This happens regardless of the GNI per capita income level of the country. The more a developing country reinvests these funds into the domestic economy, like post-
2010 Gabon, the HDI growth the country experiences. Accumulation impeded growth while reinvestments encourage growth.

Furthermore, while countries like Norway and even Algeria\(^7\) may now be able afford to accumulate a high percentage of their funds because of their HDI levels, countries like Angola, Equatorial Guinea, Gabon and Nigeria are better off increasing their share of reinvestments in real capital. This is because the latter group lacks basic needs like functional infrastructure and the quality of life of their citizens are still low.

Even with its high level of HDI ranking, Norway still feels some pangs in its recent post CBSWF of accumulation. This is because of the composition of its investments. Norway’s CBSWF has been invested in equity investments, fixed-income investments and real estate investments. By 2014, the most investments, 59.7 percent were in equity investments. Fixed-income investments had 37.3 percent of the total CBSWF and the remaining 3 percent was invested in real estate. Out of these three, the equity investments yielded negative returns, -8.6 percent. The other two yielded possible returns. While fixed-income investments yielded 0.9 percent returns, real estate investments yielded 3.0 percent. The real investments in real estate yielded more rewards than the equity investment of stocks. However, this is a risk that Norway can afford to take when past real investments are taken into account. Developing countries in Sub-Saharan Africa that still have not provided their basic needs cannot afford such risks.

\(^7\)This refers more to Norway than Algeria because there is still a lot room for reinvestment in Algeria. Norway is in the very high development category in the HDI measurement while Algeria is in the high human development category.
3.2. Looking at CBSWF Countries Through QCA

Just to reiterate from the previous chapter, the form of governance and institutions in a country are important in determining how CBSWF are spent. Thereby, influencing the effects these funds can have in a country. Norway benefited from stable and democratic political systems. These influenced the decision making process of their oil receipts and then CBSWF (Gelb, Eifert, and Tallroth, 2002). All of which have contributed greatly into reinvestments and social developments that makes Norway the best country in the world with respect to HDI ranking. We shall address more of this in chapter 4 of this dissertation.

Here, we compare countries through socio-political qualities – debt level, governing systems, poverty level and social investments – to see how these have affected the HDI components – GNI per capita, life expectancy and education. We present a QCA Truth Table (Table 1) to show if these socio-political ingredients have resulted in changes in these countries pre- and post-CBSWF adoption. The results provided are inconclusive based on changes in slope in the outcomes. This is due to insufficient data reporting in these countries especially with the breakdown of HDI outcomes. Also, a lot of these funds are relatively new.

However, we find that countries with at least two positive HDI outcome changes in slope have one thing in common. They all have high levels of social investments in the economy and only a small portion of their population is below the poverty line. Except for Trinidad and Tobago, which is slightly above 10 percent, these countries have low levels of debts. Countries with an increase in at least one HDI outcome have high levels of social investment.
Based on this truth table, one can conclude that regardless of the governing system in place, low levels of debt, low levels of the population below the poverty line and high social investment spending are important recipes for a better quality of life.

However, despite the adoption of these funds, we find that a lot of the countries in this sample still struggle with the provision of a better quality of life. Reasons for this can be seen in the reasons for the adoption of these funds and the investment strategy of these funds. One reoccurring adoption reason provided by these countries is the need to save for the future. Since Table 1 shows us that investment in social investments is a recipe for an increase in at least one HDI outcome, we conclude that real investment expenditures are ingredients for increasing the quality of life instead of accumulating funds.

4. More Effects of CBSWF

Regardless of the investment strategy in place, there are effects of adopting CBSWF that eventually result in benefits for the inhabitants of the country. This is because these are intangible benefits that can later lead to tangible results. However, these depend on if the funds are set up and used within the confines of the Santiago principles and good institutions. The management of these funds plays an important role in determining these intangible effects such as the transparency ratings and subsequent effects of these on a country.

4.1. Transparency ratings

Apart from the Dutch disease, one of the main curses associated with natural resources, especially in developing countries, is the greed and corruption that
ensues. This usually happens through the public offices and investments associated with these resources (Baliamoune-Lutz and Ndikumana, 2008; Bhattacharyya, & Hodler, 2010; Leite and Weidmann, 1999; Mauro, 1995; and Van der Ploeg, 2011).

This attribute is difficult to measure because data is reported and corrupt practices happen between the natural resource producer and buyer. However, Transparency International gives the best available information on corruption. It is called the Corruption Perception Index (CPI). Here, rankings are given based on the corruption perception level of a country’s public sector. It ranges from 0 (very corrupt) to 100 (very clean). The closer a country is to 0, the more widespread the perceived level of bribery and lack of consequences for corruption the country has.

For CBSWF, the SWF transparency rating is called the Linaburg-Maduell transparency index. It is based on ten principles that govern the funds. According to the SWF Institute, these include the provision of information on the following:

- The history, reason for creation, origin of wealth, ownership and governance of the funds.

- Up-to-date independently audited annual reports.

- Ownership percentage in company holdings and their geographic locations.

- Total portfolio market value, returns and management compensation.

- Guidelines to show ethical standards, investment policies and how these are enforced.

- Clear strategies and objectives.

- Identification of subsidiaries, where applicable.

- External managers, where applicable.
- Management of its own website.
- Main office location address and contact information.

All of these guidelines are to confirm authenticity and to create a paper trail that can be traced. This ensures accountability and that these funds are sticking to the Santiago Principles. The Linaburg-Maduell rating ranges from 0 (not transparent, very corrupt) to 10 (very transparent).

Regardless of the perceived corruption level of a country, the CBSWF can be transparent if the right institutions and guidelines are in place. This is why for countries like Angola, Nigeria and Trinidad and Tobago with low CPIs (15, 26 and 39 respectively), the CBSWF transparency ratings are high (8, 9 and 8 respectively). This means that the CBSWF in these countries have a higher chance of effecting change through transparent and accountable investments than the government. Thus making these funds credible.

As a result, when a highly transparent CBSWF is involved in a public-private partnership, the faith in the government and private sector working credibly increases. One of such cases is the Second Niger Bridge motorway investment by the NSIA Motorway Investment Company. Through the benefits of CBSWF involvement, the Federal Government of Nigeria has so far committed 30 billion naira into the project and has paid 10 billion naira of it to start the project. This also led to investment of the private sector in public infrastructure. It is particularly noteworthy because with the previous high corruption level in the country, private investment in public infrastructure had been discouraged. This is because corruption discourages private investment through increasing indirect production
costs and uncertainty over future returns of the capital (Baliamoune-Lutz and Ndikumana, 2008).

The involvement of the NSIA and the transparency and accountability benefits attached to CBSWFs has created an avenue for economic development where the private sector is willing to invest in public infrastructure. In the same vein, a proper adoption of CBSWF can encourage economic growth and development regardless of the perceived corruption level of the country’s public sector.

5. Conclusion

Despite advocating for CBSWF in natural resource producing countries, the institutions under which they are established and the kinds of investments that are made with these funds determine how effective these funds will be in improving the quantity and quality of lives of the people. For developing countries that lack basic needs and functioning infrastructure, reinvesting these funds into their real capital and social development lead to greater benefits and higher HDI growth for these countries than if these funds were accumulated for the future.

Funds are reinvested transparently into the real economy to stimulate the economy and improve the quality of life. This will in turn produces a ripple effect of reducing the poverty level. Quite unlike the currently used system of saving these funds for the future and investing in foreign financial assets, countries can adopt the economic development strategy of Norway, the UAE and Algeria by using these funds to aid social investments, and reduce the poverty and debt level. Overall, these
funds can be used to improve the quality of life of people rather than being stored up in financial assets as these have negative repercussions.
### Table 1: QCA Truth Table

<table>
<thead>
<tr>
<th>Countries</th>
<th>Debt Level</th>
<th>Governing System</th>
<th>Poverty level</th>
<th>High Spending on social investments</th>
<th>GNI per capita level</th>
<th>Life Expectancy</th>
<th>Education</th>
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</table>
LEGEND

Outcome: 0 = No significant change, 1 = Some change in trend, - = insufficient data

Debt Level: 0 = Less than 10% of GDP (low), 1 = more than 10% of GDP (high)

Governing System: 1 = somewhat imperfect multiparty voting democracy, 0 = monarchy

Poverty level: 0 = less than 25% of population under poverty line, 1 = more than 25% percent of population under poverty line.

Investment level: 0 = low spending on social investment, 1 = High spending on social investment.
CHAPTER 3
FINANCIALIZATION AND RISKS

1. Introduction

Resource-rich countries such as Canada, Saudi Arabia, Nigeria, United Arab Emirates among others, have all adopted Commodity-Based Sovereign Wealth Funds in the last seven decades or so (Beck and Fidora, 2008). These funds provide the benefit of transforming natural resources such as oil into other forms of wealth, rather than depending solely on these resources for consumption. This has resulted in different arguments with respect to how these funds are spent and the resulting consequences.

Some, see for instance Griffith-Jones and Ocampo (2008), have made a case for the financialization of majority of these natural resources for future savings or as a means of ensuring permanent income. Others, see Van der Ploeg and Venables (2008 and 2010); and Carling and Kirchner (2012), have argued for the use of these funds for developmental purposes. The latter have also argued for the diversification of these funds to other real sectors of the economy such as infrastructure, housing and food sectors. This way, residents of the country reap the social benefits of better infrastructure, health care and a healthy present generation that will produce the future generation. This investment strategy has been

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8 The United States has the Texas Permanent School Board that was adopted as far back as 1854 but usually we refer to Kuwait Investment Authority funds adopted in 1953 as it heralded a new group of oil producing countries that wanted to reduce reliance on limited oil resources.
encouraged because many of the countries that own these funds are developing countries which are strictly dependent on their natural resources for consumption at the expense of other sectors in the economy. However, this has not been the case as most of these countries invest more in financial assets instead.

This chapter will review the dangers involved in the financialization of these funds. By financialization, we mean the increase in investments of non-financial businesses in financial markets where the measure of growth is calculated by corresponding income streams. Over the years, we have seen a rise in investments in financial assets (Beck and Fidora, 2008; Poterba et. al., 1996; and Wray, 2009). However, finance has a dual function of accelerating growth and also leading to economic fragility and instability (Orhangazi, 2011; Minsky, 1985).

These dangers include a risk on the foreign currency, risks through big financial corporations and austerity risks. Regarding the foreign currency risk, most natural resources, like oil, are traded in United States ‘petro’ dollars so these financial savings and assets are mainly done in United States dollars (Beck and Fidora, 2008). As a result, these economies are tied to the United States economy via its currency. In addition, huge financial savings attract big financial corporations that swoop in to “save” or financially “invest” these funds. These corporations, as seen during the recent Global Financial Crisis, are prone to mismanagement (Prager, 2013) and so these countries are left with a present decaying generation, from choosing financial capital over industrial and real capital, and no funds for the future.
The rest of the chapter is organized as follows; in the next section, the theoretical approaches to the role of commodity based sovereign wealth funds with respect to economic development is reviewed. Afterwards, some risks involved with the way these funds are invested and the impacts this investment strategy has on the economy is discussed. The last section briefly concludes the main theme of the chapter.

2. Commodity Based Sovereign Wealth Funds and Economic Development

Commodity Based Sovereign Wealth Funds (CBSWF) have gained increased momentum in recent years. They are formed as a need to invest excess liquidity through a more transparent channel for the purpose of stabilization, continuity in consumption and all-round economic development, without the risks associated with natural resource dependency.

Here, economic development is defined as a process of sustained qualitative and quantitative positive changes in the standard of living and general economic welfare of a specific area. This means that the development is not only measured by quantitative improvements such as an increase in Gross Domestic Product (GDP) rates, but these GDP increases should be reflected in the quality of lives of the residents and in the society as a whole. Like former US President Lyndon Johnson said while promoting his “Great Society” initiative, “the great society is concerned not with how much, but with how good - not with the quantity of goods but with the quality of our lives” (Quoted in Rapley 2003 and Noll 2000). So as much as the quantitative development and growth matters, the qualitative part is equally as important as these go hand-in-hand. The quantitative and qualitative social well-
being indicators help with policy formation and assessment (United Nations, 1994; and Hicks and Streeten, 1979).

For economic growth and development to occur, a series of properly planned policies and actions that improve the economic well-being and the quality of life of the people in the specified area has to take place. Policies that promote economic growth and development focus, among other things, on the availability and improvement of access to education and training, the promotion of investment in capital goods and the support of research and development. Investment in diverse sectors of the economy is key for economic growth and development to occur (Lea and Tan, 2011; and Auty, 2001).

Many developing countries struggle with the provision of basic needs such as food, water, shelter, sanitation, education, healthcare and basic infrastructure (Stewart, 1985, and Hicks and Streeten, 1979). These countries also struggle with the issue of low level of capita per worker. To address economic development, these basic needs have to be met and policies promoting domestic investment have to take place. As a result, funds are required to meet these needs and investments. Sources of these funds include credit money creation, deficit spending, loans from international sources like the International Monetary Funds (IMF), private sector loans and Sovereign Wealth Funds (SWF) – either through commodity based SWF or non-commodity based SWF.

This chapter’s focus is on Commodity Based Sovereign Wealth Funds led growth and development. These are Sovereign Wealth Funds that target returns from natural resources in foreign currency, mostly US dollars. A lot of developing
countries have natural resources and engage in the trade of these resources with the rest of the world. So, development through this channel is funded internally through resources that a country owns without the trouble of owing interests to pay back loans or undergoing counter productive policy restrictions needed to obtain these loans, such as structural adjustment programs that can lead to poverty.

For a country to receive loans from the International Monetary Funds (IMF) or the World Bank, there are certain Washington Consensus guidelines that this country has to follow. These include austerity measures and cutting back on social programs (Williamson, 2004; and Besley and Zagha, 2005). Neither of these are beneficial to a country especially one that is trying to ensure development. As an alternative, Commodity Based Sovereign Wealth Funds (CBSWF) provide a transparent way in which funds can be recycled to meet the target need of development that a country faces. However, since these funds are in foreign currency, they can be used to buy resources and capital that a country does not own naturally or cannot easily produce. This will help cushion the negative effects of over-reliance on natural resources such as the Dutch disease.

However, the ownership of CBSWF raises the issues about safe and proper ways in which these funds should be invested. As earlier mentioned, arguments have been placed in favor of CBSWF financialization. A definition for financialization is that it is a system of storing up funds in financial capital. Here, profits flow through financial channels rather than trade, industrial capital and commodity production (Krippner, 2005). This definition in itself shows an inverse relationship

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9 See Table 1 in Appendix for examples developing countries and their natural resources.
between financialization and industrialization as the more funds that are put towards one angle means fewer funds for the other angle.

Griffith-Jones and Ocampo (2008) have argued that CBSWF can yield financial returns, which are perceived to be more important than liquidity. The aim here is to maintain a stable and competitive currency that will ensure ‘self-insurance’ in the face of a crisis. Therefore, financialization will lead to a smoothing adjustment to shocks and uncertainties with the natural resources owned by these countries.

However, financialization in general has not been without some disadvantages. Phillips (2002) in his book Wealth and Democracy linked financialization to income disparity and Krippner (2003) explains this concept via a distinction between “activity-centered” system, also known as, industrialization or real sector investment, and “accumulation-centered” system, otherwise known as financial capital investment. Krippner explains that the accumulation-centered financialization system reduces the dependence of non-financial firms on productive activities. This view can be backed up with the contradictory results being reported for commodity based sovereign wealth countries with regards to economic growth and the data being reported by the Millennium Development Goals (MDGs) of the United Nations and the World Bank’s Development Indicators.

While developing countries with CBSWF have been reporting great economic growth through records of GDP and GDP per capita, one will find that such growth does not reflect in the real sectors of the economy like health sector, education,
employment and life expectancy.\textsuperscript{10} These results can be attributed to the investment strategy. Countries with sovereign wealth funds, including CBSWF, tend to invest these funds in large foreign financial firms, rather than real sectors in their own economies (Bernstein et al., 2013; Bodie and Briere, 2013; Bortolotti et al., 2013; Chhaochharia and Laeven, 2009; Dyck and Morse, 2011). Even countries that have basic needs issues, such as Angola, Gabon, Ghana and Nigeria, tend to follow this route of investing their funds in financial assets. This investment strategy goes against one of the criteria that Makhlof (2010) provided for a fund to be classified as a sovereign wealth fund, that is, the funds must direct its investments from the realization of financial returns. By majorly financializing these funds, these funds go against their very nature and against the reason for its creation.

Report by the Sovereign Wealth Funds institute in 2012 shows that only about 1\% to 10\% of Sovereign Wealth Funds investment is put towards infrastructure (See Figure 2) and out of this little percentage, the infrastructure investment is not in the real sectors such as hospitals, roads and electricity but rather in financial capital. For example, the Alberta Investment Management Corporation invests part of its funds in a Chilean utility firm. This shows that even the investments in real sectors of the economy, like infrastructure, are actually financial as well. Also, not only are these investments financial, they are foreign as well. So these funds are mainly in foreign financial assets.

\textsuperscript{10} World Development Indicators of the World Bank.
The result of this strategy can be seen in the fact that CBSWF countries have experienced zero or negligible changes in their real sectors since the inception of their individual funds. According to the reports from the Millennium Development Goal Indices of the United Nations and World Bank’s Development Index (WDI), countries that have adopted CBSWF have experienced significant growth in their Gross Domestic Product (GDP) but this kind of growth has not reflected on the real sectors such as education, health, life expectancy and agriculture.

In addition to the zero or negligible effect on the real sectors, affected countries become susceptible to financial crises similar to the crisis they would experience from shocks that affect their natural resources. These shocks include demand shocks from alternative resources or supply shocks from depletion of resources.
In reviewing countries with CBSWF that have been financialized, we see that these countries were negatively affected by the recent (2008/2009) global financial crisis. Despite their ownership of CBSWF and the argument that these funds will be used to insulate the economy, we see, as depicted in Figure 3, that the investment in financial assets does not actually insulate these economies. One can even argue that this form of investment of CBSWF actually makes these countries more susceptible to the instability of financialization and thus the possibility of a financial crisis.

![Figure 3: Financialization Effects on the GDP per capita of CBSWF Countries.](image)

*Source: World Development Indicators of the World Bank*

From Figure 3, we can see that despite the differences in countries, population, types of governance, inceptions of CBSWF ownership\(^\text{11}\) and development stages, the Global Financial Crisis of 2008/2009 affected all these countries, to some degree. A common factor among these countries is the presence of a CBSWF that has been put up in financial assets. As a result, ownership of

\(^{11}\) See Table 1
financial assets opens the owners to financial instability, risks and eventually a
financial crisis that affects the GDP, unemployment and the economy as a whole.

A way in which the magnitude of the crisis can be alleviated in countries with
CBSWF is through the developing of a country-specific approach in investing these
funds. This approach involves diversifying these funds to sectors that require
immediate attention and have the ability to stall or hinder development. This means
that countries have to use their CBSWF to meet the basic needs from resources that
they do not readily own. Basic needs here mean food, shelter, health, education,
basic infrastructure and the likes as these have the ability to affect further forms of
economic development. When these basic needs have been met, then more focus can
be placed on using resource funds to save for the rainy day.

This is contrary to what we have been seeing in the application of CBSWF
(Beck and Fidora, 2008). Countries that lack basic needs and infrastructure look for
less riskier alternatives for their natural resource funds in order to avoid natural
resource risks like price shocks and depletion. As a result, these countries invest
huge amounts in financial assets, mostly abroad (See Table 2). However, by putting
a majority of these funds into financial assets, these countries expose themselves to
other forms of risks that affect their economies in a different, or even similar way.
These risks affect the currency of a country, the funds themselves and the effective
demand and consumption in that economy.

3. Three Risks Involved with CBSWF Financialization

3.1. Foreign exchange rate/foreign currency effect: Exchange rates are linked to
and affected by natural resources through various political economy channels.
These channels, such as the decision to invest CBSWF in financial assets, lead to exchange rate volatility (Mavrotas, Murshed and Torres, 2011). This volatility is due to the uncertainty and instability associated with financialization. Natural resources like oil are traded in US ‘petro’ dollars so these economies are tied to whatever affects the US economy and thus the US dollars. By saving up funds in petro dollars instead of using these funds to get resources that cannot be easily produced or gotten domestically, a country ties its economy to whatever happens to the issuing country. This means that the country faces a pseudo fixed exchange rate system, even if it is not clearly specified. As a result, the country gives up a lot of its ability to effect positive change internally through a combination of fiscal and monetary policies.

Also, these countries will require large holdings of foreign exchange reserves and the economy becomes largely unstable as movement in the economy becomes reliant on to the movements in the currency they are fixed and dependent on. This makes the country more vulnerable and susceptible to speculative attacks. Speculators see the pressure and limitations these countries are faced with in this pseudo fixed exchange rate system and can thus further increase this pressure on that currency by betting against the currency. In the end, the government will also be affected as it attempts to defend its currency in a bid to prevent a fall in that currency. Thus, the government cannot use these funds to foster development since it is using them to defend its currency.

Furthermore, the exchange rate of a country does not only depend on current demand for that country's goods, services and assets, it also depends on
expectations of all future demands of that country. In turn, the demand for a
country’s physical and financial assets depends on expectations about the return on
those assets relative to comparable assets in the rest of the world. The nominal
exchange rate is determined by both current demand and future expectations. As a
result, factors that influence current demand and future expectations will affect the
exchange rate. Harvey (1991) shows that political, monetary and other forms of
economic news affect the exchange rate, especially in the short term. This means
that speculations about oil financial assets and prices can influence a country’s
exchange rate.

In diversifying funds through CBSWF, countries aim to reduce dependency
on natural resources, thereby reducing the exchange rate influence of the United
States (petro) dollars on their currencies. This loosens the system from that of a
managed exchange rate that leans more towards a fixed exchange rate system to a
slightly more flexible exchange rate system. Here, the CBSWF is used to purchase
goods and services that a country cannot readily produce from the international
market in order to develop and encourage its own domestic production. However,
when the CBSWF are mainly held up in financial assets denominated in foreign
currency, mostly still in US dollars, these countries only end up on a different side of
the same coin. Their domestic currencies are influenced by the US dollar in a similar
way as would occur in the case of strict natural resource dependency without
diversification. This can be seen in the individual currency to US dollar exchange
rate trends of five CBSWF owning countries – Angola, Brunei, Nigeria, Norway and
Saudi Arabia – in Figure 4.
Figure 4: Exchange Rate Trends from February 2006 – March 2015
Despite the different exchange rate systems, the different times CBSWF was adopted\textsuperscript{12} and the different governing systems, the recent global financial crisis (2008/2009) and the recent oil crisis (mid 2014 to 2015) have led to each domestic currency losing value (depreciation/devaluation) when compared to the US dollar. This means that these countries goods and services have become cheaper to foreigners. Therefore, in addition to the reduced volume of demand for these countries exports, these countries require more of their domestic currency in order to purchase foreign goods and services. This puts these countries that are already limited from their natural resource and choice of investment in an even tighter position.

One of the things both crises have in common is the petro-dollar, thus, US economy and the US dollar. Therefore, with CBSWF being invested in foreign currency based financial assets, when the host currency economy is affected, countries holding these assets also get affected. The US housing bubble buttresses this point. The bubble triggered the financial crisis that became global (Orhangazi, 2011). Through currency ties and financial asset ties, countries like Saudi Arabia that already had CBSWF experienced the same exchange rate effect as countries like Nigeria that had not yet started a CBSWF but was still tied to US funds and financial system directly via natural resource dependency.

In a more recent case, oil prices have fallen from about $115 per barrel in June 2014 to $49 per barrel by January 2015. As a result, the reduced revenue that ensued from this, led to a fall in the domestic currency of oil producing countries

\textsuperscript{12} See Table 1
when compared to the US dollar despite the diversification from oil dependency to infrastructure and other sectors. The issue here is that the diversification into infrastructure and other assets are financial and are still set in US dollars so by switching from strict natural resource dependency through CBSWF financial assets, countries get similar effects on exchange rates as strict resource dependency. Therefore, these countries get the same old wine in a new bottle. In all, financializing CBSWF provides similar effects as natural resource dependency and the volatility associated with majorly depending on these resources.

3.2. Asset/Portfolio – Big Financial Corporations effect: In this case, we see countries saving up a lot of the CBSWF in Future Funds and other financial assets. As these financial portfolios and savings get bigger, big financial corporations such as Morgan Stanley, Goldman Sachs and Lehman Brothers swoop in to manage them. Minsky (1986) explains that the financial capitalist economy is unstable and tends to move from a hedge financing position to a speculative position and finally to a ponzi financial position. This move becomes faster the more funds the financial capitalists have at their disposal because the more the funds, the greater the risks the money managers take.

The recent global financial recession that started in 2007/8 shows how very prone to mismanagement these corporations are (Prager, 2013). Once these funds have been mismanaged and lost, countries’ CBSWF and therefore, their future funds disappear. Thus, the saving of money in financial assets only helps to save the financial corporations not the developing country. With a total of over $4.2 trillion in CBSWF (See Table 2) at the mercy of big corporations, there is a large room for
riskier investments to take place and as a result, wastage of funds. This leads to a higher level of Ponzi financial investment.

Hitherto, CBSWF have been used along the lines of what Van der Ploeg and Venables (2010) called the “Permanent Income Hypothesis”. This view is in line with the International Monetary Fund (IMF) recommendations. Here, countries with natural resources save their funds in a CBSWF big enough that the interests gotten from the funds are enough to ensure long lasting consumption (Barnett and Ossowski, 2003; Davis et al., 2002; Olters, 2007; and Segura, 2006). However, this investment strategy encourages the building up of very big CBSWF financial assets and thus encourages risky investments.

This only means that, especially in a developing country that lacks basic needs, the funds that should be used to buy unavailable resources from the international market for development are instead saved up in financial assets, which are prone to risks. In periods of crisis, these funds provide capital for risky financial corporations.

The Bank for International Settlement’s (BIS) Financial Stability Forum Report of April 7, 2008 attributes the Global Financial Crisis that started in 2007/08 to a credit boom that led to risky financial behaviors by financial intermediaries. According to the report, the crisis was as a result of “an exceptional boom in credit growth and leverage in the financial system [caused by] a long period of benign economic and financial conditions [which] increased the amount of risk that
borrowers and investors were willing to take on.”13 This credit boom is further encouraged by the funds made available to financial intermediaries through CBSWF.

Furthermore, in this money manager form of capitalism, it is majorly the capital gain that rewards the money manager not the underlying income flow. As a result, the financial capitalists, that is, the financial intermediaries, care more about the profits they stand to gain than the income flow that CBSWF set up in financial capital was created for (Papadimitrious and Wray, 1998; Minsky, 1985 and Wray, 2009). In the same vein, when CBSWF are mostly stored up in financial capital, western financial intermediaries become attracted to the growing and large amount of funds. As these funds increase, the amount of risks that the foreign financial intermediaries take also increases.

The countries that set up CBSWF aim to get a steady income flow from this investments, while the foreign financial intermediaries aim to make profits. As a result, the bigger these CBSWF get, the more financial intermediaries will make riskier investments with these funds in order to get more profits. Eventually, these funds end up in a ponzi-like investment before it crashes thereby transferring funds from the developing countries that need them for development to developed countries. Riskier steps can be taken with these funds because these foreign financial corporations have no stake in the loss of the initial capital except for the profit they stand to gain.

Also, households do not have access to the credit market and are thus unable to smooth consumption from it so, these financial based CBSWF serve to benefit the

13 BIS 2008, p.1 (Words in parenthesis are mine)
foreign financial intermediaries more, not the people or the country. At least, with adopting the investment strategy of countries using these funds to buy resources from the international market that these countries cannot produce domestically, these countries get a return for their natural resource receipts not just losing it to poor management.

An example of a mismanaged financial asset CBSWF is the Libyan Investment Authority, which recorded about $1.3 billion in losses from 2008 to 2010. According to the Wall Street Journal\textsuperscript{14}, these funds were given to the Goldman Sachs Group to be used in a currency bet among other financial trades. About 98% of the value of the investment was lost. Reasons for this include poor due diligence, patronage investment and excessive risk taking. As a solution, the Libyan Investment Authority was asked to reinvest more money that will produce yields enough to make up for the initial loss. This just goes to show that although these funds are set up to foster economic development, by investing them mainly in financial capital, a country relinquishes its rights over these funds to a financial intermediary third party. It also gives up its right of retribution from the offending mismanaging party. The longer these funds are held in investment vehicles, the greater the opportunity for depletion of funds through mismanagement. Thus, financialization of these funds increases the opportunity for fraud.

3.3. **Keynesian Effective Demand Effect/Paradox of Thrift:** This view is gotten from Keynes (1936). Here, he argued that the more savings increase, the more

\textsuperscript{14} \url{http://www.wsj.com/articles/SB10001424052702304066504576347190532098376}
aggregate demand will fall thus leading to a decrease in consumption and economic growth. Saving up CBSWF in financial assets is similar to an individual saving up funds in a savings account for interest. As, Stockhammer said, “financial investment is a transfer of assets, not a use of income.”

Thus, it is not a substitute for physical investment. As a result, when CBSWF are invested in financial assets, what happens is that countries do not use the income from the sale of natural resources for economic development. These funds are instead transferred from natural resource assets to financial assets. Therefore, no real changes take place in the economy. Investing CBSWF in financial assets is similar to saving these funds in an interest yielding savings account. Therefore, just like savings, investing CBSWF in financial assets is a leakage out of the economy that has to be put back for development, through effective demand, to occur.

One of the arguments in favor of investing CBSWF in financial assets is for continuity of consumption through what the International Monetary Funds refers to as the Permanent Income Hypothesis (Van der Ploeg and Venables, 2008 and 2010). These funds are saved up as financial assets and interests from them are used for development and consumption purposes. This means that a huge leakage of funds, like a flood, is taken out of the economy and only drizzles are being put back into the economy. The hope for continuity of consumption or saving for the future becomes counter-productive as present consumption suffers. This system weakens the current economy with the hope of a stronger future economy. However, a weak present economy is not healthy or strong enough to produce a stronger future as

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15 Stockhammer 2004, p. 720
one cannot give or produce what one does not have. If a present population lacks basic health care, they will not be fit enough to produce a healthy future generation. Also, a poorly educated generation cannot teach or train a very well educated population in the future. So, why run a surplus in financial assets when the citizens do not have basic needs?

Building up CBSWF in financial assets rather than real assets and tangible capital, such as infrastructure, in nations without basic needs have the same effects as these nations running a fiscal surplus at the expense of the private sector and the households. This produces recessionary effects as Wynn Godley’s sectoral balance theory shows the inverse relationship between government and household balances (Godley 1999, 2000). Thus, by saving up these funds in financial assets, the government's surplus build up leads to a corresponding household debt for household consumption to occur.

In addition, like other forms of leakages, the increase in savings through financializing CBSWF means that not much of what is being pumped out of the economy is going back into it. This lack of effective demand needs to be compensated for as entrepreneurs who have increasing inventories are not encouraged into increasing their investments and so aggregate demand falls even more. This in turn discourages the development of new technology through research and development. In order to cause aggregate demand to increase, the government has to spend into the economy.

However, if this government transfers funds that can be pumped back into the economy into foreign assets, there will be fewer funds for domestic investment.
Empirical evidence has shown that an increase in financialization has adverse effects on accumulation of physical capital, as one cannot be a substitute for the other (Orhangazi, 2008; Stockhammer, 2004; and Tobin, 1997). So, if the government, who is tasked with the responsibility of making up for these leakages, is now responsible for contributing to these leakages, there will be no agent left to encourage aggregate demand and that economy will continue on a downward spiral with households being in more debt just to survive.

Also, by converting CBSWF to financial assets instead of investing in the real sector of the economy, a developing country switches from an asset with high liquidity premium, money, to one that is less liquid. Funds become tied up in assets with less liquidity. As a result, countries find it more difficult to purchase development resources, which cannot readily be gotten domestically, from the foreign market. This means that tying up CBSWF in financial assets puts the developing country in a tougher position than it would have been if these funds were left in an excess crude oil account. Reisen (2008) suggests that it is better to leave these resources under ground than to mismanage them. By putting a bulk of the returns in these risky financial assets that can easily be mismanaged, CBSWF countries are mismanaging their funds.

Furthermore, a similar effect happens in the labour market. Financialization undermines the effective demand through its impact on labor and capital investment. This is because it redirects income from labor and capital investment to finance (Duménil and Lévy 2004, Stockhammer 2004, and Orhangazi 2008). The more returns on natural resources that are placed in financial assets, the more
effective demand will decline and the more unemployment increases. With more leakages of CBSWF into financial assets abroad, it is more likely that the economy will settle at an output level below full employment and there will be a gap between actual output and the effective demand that would be required at the full employment level of output. This demand gap may persist as the drops of interests being put back into the economy cannot make up for the large amount of leakages being taken out. The more this happens, the more unemployment increases since at least some workers are left involuntarily unemployed (Keynes, 1936). They are not able to signal their potential demand (need for goods and services) to employers because they have no income, and the labor market remains stuck with workers on the sidelines involuntarily.

In the alternative, if the government pumps these funds back into the economy through using these funds to obtain external resources, not readily accessible internally for domestic development, the labor market becomes encouraged. More workers are able to find employment and aggregate demand in turn will be encouraged as these workers spend into the economy. Individual savings are already a leakage; the government’s role is to make up for the leakages not add to it. By using CBSWF as a transparent recycling tool towards economic development, the government makes up for these leakages and also generates enough funds to foster developmental objectives from resources that are needed from the foreign market. These resources are then put into other sectors of the domestic industry, which encourages a more even development in that economy,
not the lopsided situation of development in only one sector – the natural resource sector.

4. Conclusion

The Santiago Principles of the International Working Group provide benefits to owning CBSWF such as public accountability and transparency. However, transparency and accountability is only one part of the spectrum, How to invest these funds is a different ball game. The IMF and other related articles (Griffith-Jones and Ocampo, 2008; and Bodie and Briere, 2014) have made recommendations for the financialization of CBSWF. The effects of this system actually produce similar effects of resource dependency and savings, which in turn defeats the diversification benefits that CBSWF should provide. Rather than use a development path that has adverse effects on a country’s exchange rate, on the funds meant for development strategies and on the overall economy, these resources are better off being left underground (Reisen, 2008). Taking funds out of a country that lacks basic needs and thus needs to encourage its industry, and leaving these at the mercy of those who only care about their pecuniary benefits is risky. Here, jobs are taken from country residents in what could have been domestic industries and used to enrich the already wealthy one percent who control these financial corporations abroad. In avoiding the natural resource curse and Dutch disease effects, a country needs to invest in its local industries and infrastructures so as to meet societal needs. The financialization and saving of its CBSWF does not achieve this purpose.
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<th>ORIGIN</th>
<th>LINABuRG-MADUELL TRANSPARENCY INDEX</th>
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<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Equitorial Guinea</td>
<td>Papua New Guinea Sovereign Wealth Fund</td>
<td>2011</td>
<td>Gas</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>Turkmenistan Stabilization Fund</td>
<td>2008</td>
<td>Oil &amp; Gas</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>US - West Virginia</td>
<td>West Virginia Future Fund</td>
<td>2014</td>
<td>Oil &amp; Gas</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>Fondo Mexicano del Petroleo</td>
<td>2014</td>
<td>Oil &amp; Gas</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

**Total** $4,238
1. Introduction

We have established from the previous chapter that financial capital is unstable and is a different side of a savings coin. So, it does not lead to any form of real growth in the economy (Blinder, 1992). Investing more of these funds in financial assets is very risky and counterproductive for developing countries that lack basic needs. As a result, more of these natural resource funds should be invested in real and sustainable capital for these countries. Of course, this will be dependent on the basic need lacking and the current economy of the individual country. The ultimate aim is to get a sustainable path towards economic development through the natural resource receipts. Real investments, rather than savings can ensure this.

In the context of CBSWF, sustainable paths would involve converting natural resources transparently and more efficiently into other forms of capital so current inhabitants and the future generation can benefit from the natural resources. In as much as CBSWF is managed separately from the government, these sustainable paths may require partnership with either the government or the private sector of the economy. This does not defeat the benefits that the Santiago Principles provide.

*This chapter was presented at the 1st International Post-Keynesian Conference in Grenoble organized by the Centre de Recherche en Economie de Grenoble, Grenoble Faculty of Economics at the University of Grenoble Alpes and the Review of Keynesian Economics in Grenoble, France, December 10-12, 2015. The author appreciates constructive comments from the discussant and participants especially detailed feedback from Prof. Stephany Griffith-Jones. The opinions expressed are that of the author.
Rather, these benefits, especially the accountability and transparency principles, spill over to these other sectors. Thus, strengthening not just the natural resource sector but also the private and other government sectors that it partners with.

So, the argument in this chapter is that CBSWF should be invested into real capitals such as infrastructure and social projects for the people. There have been positive links between social projects and infrastructure with poverty reduction and income distribution (Calderon and Chong, 2001; Calderon and Serven, 2008; Dinkelman, 2011; and Estache and Garsous, 2012). In this analysis, oil receipts should be used to increase infrastructure, which in turn will yield more receipts from other sectors.

However, before we elaborate more on these suggested paths, the next section will compare the 20 CBSWF countries being studied with respect to the level of real investment spending in the health, education, manufacturing, infrastructure and overall real investment spending. These will be analyzed as necessary conditions for a favorable outcome in HDI and the HDI components. Here, we will use Fuzzy Qualitative Comparative Analysis (QCA) to show what is really happening in these countries with respect to these development conditions and outcomes.

Section three will look into two different eras of investment strategy in Norway, which is a model oil-led developed country. Then, the fourth section explains the posited sustainable development paths of CBSWF that developing countries can adopt today. These paths are similar to the first Norwegian model in advocating for avenues that will lead to social development and real capital
investments as a source of economic growth and development. Section five will wrap up this chapter up by providing a summary and concluding remarks.

2. Fuzzy Qualitative Comparative Analysis

Based on the development of our truth table from chapter 2, there are not a lot of recorded significant changes in the expenditure and outcome levels of our variables pre and post adoption of CBSWF. This is because a lot of these funds are relatively new with respect to using some of the funds for real investments. Also, as we have seen so far, the countries that have adopted these funds have taken the savings route of financial asset investments. So in this chapter, we compare these countries with respect to their levels of real sector investments as conditions for the level of HDI outcomes.

2.1 Data and Methodology

Qualitative Comparative Analysis (QCA) is used to compare these ingredients and outcomes (Ragin, 1987; Ragin and Rihoux, 2004; and Rihoux, 2003). Here, each case is represented as a combination of causal and outcome conditions. We conducted a fuzzy QCA for development of the natural resource countries being examined. The fuzzy set permits an interval between the conventional QCA Boolean Algebra. This shows the qualitative levels of the ingredients and outcomes while retaining two qualitative states of either full membership of the variable (1) or full non-membership (0). Through this, we get individual winning combinations of real investment ingredients for development. The closer a condition variable is to 1, the higher the ingredients spent. The closer an outcome variable is to 1, the better the quality of life with respect to that variable.
In advocating for real investments, we test each country’s development progress by comparing real investment ingredients as a causal condition for positive development outcomes. To make the comparison, we use per capita data on government spending on health (health), government spending on education (educ), capital formation/gross domestic investment (capital form) and gross national expenditure (invest). These variables are real sector investment expenditures that serve as ingredients towards economic development such as health, education and infrastructure. We also examine the manufacturing value added (valuead) of these countries to understand the level of investments in manufacturing non-natural resource sectors of the economy. All of these are gotten from the World Development Indicators dataset of the World Bank.

These ingredients are used to show development expenditure as they directly contribute to the quality of life. We use the Gross National Expenditure each country to compare with the general quality of life. Data on the manufacturing value added is used in order to analyze production levels within the country. This data is based on the net output of manufacturing industries within a country. Also, data on the gross capital formation is used to determine the overall level of domestic investment. It is made up of expenditure on new additions to fixed assets, which includes land, machinery, roads, schools and hospitals, and these are added to net changes in the level of inventories. Then, we analyze government expenditure in education and health sectors. This includes expenditure on services and materials used in these sectors.
For outcomes, we use Human Development Index (HDI) data from the United Nations dataset. We also analyze individual components of HDI of these countries, that is, Gross National Income (GNI) per capita, life expectancy from birth (life) and school enrolment (school). These data were gotten from the WDI dataset. These show the quality of life of inhabitants in each country.

The HDI ranges from 0 to 1. The closer the HDI is to 0, the lower it is. This signifies a poor quality of health, low quality of education and a poor standard of living. The closer the number is to 1, the higher the HDI. This means that the country has a very good quality of health for the inhabitants, high quality of education and a very high standard of living.

2.2. Results

In Table 3, we see that countries like Norway and Brunei with high levels of expenditure in at least three of the ingredients leads to an above average level of at least two of the outcome variables and an overall high quality of life as seen in the HDI variable. On the other hand, countries like Nigeria and Angola with lower levels of HDI have really low real investments in the development ingredients.

Also, Table 3 shows a direct relationship between the ingredients and the outcomes. For instance, countries like Norway, Brunei and the United Arab Emirates (UAE) that have high levels of health expenditure also have higher life expectancy levels. These countries also have high level of expenditure in education and this has resulted in a high level of school enrolment.
The reverse is the case for countries like Angola, Nigeria and Papua New Guinea. Low levels of investment in education and health have resulted in low levels of outcomes in school enrolment and life expectancy respectively.

As a result, we have seen that investments in real development sectors have led a better quality of life. However, as we have seen, countries like Angola, Nigeria and Papua New Guinea invest their CBSWF in financial assets just like Norway, Brunei and the UAE. This is misleading for the former group of countries because unlike the latter, they lack a sufficient above average level of existing real investments.

3. The Norwegian Investment Strategy

The Norwegian resource-led development model is known to be the exemplary one for real investment of natural resource receipts (Bernstein, et al., 2013; Cappelen et al., 2000; Eika and Magnussen, 1998; and Roed Larsen, 2004). However, the Norwegian economy during the period of the oil surge of the 1970s and 1980s and the Norwegian economy today show how different this economy is from developing countries today. By examining Norway pre- and post-1990, we see that there are actually two models on natural resource receipt management from Norway. As such, the right model has to be encouraged for the appropriate situation.

Reisen (2008) points out that extracting natural resource and selling them leads to the capital (stock) diminishing. A way to prevent this is to reinvest in other forms of capital such as financial, environmental, human and physical capital. However, a country has to make these investments based on the needs of the country at the present time.
The petroleum sector is very capital intensive. As a result, employment in this sector is not enough to sustain the economy. The Norwegian petroleum sector accounts for only 1 percent of employment. The financial sector is similar. So, relying on these sectors for economic growth will be futile. This is why Norway focused mainly on other real sectors to help with job creation. The goal is to let the natural resource work for the country. Norway, a small open economy with a high level of social development and admirable unemployment rate, did this for two decades after it discovered oil.

3.1. Norway Pre-1990

Norway first struck oil in 1969 and production started in 1971. By 1990s, it was the second largest oil exporting country after Saudi Arabia. Now it is the eleventh largest oil exporter (See Figures 5 and 6). Unlike countries like Nigeria, Angola, Venezuela and Saudi Arabia that experienced a positive net export in the petroleum, Norway’s net export of crude oil went down by 7.8 percent. It is now importing more crude oil than it is exporting. This is because it now makes a conscious effort to produce less crude oil so as not to over-saturate the economy. The question then becomes, “how did Norway spend its funds to get to a point where it now needs to reduce petroleum production?”
With the oil surge of 1970s and 1980s, Norway spent most of its oil windfall of funds on physical and social infrastructure by building an excellent system of transportation infrastructure such as roads and bridges, investing in free health care and higher education for all residents. It financed its welfare state using receipts from petroleum activities. These social investments have created ripple effects that Norway still benefits from today. So much so that Norway can now afford to set up a
savings pension fund for the future to protect citizens and to avoid inflationary effects in the present economy.

By investing oil receipts directly in other sectors, Norway has increased its GDP per capita over the years (Cappelen et al., 2000; World Development Indicators). Also, the well-being and life expectancy of inhabitants have steadily improved (United Nations, HDI data). With regards to the economic growth rate, the oil receipt windfall has led to a fast catch up rate and subsequent surpassing of the growth rate of its similar neighbors, Denmark and Sweden (Roed Larsen, 2004; and Eika and Magnussen, 1998). Except for the oil price crises period, growth rate in Norway increased in the 1970s and the 1980s. On average, the growth rate was about 3.75 percent with the peak being 6.05 percent in 1984. The peak occurred after a few years of very low growth rate following the 1979 oil glut.

The growth rate experienced in Norway in this period was due to investments in different industries including the oil and gas industry. One of such investments was in the shipbuilding industry. In order to survive the growing international competition in shipping of the time, Norway shifted production to national offshore oil and gas industry, and ship equipment manufacturing. Other investments were made in the service sector, the manufacturing and mining industries, healthcare technologies, health and social welfare. The social investments have led to Norway now having a healthy, well-educated workforce.

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16 Data used here is from the World Development Indicators of the World Bank.
More so, the transparency in administering the oil receipts and real investments from these receipts have led to a developed economy, which in turn has raised the faith of the international community in this economy. This made Norway profitable enough to charge 78 percent taxes on petroleum products (Holden, 2013). Other petroleum producing countries do not charge this much. These oil tax receipts are further used to develop the economy’s real sector. In times of oil price crises though, these taxes were reduced to encourage business continuity.

Through all of these receipts, no direct disbursements to citizens, especially the Saami people in the area where oil is found, was made. Rather, more general social investments were put in place to benefit all the inhabitants of Norway. These investments were directly through the public sector.

One of the ways in which Norway fostered development through its natural resource was by setting up and funding a development bank. The Regional Development Fund was created in 1961 and has revamped itself through the years to make up part of what is now known as Innovation Norway. Till 1993, this development bank was used to promote regional development through counseling, loans and subsidies. It has been used to develop the private sector (OECD, 2008). In more recent times, it has promoted nationwide industrial development through investments in start-up companies and by encouraging sustainable innovation paths for Norwegian companies and industries both domestically and internationally. It is worth noting that Norway’s development bank focused on promoting regional development first (1961-1993). After achieving a strong domestic economy, it began to invest in Norwegian companies that invest internationally.
With a steadily increasing GDP per capital, which reached over $67,000 by 2014, an increasing life expectancy age, which has gotten to 81.5 and an overall strong economy, Norway has shown that it does not have to be all gloomy for extraction economies with respect to economic development. It has been able to achieve all of these because of certain reasons:

- The transparent government that was and still is in charge of controlling petroleum activities. This limits corruption from external companies. The government was involved in all the appropriate levels. Norway stresses the role of the government, especially a trustworthy one in oil extraction and reinvestments of oil receipts. This is an attribute that CBSWF provides. As a result of the Santiago principles and the independence of these funds, the CBSWF offers countries that adopt them a transparent governing agent.

- A state-controlled oil company, Statoil, which was created in 1972. This encouraged domestic control. In the oil price crises, Statoil was used to gain intelligence on how far foreign companies could be pushed to pay a tax increase. This was done so the foreign companies did not earn a profit at the expense of Norwegian citizens.

- Foreign companies were encouraged to set up subsidiaries in Norway and to train citizens so Norwegians were not dependent on foreigners in order to develop their own resources. This in turn helped to improve employment in Norway as the pool of unemployed people reduced.
- Competition was encouraged in the petroleum activity operation. Production licenses were given to a group of companies, not just one. This encouraged efficiency among the petroleum companies and spill over of knowledge among them.

- Transparency existed within the government and among oil producing companies.

Some of these features are what the Santiago Principles of the CBSWF offers. As a result, through its natural resources, Norway is now a high-income country that is debt-free, infrastructure is in place and the domestic citizens are better off. This is why, the country can now afford to save for the future and have a huge amount of finance capital investments.

Using the Norwegian investment strategy of the 1970s and 1980s as a case study, we see that as oil receipts increased in this period, more infrastructure and social projects were put in place. This in turn led to even more output so much so that the Norwegian economy had to start investing abroad so as not to over saturate its domestic market. Only after reinvesting in its real economy, did Norway start making major financial investments and other investments abroad.

3.2. Norway Post-1990

Based on the investments done in the 1970s and 1980s, the Norwegian economy now maintains a stable employment in different sectors. To control inflationary effects, it adopted a pension fund in 1990. This Government Pension Fund was set up to save excess funds produced from the petroleum sector. Unlike
the name, the funds are gotten from oil receipts not pensioners. Currently, this fund is the largest CBSWF and it has about 882 billion USD in it.

In a bid to control inflation and not to over saturate the economy, Norway now invests all of its pension funds internationally with a maximum annual withdrawal of 4 percent. These funds are invested in 9,000 companies in 75 countries. By 2015, 59.7 percent of the funds were in equity investments, 37.3 percent were in fixed-income investments and 3 percent were in real estate investments. Within the domestic economy, investments have been maintained but only the service sector and the industry excluding construction sector have been experiencing an increase in investment (See Figure 7).

Figure 7: Employment by Sector in Norway (Persons in thousands)

To ensure positive growth rates through oil, Norway stuck to a Fiscal Rule. This rule states that spending of oil revenues have to be equal to the expected real returns from the Pension Fund. This means that the Fund will only grow when new oil revenue flows in. The oil revenue spending is used to encourage public spending
and reduced taxes. The money gotten from Norway's CBSWF is then used to cover the structural budget deficit of the country. Oil revenue annual spending depends on the size of the Pension Fund of the beginning of that year and not on oil revenue of that year. Thus, insulating the economy from immediate shocks from oil price fluctuations of that year. One must remember though, that Norway has already met its basic needs. This is unlike developing countries in Sub-Saharan Africa that do not have their basic needs met and sufficient real capital.

Despite the benefits of protecting the economy from oil price shocks, inflation and overconsumption, adopting these funds has had some down sides. When this fund was adopted in 1990, unemployment rose to about 5 percent. This was the first time in a long time that this happened. It rose till it got to 6 percent in 1993. Then it gradually started to fall back. Though, this rate is low when compared to the unemployment rate in other CBSWF such as the current 9.9 percent in Nigeria, 26 percent in Angola, 22.3 percent in Equatorial Guinea, 20 percent in Botswana and 10.6 percent in Algeria. This is unlike Norway where the current unemployment level is 4.6 percent.

Also, despite growing more than six-fold while there was an oil boom in the past decade, Norway's fund recently lost US $32 billion in 2015. In a country like Norway, this amount may be a drop in the bucket. This is because it already has its basic needs being met and a huge amount stored up in its CBSWF. It also has a lot of social benefits for its citizens such as the 30 billion USD spent on healthcare. Here, the state system covers about 84 percent of total healthcare costs. However, for the other developing countries being studied in this research, this kind of loss is huge.
and would make a big difference in funding development objectives. Losing savings of that magnitude will make a big difference in the funds that should have been available to finance domestic investments through the international purchase of resources that a country does not possess. As a result, developing countries have to take development paths that actually lead to real development like Norway pre-1990.

3.3. Lessons from Norway

Just like in Norway, developing countries like Algeria, Angola, Botswana, Equatorial Guinea, Gabon, Mauritania and Nigeria will have to take policies that will benefit the state and its people. With a stable and transparent economy, which CBSWF offers, faith in domestic investments are restored so much so that the government is then in a position to demand the most receipts from companies that want to explore oil from these countries. The government can then benefit from oil revenue taxes that will provide more funds for development projects, thus economic growth.

These benefits are the result of internal real investments, which develops the economy and creates faith in that economy. Norway first focused on developing a strong present domestic economy before it made huge foreign investments (Bernstein et al., 2013). Real capital was invested in before the huge financial capitals that started happening after 1990. Development banks were geared more towards domestic growth in Norway first, before international investments. The present citizens were being taken care of and this put them in a stronger position to take care of the future generation. It is no wonder that Norway is number one in the
world Human Development Index ranking. Economic growth was more labor-intensive and real capital intensive. This is the kind of investment strategy countries with CBSWF should adopt in using its funds.

Also, a strong accountable government was used to ensure that all the social developments in Norway could happen. CBSWF provides a ‘non-governmental government’ that can transparently make huge investments and are accountable to the domestic and to a level, international world. This is important because transparent governance through CBSWF can develop capital markets and ensure economic growth. It can do this directly or by using some of these CBSWF to set up sub-divisions that can have direct impacts on the people.

This economic growth can be encouraged through different streams such as job creation in different sectors, private sector partnerships and public sector investments. Arguments have been made in favor of private sector investment (Greene and Villanueva, 1991; and Khan and Reinhart, 1990). Even so, public investments are still a major source of growth for the economy, as the effectiveness of the private sector is dependent on the institutions and infrastructure in place. For public investments to be effective, good governance has to be in place.

However, standards of governance are generally lower in developing countries than developed countries (Ndikumana, 2007). This in turn contributes to reasons why the level of growth in Sub-Saharan Africa over the years has been low relative to other regions (UNECA, 2008). These are the institutional issues that owning a CBSWF addresses. Owning this fund is just one lap of the race, investing it in beneficial sustainable projects is another part of the race. Thus, adopting different
sustainable paths to domestic development can provide more than just the budget balance of a developing country, which financial capital investments offer. Rather, it will help develop the present citizens in that country and promote a stable and healthy economy that can be used to ensure an even more stable and healthier future generation.

4. Sustainable Paths for CBSWF Developing Countries

By sustainable path, we mean a situation where natural resources are used so that both the present and future generation benefits. The former does not suffer for the latter to benefit (Solow, 1992). It does not discount the well being of both the present and future generations. This means that for every amount of natural resource used, some social capital should be used to replace it. These resources should be invested in reproducible capitals for both the present and the future generations (Solow, 1992).

The main challenge for a lot of countries with CBSWF is economic diversification. For instance, countries like Algeria still struggle with long-term macroeconomic stability and how to diversify the receipts from natural resources despite setting up CBSWF since 2000. One of the reasons why this is still an issue is that the country suffers from a slow decision making process (2014 IMF Report). Similarly, for the Nigerian CBSWF, Nigerian Sovereign Investment Authority (NSIA), a lot of the implementations for real sector diversification are still in the planning phase. This is because the investors lack faith in the federal government institution. In the face of all of these impediments to growth, there are policy alternatives that can be taken towards development. These address methods on how to increase
revenue in non-natural resource sectors. These involve increasing aggregate demand by investing in green jobs, the use of development banks to give loans to small and medium enterprises, and public-private partnerships (See Figure 8).

Figure 8: Sustainable Paths for CBSWF Developing Countries

4.1. Green Investments – Green Jobs
The 2015 Human Development Report (HDR) of the United Nations Development Programme (UNDP) stresses the importance of work in encouraging human development and thus, economic development. Direct real investments in a country go a long way in creating jobs for its citizens. Though CBSWF are gotten from natural resource receipts, which contribute to environmental degradation, the investments they are invested in can be environmentally sustainable. These investments can take into account both the economy and the environment, as the two do not have to be mutually exclusive. One of such ways is by investing these funds in green investments thereby creating green jobs (Forstater, 2004 and Milani, 2000). These are investments that are not beneficial to the private sector in their search for profit maximization. It takes into account both the quantity and quality of investments being made. As a result, some projects can be done in conjunction with the federal government.

Using these CBSWF for sustainable green investments will ensure that effective demand is met and the right social policies are taken. It will also serve as a job guarantee program (Forstater, 2003 and Mitchell, 2000). Through this program, citizens from the unemployed pool are used to carry out these investments. This is especially important because these countries are heavily reliant on a sector that only accounts for only a small percentage of employment. For instance, in Trinidad and Tobago, oil accounts for about 80 percent of exports and 40 percent of GDP, yet only 5 percent of employment.

To accomplish this, a sustainable investment plan has to be made. This might require an initial investment in training and education of some unemployed citizens
by training them abroad with a guarantee of returning to work in these sectors. In
the alternative, trained professionals in the required fields can be brought into the
country to train citizens and the next set of educators. This is similar to the
development of the Information Technology (IT) sector in India, which has led to
India now being one of the biggest IT capitals in the world. This feat started decades
ago with policies set in place for IT development by British-trained Indian returnees
who set up companies and training centers for citizens (Subramanian, 2006). The
training process involved bringing in professionals to train the next set of IT
professionals and educators. The United Arab Emirates has done a similar
sustainable development path with its tourism sector using funds from natural
resources.

In the same vein, the green investment initiative should focus on a sector in
the economy that will be beneficial to the country’s growth. Funding this project will
be through CBSWF. The training phase will build up the human capital for the next
phases of investment. This leads to a spill over effect for the private sector as this
training creates a pool of trained citizens that they can benefit from. As a CBSWF
funded investment, it is more transparent, publicly declared thus, more accountable.
By training and using citizens from the unemployed pool, it will have a real effect on
the people in the country that adopts these. The sustainable path cannot just be any
project though. It has to be for a basic need sector that the specific country struggles
with. It should address the basic need that is impeding growth and development in
that country.
This could be investment in sectors such as electricity, health care, agriculture, good roads, security and more schools, which the Sub-Saharan African countries being analyzed are deficient in. However, these have to be carried out in a very environmentally efficient way through investments like solar energy plants, biofuels, hydroelectricity and energy efficient glass. Here, materials are gotten locally and the CBSWF are used to purchase other materials from the international market that cannot be easily gotten domestically. For these projects, citizens from the unemployment pool are used. As a result, it provides an added advantage of reducing unemployment while being environmentally efficient and providing basic needs for the citizens.

Through these green investments, developing countries can reap the benefits of ecologically sustainable projects. These include spill over effects on the private sector, which in turn ensures environmental efficiency in the country.

In addition, by using citizens from the unemployed pool, these CBSWF provide an added advantage of setting the average wage rate in the economy (Forstater, 2013). This is especially useful for projects that are done in conjunction with the government. With the success in reducing unemployment and the transparency that CBSWF provides, the federal government might get more incentive to divert more natural resource receipts into CBSWF and even conduct a direct Job Guarantee social policy program for citizens willing and able to work\textsuperscript{18}.

\footnotesize{\textsuperscript{18}With the author’s visit to the NSIA and in discussing with the Head of the Investment Risk Management division, it was understood that with the success of one investment, confidence in taking bigger investments develops.}
More so, green investments are becoming even more popular. This is because the concern for the environment is increasing as seen in the recently held United Nations Climate Change Conference in Paris, 2015. This conference was attended by a lot of world leaders and the aim was to encourage and ensure sustainable innovations that will benefit the environment. As a result of the environmental concerns and the recent Climate Change in Paris, countries have started making green investments. Norway is currently investing in green buildings. This is done through the use of energy efficient building materials that provide quality insulation, low maintenance heat exchangers and efficient burning furnaces. Following the conference, the Philippines confirmed 23 new coal-fired power plants thus making the percentage of coal-generated electricity 42 percent. Also, Australia has launched its first community-owned electricity supplier after raising about 3 million USD. The money raised and the energy gotten through this investment is enough to start retail operations for residents in this community in Australia. In addition, the European Investment Bank (EIB) has approved a loan on 12.7 billion Euros for new green investments in energy, transport like green ferries, education, infrastructure, corporate research, food security and disaster recovery in Europe, Asia and Africa.

Developing countries in sub-Saharan Africa that own CBSWF can tow this line using their funds. They do not need to borrow if proper planning is made and the CBSWF are set up to address mostly real capital. Since coal is seen as a relatively cheap option of power generation in developing countries that have insufficient power, these countries can adopt these methods, develop the electrical sector and
encourage manufacturing\textsuperscript{19}. All these can be financed through CBSWF without the need to borrow funds from the international market. The CBSWF can be used to purchase whatever resources are lacking domestically from the global market. In the end, citizens and other sectors benefit from the additional electricity supply, the manufacturing sector is encouraged and domestic employment increases. This way, CBSWF is used to achieve real economic growth and development with ripple effects on social development.

\textbf{4.2. Development Banks}

CBSWF around the world have about US$4.058 trillions in assets. About 14 percent (\$553.45 billion) of these funds are owned by developing countries\textsuperscript{20}. These countries are still heavily indebted to other countries despite the resources they own. Rather than increasing foreign reserves that are volatile, some of these funds can be invested into national development banks that are then used to invest in domestic private sector projects that require international purchases. These development banks can be used to fund loans for small and medium-sized enterprises (SMEs). The ultimate goals are to promote the development of national economic activity, social development and regional integration (Corbetta and Gigante, 2015; Griffith-Jones and Director, 2011; and Griffith-Jones, 2014).

As a result, CBSWF can be used to meet not only macroeconomic policy goals but also microeconomic goals. For the latter, the creation of development banks will be used to provide financing for domestic economic development investments

\textsuperscript{19}See Oni, 2013 for history on the deterioration of the Nigerian Power sector and how this has led to manufacturing countries fleeing to Ghana.

\textsuperscript{20}Developing countries here are countries that have a low Human Development Index according to the United Nations data and an underdeveloped industrial base.
(Griffith-Jones and Ocampo, 2008). So far, these funds have helped financial institutions in developed countries. Rather than the current wealth transfer from developing to developed countries, these funds can be used to finance domestic agricultural and manufacturing projects, and other Small and Medium-sized Enterprises (SMEs) that require resources from the international market.

To achieve this, developing countries can invest some of the CBSWF into development banks dedicated to financing long-term private sector projects for micro, small and medium enterprises. It is for private sector led financing. These are funds which commercial banks and capital markets cannot and will not provide. As a rule of thumb, these investments should be for enterprises that will contribute to economic development. This will in turn help in the diversification of industry and in job creation.

However, for this path to be effective, these development banks should have some characteristics. Some of which are attached to the SWF principles. These characteristics include:

- **Transparency** – The process of obtaining the loans and investing in the development enterprise should be transparent. Both the bank and the entrepreneurs have to be accountable for every dollar that goes in and out of the business.

- **A clear mandate has to be stated** – This applied to both the development bank and the entrepreneurs. If the objective of the bank is to meet developmental microeconomic needs through loans, it has to be clearly stated. The objective the bank aims to achieve has to be clearly stated. For the entrepreneur, the objective of
the SME has to be clearly stated. Based on the first principle of transparency, clearly stating your mandate makes it easy to get more information from the bank based on how other SMEs in a similar position handled challenges. This is similar to the Norwegian principle created by competition and sharing of knowledge.

- **Adequate initial capital from CBSWF** – Here, the CBSWF has to receive adequate capital based on the impact it plans to have. This capital will be enough to start great development projects and maintain these projects. The dollar amount is country-specific and depends on the level of impact and mandate the project aims to achieve.

- **Independent internal governance** – Just like in the establishment of SWFs, these CBSWF funded development banks will act as subsidiaries of the CBSWF with an independent internal governance. This has to be separate from the federal government. This governance has to be clear, transparent and accountable. As a result, the law making institutions that govern the CBSWF will cover it.

Some developing countries have set up development banks to meet development objectives. Though none have been funded through CBSWF. For instance, the BRICS (Brazil, Russia, India, China and South Africa) development bank was set up mid-2014. It was set up to fund infrastructure projects in BRICS countries. Brazil, India and China have had successful individual development banks. In Nigeria, the Development Bank of Nigeria was launched in March 2015. It was set up for sustainable development funding.

Through development banks, developing countries can fund projects that will encourage the agricultural sector, promote the financial empowerment of
women and also encourage economic growth. This also encourages proper usage of the vast arable lands that these countries possess, reduces hunger, reduces poverty and other gender related problems. It ensures that the economy, and society at large, is better off than if these projects were not in place. Loans are given to fund projects that have developmental impacts in a country. These include manufacturing and agricultural projects. The aim is to finance investment projects in developing countries that are investment deficient (Bhattarchaya, et. al., 2012).

By setting up these development banks, funds are used to reach development projects that the CBSWF infrastructure funds cannot reach. It develops the micro part of the economy as the CBSWF infrastructure funds deals with the macro part of the economy. These are done without the need to borrow from the international community or waiting for donations (Gelb et. al. 2007). Rather countries use resources they have to obtain resources they need. This leads to some benefits for the economy such as:

- Financing the infrastructure buildings and SMEs in developing countries. International private flows and private finance do not fund these kinds of projects. It is usually up to the government to step in and fund these projects but in a developing country, all hands have to be on deck to encourage development. The CBSWF funded development banks can be used support long-term development projects that are not profitable for the private sector or to donors.

- Benefits of low costs and relatively high credit ratings when compared to the respective governments (Griffith-Jones and Kollatz, 2015). Though funded through natural resource receipts, these CBSWF development banks are managed
separately and transparently. As a result, even when resources are depleted to fund these development banks, they have good credit ratings for borrowing *if* they have to. Looking at China, Brazil and India, these development banks are profitable enough to sustain its existence without requiring high interests like private banks. As a result, it is a great way to ensure sustainable development. However, if resources are depleted and for various reasons, these development banks are credit deficient, projects will not be suddenly halted. The transparency and accountability principle make them viable and dependable borrowers, even more than the countries they are in.

- Benefits of improving effective demand by financing long-term projects that private banks would not finance. Developmental projects like infrastructure are long-term projects, which are not bankable to the private sector. If the economy is left on its own, effective demand will fall short in the market. So, government spending directly (in this case) through CBSWF and development banks will make up for the market imperfections (Keynes, 1936). Thus, development banks will make up for the inefficient demand of the private sector. This is a benefit that private banking cannot afford especially for financing public goods.

So, CBSWF can take advantage of the benefits of development banks and meet not just macro level development projects but also micro level development projects that would ordinarily have been difficult for them to reach. This way, oil receipts are used to transparently meet development needs at the aggregate and smaller unit levels.

*4.3. Public-Private Partnership (PPP)*
Privatization limits transparency because through competitive bidding and other practices, companies tend to engage in corrupt practices in order to win the bid. In a similar vein, the public sector, especially in developing countries with natural resources, struggle with high level of corruption, which impede growth directly and through investments (Baliamoune-Lutz and Ndikumana, 2008; Mauro, 1995; and Tanzi and Davoodi, 1998). CBSWF provides an alternative path to economic growth and development both directly and through partnerships with the private and public sectors. This path curbs corruption by being transparent and accountable. Thus, investments made through this initiative can focus on sustainable paths for growth and development even when in partnership with the public and private sectors. This is because of the increased transparency and accountability that CBSWFs offer.

Developing countries, such as Nigeria, Gabon and Mauritania, have struggled with high levels of corruption in the public sector, especially with respect to natural resources. As a result, even with the establishment of CBSWF in these countries, these separate SWF parastatals have been very cautious with making real investments. A visit to the Nigerian Sovereign Investment Authority (NSIA) in June 2015 buttressed this caution. When asked about the kick off on financial investments while real investments are still at the appraisal stages, the head of the investment risk management department, Kolawole Owodunni, explained that this parastatal still struggles with faith in the economy. As a result, partnership with other sectors is being encouraged as a sustainable path towards development.
Like the name suggests, PPPs are a means of achieving societal goals through a combination of government resources and private agent resources (Skelcher, 2005). The former is more social and responsible while the latter is more competitive and efficient (Jamali, 2004). In this partnership, the focus is not just on quantity but also on the quality of developmental projects. They are aimed at producing public goods that would not necessarily be produced by the private sector. By combining both government and private sector forces, we get development projects that are social, accountable, responsible, competitive, cutting edge and efficient.

The idea of a PPP was formed in the face of macroeconomic disturbance around the late 1970 to early 1980s (Jintamanaskoon and Chan, 2011). Then, it gained momentum around 1990s. Since then, a lot of countries, developing and developed alike, have adopted PPP in various forms in order to finance public goods projects. In the context of CBSWF, with the restricted financial and political capacity that these funds have, partnering with the private sector can ensure that a lot more social products are carried out. The partnerships can be with not-for-profit private sector companies.

The CBSWF is a state owned fund, which is prone to slow decision-making and sluggish means of carrying out projects. By partnering with the competitive and efficient private sector, it ensures that the private sector makes the public sector less sluggish (Robinson et al., 2010). Thus, encouraging efficiency in public infrastructure and social projects provision. It also ensures that the quality of the
investment is better. Both parties function as checks and balances for each other, the citizens as well as the society at large reap the benefits.

CBSWF-PPP cooperation can be used to fund many social projects and ensure sustainable development in a developing country. These projects can be chosen based on the basic need that a country lacks. It could be taken one project at a time and could include clothing manufacturing plants, housing projects, agricultural producing projects for both food crops and cash crops, health care facilities, and infrastructural projects. Oyebanji et al. (2011) talk about how PPP can be used to address the housing inequality in developing countries like Nigeria. Here, PPP is used to provide housing for low-income earners. By combining efforts, PPP ensures that a greater effect is produced than if each individual unit carried out the project.

Some CBSWF parastatals have partnered with the private sector in carrying out some social projects. In Gabon, the domestic development projects have been carried out through PPPs for different developmental projects. In targeting Greenfield projects such as economic and social infrastructures – bio-energy, air and sea transport, and health, education and public housing – Gabon’s CBSWF partnered with Edifice Capital. For seafood development, it partnered with Ireland Blyth Limited is aimed at investing in domestic infrastructure in Gabon while its investments in agriculture have been through PPPs with the Agriland Fund for Poultry and the Gabon Seafood investment for fishery.

Gabon is not the only developing country CBSWF that has adopted PPP in order to get sustainable development. The Nigerian CBSWF is in a PPP with Julius Berger for the development of a Second Niger Bridge. $700 million of the CBSWF
infrastructure has been invested in this PPP. It also partnered with Seven Energy International Limited in 2014 as a contribution towards transforming the gas and power sectors. Here, $100 million was invested into this project. For these developing countries that have struggled with mismanagement in the public sector especially with regards to public goods, adopting a PPP can act as a confidence builder for future projects to be carried out. This will benefit these countries directly rather than investing in financial assets abroad while waiting for things to change domestically. It adopts market principles in government activities.

Furthermore, PPP challenges the private sector into making more social projects and meeting social development goals. This in turn builds the intangible asset of goodwill in the private sector. Thus adding value to the private companies involved in these PPP. Therefore, we have a situation where the people, society, public sector and CBSWF benefit, even as the private sector benefits as well.

However, for these PPPs to be effective, they have to have clearly defined policies, time limits and goals. These policies have to well documented and accountability has to be ensure. Once again, these principles of effectiveness are already attached to the ownership of CBSWF. Thus making CBSWF a good option for sustainable development in developing countries that lack basic needs.

5. Conclusions

Overall, CBSWF should drive development that impacts people and makes the society better. Before these funds are set up, proper institutions have to be in place so these funds are used for what they are set up else the country might as well not create these funds. These oil funds led development have been more successful
in countries like Norway that have strong fiscal institutions. Fiscal policy has to be consistent with the allocation of resources of these funds.

For developing countries, adopting Norway’s pre-1990 model in investing its CBSWF oil receipts will be more beneficial than the post-1990 Norwegian model. The former leads to a great society where the quality of life, not just the quantity, is improved. Investments should be maximized at all costs using sustainable paths that can be maintained. As such, cooperation among all three sustainable paths will be needed. Considering the principles attached to these funds, the CBSWF is able to manage all three paths to ensure sustainable growth. This also means that just like Norway and Algeria, foreign debts should be paid off as much as possible as this can impede growth. The ultimate goal is to have a great society with strong economic and social systems in place where not just money is saved but also people.
Table 3: Fuzzy Qualitative Comparative Analysis of Investment Ingredients and Outcomes

<table>
<thead>
<tr>
<th>Country</th>
<th>Conditions</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>health</td>
<td>educ</td>
</tr>
<tr>
<td>Algeria</td>
<td>0.11</td>
<td>0.68</td>
</tr>
<tr>
<td>Angola</td>
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</tr>
<tr>
<td>Botswana</td>
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</tr>
<tr>
<td>Brunei Darussalam</td>
<td>0.85</td>
<td>0.77</td>
</tr>
<tr>
<td>Chile</td>
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<td>0.33</td>
</tr>
<tr>
<td>Equatorial Guinea</td>
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<td>0.12</td>
</tr>
<tr>
<td>Gabon</td>
<td>0.23</td>
<td>0.27</td>
</tr>
<tr>
<td>Ghana</td>
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<td>0.57</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.19</td>
<td>0.64</td>
</tr>
<tr>
<td>Kiribati</td>
<td>0.1</td>
<td>0.25</td>
</tr>
<tr>
<td>Mauritania</td>
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</tr>
<tr>
<td>Mexico</td>
<td>0.51</td>
<td>0.45</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.06</td>
<td>0.23</td>
</tr>
<tr>
<td>Norway</td>
<td>0.95</td>
<td>0.72</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>0.05</td>
<td>0.39</td>
</tr>
<tr>
<td>Russian Federation</td>
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<td>0.65</td>
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<tr>
<td>Saudi Arabia</td>
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<td>0.67</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>0.53</td>
<td>0.39</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>0.69</td>
<td>0.65</td>
</tr>
<tr>
<td>Venezuela</td>
<td>0.5</td>
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</tr>
</tbody>
</table>
Chapter 5

Commodity Based Sovereign Wealth Funds: The Vision 2030 and Development Paths in Sub-Saharan Africa

“It turns out that advancing equal opportunity and economic empowerment is both morally right and good economics, because discrimination, poverty and ignorance restrict growth, while investments in education, infrastructure and scientific and technological research increase it, creating more good jobs and new wealth for all of us.”

- William J. Clinton (Democratic National Convention on September 5, 2012)

1. Introduction

The United Nations’ year 2000 Millennium Declaration had a lot of world leaders around the world agree to eight major goals towards development by 2015. The countries involved agreed to these goals that ranged from eradicating extreme hunger to ensuring environmental sustainability. However, identifying, financing and implementing the right projects in order to achieve these Millennium Development Goals (MDGs) proved difficult for these countries. Despite some improvements in these countries, the MDGs were not fully achieved (Ki Moon, 2014). Since the inability to achieve the MDGs occurred, the United Nations (UN)
held yet another summit. This time, the goal was sustainable development and the deadline was set to 2030.

This Vision 2030 September 2015 summit coincided with a period of hardship for oil dependent countries. By this period, the price of oil plummeted from above $100/barrel the year before to below $40/barrel. As a result, resource dependent countries rekindled talks on real sector diversification (Albassam, 2015; Al-Darwish et. al., 2015; and Callen et. al., 2014). The UN Vision 2030 provided achievable goals that encouraged this need for real sector diversification for these countries. To achieve sustainable development, these countries have to boost their non-oil based economy. This can be achieved by using oil revenue and sovereign wealth funds gotten from these oil revenues. In boosting the non-oil based sectors of the economy, these natural resource countries reduce resource dependence and its curses. It also provides the added advantage of job creation, which is essential for development.

Based on the previous chapters, and data analyzed, this chapter will be providing a development path for Angola, Equatorial Guinea, Gabon, Ghana and Nigeria. These Sub-Saharan African countries have struggled with financing and carrying out development projects despite their natural resources. Before we present these development paths, the next section will provide a deeper introduction of the Vision 2030 especially as it relates to the Sub-Saharan countries in question. Then we provide a development path for these countries with respect to these Vision 2030 goals. Finally, we provide concluding paragraphs that synthesize this chapter.
2. The Vision 2030 and Sovereign Wealth Funds

The United Nations’ Vision 2030 Sustainable Development Goals (SDGs) builds upon the foundation of the 2000 Millennium Development Goals (MDGs). While the latter provide a blueprint towards development in countries, the former is centered on achieving sustainable development through economic integration and cooperation. It aims to encourage globalization through individual country sustainable development and environmental sustainability.

Sustainable development relies on three core elements in order for it to be achieved. These are economic growth, social inclusion and environmental protection. People are central to the achievement of sustainable development. These resource funds can be allocated into human and infrastructural capitals that ensure economic growth (Becker et. al., 1994). Through grassroots programs such as development banks and Small and Medium Enterprise-Sized schemes, promoting equality, and social investments, social inclusion and development is fostered. These social development projects can be financed through resource-based Sovereign Wealth Funds. These state-owned investment funds gotten from commodity exports are reinvested into real assets as a means of diversifying the economy.

However, since the source of these funds is natural resources, which is not environmentally friendly, these funds can be transparently filtered into environmentally sustainable assets. This will involve investment in Research and Development (R&D) aimed at protecting the environment. The ultimate goal is to diversify the economy through environmentally friendly means that will ensure sustainable development. Since economic development cannot take place without
financing, these commodity-based sovereign wealth funds offer the finance to get this started.

The United Nations estimates that global sustainable development projects will cost trillions of dollars (Ki-Moon, 2014). Savings in CBSWF financial assets are over $4.3 trillion\(^{21}\). These funds have been saved up in financial assets, mostly outside of the domestic countries. The goal has been to store up wealth for the future. This savings strategy has been done in line with the International Monetary Fund’s Permanent Income Hypothesis (PIH) (Bjerkholt, 2002; Barnett and Ossowski, 2003). The idea behind PIH is that countries save up a large amount of funds for the raining day and then use the interests gotten for current consumption. Thereby, swapping current consumption for future consumption in order to ensure consumption smoothing over the years.

Since the ongoing oil crisis started in 2014, these resource dependent countries have experienced the adverse effects of this austerity kind of economic policy. Countries such as Nigeria are currently experiencing recessions, domestic currencies have depreciated and economic hardships have increased. As a result, there has never been a better time than now to consider sustainable development. In this system, the current generation is not sacrificed for the future generation. Unlike proponents of the IMF PIH strategy, a reverse PIH investment of these funds will achieve sustainable development for these resource economies. Countries diversify their resource funds into real sectors of the economy, and then if (and only if) needed, the unused profits from the real capital investments can be put into

\(^{21}\)http://www.swfinstitute.org/sovereign-wealth-fund-rankings/
financial capital investments. This way, economies are sure of continuity and a future through a strong and healthy current population. The future is saved through the people and efficient physical assets not through financial assets.

The Vision 2030 goals, if implemented, will achieve this goal of a strong future generation built on the backs of a strong and healthy current population. There are 17 main sustainable development goals in the United Nations’ Vision 2030. They include:

Goal 1. End poverty in all its forms everywhere

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3. Ensure healthy lives and promote well-being for all at all ages

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 5. Achieve gender equality and empower all women and girls

Goal 6. Ensure availability and sustainable management of water and sanitation for all

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10. Reduce inequality within and among countries
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12. Ensure sustainable consumption and production patterns

Goal 13. Take urgent action to combat climate change and its impacts*

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

These 17 goals can be tied into five main investment goals – Human Capital (Goals 1 to 5), Physical Capital (Goals 6, 7 and 9), Environment (13 to 15), Security (Goals 11 and 16), and Globalization (Goals 10 and 17). Goals 8 and 12 cover all five sub-divisions. It is worth noting that the first sixteen goals are geared towards domestic sustainable development before goal 17, which is geared towards globalization. Thus, buttressing the need for domestic real sector developments before finance capital investments abroad. The latter is the current investment scheme of CBSWF in resource rich countries that have adopted these funds. This gives credence to the popular idiom charity begins at home.
Based on this, we suggest a development path for the five Sub-Saharan African countries – Angola, Equatorial Guinea, Gabon, Ghana and Nigeria – in this study. This is because these countries are rich in natural resources, still struggle with providing basic needs for their residents; yet own CBSWF that are invested in financial assets abroad.

3. Economic Development Path

The economic development path suggests an economic development strategic plan geared towards achieving the Vision 2030 goals in these countries. These sustainable development projects will be funded using resource funds. Though these funds are gotten through environmentally destructive means, using them for development, research and environmentally sustainable projects purifies these funds for the ‘greater good.’ Saudi Arabia, for example, is funding its Vision 2030 projects using oil funds.

Resource abundant countries that own SWFs can use these funds to transparently diversify their economy from natural resources to other sectors. This can be achieved by targeting investment projects in line with the Vision 2030 SDGs. Focus should be placed on the sectors that a country lacks in terms of basic needs. Based on the derived QCA table from chapter 4, we can see that there are five Sub-Saharan African (SSA) countries with these funds that are still struggling with basic needs and have low Human Development Indicators (HDI). These countries are Angola, Equatorial Guinea, Gabon, Ghana and Nigeria. Analysis of the expenditure and HDI outcome from the World Bank’s database are used to determine areas that these countries need to begin with in achieving the SDGs. These path to achieving
these SDGs are based on the subdivided sectors of these goals – Human Capital, Physical Capital, Environment, Security and Globalization. The expenditure and output world development indicators data are then used to create the development paths in Table 4 below.

Table 4: Development Path Table for Some Sub-Saharan African Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Human Capital</th>
<th>Physical Capital</th>
<th>Environment</th>
<th>Security</th>
<th>Globalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Equatorial Guinea</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Gabon</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Ghana</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

It should be noted that the paths are intertwined as projects are related. By starting out with one development project, spill over benefits occur into other projects. Therefore, the benefits of funds are diversified into more than one sector. In achieving infrastructural Goal 9 of Vision 2030, CBSWF owning countries can ensure that environmental Goals 13, 14 and 15 are met. Rajasekaran et al. (2013) and Vasudevan et al. (2006) provide a deeper explanation into how this can be achieved. Their research focuses on how to convert plastic waste into materials that are used for road construction. Rajasekaran et al. (2013) show that these recycled plastic has been used along with Bitumen in road construction in India. On the tested roads, water did not seep through constructed roads between 2002 and
2012. Thus, there was an avoidance of wear and tear, and the amount of pothole-induced reconstruction was reduced as well.

Vasudevan et al. (2006) provides seven benefits of this environmentally friendly system of infrastructure development. The benefits range from reduced costs, to more durable roads and environmentally friendly constructions. They include:

(i) Stronger road with increased marshall stability value.

(ii) Better resistance towards rainwater and water stagnation so no stripping and no potholes.

(iii) Increase binding and better bonding of the mix thus reduction in pores in aggregate and hence less rutting a raveling.

(iv) No leaching of plastics. No effect of radiation like UV.

(v) The load withstanding property increases. It helps to satisfy today's need of increased road transport.

(vi) Value addition to the waste plastics (cost per kg. increases from Rs. 4 to Rs. 12).

(vii) The cost of road construction is also decreased and the maintenance cost is almost nil (Vasudevan et al. 2006, 241)

By adopting this sustainable, and environmentally friendly method of diversifying resource funds, the current and future populations are well taken care of. The costs are reduced for the future generation and a healthier world is left behind for the future generation. The current population is well educated and trained enough to pass on their knowledge to the future generation. The added
bonus is that regardless of whatever sector a country starts with, unemployment will be tackled. This is because jobs will be created through each project since diversification has been linked to a reduction in unemployment (Izraeli & Murphy, 2003; Forstater, 2004; and Milani, 2000).

This increase in employment further leads to a reduction in crime rates (Gould, et. al., 2002 and Tripodi, et. al., 2009). Thus leading to an improved security in the country. This is particularly beneficial to the domestic economy and also helps with international trade (Barbieri & Schneider, 1999).

Overall, tackling the issue of basic needs, especially through the development of human capital and physical capital will provide spill over benefits to the other sustainable development goals and lead to an overall increase in development. By focusing on human and physical capital, which Angola, Equatorial Guinea, Gabon, Ghana and Nigeria lack, sustainable development can be achieved and SSA would not lag behind in the global growth initiative.

4. Conclusion

Hence, we see that even though CBSWF are gotten from natural resources that are environmentally destructive, we can achieve the United Nations’ SDGs in resource abundant countries in Sub-Saharan Africa. These funds can be put into real sector green investments that produce ripple effects in ensuring overall economic development. By addressing the basic needs problem in this region, countries can use what the have to get what they want.

As a result, CBSWF are a useful tool in financing and achieving the Vision 2030 sustainable development goals in Sub-Saharan Africa. However, for CBSWF to
be useful in achieving these goals investment strategy has to be geared towards real assets. The future has to be built by saving people today instead of saving money today. These funds have to be injected into the real economy not leaked through financial capital. This way, the Vision 2030 goals can be achieved in Sub-Saharan Africa.
Chapter 6

Commodity-Based Sovereign Wealth Funds: A Conclusion

The chapters within this dissertation contribute to the literature on natural resource funds and alternative paths for sustainable development. The idea of these funds is to convert natural resources to tools for development. Thus, the argument in this research is for countries with natural resource receipts not funds through taxation (China) or funds through borrowing (India). The research has covered what these funds are, how they are spent, the risks involved in the current method of over financialization of these funds and alternative sustainable paths for investing these funds.

Traditionally, discussions on natural resources have focused on the problems attached to these funds. This led to the importance for alternative paths in the usage of natural resource funds such as SWF. However, these SWF discussions have mainly been mainstream. They have been centered on accumulation for the future generation despite the developmental challenges of some of the countries that own these resources and funds.

This dissertation reviews these and proffers solutions on how to better use these funds to encourage economic growth and development. It makes some policy and institutional suggestions. These suggestions are Keynesian in nature and encourage inward-looking development strategies as opposed to strategies that depend on foreign sources. Despite the need for international trade in purchasing resources that these developing countries do not readily and easily own, the focus is
on domestic development. The use of what a country has to get what the country needs.

One reoccurring theme in this dissertation is that if properly implemented, these funds can be a good tool for sound fiscal development (Le Borgne and Medas, 2007). Pre-1980 stabilization funds suffered from mismanagement (Balding, 2012). So to ensure sound fiscal development, the appropriate tools and guidelines have to be followed. With the right institutions, transparent guidelines and accountable investments, countries can adopt alternative paths to sustainable developments so that when the natural resources are depleted, these economies would not deteriorate. These alternative paths include green investments, which help in creating jobs; partnership with the public and private sector and the adoption of development banks for microeconomic development.

Also, this research pointed out that rather than accumulate funds for accumulation sake, these funds should finance real sector developments. The finance sector, through development banks, should service long-term investments in the real sectors in these developing countries (Griffith-Jones, 2012). This means that the finance sector should service the real sector not the real sector servicing the financial sector. The former has the ability to create a positive change and impact in not just the quantity of the economy, but also in the quality of the people.

More so, basic needs sectors have to be developed as these impede economic growth and development. These sectors include food (agriculture), renewable energy and electricity, infrastructure (roads, hospitals), basic education (schools), water and public transportation. The ultimate goal is to have an economy where
both the quantity and quality of life improve. Economies where the present and future generations are reap the benefits of the natural resources. This economy is on a healthy present generation, as a dead generation cannot birth a living one.

Finally, the process of developing this dissertation has brought to light further areas of research. By pointing out the need to country-specific forms of development, it has created room for further research on country specific CBSWF-led economic growth and development.
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VITA

Omosalewa Oluyinka Olawoye was born on October 01, 1985 in Lagos, Nigeria. She has a Bachelors degree in English Language and Literature in 2006 from the University of Lagos, Nigeria. Afterwards, she moved to Canada for a Bachelors degree in Economics from Laurentian University in Sudbury, ON. Since Fall 2010, she has been a doctoral student of Economics and Social Science Consortium at the University of Missouri, Kansas City. Omosalewa currently works as an Assistant Professor of Economics at Ryerson University, Toronto, ON.