

Avoiding the Resource Curse:

Lessons from Norway and Botswana to Ghana and Venezuela

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This master's thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.

Motivation and acknowledgements

The first time I became aware of the resource curse phenomenon was during my studies at QUT in Brisbane, Australia, in 2011. While Australia is one of the few examples of countries that seems to have been able to avoid the resource curse, despite having huge mineral endowments, the topic was very relevant due to a recent boom in the mining industry. I especially found the impact of the resource curse on government decision making and monetary policy interesting.

Writing this thesis has definitely given me a lot more insight in an interesting and relevant topic, and has been a nice end to my studies at the University of Agder.

I want to Professor Stein Oluf Kristiansen for good advice and very productive feedback, which have led me in the right direction.

Abstract

The purpose of this master thesis is find out what the resource-rich Ghana and Venezuela can learn from management of natural resources in Norway and Botswana. Previous studies show that institutions are an important determinant for the impact of the resource curse in resource dependent countries. By a comparative analysis, large differences in institutional quality are revealed. Transparency, accountability and a strong rule of law are found to be among the features that distinguish the successful countries. These differences translate into different economic policies. While Norway and Botswana have exhibited prudent fiscal management, government spending in Venezuela in particular, have been procyclical and unproductive. Although Ghana is lagging behind Norway and Botswana, the country should be able to avoid the resource curse if follows the path of the successes. Venezuela on the other hand, seems unlikely to pursue policies that can promote sustainable growth.

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“Men of a fat and fertile soil, are most commonly effeminate and cowards; whereas contrariwise a barren country make men temperate by necessity, and by consequence careful, vigilant, and industrious.”

(Jean Bodin 1576, as cited in Homes, 1995, p. 109)

Chapter 1

INTRODUCTION

1.1. Curse or blessing?

Having an abundance of valuable resources like oil, natural gas and minerals is typically seen as a source of wealth and a blessing for countries. Petroleum in particular, creates enormous revenues. These revenues should be able to help countries overcome capital and foreign exchange constraints, and create a “push” to increase growth (Sachs and Warner, 1999). However, most resource-rich countries have experienced slower economic growth than economies without resource abundance like Korea and Hong Kong. While gold is often referred to as “black gold” it was also called “the devil’s excrement” by former Venezuelan Oil Minister and OPEC co-founder Pablo Perez Alfonso (Useem, 2003). This paradox is called the resource curse.

Several empirical studies show an inverse relationship between natural resource abundance and economic growth. A study by Sachs and Warner (1995) show a negative effect of natural resource intensity on GDP growth during the years 1970-1990. The results from their cross-country regression analysis remain significant after controlling for variables other studies have claimed to be important in explaining cross-country growth.

UNCTAD data shows that per capita income in resource-poor countries grew two to three times faster than resource-rich countries between 1960 and 1990. The gap between growth rates increased after 1970 (Auty, 2001). Nigeria, Zambia, Sierra Leone, Angola, Saudi Arabia and Venezuela are examples of countries that have had an abundance of natural resources for several decades, but can be considered growth losers, while the resource-poor Asian Tigers; Korea, Taiwan, Hong Kong and Singapore, have experienced incredible growth since the 1960s.

However, some countries have had great economic growth despite their resource abundance. Norway is one of the most prominent examples of countries that seem to have been able to

avoid the resource curse. While Norway's exports are dominated by the petroleum sector, Botswana is one of the largest producers of diamond in the world. Statistics from UNCTAD (n.d.) shows both these countries have achieved high, stable growth rates for decades. Venezuela on the other hand, has had almost no economic growth since 1970, despite sitting on the world's largest proven petroleum reserves. Ghana is another interesting example as it has been known for fertile lands and mineral endowments but has struggled to develop the economy. The economy has been growing rapidly the last years, but the country recently discovered oil in commercial quantities, and must carefully avoid the resource curse to ensure sustainable economic growth. Will the oil discovery turn out to be a blessing or a curse? Can the resource management of Norway and Botswana show possible solutions to the challenges Ghana and Venezuela are facing?

According to Wiig and Kolstad (2009), three main mechanisms behind the resource curse have been given most attention in previous research. The impact of these mechanisms is related to the quality of institutions in the country. Dutch disease refers to problems similar to those of the Netherlands during the 1970s. High profitability in the natural resource sector leads to high demand, which pushes up wages and appreciates the exchange rate. This reduces competitiveness in the non-resource sector, which slows growth. Secondly, economic rents from the natural resource sector increase both incentives and ability for the government to secure their power through patronage, and pursue self-enrichment instead of activities that increase the productive potential of the economy. The third mechanism behind the resource curse is rent-seeking activities from other private agents that have negative consequences for the economy.

1.2. Research questions

Even though many countries seem cursed by their natural resource abundance, the success of for instance Norway and Botswana implies that the curse is avoidable. How countries should address the issues related to the resource curse has become an important topic. Escaping the resource curse is crucial in order to achieve economic growth and prosperity for many developing countries. This master thesis seeks to answer the following question:

What can Ghana and Venezuela learn from the management of natural resource revenues in Norway and Botswana in order to avoid the resource curse?

Relevant research questions that need to be answered in order to find solutions to this problem are:

- *How do institutions in Ghana and Venezuela differ from Norway and Botswana?*
- *How do the countries differ in terms of economic policies?*
- *Which of the economic policies that have been successfully implemented in Norway and Botswana should Ghana and Venezuela adopt in order to escape the resource curse?*
- *Are other economic policies, social or political reforms needed to avoid the resource curse in these countries?*

By comparing these countries to Norway and Botswana; countries that have successfully managed their natural resources, the paper aims to find possible ways to achieve sustainable economic growth. The challenges Ghana and Venezuela are facing are in many ways different, but they all originate from a vast amount of natural resources. This master thesis will analyze both similarities and differences, and country-specific recommendations will be suggested.

1.3. Structure of the work

Using an exploratory comparative analysis, this paper begins with a brief contextual overview that describes the natural resource sectors in Norway, Botswana, Ghana and Venezuela, and their individual economic developments since 1970. This chapter shows the different impact of resource abundance. Chapter 3 provides insight in literature describing institutions and policies that correlate with the outcome of resource abundance, and how equilibrium forces in countries with weak institutions make reforms difficult to implement successfully. Kolstad and Wiig (2009) present the main framework around the resource curse mechanisms, and various political economy studies describe the impact and characteristics of institutional

quality. Different economic policies advocated to resource dependent countries are then described.

The methodology used in this thesis is presented after the theoretical framework, in chapter 4. Chapter 5 seeks to answer the research questions in light of the literature study. The differences and similarities between institutions in both the successful countries and the countries vulnerable to the resource curse will be analyzed. The economic policies these countries have pursued will then be analyzed in a similar way. Possible lessons Ghana and Venezuela can learn from Norway and Botswana is suggested in the end of chapter 5.

Chapter 2

CONTEXTUAL OVERVIEW

This chapter briefly presents the natural resource sectors in Norway, Botswana, Ghana and Venezuela, and the economic developments since 1970 in the respective countries. The different experiences of resource wealth in each country provide a foundation for the theoretical review and comparative analysis, which seek to find recommendations for the vulnerable countries.

In literature on the topic, including Stevens (2003) and Torvik (2009), Norway and Botswana are often hailed as examples of resource-rich countries that have achieved high, sustainable growth rates by managing their natural resources well. The similar experiences of these countries suggest that countries in different stages of development can avoid the resource curse, and that the curse is not dependent on geographical or regional features. While Norway was already a developed economy upon the discovery of oil, Botswana was among the poorest countries in the world when its diamonds endowments were found (Acemoglu, Johnson and Robinson, 2002). The achievements of these countries must be caused by some other variables, which this thesis aims to explore.

Venezuela and Ghana have one trait in common with Norway and Botswana: They are both resource-rich. Otherwise they are different in many ways. Ghana, formerly known as the Gold Coast, has by far lowest GDP per capita of the countries analyzed, despite its long history of gold and cocoa exportation. It has recently discovered oil, which makes the resource curse particularly relevant. Venezuela has the largest proven crude oil reserves in the world (OPEC, 2013), but is often quoted as an example of failure to manage resource wealth.

These four resource-rich countries represent a wide range of variables that may affect the impact of a resource. By comparing contrasting cases, the robustness of any findings of policies and institutional features that separate the vulnerable countries; Ghana and Venezuela, from the countries that have managed to escape the curse; Norway and Botswana, will increase.

2.1. Norway

Compared to other industrialized countries, the economic growth in Norway has been very high. In 1970 the GDP per capita measured in purchasing power parities was 5 percent below the OECD average. By 2010 it was 70 percent above the average (Holden, 2013). Larsen (2005) compares Norway to its Scandinavian neighbors Sweden and Denmark. It had been the poorest of the countries for centuries, but this trend started to turn in the early 1970s. By 2000, the country had the largest GDP per capita in Scandinavia. Norway's accelerated growth from the 1970s coincided with the discovery of oil.

Petroleum exploration in Norway was led by Phillips Petroleum during the 1960s. The Norwegian government however, claimed sovereignty over the Norwegian continental shelf. Regulations from 1963 determine that "the right to submarine natural resources is vested in the State" and that the government would have to authorize licenses for exploration and exploitation of these resources (LOV-1963-06-21-12). According to the Norwegian Ministry of Petroleum and Energy (2013) geological expertise was negative towards the existence of oil and natural gas deposits on the Norwegian continental shelf, but there was great enthusiasm following the discovery of natural gas in the Netherlands in 1959. The explorations proved successful. In 1969 the offshore Ekofisk field was discovered and oil production started two years later. During the next years several new offshore discoveries were made. Phillips Petroleum and other foreign companies dominated the exploration and development of the first oil and gas fields in Norway (Norwegian Ministry of Petroleum and Energy, 2013). Holden (2013) finds a gradual increase of domestic participation however. During the 1970s, the Norwegian involvement grew through the state owned Statoil, and the private companies Hydro and Saga.

Today, Norway is the largest oil producer and exporter in Europe, and the world's second largest natural gas exporter (U.S Energy Information Administration [EIA], 2012a). Preliminary figures of the annual national account for 2013 show that value added from oil and gas extraction including services currently accounts for about 21.5 percent of Norway's GDP, down from approximately 23 percent in 2012 (Statistics Norway, 2013). Data for 2012 from the World Bank (n.d.a) show that Norway has the fourth highest nominal GDP per capita in the world at 99,558 U.S. dollars, and also the fourth highest GDP per capita at

purchasing power parity at 65,640 current international dollars (n.d.b). The economic achievements of Norway are underlined by the Human Development Report 2013 (United Nations Development Programme, 2013). Norway consistently tops the Human Development Index, which is a worldwide index ranking both GDP per capita, life expectancy and education.

2.2. Botswana

Another example of a resource-rich country that has experienced high economic growth rates in the same time period is Botswana. Botswana is a small country to the north of South-Africa with a population of only 2 million, yet the largest diamond producer in the world by value. According to Acemoglu et al. (2002) Botswana had the highest economic growth in the world between 1965 and 1998, even surpassing the mentioned Asian Tigers.

Botswana was a British colony until its independence in 1966. The country's situation in 1966 differs from Norway in many ways. It was the second poorest country in the world, next to Bangladesh (Manatsha and Maharjan, 2009). Conditions were not considered favorable for economic growth according previous studies (e.g Bloom and Sachs, 1998). Botswana is tropical/subtropical and landlocked, situated in a region with a long history of conflicts and poverty. The main sector was agriculture, mostly cattle ranching. Because of the dry climate however, agricultural conditions were poor as well, so Botswana had to import food at a value of approximately 10 percent of GDP. There was little infrastructure, or other assets. Only 12 km of paved road existed, just 22 Botswana had graduated from university and 100 from secondary school. The country relied heavily on foreign aid. In 1966, 50 percent of government expenditure was paid for by Britain (Acemoglu et al., 2002).

Two years before Norway discovered oil, in 1967, geologists from the diamond company De Beers found diamonds in Botswana. The government of Botswana and De Beers Consolidated Mines Ltd formed the joint venture partnership Debswana Diamond Company (Pty) Ltd in 1978, which owns the four diamond mines operating in Botswana. The Debswana mines include Orapa, the largest diamond mine in the world and Jwaneng, the world's richest mine by diamond value ("History and Profile", n.d.). The company is the largest private employer

in the country, and produces more than 70 percent of Botswana's export revenues and 30 percent of GDP ("Introduction", n.d.).

After rapid diamond-led growth, Botswana was classified as an upper-middle economy by 1998. Nominal GDP per capita was up to 7,238 U.S. dollars in 2012 (The World Bank, n.d.a) and 16,321 current international dollars adjusted for purchasing parities (The World Bank, n.d.b). According to Mehlum et al. (2006) the mining sector has consistently contributed to around 40 percent of GDP since 1980. The annual reports from Bank of Botswana (2001, 2013), show that agriculture and manufacturing have remained almost negligible in comparison. There has been a large slump in demand for diamonds after the financial crisis however. Mineral production, mostly diamonds, fell by almost 50 percent in 2009 and contribution to GDP was down to 19.6 percent in 2012. Growth in non-resource sectors has somewhat counteracted the effects of the decline in mineral exports Real GDP per capita have been growing recent years, although slower than the past three decades (Bank of Botswana, 2013). Compared to the situation in 1966, infrastructure, education and healthcare have improved dramatically. However, because the country suffers from the second highest HIV/aids prevalence in the world, education and health outcomes are still below other countries in the upper-middle income group (Acemoglu et al., 2002).

2.3. Ghana

Ghana is a West-African country with a population of 25 million people. In 2007 oil was discovered in commercial quantities off the Ghanaian coastline, and the resource curse debate became increasingly relevant. Ghana is not a newly resource abundant country however, it has been known for its resource-richness for centuries, especially gold. Portuguese sailor discovered Ghana in 1471, and the area became known as the Gold Coast. The Gold Coast supplied European traders with gold and slaves, and became part of the British Empire in the 19th century (Government of Ghana, 2013).

In 1957 Ghana became the first African colony to gain independence from Britain. As opposed to Botswana, Meredith (2005) describes Ghana as one of the richest tropical countries in the world at the time of independence. Ghana was the world's leading producer

of cocoa, it had large foreign currency reserves, and also possessed an abundance of timber, gold and other minerals. Initial conditions were much more favorable for economic growth than in its African counterpart Botswana.

Ghana has been at peace since independence in 1957, but there were several military coups during the 1970's. In the same period, the Ghanaian economy fell into a depression (Kermeliotis, 2014). UNCTAD data (n.d.) shows that real GDP per capita fell by more than 2 percent per year on average. Since the mid 1980's economic growth in Ghana has been relatively high compared to neighboring West-African countries, and growth rates have been increasing. Despite its resource abundance, Ghana still remains a poor country. Nominal GDP per capita was only 1,605 U.S. dollars in 2012 (The World Bank, n.d.a), and 2,014 current international dollars adjusted for purchasing parities (n.d.b). Granado and Daal (2014) note that about a quarter of the population lives below the poverty line, and businesses lack access to affordable credit and reliable electricity supply.

The oil field discovered in 2007 in western Ghana, has been named Jubilee, because it was discovered around the same time as the country was celebrating its 50 years of independence. The proven reserves are significant, but not high compared to the largest oil producing countries. Production started in December 2010, and Jubilee is expected to fuel the Ghanaian economy for the next 20 years (Kuzu and Nantogmah, 2010). Estimates suggest that the reserves from the Jubilee field will add about 6 to 7 percent to GDP over the next 5 to 10 years of production and then decline over the next decade. Production estimates may increase as new discoveries are being announced (Aydin, 2011). Data from Ghana Statistical Service (2013) show that crude oil production contributed to 6.8 percent of GDP in 2012. This is more than the combined production from gold and cocoa, the two major sectors of the economy for the last 100 years (Moss and Young, 2009).

According to Kuzu and Nantogmah (2010), initial reactions to the discovery of oil were euphoric. The now deceased president Kufour held a press conference with a glass of champagne in one hand, and a glass of crude oil in the other. He described oil as a "shot in the arm", and claimed that Ghana would emerge as an "African Tiger" within five years.

There are still some concerns about Ghana's ability to benefit from the newly discovered oil-fields however. Several sources, including Agbele (2011), Amundsen (2012) and Borowski

(2013), claim there are clear signs of corruption in Ghana. Skepticism also hails from the country's long history of gold mining, which has not been able to transform the Ghanaian economy (Kuzu and Nantogmah, 2010). According to Obeng-Odoom (2010, p. 108) the majority of people in many gold mining towns are homeless, unemployed and poor, and "the environmental impact has been devastating".

2.4. Venezuela

While Ghana struggles to avoid the resource curse, it has experienced positive economic developments in recent years, sustainable or not. The fourth country to be analyzed however, Venezuela, has not been able to take advantage of its vast natural resources. In an interview with Harvard Business Review, Professor Francisco Monaldi claims that "Venezuela is the textbook case of the worst economic policies if you want to avoid the resource curse" (Green, 2013).

The OPEC member officially named República Bolivariana de Venezuela is a South American country with a population close to 30 million. This relatively small, tropical State has the largest proven petroleum resources in the world (OPEC, 2013). Most of these reserves are located in or near the Caribbean Sea; in the Gulf of Venezuela, Lake Maracaibo and the Orinoco River basin.

As Figure 2.1 and Figure 2.2 show, GDP have declined for decades before a small growth spurt recent years. In 1949 Venezuela's GDP per capita was higher than in countries like West Germany, Italy and Japan (Rossi, 2011). Compared to the situation today, it seems obvious that Venezuela is one of the clearest examples of failure to manage resource abundance. Rodriguez, Morales and Monaldi (2012, p. 1) describe Venezuela as a "textbook case of a resource dependent country". They argue that weak institutions, particularly rule of law and control of corruption, allow for wasteful spending and oppressive governments.

According to Rodriguez et al. the country was hailed a success story with a robust economy between 1935 and 1978, and from 1958 a stable democracy as well. From 1978 however, a prolonged economic depression started, and poverty and inequality increased. This led to the

election of political outsider Hugo Chavez in 1998, and the socialistic “Bolivarian Revolution”. In the last decade, Venezuela, like many other oil exporting countries, has enjoyed high revenues from the great increase in oil prices. Economic and social policies have however, increased Venezuela’s dependency on oil, and Rossi (2011) argue that the recent GDP growth is not sustainable.

While Chavez’s government has received a lot of criticism, the reforms have brought some positive changes. The government has managed to reduce poverty and health services (Rossi, 2011), and income inequality, measure by the Gini coefficient index, is now the lowest in Latin America (Plummer, 2012).

Nominal GDP per capita was 12,729 U.S. dollars in 2012 (The World Bank, n.d.a), and 13,267 current international dollars adjusted for purchasing parities (n.d.b). The petroleum sector accounted for around 25 percent of GDP (OPEC, n.d.). Data from The World Bank (n.d.c) show that 50 percent of fiscal revenues and 96 percent of export value came from petroleum production. The petroleum sector accounted for around 25 percent of GDP (OPEC, n.d.). Despite high revenues due to unusually high oil prices, fiscal deficits have been large, public debt has risen sharply (Rossi, 2011). Rossi further notes that Chavez has not been able to increase the productive potential of the economy. These findings will be discussed in chapter 5.

As mentioned, Venezuela sits on the largest proven crude oil reserves in the world, 20 percent of the world’s total reserves, yet it is only the ninth largest exporter (OPEC, 2013). Rodriguez et al., (2012) find that oil exports have decreased by around 50 percent since 1997 by volume, but that the impact on revenues has been more than offset by the oil price boom. If production stays at current levels it would take more than 270 years before Venezuela runs out of oil. The majority of the oil is located in the Orinoco River basin, known as the Orinoco Oil Belt. Oil found in this area is extra-heavy, which is difficult and expensive to extract. At current prices and estimates for the foreseeable future, increased exploitation of these resources is still economically viable, but production has been held back by lack of investment. Furthermore, liquid fuels are heavily subsidized in Venezuela. The Venezuelan gasoline prices are the lowest in the world, averaging 2.1 U.S. cents per liter in 2011. Accordingly, an increasing share of oil production is now being consumed domestically instead of being sold to foreign markets.

2.5. GDP growth rates

Figure 1 and Figure 2 show the historical growth of the economies analyzed in this thesis.

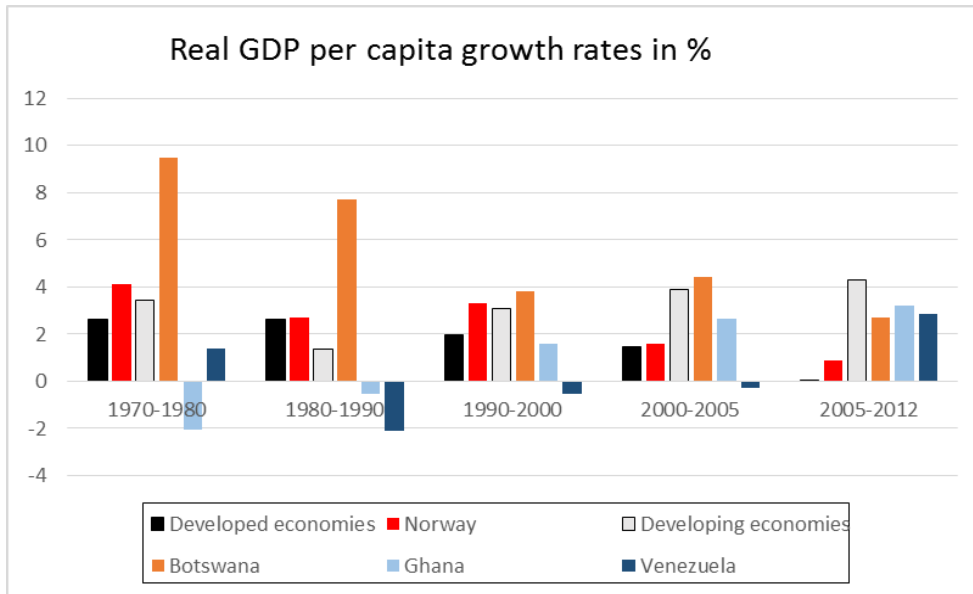


Figure 1. Adapted from *Real GDP growth rates, per capita, annual*, by UNCTAD, n.d., retrieved from <http://unctadstat.unctad.org/>

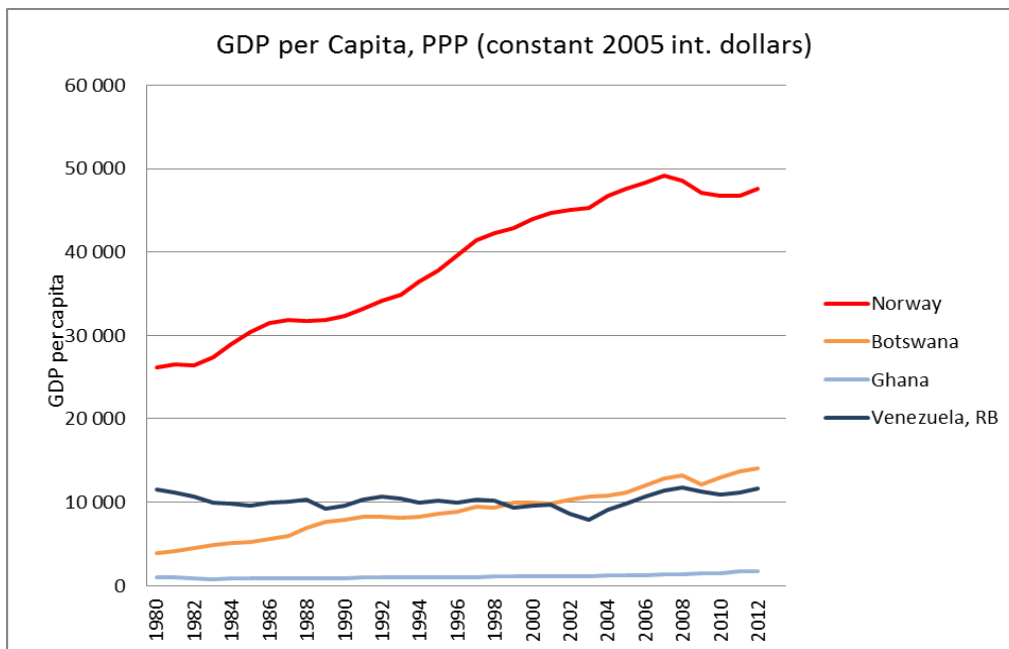


Figure 2. Adapted from *GDP per capita, PPP (Constant 2005 international dollars)*, by The World Bank, n.d., retrieved from data.worldbank.org/

Figure 1 shows the average growth rates for both developed and developing economies, as well as growth rates for the five countries analyzed in this thesis. The reason for including these variables is the different growth rates shown by developed and developing countries the last decades. The data from UNCTAD show that growth rates in developed countries have slowed down considerably during this timeframe, while developing economies are catching up in terms of GDP per capita. The developed economy in this comparison; Norway, has seen declining growth rates recent years, yet growth has been higher than the average of developed economies. Ghana on the other hand, a developing economy, has experienced increasing growth rates, but lower than other developing economies.

Figure 2 uses GDP in purchasing power parities (PPP). GDP is converted to international dollars, which adjust GDP for differences in domestic price levels. GDP in (PPP) is a better measurement for cross-country analysis than nominal or real GDP. Constant terms are used to better show economic development over time. Data for GDP in PPP is not available from the databases of The World Bank, IMF or UNCTAD pre 1980.

Chapter 3

THEORETICAL FRAMEWORK:

Avoiding the resource curse

3.1. Empirical evidence

Several studies show an inverse relationship between natural resource abundance and economic growth instead of “the big push” one would logically expect. Most literature on the resource curse phenomenon refer to Sachs and Warner (1995), who show a negative effect of natural resource intensity on GDP growth during the years 1970-1990. The results from their cross-country regression analysis remain significant after controlling for variables other studies have claimed to be important in explaining cross-country growth. These control variables include level of initial GDP in the countries analyzed, their openness policy, investment rates, human capital accumulation rates, changes in the external terms of trade, government expenditure ratios, terms of trade volatility, and the efficiency of government institutions.

Manzano and Rigobon (2001) find similar results in their study. The relationship between exports of primary products as a share of GDP and economic growth is slightly negative, but the findings are not conclusive. They find almost as many successful resource-rich countries as failures, and the signs of a resource curse disappear when controlled for debt overhang incurred while commodity prices were high during the 1970s. There is certainly no positive correlation between resources and growth, or “blessing” found however.

According to Warner (2013) there is a “lively debate about whether the natural-resource curse still exists”. Many resource-rich countries have experienced high growth rates recent years, including Ghana and Venezuela. Warner argues however, that these numbers are distorted by the resource price boom. Although GDP has increased, the growth rates in non-resource

sectors are much lower. He claims that growth in non-resource sectors is a better measurement of the economy's ability to achieve sustainable growth.

3.2. Important definitions

There seem to be broad consensus among scholars that so-called resource curse is a real concern for resource-rich economies. The mechanisms behind the curse are heavily debated however. Some important definitions will be shortly discussed before moving into this topic.

3.2.1. Natural resource abundance

Most empirical studies have defined natural resource abundance as export of primary exports as a share of GDP (Brunnschweiler, 2008), including Sachs and Warner (1995). There are logical reasons to criticize this definition however. Stijns (2005) substitute export shares with natural resource reserves and production data, and finds no evidence of a resource curse.

Brunnschweiler (2008) defines natural resource abundance, or resource wealth, by an estimation of the net present value of future resource rents per capita. With this measurement she finds a positive relationship between resource abundance and economic growth.

Brunnschweiler argues that there is not a strong correlation between natural resource abundance and the intensity resource exports. Australia and Germany are mentioned as examples of resource-rich countries with relatively low resource exports. A high level primary exports can therefore be an indication of resource dependency or lack of diversification, instead. This topic will not be discussed further in the thesis because Norway, Botswana, Ghana and Venezuela can be described as resource-rich countries defined from either definitions; export shares, production, reserves and net present value of resource rents.

Several studies, including Isham, Woolcock, Pritchett and Busby (2005) distinguish between *point source resources* and *diffuse resources*. Point source resources are resources that are extracted from geographically concentrated location and provide revenue that is easy to control and capture, like petroleum and hard minerals. Diffuse resources are resources which are less concentrated like agricultural products and fish. Except for Ghana's relatively large cocoa industry, all the countries compared in this cross-country analysis are specializing in point source resources. When referring to resources, point-source resources are implied.

3.2.2. Rents

Economic rents are earnings in excess of relevant cost, including normal return on capital. Basic economic theory states that rents are zero in perfectly competitive markets, but in natural resource industries, especially oil in recent years, these rents have been large because of high market prices. These high prices are a result of limited supply both in nature and from artificially low production due to cartels like OPEC.

3.2.3. Institutions

The term “institutions” can be defined as *rules of the game*, or constraints that structure human interaction. Institutions are both formal and informal rules of behavior, as well as ways and means of enforcing these rules (North 1990). Aoki (2007) describes institutions as the equilibrium outcome which arises through repeated interactions between agents. Examples of measures of institutional quality are many; the rule of law, transparency and accountability, trust and economic policies. This thesis will distinguish between the concept of institutions and economic policies that directly address the issues related to the resource curse, even if the two are interrelated. Research suggests that institutions affect the ability of countries to avoid the resource curse. Studies on this relationship and characteristics of strong institutions will be described in chapter 3.4.

3.3. The resource curse mechanisms

Initial research, most notably Sachs and Warner (1995, 1999, 2001) generally pointed to macroeconomic transmission mechanisms, more specifically the *Dutch Disease*, as the main mechanism behind the negative effects of resource abundance on growth (Stevens and Dietsche 2008). Later studies, including Robinson, Torvik and Verdier (2006), Mehlum, Moene and Torvik (2006), Stevens and Dietsche (2008) and Kolstad and Wiig (2009), have focused more on the political economy models. Kolstad and Wiig even criticize the work of Sachs and Warner for putting later empirical studies “on the wrong track”. They argue that the resource curse is not necessarily about resource abundance, but the economic rents created by exploitation of natural resources.

Kolstad and Wiig summarize the three mechanisms that have received the most attention in explaining slow or negative growth among resource-rich countries (Figure 3).

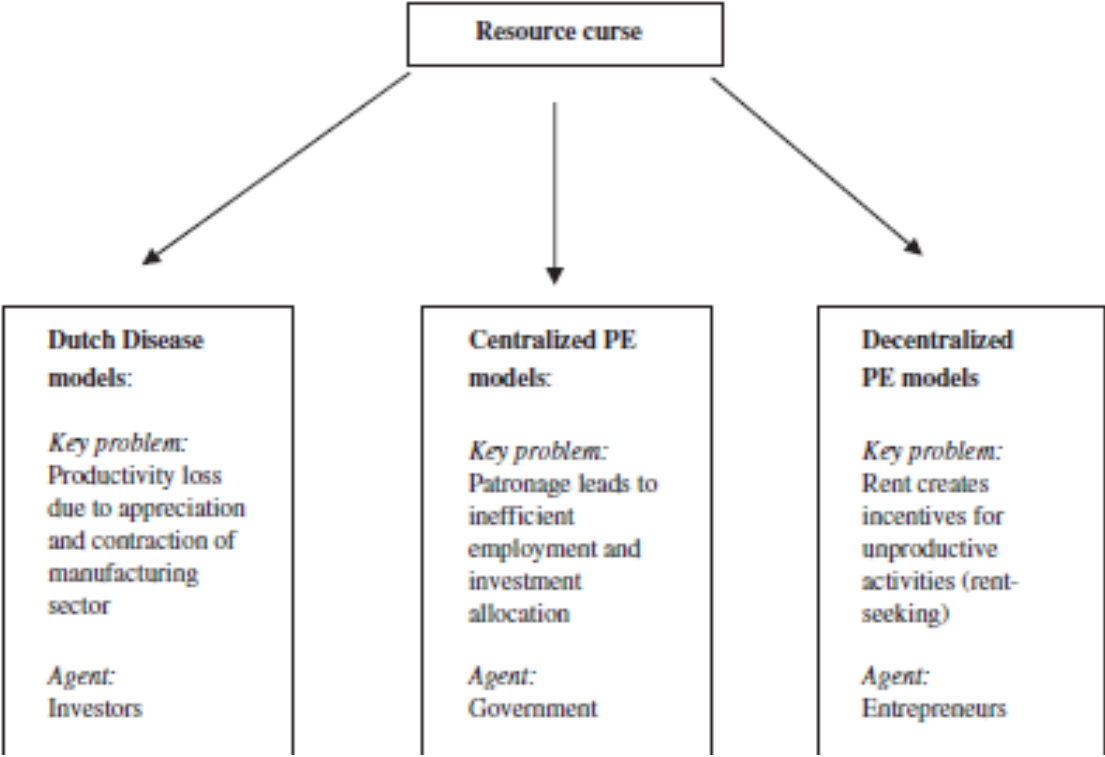


Figure 3. Resource curse mechanisms. Reprinted from “It’s the rents, stupid! The political economy of the resource curse” by I. Kolstad and A. Wiig. 2009, *Energy Policy*, 37(12), pp. 5319.

3.3.1. Dutch Disease

The name “Dutch Disease” originates from the problems experienced by the Netherlands during the 1970s. The Netherlands experienced a recession after the discovery of large natural gas deposits in the North Sea. The Dutch Disease models focus on lost competitiveness in non-resource sectors – manufacturing being the most significant in developed economies, like in the Netherlands during the 1970s. High demand in the resource sector inflates wages and the currency appreciates. In turn, this cause sectors not affected by the increased demand to lose competitiveness in international markets. The contraction of non-resource sectors causes productivity loss that slows down economic growth. Sachs and Warner (2001) use the expression “crowding-out logic”. If activity X drives growth, growth suffers if natural

resources crowd-out activity X. Crowding-out happens because profits are reduced from higher input prices. Sachs and Warner identify X as traded manufacturing activities.

3.3.2. Centralized- and decentralized political economy models

The centralized- and decentralized political economy models from Kolstad and Wiig's framework are based on the assumption that rents are the source of the resource curse. Political economy models argue that resource rents cause inefficiency and dysfunctional behavior in countries with weak institutions.

While the Dutch Disease model focuses on a shift in demand from investors, the centralized political economy model analyzes the incentives and constraints of the government. The key problem in centralized political economy models is recognized as patronage (Kolstad and Wiig, 2009). Caselli and Cunningham (2007) argue that resource revenues can be spent on enrichment of the political elite, activities that preserve the power of the political elite, and investments that can increase non-resource income and the productive potential of the economy. A growth in natural resource rents both increases the value of staying in power and creates stronger challenge for power from the opposition. They claim that the effect of natural resources is ambiguous. The government can secure its position in power in both productive and unproductive ways. The potentially productive method is to increase support through investments and effective policies. However, the government can also enhance its likelihood to stay in power through patronage, e.g. by allocating jobs and investments to political supporters, which leads to inefficiencies. An increased challenge for power can also cause both detrimental and potentially productive responses from the political elite. A potentially productive method is to give political opponents valuable outside options by spending resources to raise profitability in the private sector. The economically detrimental response is to spend resources fighting the opposition through armed conflicts, repression and by buying off opponents. Furthermore, natural resource wealth tends to inhibit democratic development because the resource rents help regimes conserve their power (Stevens and Dietsche, 2008; Frankel, 2010).

Decentralized political economy models analyze the incentives of private agents. The key problem in decentralized models is recognized as rent seeking; individuals outside the political elite choose to compete for rent extracting activities instead of productive work or entrepreneurship. Rent seeking can turn natural resources into a curse if there are increasing

returns to scale in the productive non-resource sectors or if rent seeking has direct negative spillover effects on productivity (Caselli and Cunningham, 2007).

3.3.3. Other remarks

A final trait of resource-rich economies not easily fitted into the framework of Kolstad and Wiig is vulnerability caused by high commodity price volatility. Countries of natural resource wealth are particularly prone to “boom and bust cycles” (Frankel, 2010).

Most studies claim that the resource curse is not inevitable. Both studies focusing on the macroeconomic mechanisms and political economy models stress that proper management can contain the problems (Larsen, 2004). Institutions and economic policies that can facilitate economic growth instead of the mentioned negative effects in resource abundant countries are presented next.

3.4. Institutional quality

3.4.1. The impact of institutions

Cross-country regressions by Mehlum et al. (2006) show the effect of institutional quality on average GDP growth from 1965-1990. Figure 4 shows the growth rates of 42 countries that had more than 10% of their GDP as resource exports during this period. Figure (b) are the countries with the best institutions, and (c) are the countries with the worst institutions. Countries with bad institutions performed worse and the most resource dependent countries in this group showed particularly low growth rates. They conclude that their “main finding is that the resource curse applies in countries with grabber friendly institutions but not in countries with producer friendly institutions”.

Mehlum et al. (2006) define producer friendly institutions as institutions that attract entrepreneurs into production. Grabber friendly institutions are institutions that make it attractive for entrepreneurs to shift from productive activities to unproductive influence activities – rent-seeking. Grabbers use all their capacity to exploit as much rents as possible from natural resources. Examples of weak institutions are weak property and contractual rights, malfunctioning bureaucracy and low corruption control. With producer friendly

institutions rent-seeking and production are complementary activities, while with grabber friendly institutions these are competing activities and therefore detrimental to economic growth

Kolstad and Wiig (2009) introduce the term impartially enhancing institutions. Good institutions that are able to lift the resource curse mechanisms are institutions that are impartial. Weak institutions are partial, and they typically benefit the elite, while they are the negatively affecting sustainable economic growth and the rest of the population. The problem of institutional change is that those who benefit from the partially enhancing institution often are in a position to resist the change. Government officials in countries with weak institutions will for instance be unwilling to reduce their opportunities to secure wealth and powerful positions through patronage and corruption. Minor institutional reforms will not be sustainable because elites have incentives to reverse the changes. Kolstad and Wiig sum it up by saying that institutions must be changed in a way that aligns the interest of the government with the population, and that gives entrepreneurs incentives to behave socially optimal.

Acemoglu and Robinson (1999) emphasize the importance of the rule of law and property rights. A strong rule of law can be characterized by a high level of confidence in protection by the police force, and fair and competent courts. Without secure property rights and mechanisms that constrain abuse from either the State or civilians, there is less incentive to engage in productive activities. It is also easier to control markets to create ineffective monopolies and pursue rent seeking.

If institutional quality has a significant impact on the economic developments of resource-rich countries, what policies or reforms should be adopted to escape the resource curse?

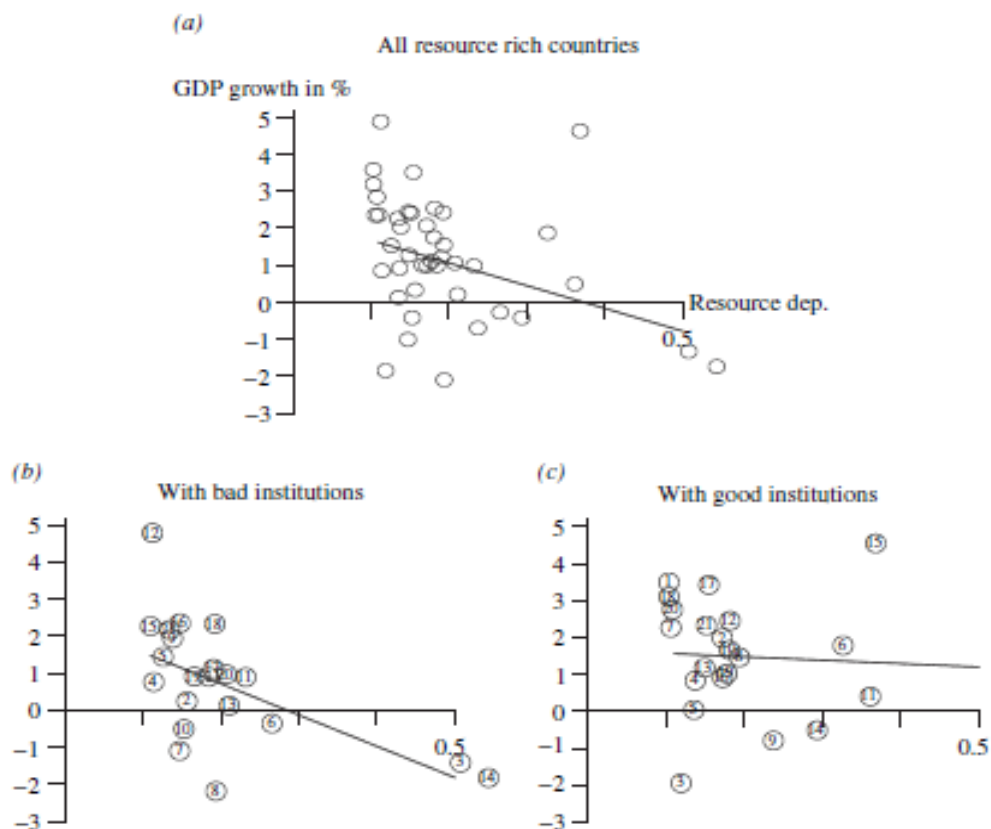


Figure 4. Resources and Institutions (a) all resource rich countries (b) with bad institutions (c) with good institutions. Reprinted from “Institutions and the Resource Curse” by H. Mehlum, K. Moene and R. Torvik. 2006, *The Economic Journal*, 116(508), p. 2.

3.4.2. System of government

The system of government or constitutional design can be seen as the foundation for a country’s institutions. They define the “formal rules of the political game” (Andersen and Aslaksen, 2008, p. 4). As previously mentioned, resource rents help authoritarian regimes conserve their power. Stevens and Dietsche (2007) argue that the natural resource revenue allows governments to “diffuse pressure to democratize”. According to Frankel however, there is not good evidence that democracy directly leads to economic growth.

A cross-country study of 90 countries by Andersen and Aslaksen (2008) investigate if the system of governance determines how natural resource abundance influences economic growth. They find that constitutions do not affect growth directly, but there is a negative interaction with resource abundance. According to the study, presidential and nondemocratic

regimes suffer from the resource curse, while parliamentary democracies do not. Democracies perform better than authoritarian regimes, but the particular form of democracy has even higher importance. Andersen and Aslaksen explain their findings with the assertion that presidential regimes pursue policies inferior in terms of promoting growth compared to parliamentary regimes. This assertion is based on recent theoretical contributions in the political economy literature. Presidential governments seem to favor powerful minorities at the expense of broad investments because they are not being constrained by a confidence requirement from the congress to remain in power (Persson and Tabellini, 2003). The electoral rules also have an impact on the incentives and constraints faced by politicians. Kunicová and Rose-Ackerman (2005) argue that corruption is lower under majority rule than under proportional rule because proportional representation makes it more difficult for voters and the opposition to hold and corrupt individuals accountable. Their empiric study shows a positive correlation between proportional representation systems and corruption. Corruption is especially high when proportional representation is combined with presidential regimes.

Eifert, Gelb and Tallroth (2002) provide a different perspective. They analyze different type of rentier states – states that live off profits from resource exploitation rather than the surplus production of the population (Karl, 2007). The study separates rentier states into five categories: “mature democracies”, “factional democracies”, “paternalistic autocracies”, “reformist autocracies” and “predatory autocracies. The institutional features in these rentier states differ in terms of; the length of political horizons, the level of transparency, policy stability and quality, the political power of non-resource sectors and the power of interests that are directly involved in state spending. The different institutional features of these rentier states determine the capacity to address the challenges caused by natural resource abundance.

Eifert et al. (2002) argue that mature democracies and reformist autocracies are best suited to address these policy challenges. Mature democracies, like Norway, benefit from stable party systems, high level of social consensus, competent and independent bureaucracies and judicial systems and often highly educated electorates. Political stability and institutional accountability give politicians incentives to long term policy horizons because party reputation and economic performance are important in order to compete for political power. Policy regimes are usually based on transparent information and a change of government will rarely lead to drastic policy alterations. Because political competition is partly based on economic performance, there are incentives to allocate investments and public goods in ways

that complement the productivity of the private sector. The features of mature democracies give citizens opportunities to influence government spending and keep excessive government consumption, patronage and rent seeking to a minimum.

Reformist autocracies are preferred because of their stable governments, broad social consensus and competent and independent technocratic elites. This type of rentier state lack the democratic representation and transparency of the mature democracies but seek to generate legitimacy through policies that reduce poverty and facilitate economic growth. This ensures a long term policy horizon where competent and politically independent technocrats are given important positions. The closed political system and lack of transparency create incentives to patronage and rent seeking activities but Eifert et al. claim that these incentives are constrained by the political mandate to make real social and economic improvements. They find that reformist autocracies often use resource revenues productively to stimulate diversification and growth. Indonesia under the Suharto government is referred to a typical reformist autocracy. Major economic developments began when Suharto came to power in 1967. A team of economic advisors known as the “Berkley Mafia” proved to have “both exceptional influence and continuity” (p. 24). Eifert et al., further note that the non-oil tradeables, agriculture and increasingly labor-intensive industry “constituted a major political interest group with a direct concern for the quality of public spending as well as for avoiding extreme appreciation of the real exchange rate” (p. 25).

Factional democracies, paternalistic autocracies and predatory autocracies have greater weaknesses related to the resource curse than the rentier states above. The type of states that are most likely to experience the curse of natural resources are predatory autocracies. Predatory autocracies are characterized by an unstable political environment, often legitimized by military force. The regimes are “kleptocratic” with very high government consumption, rent seeking, patronage and corruption. One of the most obvious examples of predatory autocracies is Nigeria. Nigeria is one of the largest oil producers in the world, yet it remains one of the poorest.

3.4.3. Transparency and accountability

An adequate level of transparency and accountability is an important criterion for well-functioning institutions. In many resource-rich countries corruption is a key issue in the form

of rent seeking and patronage as explained earlier. Corruption is defined as misuse of public power or resources for private gain (Karl, 2007). Lack of transparency creates an agency problem where agents are allowed to behave opportunistically because of asymmetric information. Transparent environments ensure that resource revenues are utilized productively rather than to be exploited by powerful, corrupt agents. Kolstad and Wiig (2008) also argue that information failure undermines cooperation and trust. Lack of information increases transaction costs because it will be more challenging to form and maintain cooperative agreements. According to political economy literature, i.e. Eifert et al. (2002), democratic governments are more transparent. However transparency can also be seen as a prerequisite to democratic developments. Without well informed citizens, real democratic representation is impossible.

The Extractive Industries Transparency Initiative (EITI) is one of several global projects that seek to improve transparency in resource-rich countries (Kolstad and Wiig, 2008). EITI stress the importance of transparency in a publication from the UK Department of International Development (2004, p. 2-3):

“Increasing transparency and knowledge of revenues will empower citizens and institutions to hold governments to account. Mismanagement or diversion of funds away from sustainable development purposes will become more difficult. It should also benefit developing and transition economies by improving the business environment, helping them to attract foreign direct investment. Responsible companies stand to benefit from a more level playing field, a more predictable business environment and better prospects for energy security.”

According to Transparency International (n.d.) the solution to fight corruption is to ensure disclosure and public access to all relevant information. For increased transparency to have an impact on corruption, stakeholders must have incentives and ability to act on the information provided. Like other institutional changes, reforms that increase transparency and accountability are likely to be difficult to implement in corrupt countries because government officials who benefit from the information asymmetry will tend to resist these changes (Kolstad and Wiig, 2008).

3.5 Diversification

3.5.1. Resource dependency

Why should countries with an abundance of natural resources diversify their economies instead of specializing on their comparative advantage? The assumption that diversification is exclusively beneficial may not seem obvious from an economic point of view, but several researchers, including Humphreys, Sachs and Stiglitz (2007) and Gelb (2010) argue that diversification is one of the main solutions to avoid the resource curse. Furthermore, Lederman and Maloney (2007) find a negative correlation between export concentration and economic growth. Although the theoretic recommendations are fairly conclusive, many resource-rich countries remain dependent on the exploitation of these resources.

Natural resource dependency can be measured from different variables; primary exports in percentage of total exports, resource revenues as a share of total fiscal revenues or the resource sectors contribution to GDP among others. Chapter 2 of this thesis provided insight on the resource dependency of Norway, Botswana, Ghana and Venezuela. All the countries in this comparison can be defined as resource dependent using any of the suggested measurements, although some more than others. Furthermore, Gelb (2010) argues that these numbers understate the real level of oil dependence, because they do not include non-resource activities and flows that depend on the domestic spending and export revenue made possible by the oil industry. Gelb's arguments are directed at oil-rich economies, but they can also be related other resource endowments like Botswana's diamonds.

Naturally, economic diversification is a necessity to achieve sustainable growth in countries rich in non-renewable resources like petroleum and minerals. Diminishing reserves will ultimately result in declining production rates, and without strong non-resource sectors these economies are likely to experience severe recessions. Limited supply is not the only reason for resource abundant countries to diversify. Even countries like Venezuela, which has oil reserves estimated to last 270 years at current production rates, can benefit from diversification.

3.5.2. Spillover effects

According to Karl (2007) natural resource industries are characterized by high capital intensity and weak linkages to the broader economy, especially oil production, which is the world's most capital-intensive industry. Resource sectors provide few jobs, and often few productive linkages and learning effects that spur growth in the rest of the economy. Multiplier effects, or so-called *spillover effects*, from gaining experience and developing technologies that are beneficial for the whole economy seem less pronounced in natural resource production. If growth in the resource sector had a significant spillover effect, lack of diversification would be less of a problem. Gelb (2010) compares the production of toasters with resource industries. Companies in a country that export toasters have the capabilities to move to a wider range of white goods. Investments in sectors with a "dense" product space can have positive externalities, but in resource sectors there is often no clear knowledge, skills or market relationships with other industries.

Gylfason, Herbertsson and Zoega (1999) find that resource sectors experience *less learning by doing*. Industries like oil and hard minerals bring fewer productivity increases than the manufacturing industry. Because of the enclave nature of the resource industries, diffusion of technological developments to other sectors is limited.

3.5.3. Education

Gylfason, Herbertsson and Zoega (1999) also point to the fact that resource industries typically do not require as much high-skilled labour and advanced capital as other industries, with a few exceptions like high-tech oil-drilling operations. Moreover, rents from natural resources make governments less dependent on the development of human capital. Gylfason et al. show that school enrollment at all levels is negatively related to natural resource abundance. In the other end, Finland and South-Korea, known for their "spectacular evolution from primary-based economies to exporters of high-tech manufactures", consistently rank at the top of worldwide educational quality comparisons. Out of countries specializing on natural resources, only Norway scores high in these rankings (Gelb, 2010, p. 10). Gylfason et al. (1999) claim that more and better education shift the comparative advantage away from resource industries towards manufacturing and services, and thereby accelerate learning by doing.

3.5.4. Final remarks

Gelb (2010) argue that diversification does not necessarily imply shifting to the manufacturing industry. Diversification can also mean maximizing the supply chain within the resource sector; either through domestic upstream linkages between different resource industries, or through strengthening links between the resource base and downstream processing industries.

As mentioned, many resource-rich countries have not managed to diversify their economies. Whether this is due to deliberate strategies or policies failures, is beyond the scope of this thesis, but as chapter 3.4 explains, equilibrium forces in countries with weak institutions will tend to resist reforms that reduce opportunities for rent seeking and patronage.

3.6. Privatization versus nationalization of the resource sector

The ownership structure of natural resource industries is another consideration for resource-rich countries. Privatization has been pushed as a tool for economic development by the International Monetary Fund and the World Bank (Palley, 2003). The obvious benefits of privatizing the resource sector are to remove political agendas and ensure efficiency through profit maximizing motives. More competent management, both domestic and foreign, can also be involved. Furthermore, resource sectors in need of massive investments to increase production will benefit from foreign direct investments.

Privatization can also improve social contact between the government and citizens. A symptom of rentier states is that the resource rents reduce necessity of social contact: the incentives to create other sources of revenue from the population through taxes are low. Weinthal and Jones Luong (2001, p. 217) argue that countries should privatize their resource sectors in order to escape the resource curse. With private ownership:

“The state has less control over how the resources are distributed and utilized and are thus compelled to develop mechanisms for extracting revenue from private owners as well as to generate other sources of revenue outside its natural resource sector. They may therefore be more likely to invest in institution-building – most notably, reliable tax administrations and

stable tax regimes that provide a broad tax base and ensure popular compliance – as well as to develop other sectors (e.g. manufacturing and agriculture), and perhaps even to invest in human resources.”

In “Escaping the Resource Curse” Stiglitz claims that reduced possibilities for government corruption is not a good argument for privatizing the resource sector (Humphreys et al., 2007). Without complete transparency there will be an agency problem where the agents, whether it is the government officials or private companies, have incentives to divert resource rents to their own private benefit. This behavior conflicts the interest of whom the agents are supposed to serve, the principals, or more specifically the citizens of the resource-rich country. Corruption occurs both in government enterprises and private firms. Furthermore, profit maximizing companies have incentives to minimize payments to the government for the right to control their assets.

The process of privatization is also costly and difficult, and the process itself provides vast opportunities for corruption. Stiglitz notes that “those arguing for privatization must show that the losses from maintain the resources within the public sector are greater than the combined losses associated with the transfer and the losses from agency problems after privatization” (Humphreys et al., 2007, p. 30). Another argument against privatization is that assets often end up in the hands of foreign companies, thereby preventing domestic learning and spillover effects.

In his study of Norway, Larsen (2004) claims that the country may have managed to induce spillover effects, or learning by doing, from the oil industry by keeping the sector under government control and promote domestic participation. Larsen suggests that experienced international companies should lead exploration and initial production, while the governments ensure that domestic companies are allowed to participate. After a gradual accumulation of competence, domestic firms can be given more important roles. This approach reduces costs and risks associated with underqualified domestic companies, and productive innovations and know-how gained can create productive linkages to other sectors.

3.7. Volatility and fiscal policy

Diversification is also important to avoid the volatility of resource dependent economies. Commodity prices are characterized by high price fluctuations, and oil prices are particularly volatile. This implies that less diversified resource economies are vulnerable to economic shocks, or frequent boom-bust cycles; another reason to adapt policies that seeks to diversify the economy. Volatility has several negative effects on growth. The exchange rate appreciates during boom cycles with high international commodity prices, and depreciates during bust cycles or recessions. It negatively affects budgetary discipline, control of public finances and long term plans (Karl, 2007), and reduces the attractiveness of investments, especially foreign direct investments because less risky assets are preferred (Lewin, 2011).

3.7.1. Countercyclical spending

Lewin (2010) claims that fiscal policies often exacerbate these tendencies because government spending is expansionary in boom cycles, and contractionary in bust cycles. Government spending increases when revenues rise and optimistic governments borrow against future revenues. When the commodity prices and revenues decline, governments are stuck with debt overhang instead of accumulated assets that could stimulate the economy. Debt overhang from the 1970s is can be used to explain the weak performance of resource-rich economies as Manzano and Rigobon (2001) found in their study presented in chapter 3.1.

Accordingly, effective fiscal policy is of high importance to countries aiming to escape the resource curse. Most research on fiscal policy and resource abundance, i.e. (Karl, 2007, Frankel, 2010 and Lewin, 2011), stress that prudent fiscal policy during boom is vital to dampen the contraction during bust cycles. There are many examples of governments not being able to resist the temptation or political pressure to increase spending during economically optimistic times. According to Frankel (2010) investment projects and the government wage bill accounts for much of the increased spending in boom periods. Investments in infrastructure can have a positive impact on future productivity and sustainable growth, but these projects are often “white elephants” – unproductive but politically prestigious projects, that are often stranded without funds for completion or maintenance when recessions occur. Similarly, increased public employment or higher public wages are often unsustainable when government revenues suddenly fall due to rapid decline in

commodity prices. Reduction of workforce or wages however, is difficult and takes time. This lag creates increased debt.

The main point is that fiscal policy should be *countercyclical* rather than *procyclical* to moderate the shocks from high commodity price volatility. Countries should borrow during recessions to sustain consumption and investment, and exercise prudent fiscal discipline during boom cycles by repaying debt or accumulating assets.

3.7.1. Taxation

Rodriguez et al. (2012, p. 3) argue that governments should modernize their tax administrations and expand their tax base, not only because increased taxation increase fiscal revenues, but also because it has a significant impact on governance. They state that:

“Taxation, by forcing citizens to forgo part of their income to finance the state, generates incentives for them to demand accountability and an efficient use of what is essentially their money. Furthermore, when forced to rely on broad taxation, governments are more compelled to provide something in exchange, be it representation or public goods and services that benefit all. Resource rents on the other hand, do not accrue from broad based taxation but rather from a narrow economic base that often consists of foreign companies or state owned companies.”

This point of view is supported by Moss and Young (2009, p. 7). They note that much of the “research on the resource curse can be interpreted as a break-down in the *social contract* between the citizens and the state”.

3.8. Resource funds

Accumulation of foreign exchange reserves in Sovereign Wealth Funds can be an important fiscal tool to help avoid procyclical spending and control the mechanisms causing problems related to the resource curse. Saving can ensure that countries preserve wealth to a future point in time when non-renewable resource reserves are depleted. Consumption can be sustained indefinitely if the Hartwick rule (Hartwick, 1977) is applied. If following the

Hartwick rule, all resource rents should be reinvested in “produced capital” as a substitution for the depletion of resource. This is rarely applied however (Hamilton and World Bank, 2006). Secondly, it reduces inflationary pressure, which reduces export competitiveness. Combined with adequate governance Sovereign Wealth Funds can also help preventing rent seeking and patronage. According to Frankel (2010) the standard recommendations for resource funds are that they should be professionally run, politically independent and operations should be transparent. The objective of maximizing the prosperity of the country should be emphasized.

Another way of accumulating reserves is through the central bank. According to Frankel (2010) economist have regarded this as a sub-optimal solution. First of all, returns on foreign exchange, typically US treasury bills, is low. Secondly, reserve increases can lead to rapid monetary expansion and inflation if the central bank is not able to successfully sterilize the capital inflows. The increased monetary base can be offset by encouraging foreign private investment or foreign borrowing in the domestic market, but is typically done by selling treasury bills. These initiatives can be difficult to execute successfully (Lee, 1997). Political independence and transparent operations of resource funds are important to avoid abuse by the government. If the Central Bank has political independence and the resource fund does not, the reserves should be left “where they cannot be raided” (p. 33).

Warner (2013) argue that governments are faced with two conflicting options to confront the resource curse and increase growth; invest in offshore assets or in the domestic economy. The optimal decision depends on the real return of the domestic investments. The latter option is more attractive if long term growth can be boosted through productive public investments. Developing countries with a struggling population often assume that returns to public investments are high because of the great needs. However this assessment should not be based on wishful thinking. Warner gives examples of enormous investments in resource-rich countries in boom periods, including Saudi-Arabia, which led to improvements in health and education but failed to boost economic growth over the next decades.

3.9. Monetary policy

What monetary policy should developing countries adapt to avoid the macroeconomic mechanisms of the resource curse? The best solutions are highly circumstantial.

Keeping a fixed exchange rate reduces the cost of international trade, and helps the central bank to keep inflation at low rates. Frankel (2010) claims that maintaining a fixed exchange rate may be appropriate for very small and open countries. A floating exchange rate however, acts as a buffer for volatile commodity prices because the currency appreciates during boom cycles and thereby reduces excessive capital inflows. In bust cycles the currency depreciates and improves terms of trade for the export industry. Several commodity exporters maintain an intermediate exchange rate regime like a managed floating exchange rate or target zone. A managed floating exchange rate can be especially beneficial for countries in the early stages of a possibly temporary resource boom; the Central Bank can intervene in the foreign exchange market to avoid rapid expansion in the money supply (Frankel, 2010).

Resource dependent countries also need to consider the effect of the chosen nominal target for the Central Bank. According to Frankel both monetary economists and central bankers tend to favor inflation targeting over exchange rate targeting. Inflation targeting usually takes the Consumer Price Index (CPI) as the index to measure inflation. The problem of the CPI for resource exporters is the procyclical effects. When commodity prices fall, it would be beneficial with loose monetary policy through a depreciation or devaluation of the currency. If following a CPI target however, the central bank need to keep monetary policy tight because depreciation will cause import prices to rise and the CPI can be pushed above the target range.

Frankel suggests another policy regime; Peg the Export Price (PEG). PEG pegs the currency to the main commodity prices on a daily basis; if dollar price of oil increases by 1%, monetary policy allows the currency of the oil dependent country to appreciate by 1% to keep the local price of oil fixed. Similarly to a floating exchange rate, PEG automatically adjusts the effect of price fluctuations on terms of trade in economies with a large resource sector. A PEG regime has disadvantages for non-resource sectors however. The burden of volatile

commodity prices is transferred to the price of non-resource exports. This conflicts diversification strategies.

3.10. Summary

This chapter has aimed to provide a foundation for the analysis of the research questions from chapter 1. Empirical evidence supporting the resource curse theory was presented, before a review of studies on macroeconomic mechanisms and political economy explained the forces driving the negative impact of resource abundance. Various dimensions of institutional quality, and policies advocated to address the resource curse mechanisms, were then described. The theoretical framework on resource curse avoidance from this chapter will be used to analyze the impact of institutional differences and various economic policies in the comparative analysis in chapter 5.

Chapter 4

METHODOLOGY

Because of the nature of the research questions, and the small sample size of only four countries, an exploratory research and qualitative data collection and analysis, is found to be most purposeful. Chapter 4.1 and 4.2 will shortly present the most important methods in social science, but most attention will be given to the exploratory and qualitative research. The chosen method qualitative method is then described in chapter 4.3.

4.1. Classification of research designs

According to Zikmund, Babin, Carr and Griffin (2010), the research design represents the “master plan” for the study as a guide in collecting and analyzing data. No research design can be argued to be correct, or incorrect, but the type of research design should be consistent with the purpose of the research. The fundamental objective of the research can be classified as exploratory, descriptive or causal.

Exploratory research is often conducted as a preliminary step of descriptive or casual research. This type of research aims to explore ideas or insight by breaking a vague problem statement into smaller, more precise research questions or hypothesis, clarify concepts or testing measurement methods (Zikmund et al., 2010). Bhattacharjee (2012) note that the hypotheses created can then be valuable for descriptive research later. Exploratory research “attempts to connect the dots”, by “identifying causal factors and outcomes of the target phenomenon” (2012, p. 6). According to Zikmund et al. (2010) it can also contribute to answer research questions however. Exploratory research methods include literature search, experience surveys, focus groups, and analysis of selected cases. Ghauri and Grønhaug (2002) state that exploratory research design should be flexible, as new information can cause the research to change direction. They argue that key attributes to a good exploratory research design is the ability to observe, gather information and construct explanations.

Descriptive research design is used when the purpose is to describe characteristics of certain groups, to estimate the proportion of subjects in a population, or to analyze relationships between variables or make predictions. While exploratory research is often used when the researcher seeks to gain insight, descriptive research must start with prior knowledge about the phenomenon studied. Descriptive research should be based on clear specifications of the population studied, how it should be performed, and it should be based on specified hypotheses. Common examples of descriptive research methods are cross sectional studies, which involve a one-time measurement of a sample from the population of interest, and longitudinal studies, which use repeated measurements.

Causal research seeks to infer causality between variables. As Zikmund et al. note, the scientific notion of causality can never *prove* that X is a cause of Y, but a hypothesis can be supported if the occurrence of X makes the occurrence of Y more likely. The most common casual research methods are experiments, which are further classified into different types of laboratory- or field experiments.

4.2. Qualitative and quantitative research processes

Quantitative research methods seek to describe or analyze causality. They typically use large sample sizes to generalize findings. Collection and analysis of data should follow a structured plan and focus should be on neutral and objective interpretation of findings. Because of the large number of respondents, knowledge of each respondent will be superficial (Zikmund et al. 2010).

Zikmund et al. (2010) state that qualitative research methods are often used to explore develop hypotheses and to test structured interview schemes. As opposed to quantitative methods, qualitative methods are usually based on small, non-representative samples. Qualitative research emphasizes understanding of the unique and particular instead of searching for law-like generalizations. This type of research is more subjective than quantitative processes, as the researcher's interests and personal values will influence the interpretation. Furthermore, qualitative research is described as more holistic: The research seeks to understand the interplay between individuals and the context. According to Andersen

(2013) qualitative research is most appropriate when the purpose of the research is to develop hypotheses.

Qualitative data can be collected through for instance observations, depth interviews or content analysis based on secondary data. After finishing the qualitative data collection, the findings are analyzed. Zikmund et al. (2010) claim that main problem for the data analysis is to reduce the amount and complexity of the data collected. Decisions on what should be emphasized, minimized or eliminated from further study should be based on the relevance for research questions. After collecting and reducing the data, the researcher should look for relationships between categories, characteristics of single respondents and characteristics of the context. Quantitative methods can be used in qualitative research for the purpose of studying similarities and differences between units. Next, the content of the relationships are described, by focusing on why there are differences and similarities. The final step of the qualitative data analysis is to try to find explanations of the results based on a theoretical framework.

4.3. Chosen research design: An exploratory comparative analysis

Exploratory research design

Since objective of this analysis is to find possible solutions to avoid the problems many resource-rich countries face, an exploratory research design seems most appropriate.

An exploratory comparative research method is used to form hypotheses on how institutions and economic policies from Norway and Botswana can help Ghana and Venezuela to avoid the resource curse.

Qualitative data collection

Qualitative research also seems most beneficial because of the complex nature of the resource curse mechanisms. Knowledge of human behavior and its implications to the outcome of policies and reforms is vital to understand ways of escaping the resource curse. Furthermore, quantitative data cannot always be compared across borders because of various contextual features, and causal relationships between policies and growth can be difficult to test for without significant simplifications. There are so many variables affecting growth in resource-

rich countries that to empirically test the impact of i.e. a new monetary policy will require a very high amount of control variables including commodity price fluctuations, fiscal policy and institutional changes. Content analysis is therefore based on qualitative secondary data from the books and journals on the resource curse, and up to date country-specific data from governments, nongovernmental organizations and other sources. This data provide the basis for the analytic process of answering the research questions. Findings are also supported by historical numerical data however.

Comparative analysis

In a comparative design, two or more cases are compared both cross-sectional and through an extended period of time (Blekesaune, 2005). Data may be collected using a combination of interviews, personal observations, and internal or external documents. A comparative case analysis is similar to a multiple case design. Bhattacharjee (2012, p. 40) states the following about case analysis:

“The strength of this research method is its ability to discover a wide variety of social, cultural, and political factors potentially related to the phenomenon of interest that may not be known in advance. Interpretation of findings may depend on the observational and integrative ability of the researcher, lack of control may make it difficult to establish causality, and findings from a single case site may not be readily generalized to other case sites.

Generalizability can be improved by replicating and comparing the analysis in other case sites in a multiple case design”.

A comparative design has been chosen over a more narrow case study of one or two countries to find explore more variables, or policy recommendations, applicable in countries with various contextual features. There is a trade-off however between a more detailed analysis on an institutional level and a more broad cross-country comparison. Since this is qualitative study, the comparison is limited to four countries to be able to explore a high amount of variables.

The countries in this comparative study are systematically selected according to a method of difference (Lijphart, 1971). There are two cases of countries that are found to have avoided the resource curse, two cases of countries that remain vulnerable to curse. The four cases

compared share one similarity; resource abundance, but otherwise they are heterogeneous in many ways. Resource curse mechanisms are affected by several political, social and historical factors, and experiences from one country cannot necessarily be transferred to another. By contrasting two growth successes from two different continents, which discovered resources at different levels of development, with less successful countries which also differ significantly from each other, the aim is to find relationships between the cases that can infer possible policy recommendations and more nuanced interpretations of the phenomenon. Norway and Botswana are not representative for all successful resource-rich countries, and Ghana and Venezuela are not representative for all the countries that remain vulnerable to the resource curse, but they do represent a wide range of attributes.

4.4. Validity and reliability

Validity is the extent to which a measurement is capable of measuring what it is intended to measure. Reliability refers to the consistency of results if the study is repeated (Zikmund et al. 2010). The quality of the conclusions in this comparative analysis is dependent on the quality of the analysis of the individual countries. If these analyses are not valid, the similarities and differences that create the foundation for the conclusions will be flawed as well. To enhance validity and reliable results, efforts of *triangulation* has been used. The analysis is based on qualitative data from a wide range of sources including books, economic journals, government documents and newspaper articles. Qualitative data is also supported by statistics. It is possible however, that parts of the analysis are influenced by biased opinions.

Chapter 5

ANALYSIS:

Lessons from Norway and Botswana

How do institutions in Ghana and Venezuela differ from Norway and Botswana?

5.1. The institutions of successful countries

Norway

Holden (2013) notes that when oil was discovered in Norway in 1969, the country had already been a stable democracy since 1905. Norway had a well-functioning bureaucracy with little corruption, the legal system worked well, and a free and active press was evaluating and commenting the government and other institutions. Eifert et al. (2002) names Norway as a “prototype representative” of a mature democracy, which together with reformist autocracies is found to manage resource revenues well. Norway is a parliamentary democracy, with institutions described as highly consensus-oriented. Involvement of interest groups representing business and labor is strong. The institutions have successfully reconciled competing claims for oil revenues with goals of long-term planning and stability. Parliamentary democracies are found to be superior in terms of promoting growth, as described in chapter 3.4 (Andersen and Aslaksen, 2008).

Norway has a proportional representation system where parties are assigned parliamentary seats in “Stortinget” proportionally to the number of votes they get. According to Kunicová and Rose-Ackerman (2005) corruption is lower under a majority election system than under proportional rules. However, the correlation between proportional representation and corruption is stronger when proportional representation is combined with a presidential system. Most studies rank Norway among the least corrupt countries in the world, as indicated in Figure 5.

According to Eifert et al. (2002, p. 9) “Norway also has a strong pro-stabilization constituency in the form of employees, trade union and business leaders, and voters who are dependent on the non-oil tradable sectors for their well-being and have a good understanding of the need for restraint in public spending and the avoidance of a volatile expenditure pattern.”

Furthermore, Eifert et al. note that political differences are relatively small compared to other countries, and values are egalitarian. The effect of social norms and cultural distinctions like these are difficult to document and quantify, but may be important for the institutional equilibrium. As Stevens (2003) emphasize, it is not only important to look at the particular policies adopted, but why these policies were followed in the first place. A broad social consensus of the importance of equality may have constrained dysfunctional elitist behavior and allowed implementation of policies that benefitted the whole population. Holden (2013, p. 2) claims that:

“The management of the petroleum resources reflects the view among Norwegian decision makers that the resources belong to the nation, and that the development should benefit the society as a whole, including future generations.”

The indicators of “good governance” used by The World Bank project Worldwide Governance Indicators (WGI) is closely related to institutional quality, which is presented in chapter 3.4 as an integral part of the resource mechanisms. WGI (2013a) defines governance as “the set of traditions and institutions by which authority in a country is exercised.” Implicitly, governance is seen as shaped by a country’s institutions, which is a wider term defined as “rules of the game” or equilibrium outcomes in chapter 3.2.

Figure 5 presents data retrieved from The Worldwide Governance Indicators (WGI). WGI is a dataset summarizing the views on different dimensions of the quality of governance in more than 200 countries. Ratings are computed from an average of surveys and expert studies conducted by a wide range of sources, including survey institutions, non-governmental organizations and private firms (WGI, 2013a). The six governance indicators are all presented in chapter 3.

As studies presented in chapter 3 show, “Control of corruption” and “rule of law” are arguably significant for well-functioning institutions. Furthermore, the high levels of “voice

and accountability” typically found in mature democracies like Norway, are found to be beneficial for resource rich countries. These features help aligning the interest of the population with the interest of the government, and corruption and dysfunctional behavior among government officials is constrained because they are held accountable for their actions. “Political stability” is claimed to be an advantage of mature democracies because it leads to a long term policy horizon, while “Violence and terrorism” are characteristics of predatory autocracies like Nigeria. WGI (2013a) states that “Regulatory quality” measures the perception of the government’s ability to “formulate and implement sound policies and regulations that permit and promote private sector development”, which is related to chapter 3.5 about diversification. “Government effectiveness” indicates the level of quality of public services and competence of civil servants, and their independence from political pressure. It also measures the perception of the quality of policy formulation and implementation and credibility of the government’s commitment to follow these policies.

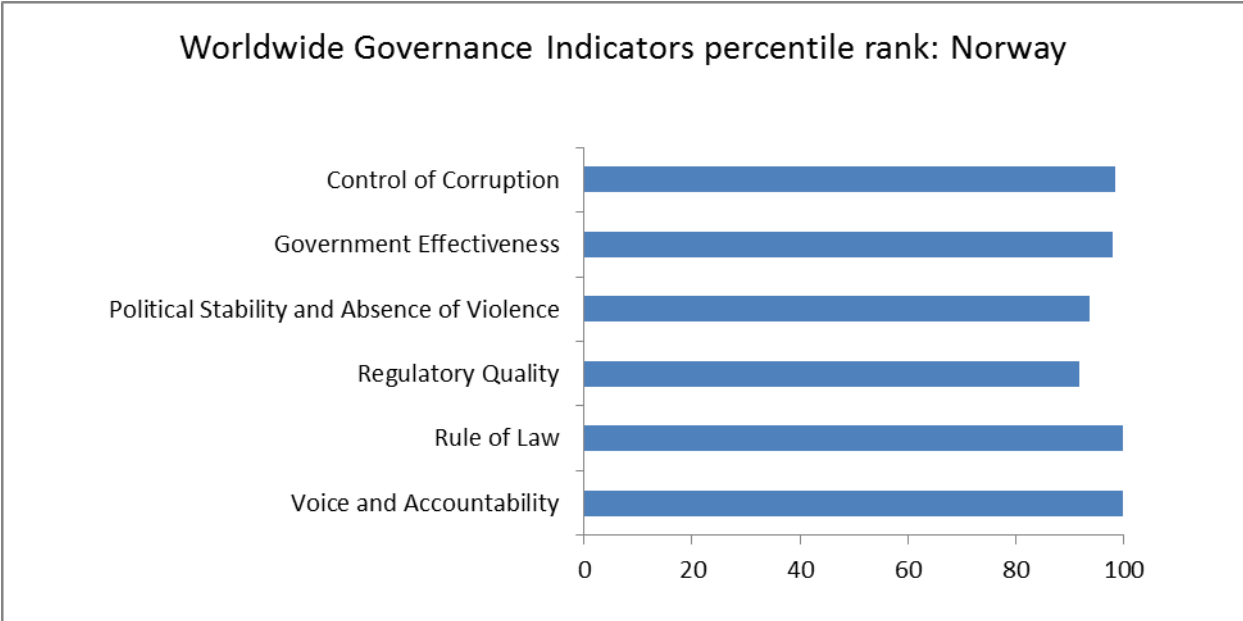


Figure 5. Adapted from *Interactive Data Access, Norway*, by Worldwide Governance Indicators, 2013b, retrieved from <http://info.worldbank.org/governance/wgi/>

The percentile rank shows the percentage of countries which scored lower than Norway. As the dataset from WGI show, Norway scores better than 90 percent of the more than 200 countries compared in all six dimensions of governance indicators. Norway receives a score of 100, the best in the world, in Rule of Law and Voice and Accountability. The strong ratings

from The Worldwide Governance Indicators support the qualitative evidence of high institutional quality in Norway.

Botswana

Similarly to Norway, Botswana has a long history of multi-party democracy. Botswana is a parliamentary republic, which means that the President is dependent on confidence from the parliament. While Norway has experienced relatively frequent changes of power, the Botswana Democratic Party (BDP) has been continuously in power since independence. The opposition parties are described as “very weak, fragmented and uncooperative” (OECD/AfDB, 2007, p. 145). BDP won the first election held in 1965, and has won every election since. The parliament consists of the House of Chiefs and the National Assembly. Members of the House of Chiefs are hereditary tribal leaders. Their function is largely advisory, and the constitution gives them no real legislative power (Acemoglu et al. 2002). The National Assembly consists of the President and Attorney General and 4 seats appointed by the winning party BDP and 57 elected members. In the latest 2009 election, Botswana Democratic Party (BDP) won 45 of the 57 seats (Central Intelligence Agency, 2014a) Representation is based on a majority rule, where the country is divided into constituencies, which returns one winning member to the National Assembly (Democracy Web, n.d.)

Botswana’s democracy has criticized for being a one-party autocracy in reality. International inspections have found elections to free and fair however (Rabin, 2011; Lewin, 2011) and the opposition are able to influence public debate (Democracy Web, n.d.) The press is claimed to be relatively free as well. According to Acemoglu et al. (2002) several newspapers openly criticize the government and any instances of mismanagement.

So how did BDP manage to gain popularity sufficient to stay in charge for almost 50 years? Acemoglu et al. (2002) suggest that the composition of BDP may be the answer. Seretse Khama, the first President of Botswana and leader of BDP was a hereditary chief of the largest tribal state and also educated in Europe. He was able to gain support among both the tribal chiefs and the growing educated elite of teachers and civil servants.

Many studies on the resource curse hold Botswana as one of the best examples of countries with good governance and beneficial institutions, i.e. Acemoglu et al. (2002), Leith (2005) and Lewin (2011). As shown in chapter 2.2 Botswana has experienced remarkable growth, and research suggest that this is due to sound economic policies, allowed to be implemented and maintained successfully because of high institutional quality. Eifert et al. (2002) argue that even though Botswana is less developed than other mature democracies, it shares many of the same features. Lewin (2011, p. 85) states that:

“Very few, if any, mineral-rich countries in Africa have been ruled as peacefully and productively as Botswana; it is hard to escape the conclusion that the democratic institutions established at independence are an important part of the explanation.”

According to Acemoglu et al. (2002) Botswana had unusual pre-colonial political institutions. At the time of independence, before the diamonds industry developed, the country had already built relatively democratic and efficient institutions. The tribal institutions allowed regular citizens to freely criticize to the chiefs. Wide participation in political processes restricted the political power of the elites. Acemoglu et al. believe that Botswana was able to adopt good policies and institutions because they were in the interests of the tribal chiefs and cattle owners, the political elite at that time. Leith (2005) emphasizes that the government established respect for property right and the rule of law. Focus on transparent institutions originated from the traditional tribal tradition of consultation. An involved civil society has kept government officials accountable for the management of resource revenues, and thereby helped reduce rent seeking and patronage.

Several formal structures ensure that accountability remain strong. According to the African Development Bank (2009a), there is a strict system of checks and balances for accounting procedures and internal auditing. An example is the Parliament’s Public Accounts Committee, which is composed of members of both the ruling party and the opposition who are responsible for the scrutiny of public service expenditures. Botswana also has a politically independent anti-corruption authority, the Directorate of Corruption and Economic Crime.

As chapter 2.2 explains, education was almost not existent at the time of Botswana’s independence. However the BDP government chose not to “indigenize” the bureaucracy with unskilled labor like most other African countries did post-independence. To ensure

government effectiveness and regulatory quality they hired expatriate workers and used international advisers and consultants until suitably qualified citizens of Botswana were available (Acemoglu et al., 2002). Cobbe (1999, p. 133) claims Botswana’s success was a “a consequence of luck and the presence of the right personalities in the right places at the right times”.

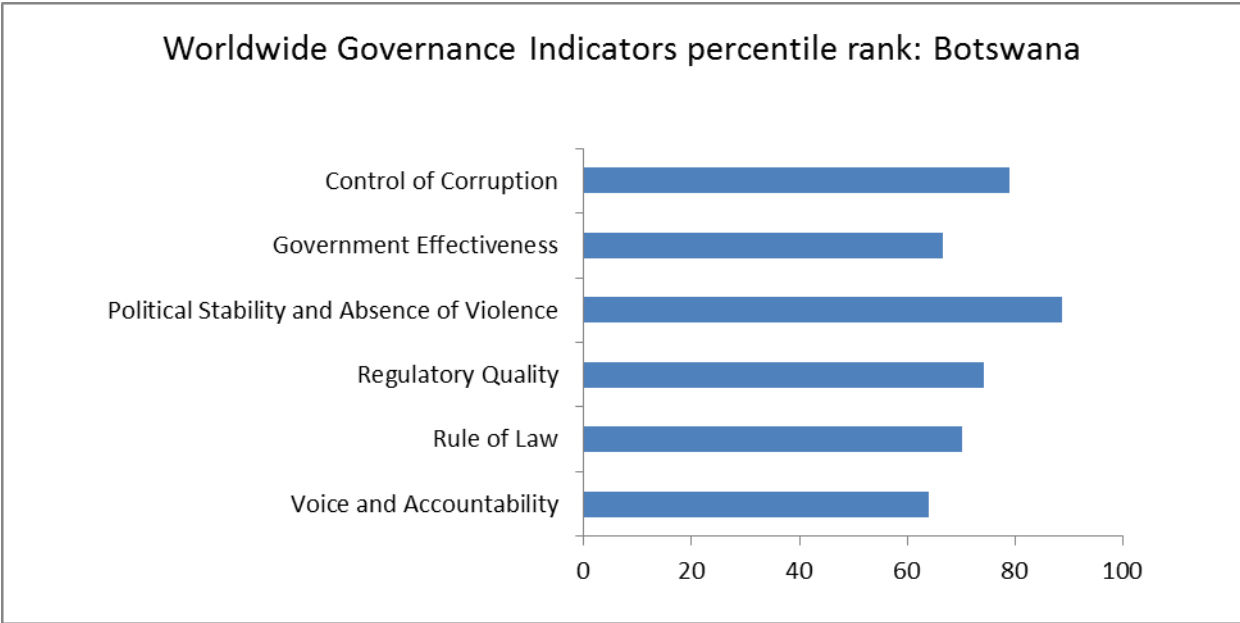


Figure 6. Adapted from *Interactive Data Access, Botswana*, by Worldwide Governance Indicators, 2013b, retrieved from <http://info.worldbank.org/governance/wgi/>

Botswana scores best of the African countries in all of the six Worldwide Governance Indicators, except for “Voice and Accountability”, where only South Africa is ranked slightly higher. This is possibly a result of the political dominance of BDP. As Figure 5.2 shows, Botswana scores particularly well in “Political Stability and Absence of Violence” and “Control of Corruption”.

5.2. Institutions of the vulnerable countries

Ghana

According to Moss and Young (2009), Ghana has been highly politically stable since a period of conflicts and military coups during the 1970’s. The country has been a multiparty

democracy since. Ghana has a presidential form of democracy (Central Intelligence Agency, 2014b), which is found to provide fewer incentives for growth-promoting policies than parliamentary systems like in Norway and Botswana. Like Botswana, the country use a majority rule election system (ibid), associated with increased accountability.

Ghana has had six successive elections since the return to a multiparty democracy in 1992 (1992, 1996, 2000, 2004, 2008 and 2012), with two shifts of government between opposing parties. The elections have been described as credible and peaceful, and are widely believed to reflect the public will. The parliament actively debates national issues, there is a free and vibrant press and an engaged civil society. The country has been hailed for its peace and political stability, and U.S. president Barack Obama called it “a model for democracy” in Africa (Kermeliotis, 2014). Kuzu and Nantogmah (2010, p. 7) note that:

“Ghana has a maturing, but still young democracy that can serve as the foundation to improve the accountability and transparency of the country’s petroleum industry and government institutions currently in place to regulate the industry.”

Compared to the quality of institutions of Norway and Botswana however, Ghana seems to still lag behind. Agbele (2011) criticizes the democracy because only two political parties are able to contest for power. The validity of this argument is debatable however, considering the success of the one-party dominance of Botswana’s democracy, and the positive resource management of Indonesia’s Suharto led autocracy, for instance. Agbele finds a perhaps more problematic institutional arrangement: The winning party tends to fill all top public positions, creating an environment that increase rent seeking opportunities for the ruling group. He further argues that implementation of anticorruption laws remain weak. As opposed to Norway and Botswana, Ghana lacks an effective system for checks and balances on government spending.

Amundsen (2013) provides a somewhat contrasting opinion, claiming that Ghana have the institutions necessary to ensure productive use of the resource rents. According to Amundsen several instances of corruption has been revealed recently. Current debates question whether this is a sign of a widespread problem, or well-functioning control systems. Benjamin Boakye, an economics expert with the African Center for Energy Policy in Accra, argues that Ghana has appropriate legislation, but emphasize that a resource curse can only be avoided if

members of the civil society hold the government accountable by pushing it to apply the laws made (Borowski, 2013).

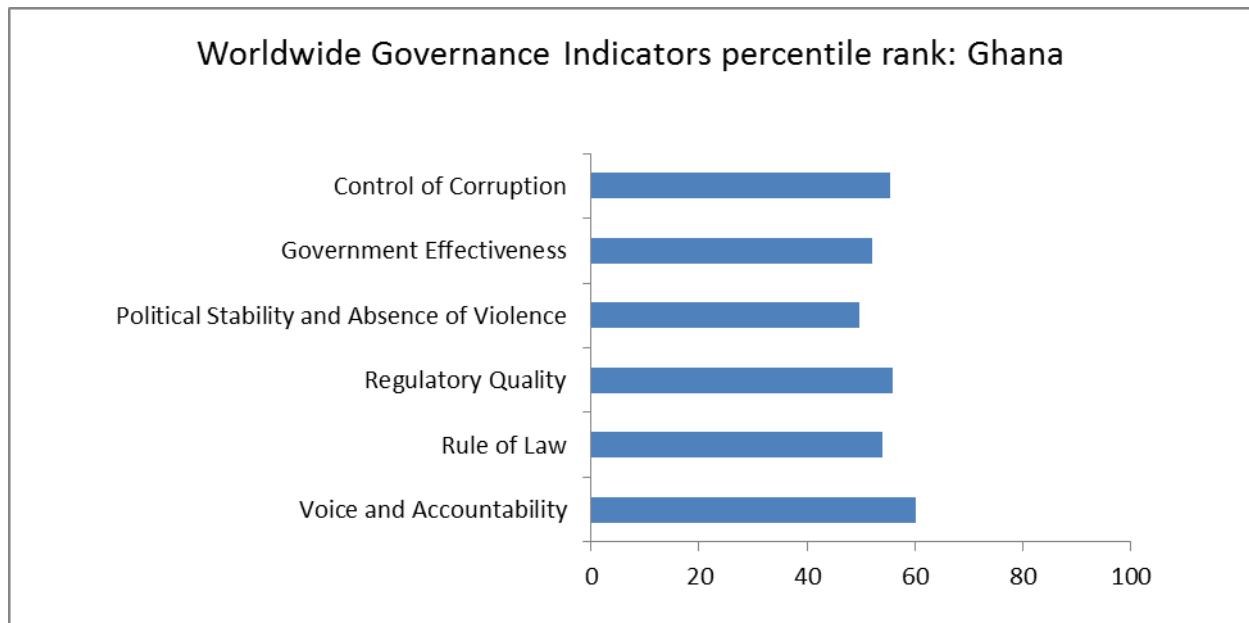


Figure 7. Adapted from *Interactive Data Access, Ghana*, by Worldwide Governance Indicators, 2013b, retrieved from <http://info.worldbank.org/governance/wgi/>

The good governance indicators of Ghana have steadily improved since the data collection by WGI began in 1996. Especially perceptions of “Voice and Accountability” and “Rule of Law” have improved (Moss and Young, 2009). As Figure 7 shows, Ghana scores better than half of the other countries in the latest rankings (WGI, 2013b). Ghana is among the best African countries, but score worse than both Norway and Botswana in all six dimensions.

Venezuela

República Bolivariana de Venezuela is a presidential democracy like Ghana. Members of the National Assembly are elected on proportional basis (Central Intelligence Agency, 2014c). Presidential regimes with proportional voting systems are found to be particularly corrupt, as they are associated with lack of accountability and dysfunctional policies, which chapter 3.4 explains further.

Similarly to the growth successes Norway and Botswana, Venezuela was a consensual democracy through the 1970s and 1980s. However, in Venezuela the governments used oil rents from high income taxes on multinational companies to consolidate their power. Attempts to diversify the economy with oil rents, particularly during the oil boom in 1974-1978 and 1979-1981, fed corruption through entitlements, and led to Dutch Disease and a further deterioration of institutions (Auty, 2009). From 1978, a prolonged economic depression started, and poverty and inequality increase. This culminated with the election of political outsider Hugo Chavez in 1998, and the socialistic “Bolivarian Revolution”.

Coronel (2008) note that Chavez was elected on three main promises: writing a new constitution and improve the state, fight poverty and eliminate corruption. While Chavez has managed to reduce poverty (Plummer, 2012), Coronel (2008) claims that the new constitution has been exploited by the Chavez led government to destroy all existing political institutions and fill important positions with bureaucrats loyal to the president. Chavez’s government has been called a “participatory democracy” (Hirst, 2013), which seeks to increase the involvement of the people in decision making processes, but is characterized by disregard for separation of power and institutional independence. Several sources find a further increase of corruption and reduction of institutional quality (Coronel, 2008; WGI, 2013b). Rodriguez et al. (2012) claim that the “media and civil society organizations have been under intense pressure from the government”. It’s reported that media have resorted to self-censorship to avoid confrontation with the government. Human rights organizations and political parties have been deprived part of their revenues and international fund-raising has been prohibited by law. These conditions have made it hard for the opposition to compete with the governing elite.

Hirst (2013) provides interesting examples of the low quality of institutions in Venezuela. Bureaucratic hurdles to accomplish anything administratively feed corruption. For instance birth certificates must be renewed every six months. This creates an environment that attracts rent seekers, or “enablers”, to assist in processing documents that would otherwise be free of charge. Hirst claims that the most significant cause of corruption in Venezuela is probably not oil rents but illegal drug trade. The country is a major drug transit route: the majority of drug flights between the Americas and West Africa, and 50 percent of drugs seized in Europe, was found to come from Venezuela in a United Nations Office on Drugs and Crime report (2009, as cited in Hirst, 2013). Drug trade and natural resource sectors are similar in the sense that

they both command high international prices and because of supply restrictions. Similarly to oil rents, corruption from drug trade deteriorates institutions. The existence of the enormous illegal drug industry can also be seen as evidence of nontransparent institutions and absence of a well-functioning rule of law. Hirst also refers to a survey which shows that 50 percent of the county's citizens describe their environments as unsafe or very unsafe. The results from the capital Caracas are extreme: 90 percent characterize their city as dangerous. Caracas is widely regarded as one of the most violent cities in the world.

Several sources find that the government has been increasingly authoritarian under Chavez and his handpicked successor Nicolas Maduro (Rodriguez et al., 2012; Human Rights Watch, 2014). Rodriguez et al claim that the authoritarian rule, combined with a lack of formal and transparent mechanisms of oil revenue distribution, is a large part of the problem in Venezuela. Rossi (2011) notes that Venezuela's economic framework is founded on political favor, or patronage, rather than economic fundamentals. It seems clear that the institutions of Venezuela translate into policies that are not able to promote sustainable growth.

In the framework of Eifert et al. (2002), Venezuela is named as an example of a "factional democracy", along with its South American neighbors Ecuador and Colombia. Except for having relatively high income equality, as chapter 2.4 mentions, the characteristics Eifert et al. (2002) attribute to factional democracies seem to be an accurate description of the institutions in Venezuela (p. 7):

"Political parties are often weak, and formed around charismatic leaders; military intervention in politics is not uncommon. Governments are often unstable; where they are stable, single-party dominance underlies nominally democratic institutions. In either form, political support derives from systems of patronage. The short-horizon politics of competition for power and state-allocated resources gives rise to unstable policy regimes and nontransparent mechanisms of rent distribution, encouraging the development of clientelistic networks and rent-seeking behavior throughout state and society."

The democratic elections of Venezuela may actually have exacerbated the resource curse mechanisms because governments have had incentives to exploit resource revenues to strengthen their position before the end of the election period. With such nontransparent institutions, tightening public expenditure means losing support, and thereby control over the

enormous rents. As chapter 3.4 explains, Eifert et al. (2002) find that reformist autocracies perform better than factional democracies. Perhaps the economy of Venezuela would perform better without democracy?

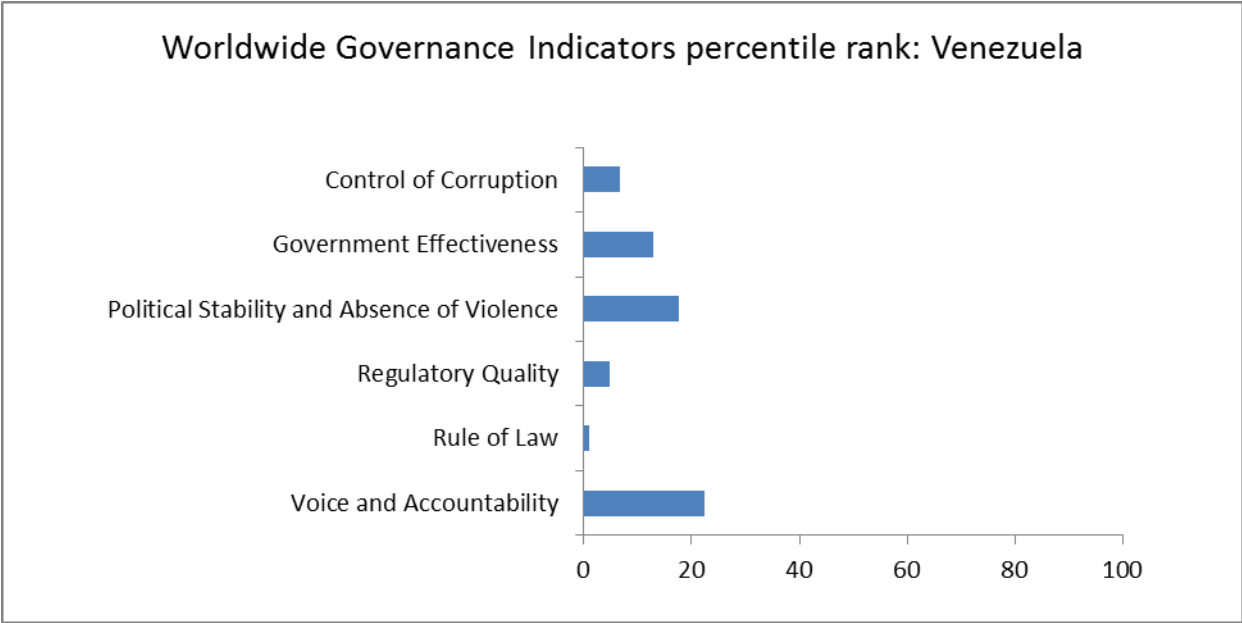


Figure 8. Adapted from *Interactive Data Access, Venezuela*, by Worldwide Governance Indicators, 2013b, retrieved from <http://info.worldbank.org/governance/wgi/>

WGI’s (2013b) database shows a steep decline from already low numbers on governance indicators. The surveys support the qualitative evidence of a low level of institutional quality in Venezuela. Figure 8 shows that Venezuela score considerably worse than the other countries analyzed in this cross-country comparison. While still ranked low, “Voice and Accountability” is perceived as the best dimension of Venezuela’s governance indicators. This is probably because of the democratic elections every six years. Venezuela is ranked among the worst countries in the world for “Control of Corruption”, “Regulatory Quality” and “Rule of Law”.

How do the countries differ in terms of economic policies?

5.3. Economic policies of the successful countries

5.3.1. Diversification

Norway

As chapter 2.1 presents, the petroleum-led growth has been impressive compared to other developed countries. Despite having a small population of only 5 million people and simultaneously being one of the leading oil and natural gas exporters in the world, the Norwegian economy seems less dependent on resource revenues than the other countries in this comparison. GDP per capita is among the highest in the world and current contribution of the petroleum sector to GDP is not more than 21 percent (Statistics Norway, 2013).

According to Holden (2013) the petroleum sector only employs around 2 percent of the total workforce in Norway. However, the sector is more important for labor when it comes to demand for investment goods and other inputs. Around 8 percent of the employment is associated with the demand from petroleum activities.

Several sources argue that Norway has, at least to some degree, managed to diversify its economy (Arnold, 2012; The Economist, 2013) particularly by a centralized wage spillover effects (Larsen, 2004), and by building human capital (Gelb, 2010). Norway rank exceptionally high among resource-rich countries in worldwide educational quality comparisons, according to Gelb (2010). It is estimated that the human capital now accounts for 82 per cent of Norway's national wealth compared with just 7 per cent for petroleum (Arnold, 2012).

Non-resource sectors have suffered from lack of competitiveness however. According to Amundsen (2013) Norway had a thriving textile industry before the discovery of oil, which “basically disappeared after massive investments in the oil sector”. The large demand from the increasing oil sector started a restructuring of the Norwegian economy, crowding out other production activities (Larsen, 2004). Larsen finds that the oil production as a share of total

economic output became fairly constant early on. There have been no signs of an increasing dependence of oil revenues.

Larsen (2004) argues that the centralized wage negotiation system of Norway has helped the country avoid the Dutch Disease. He claims that Norway has succeeded in making manufacturing the wage leader in the labor market, not the resource extraction sector. Because the parties involved in wage negotiations are large unions of employers and employees that need to be able to consider aggregate interests, unsustainable appreciation of wages have been constrained. Productivity increases in the manufacturing sector is institutionalized as the accepted wage increase ceiling.

As explained in chapter 3.5 natural resource industries are generally capital intensive, required little skilled labor, and provide few productive linkages and learning by doing effects. Spillover effects are therefore more prominent in other sectors like manufacturing. High-tech oil-drilling operation is an exception however, because of the critical need for expertise and innovative processes. Larsen (2004) suggest that the spillover-loss in Norway may have been much lower than in other oil producing countries because of accumulation of domestic know-how and expertise in offshore extraction, and the immense real capital needed in the offshore oil industry.

Diversification has mostly happened within the resource sector, both through upstream linkages from oil to different resource industries, and through downstream links to processing industries. According to an article by The Economist (2013) Norway is now considered the world's deep-sea drilling capital. Norwegian companies have expertise in various drilling techniques and have developed cost-effective methods of exploratory drilling in rough offshore conditions. Norwegian companies sell their offshore expertise to the rest of the world. The same strategy has been adopted by other industries, most notably in fish farming, where Norwegian companies use the most advanced technology in the world (Arnold, 2012). Even though petroleum remains the largest sector, Norway has developed an increasingly diverse export base. It is world's leading exporter of sub-sea technology and products, the second largest exporter of seafood and the sixth-largest exporter of aluminum (ibid).

Botswana

As mentioned in chapter 2.2, the mining sector has consistently contributed to around 40 percent of GDP since 1980 (Mehlum et al., 2006). Debswana Diamond Company produces more than 70 percent of export revenues and 30 percent of GDP. Several reports emphasize that Botswana's government has strived to diversify its economy away from diamond mining. One of the primary objectives of Botswana's macroeconomic policies is to create an environment that promote private-sector growth and export diversification (OECD/AfDB, 2007). Diversification efforts are described as largely unsuccessful however (Siphambe, 2007; African Development Bank, 2009b; Meija and Castel, 2012). Despite the lack of diversification Botswana's has enjoyed one of the highest economic growth rates in the world since its independence. Siphambe finds that over the period 1974 to 2006, average yearly growth in real GDP was 8 percent. Even though growth in non-mining sectors was lower, it was still high, at 6.8 percent per year. According to Warner (2013) growth outside was relatively slow until the mid-1990s. Diamond production increased so much that it accounted for 70 percent of the increase in GDP between 1970 and 1996. Since 1996 growth has continued still continued however, and non-resource sectors are catching up. He finds that Botswana is a "one of the few mineral-rich countries to show fast growth after a resource boom".

According to Meija and Castel (2012) there are narrow linkages to between the mining sector and the rest of the economy. Similar to the oil industry, mining is capital-intensive, which limit opportunities for employment. Despite being the dominant sector of the Botswana's economy, mining employs only about 2 percent of the workforce like in the case of the Norwegian petroleum industry. Botswana's mining industry has not provided the same productive spillover effects however.

The BDP government has made large investments in human capital, health and infrastructure, which have raised Botswana's productivity (Acemoglu et al., 2002; Lewin, 2011). Compared to the situation in 1966 developments in these areas are enormous, but because of the high HIV/aids prevalence, education and health outcomes are still below other countries in the upper-middle income group. Attempts to develop a competitive manufacturing industry seem to have failed however. Siphambe (2007) notes that "this sector has certainly not matched the hopes and expectations of the people and government of Botswana that wanted to position it as a key to a successful diversification of the economy." Meija and Castel (2012) argue that

the slow pace of economic diversification into the manufacturing industry are caused by a small domestic market, high cost of labor relative to the region, and human capital not fitted to the market demand. Even diversification within the resource sector has been minimal. Meat production was the only significant manufacturing activity at the time of independence, and the only major additions have been brewery activities started in the 1970s, and recent textile and garment production. A Hyundai Motor plant was built in the 1990s but operations were later discontinued (Siphambe, 2007).

The non-resource growth has mainly been fuelled by the government sector. The government is the largest employer in the country, employing 30 percent of the active workforce (Lewin, 2011). Government-induced demand has strengthened growth and development of the domestic economy through a large expansion of public services, particularly education, as well as public investment in infrastructure (Siphambe, 2007). Siphambe claims that:

“Even though the government sectors may be seen to have grown due to resources deriving from the mining sector, it has most significantly acted as a channel through which the wealth created by diamond mining has been reinvested in the economy. So in effect, over the period from 1966 to the present, the government has acted as the main link between the booming mining sector and the rest of the economy as a whole, a role that has spurred the rapid rate of overall development recorded during the period.”

Siphambe also emphasizes the rising contribution of the financial services sector (banks, insurance and business services) and trade, hotels and restaurants. Demand from these types of services is a reflection of increased demand from domestic firms, increasing real incomes and a growing tourism sector.

As chapter 3.5 explains, resources-rich countries tend to prioritize education less than resource-poor countries. Botswana seems to be one of the exceptions; its expenditure on education relative to income is among the highest in the world (Frankel, 2010). Even if diversification efforts have failed produce significant results in private non-resource sectors so far, Lewin (2011) argues that the investments in human capital and improvements in infrastructure, together with large financial reserves, should bring long term benefits that will ease the transition to a more diversified economy.

5.3.2. Government involvement in the resource sector

Norway

The Norwegian government claim sovereignty over the Norwegian continental shelf. Regulations from 1963 determine that “the right to submarine natural resources is vested in the State” and that the government would have to authorize licenses for exploration and exploitation of these resources (LOV-1963-06-21-12).

Taxation of the petroleum sector has been heavy. Holden (2013) argues that this policy was adopted to make sure that oil revenues were exploited in a safe and profitable way, and that the oil revenues reaped by the state were maximized. Another clear goal of state involvement was to make sure that Norwegian companies could participate and thereby build up expertise. Chapter 5.3.1 explains how Norway may have managed to avoid spillover-loss due to accumulation of know-how and expertise from participation in high-tech offshore operations.

Holden (2013) further explains that the obstacle to Norwegian participation was that the operations in the North Sea required high competence. Cost and risks associated with giving key roles to underqualified Norwegian companies posed a significant problem. A successful trade-off was achieved by letting experienced international oil companies lead in the beginning, while maintaining government control and Norwegian participation. After a gradual accumulation of competence, Norwegian firms have been given an increasingly important role, both in extraction and supply of inputs.

As chapter 2.1 mentions, Phillips Petroleum and other foreign companies dominated the exploration and development of the first oil and gas fields in Norway (Norwegian Ministry of Petroleum and Energy, 2013). During the 1970s however, the Norwegian involvement gradually increased through the state owned Statoil and the private companies Hydro and Saga. Founded in 1972, Statoil was given a 50 percent participation share in each production license of all new fields. This rule was later changed, and Stortinget (the Norwegian parliament) can now evaluate if the level of state participation should be higher or lower than this. Statoil was privatized in 2001, but the Norwegian government still holds 67 percent of the shares (Holden, 2013).

Botswana.

The government of Botswana and De Beers Consolidated Mines Ltd formed the company Debswana Diamond Company (Pty) Ltd in 1978. This is a joint venture partnership where each holds 50 percent of the shares. Debswana owns the four diamond mines operating in Botswana, but other multinational companies are exploring (Debswana, n.d.b). Unlike in the case of Norway, participation has not led to spillover effects for the rest of the economy. Mining is a capital intensive process that generally does not require a lot of high-skilled labor and provide few linkages to other sectors (see chapter 3.4). Siphambe (2007) argues that the dominance of diamonds in terms of output, government revenue and export, meant that the growth of the economy would have to be heavily state-led. The government did not blindly follow the liberal policies advocated by the IMF and the World Bank. It chose to only liberalize the markets where the private sector was considered to be sufficiently developed.

5.3.3. Fiscal policy

Norway

According to Larsen (2004) Norway has avoided the typical procyclical behavior of resource-rich countries (see chapter 3.6) since oil production commenced in the 1970s. It has exercised fiscal discipline, paid back debts and saved foreign exchange through a resource fund, which will be presented in the next chapter. A fiscal rule adopted in 2001, constrain the governments non-oil deficit to 4 percent of the resource fund to ensure that resource revenues are saved for future generations. This fiscal rule, the so-called “spending rule”, aims to reduce expenditure pressure and insulates the budget from oil price volatility by de-linking resource revenues and public expenditure (International Monetary Fund [IMF], 2007).

The idea behind the fiscal rule is that the spending of oil revenues is equal to the expected long run real return of the accumulated financial assets in the resource fund, which is estimated to be 4 percent annually. The stable supplement to the budget enables higher public spending and lower taxes than what would be possible without petroleum revenues, but because only the expected return can be withdrawn, the fund will never be smaller in expected terms (Holden, 2013). Deviations which allow for an effective countercyclical fiscal policy during recessions are permitted however (IMF, 2007).

According to Holden (2013) the fiscal rule from 2001 has gained broad political support, and has so far been followed by the subsequent governments. There is more debate on the way oil revenues should be spent. When the spending rule was adopted it was stated that the oil revenues should be spent to stimulate economic growth, but there are no explicit restrictions, and critics argue that the money is mainly spent on welfare and consumption instead of productive investments.

Norway's petroleum industry is heavily taxed at 78 percent, which ensure that Norway reaps a large share of the oil revenues generated. The high tax rate reflects the high profitability of petroleum extraction. Taxation is viewed as stable and transparent however, which increase the attractiveness of the Norwegian continental shelf to international oil companies. The Norwegian government has also accommodated oil companies by for instance reducing the tax rates when the oil price declined in 1986.

Botswana

According to Siphambe (2007), fiscal policy in Botswana has reflected the prioritization of two underlying objectives: sustainable economic growth and diversification of the economy. Botswana's current National Development Plan emphasizes the importance of sustaining macroeconomic stability and enhancing Botswana's competitiveness in global markets (Botswana Ministry of Finance and Development Planning, 2009).

The country is known for its prudent fiscal policy by de-linking public expenditure from revenue and instead establishing saving funds (Lewin, 2011; Meija and Castel, 2012; OECD/AfDB, 2013). Acemoglu et al. (2002, p. 2) call Botswana's fiscal policy "prudent in the extreme". It has managed to avoid the typical procyclical behavior of resource-rich countries, exacerbating the volatile commodity cycles and real exchange rate volatility, as explained in chapter 3.6. Botswana has avoided unsustainable public expenditure by maintaining a fairly constant growth in real expenditures, independent of the real growth of government revenue. In 2006 the country established a fiscal rule that restricts government spending to 40 percent of GDP (Siphambe, 2007).

Botswana's public expenditure is not only restricted to avoid procyclical behavior. The country also manages the rents from diamond production carefully to achieve sustainable

development. In order to maintain long-term economic growth, Botswana has recognized that revenues from depletion of its non-renewable mineral endowments must be seen as assets sales instead of value added in production. The government follows an explicit policy of reinvestment of all mineral rents to ensure that consumption can be maintained even after mineral reserves are depleted, similar to the Hartwick rule presented in chapter 3.8. Since the 1980s, the government of Botswana has used the “Sustainable Budget Index” (SBI) to monitor how well revenue from mining is reinvested in the national budget (The World Bank, 2011). In theory, depletion of natural resources can be offset by substituting it with other forms of capital that are able to generate the same amount of income. According to Lange (2003) Botswana’s government can reinvest mineral revenue in public sector capital (infrastructure), human capital (education and health care) and in foreign financial assets. According to the Hartwick rule, the national wealth will decline over time if the rents are used for public consumption instead.

$$SBI = \frac{\text{Govt. Spending (non-investment)}}{\text{Govt. Revenue (recurrent)}}$$

The SBI show the share of non-resource revenue that is spent on public consumption. If SBI is below 1, the government can be sure that the Hartwick rule is being followed.

If $SBI < 1$: All mineral revenues are used for investment.

If $SBI > 1$: Some of the mineral revenues are spent on unsustainable consumption.

Until the mid-1990s the SBI was well below 1, but it has risen slightly above 1 since then (Lange, 2003). While the implementation of the SBI may have helped Botswana’s long term economic development, Lange and Wright (2004) argue that further examination of the public sector capital budget reveals unproductive investments, not able to provide the returns necessary to offset resource depletion.

According to OECD/AfDB (2013) Botswana’s tax system is robust and non-distortionary.. A vigorous tax administration has ensured that revenue targets have always been surpassed. Surveys have found that penalties of non-compliance are administered consistently and that they are set high enough to be effective. Tax rates are low compared to other countries in the region. There is also mineral tax of 10 percent, mineral royalties of 10 percent of gross market value of diamonds and licensing fees (KPMG, 2012). The mineral taxes seem low compared to the 78 percent petroleum tax of Norway.

5.3.4. Sovereign Wealth Funds

Norway

According to Holden (2013), increased domestic demand from the oil sector combined with increased public spending led to a rapid rise in the cost level relative to trading partners in the mid-1970s, and a subsequent decline in the traded non-resource sector. To avoid a repetition of increase in public spending from rising oil revenues, a government commission suggested that revenues from petroleum extraction should be transferred to a resource fund.

Consequently, Norway established a Sovereign Wealth Fund named the Petroleum Fund in 1990. No money entered the fund until 1996 because a long bust cycle during the early 1990s. The name was changed to in the Government Pension Fund Global in 2006, to emphasize the objective of saving for the future (Holden, 2013). Investing in foreign financial assets through the establishment of the resource fund also served the purpose of sterilizing revenue inflows to avoid problematic macroeconomic mechanisms, as explained further in chapter 3. The Government Pension Fund Global is the largest Sovereign Wealth Fund in the world. Its value at the time of writing is estimated at close to 700 billion US dollars (Norges Bank Investment Management, 2014a)

Transfers to the resource fund come from the entire net cash flow from the petroleum sector and the return of the fund's investments. The outflow is the amount needed to cover the non-oil budget deficits (Norwegian Ministry of Finance, 2013), which should not exceed 4 percent of the funds value. The Ministry of Finance is responsible for the management of the Government Pension Fund Global, but the operational management is carried out by the central bank, which invests the fund's capital in bonds and equities outside of Norway in accordance with guidelines issued by the Ministry (ibid). The central bank (Norges Bank Investment Management, 2014b) states the following with regards to the investment strategy of the Government Pension Fund Global:

“The capital is invested abroad, to avoid overheating the Norwegian economy and to shield it from the effects of oil price fluctuations. The fund invests in international equity and fixed-income markets and real estate. The aim is to have a diversified investment mix that will give the highest possible risk-adjusted return within the guidelines set by the ministry.”

Management of the fund is accounted for in annual reports to the national assembly, “Stortinget”, and in the National Budget (Holden, 2013). In the latest report, the Norwegian Ministry of Finance (2014) emphasizes the importance of transparent management of The Pension Fund Global. The Ministry states that it “seeks to facilitate a broad-based debate on important aspects of the investment strategy of the Fund” (p. 10). The management of the resource fund has is often hailed as a good example for other nations. Behrens (2010) finds a high level of compliance to the Santiago Principles, which is a set of 24 guidelines for high standards of governance, transparency and accountability by sovereign wealth funds.

Botswana

Mineral rents not invested in infrastructure or human capital, are managed by the central bank, the Bank of Botswana. Foreign exchange reserves in excess of what is used by the central bank to provide a buffer against short term fluctuations are transferred to the Pula Fund, which is Botswana’s Sovereign Wealth Fund. The Pula Fund is used for investments in long term assets to achieve high returns (Kojo 2010, as cited in Meija and Castel, 2012).

The Pula fund was established in 1994 and serves two functions: to help stabilize the economy and to be a savings fund for future generations. Previous fiscal surpluses are saved in the Government Investment Account, which can be used to finance fiscal deficits typically experienced during commodity price bust cycles. Resource revenues are invested in the Intergenerational Equity Fund, which is the portion of the Pula Fund that seeks to benefit future generations (Meija and Castel, 2012). Siphambe (2007) and Meija and Castel argue that the Pula Fund has been managed transparently and effectively because of Botswana’s strong institutions. According to Siphambe the saving of diamond revenue has “achieved at least two outcomes: (i) it has avoided the occurrence of severe Dutch disease and (ii) it has avoided emergence of white elephant structures” (unproductive, but prestigious projects). Compared to the Norwegian Sovereign Wealth Fund, Botswana’s Pula fund seems almost negligible however, currently valued at around 6.9 billion US dollars. (SWF Institute, n.d.a).

5.3.5. Monetary policy

Norway

The Norwegian government has pursued an inflation target for monetary policy. The central bank’s objective is to keep inflation low and stable at an annual CPI increase of 2.5 percent

(Norges Bank, 2008). At the same time, monetary policy should contribute to stabilizing output and employment developments. Monetary policy seeks to balance these needs against each other, when conflict of interest arises (Norwegian Ministry of Finance, 2007). According to Norges Bank (2008), the bank is in a position to intervene in the foreign exchange market to influence the value of the currency, but it will normally not use interventions. The exchange rate is floating, and thereby acts as a buffer for volatile commodity prices as chapter 3.9 explains.

Botswana

The monetary policy of Botswana uses an inflationary target. According to Linah Mohohlo, Governor of Bank of Botswana, maintaining inflation at low, predictable and sustainable levels has been a key objective for the central bank for many years (Mohohlo, 2008). Botswana's current National Development Plan (Botswana Ministry of Finance and Development Planning, 2009, p. 63) state that:

“The principal objective of monetary policy, which is implemented by the Bank of Botswana, is to prevent inflation from moving outside a target range, currently between 3 and 6 percent. This range is considered to be consistent with achieving maximum sustainable economic growth”.

Botswana has fixed exchange rate regime. Mohohlo claims that achieving and maintaining price stability has been challenging for the Bank of Botswana. The domestic economy is small and open, which means it is very susceptible to external inflationary shocks like rising food and oil prices. As mentioned in chapter 3.9 a fixed exchange rate helps the central bank to keep inflation at low rates.

According to Botswana Ministry of Finance and Development Planning (2009, p. 61) “it is extremely important for the diversification of the Botswana economy that there should be a competitive exchange rate.” Initially the currency of Botswana, the pula, was pegged against the US dollar. However, this was changed after the country experienced a sharp loss of competitiveness when the South African rand depreciated against the dollar, and thereby the pula as well (Frankel, 2010). South Africa is Botswana's main trading partner and more than 80 percent of merchandise imports come from the neighbor to the south. Nearly all tradable goods and services have to compete with imports from South Africa because of the low trade

barriers in The South African Customs Union, which Botswana is part of (Botswana Ministry of Finance and Development Planning, 2009). To ensure a stable, competitive environment for the local industry, the pula is now pegged to the rand (Frankel, 2010). Acemoglu et al. (2002) find that the exchange rate has remained closely tied to fundamentals.

5.4. Economic policies of the vulnerable countries

5.4.1. Diversification

Ghana

Ghana's President John Mahama has recently emphasized the importance of reducing reliance on the country natural resources; gold, cocoa and oil (Blas, 2014). A new law regulating the distribution of oil revenue aims to ensure that the profits from oil extraction are spent on broad investments. Too strong focus on the oil sector can be detrimental to other sectors like the large agriculture sector which employs more than half of the Ghanaian workforce. Examinations of government expenditure show that investment of oil revenues has not been distributed according to the law however (Borowski, 2013).

Before oil production commenced, Ghana's economy was dependent on three traditional commodities; gold, cocoa and timber, which accounted for more than $\frac{3}{4}$ of export revenues (United Nations Statistics Division 2009, as cited in Moss and Young, 2009). The growing oil revenues adds to the export base, but the economy remains dependent on volatile commodities. Crude oil production contributed to 6.8 percent of GDP in 2012, more than cocoa and gold combined (Ghana Statistical Service, 2013). The revised GDP for 2013 show increase to 8.1 percent (Ghana Statistical Service, 2014).

According to President Mahama (Blas, 2014), the government is trying to diversify through downstream linkages within the resource sector, similarly to what Norway did to the oil industry. Mahama want to give cocoa traders incentives to process more cocoa beans domestically into cocoa powder for chocolate production, instead of simply exporting raw materials. The government is also trying to ensure that value is added to gold production by

refining more domestically instead of exporting gold in bulk. Successful implementation of such policies can cause spillover effects for the broader economy.

According to a report from The Mitchell Group (2009), the government of Ghana has spent a high amount of resources on education relative to its income. Ghana has also received foreign aid targeted to support basic education. Education reforms have been targeted towards expanding enrollment for decades. Despite the large investments in human capital, Ghana score low in cross-national educational comparisons, even compared to countries of the same income level. Private schools consistently outperform public schools. The lack of achievements can be attributed to the difficulty of supporting basic education for all, while at the same time providing high educational quality. Out of the 148 countries compared in the latest Global Competitiveness Report (World Economic Forum, 2014), Ghana scores 122 in “Health and Primary Education” and 108 in “Higher Education and Training”.

Venezuela

In 1998, oil exports accounted for 31 percent of fiscal revenues and 64 percent of total export revenues (Rodriguez et al., 2012). Data from The World Bank (n.d.d) show that by 2013 these numbers had increased to 50 percent of fiscal revenues and 96 percent of export. The petroleum sector accounted for around 25 percent of GDP (OPEC, n.d.). As a result the Venezuelan economy is extremely vulnerable to international oil price fluctuations.

Government attempts to diversify the economy away from oil in the 1970s and 1980s was largely unsuccessful and instead caused low competitiveness in domestic industries and a prolonged economic recession, as chapter 5.2 mentions. Coronel (2008) states that the project called “The Great Venezuela” poured oil revenues “into industrial projects designed to convert southern Venezuela into another Ruhr. At one point, the country was home to more than 300 state-owned companies, none of which was profitable.” According to Auty (2009) 70 percent of manufacturing investments during the oil boom in the late 1970s went to expanding the steel and aluminum industry in the southern Venezuela. As previously mentioned however, mining is a capital intensive industry like oil, so the large investments created few job. Additional rents were therefore used to increase employment in the public sector (Karl 1997, as cited in Auty, 2009), which fueled the unsustainable level of consumption further.

Since the government controlled the petroleum resources, and thereby most of the foreign currency for imports, both public and private production became dependent on the government (Rossi, 2011). Rossi argues that the heavy interference of the current regime have further repressed virtually all sectors by scaring off investors. Chavez's "productive socialism" has led to a collapse in production in both agriculture and manufacturing, and even in the petroleum sector.

An article by Muhr and Verger (2006), focus on reforms aimed at providing higher education all. Free education became an institutional right under Chavez's presidency. Evidence of the government's commitment to accumulate human capital is shown by an increase in the education budget by 288 percent between 2001 and 2005. Education accounted for around 15 percent of total government spending in 2006. The central objective of the commitment to achieve higher education for all is to develop "integral and sustainable human development" and to increase equality by including those who historically have not been able to afford higher education. Muhr and Verger note that fractions of Venezuela's middle and upper classes claim that the great expansion of higher education will decrease the quality. This debate is similar to that of Ghana. While Ghana aims to provide basic education for all its citizens, the emphasis on education is taken a step further to include university level education in Venezuela.

According to Rodriguez et al., (2012) Chavez's regime also implemented other social programs or "Misiones", which are aimed at improving a wide range of areas like education, job-training, health and agriculture. however, these expenditures are inefficient and prone to corruption. Moreover, "the discretionary distribution of resources via Misiones has allowed the government to favor supporters and punish dissent" (p. 19).

5.4.2. Government involvement in the resource sector

Ghana

Since the new oil discovery, a new legislation has been passed to ensure that Ghanaian companies secure a share in the oil industry. The legislation indicates the government's desire to keep control of the resources, and make sure that Ghana will benefit from the petroleum extraction through participation. Ghanaian companies will be secured a 5 percent share in oil

production and the supply network initially (Borowski, 2013). The document, called “Local Content and Local Participation in Petroleum Activities - Policy Framework”, states that the government will seek increase participation gradually, with vision of at least 90 percent participation in all aspects of the oil and gas value chain by 2020 (Kuzu and Nantogmah, 2010).

This strategy is similar to that of Norway (see chapter 5.3.5), which petroleum reserves is also found offshore. The initial development is being led by international companies to minimize cost and risk posed by involvement of underqualified Ghanaian companies. By securing government control and domestic participation, Ghanaian companies can accumulate competence before being given increasingly important roles. By implementing this strategy, the government hope that increased capabilities can bring positive spillover effects to other sectors. A degree of 90 percent participation is much higher than in Norway however. Considering the relative lack of human capital, financial constraints and little experience in petroleum extraction, this target seems too optimistic.

Venezuela

Venezuela’s constitution states that the oil belongs to the state (Rossi, 2011). According to EIA (2012b) the oil industry was nationalized in the 1970s with the creation of the State owned oil and gas company Petroleos de Venezuela S.A (PdVSA). During the 1990s the petroleum sector was liberalized, but since Hugo Chaves came to power in 1998 government participation have increased again. From 2006 new regulations mandated a minimum 60 percent share to PdVSA in in all new and existing oil projects. While most international oil companies complied with the new terms, Eni and Total were forcibly taken over. Rossi (2011) finds examples of government involvement that have led to loss of productivity:

In 2010, the government expropriated almost 200 companies in in key sectors like steel, cement, electricity, communications, food and petroleum. Most of them were productive and paid taxes, but after the government acquired them, production collapsed and the companies now need to be subsidized. As mentioned in the previous chapter, the “productive socialism” implemented in 1998 has discouraged investments, and thereby repressed production in a wide range of economic sectors, including petroleum. This seems particularly problematic, considering that the majority of Venezuela’s enormous petroleum reserves are extra-heavy

(see chapter 2.4). Heavy crude oil is difficult and expensive to extract, which means foreign investments and expertise will be vital to be able to increase production.

5.4.3. Fiscal policy

Ghana

Ghana's fiscal policy in 2012 and 2013 has been expansionary. This has created large fiscal deficits and increasing debt. Economic growth has been declining recent years, but it still remains high. Real GDP growth was down to 7 percent in 2013 and is estimated to 5 percent in 2014 (Granado and Daal, 2014). The fiscal deficit was 11.5 percent in 2012 and 10.5 percent in 2013.

Republic of Ghana Ministry of Finance (2014) states that the fiscal deficits are caused by several factors: a shortfall in tax revenue due to lower domestic output and import levels, a temporary energy crisis and falling commodity prices, most notably gold and cocoa. There has also been a large increase in the government wage bill, and increasing interest payments on debt. High growth rates during the last decade have caused Ghana to be categorized as a lower-middle income country. The increased status has ironically caused an adverse effect as the country face reduced foreign aid and access to grants and concessional financing.

Fiscal policy aims to achieve sustainable fiscal deficits and public debt in during the next years. A gradual reduction to 6 percent deficit is targeted by 2016. The government seeks to reduce the fiscal deficits by rationalization of public expenditure and enhancing tax revenues. These deficits can be defended from as procyclical expenditure due to low commodity prices, but according to the theory from chapter 3.6 deficits should be avoided when the commodity cycle changes and oil revenues increase. An increased government wage bill can cause unsustainable levels of public consumption which can be difficult to reverse within a short timeframe and cause debt overhang.

Gyampo (2010) claims that revenue collection is a major challenge for Ghana's oil management. The government has previously lacked capacity to collect revenues and audit payments from gold mining companies (The World Bank 2008, as cited in Gyampo, 2010) and oil accounting is much more complex than mining. Moss and Young (2009) find that that

the capacity of the government to collect taxes has increased however, as government revenue from taxes has increased from 12% of GDP in 1990 to 24% in 2005. Increased taxation can also be seen as a sign of growing social contract between citizens and the government, which is beneficial for resource dependent countries because resource rents tend to diminish the governments accountability to its citizens, as the chapter 3.6 explains.

Ghana's Petroleum Revenue Management Bill defines the distribution of oil revenues. The bill includes a transparent formula for the transfer of oil revenue to the national budget, and prohibits use of petroleum reserves as collateral for public debts. It also regulates the amount of oil revenue that can be used to cover recurrent expenditure in the budget (Kuzu and Nantogmah, 2010).

Venezuela

Fiscal policy in Venezuela seems to exemplify the policies not to follow for resource-rich countries. Auty (2009) explains how procyclical spending of resource rents and unsuccessful fiscal policies caused Venezuela to fall into a resource curse: The 1974-1978 and 1979-1981 oil booms boosted consumption through subsidized prices and lower taxes on income and expenditure, and as mentioned, the government invested large amounts in the steel and aluminum industry. Instead of saving some of the resource rents during the boom periods, Venezuela accumulated foreign debt. When the economy became overheated the government opted to price controls and subsidies instead of reducing public consumption. The result was that producers lowered supply because of low profit margins, and economic growth declined. Moreover, poor project management delayed start-up of metal plants. This caused them to be technologically outdated and less competitive, and unable to service their debt. Auty states that "little non-oil tradable activity was competitive by 1981" (p. 38).

During the next decades, successive governments have failed to constrain public expenditure, and Auty claims that the electoral cycle has undermined stabilization policies further. In 1989 the elected government attempted to tighten fiscal policy, which caused high unemployment and political instability, and was followed by two failed military coups in 1992, the first led by Hugo Chavez. Teodoro Petkoff (2011, as cited in Rossi, 2011, p. 15) finds a "formidable expansion" of highly unproductive public expenditure under Hugo Chavez as well. He states that "highly unproductive expenditure, translated into a widening of demand and consumption and attended by unfettered imports instead of the growth of the internal supply." According

to Ross (2011), imports tripled between 2000 and 2008. Despite high revenues due to unusually high oil prices, fiscal deficits have been large and public debt has risen sharply.

Rodriguez et al. (2012) calls Venezuela “a classic example of an oil exporting country with substantial resource rents and low taxation. The social contract between the government and the citizens of Venezuela declined during the 1970s and 1980s due to the reliance on resource revenues, and minimal non-oil taxation (Auty, 2009).

Arezki, Hamilton and Kazimov (2011) compare Norway and Venezuela’s public spending with an index of commodity export price between 1970 and 2010. Figure 9 and Figure 10 show that Venezuela’s spending has been following the export prices, particularly after peaks, while Norway’s prudent fiscal policy is evident from the countercyclical spending tracks; spending and commodity export prices move in opposite directions.

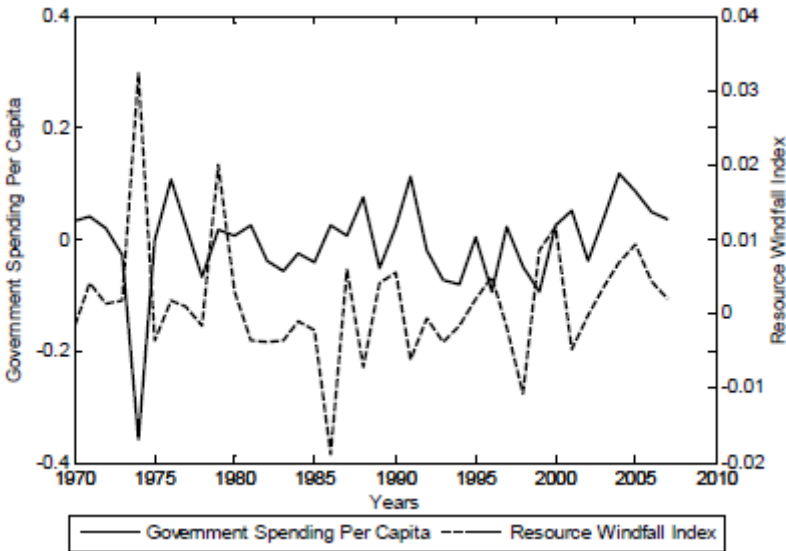


Figure 9. Government spending in Venezuela. Reprinted from “Resource windfalls, macroeconomic stability and growth: The role of political institutions” by R. Arezki, K. Hamilton and K. Kazimov. 2011, Washington DC: International monetary fund (IMF)

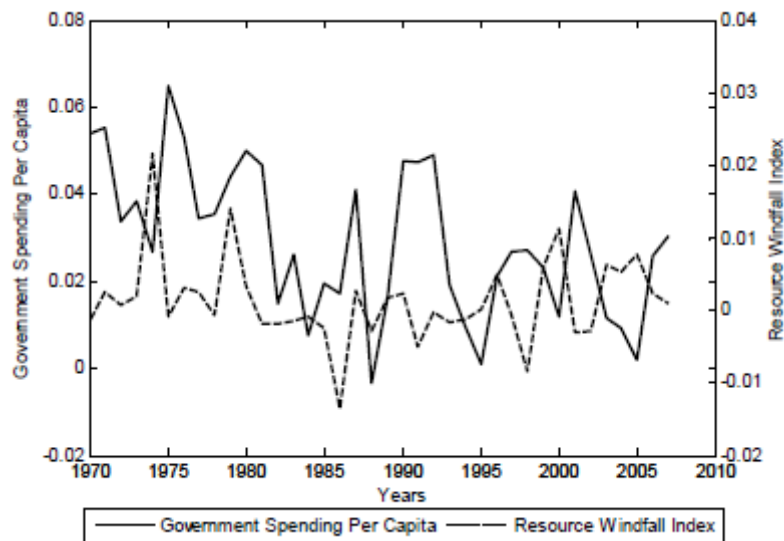


Figure 10. Government spending in Norway. Reprinted from “Resource windfalls, macroeconomic stability and growth: The role of political institutions” by R. Arezki, K. Hamilton and K. Kazimov. 2011, Washington DC: International monetary fund (IMF)

5.4.4. Resource funds

Ghana

After the discovery of oil, Ghana found it beneficial to set up a Sovereign wealth fund. Following debates on how to reap the benefits of the newly discovered oil resources and avoid the resource curse that tend to follow, the Ghana Petroleum Funds were founded in 2011. The Ghana Petroleum Funds is divided in to Ghana Stabilization Fund (GSF) and Ghana Heritage Fund (GHF). GSF was established to support fiscal stability by smoothing out deficits in case of unanticipated revenue shortfalls caused by the volatile oil price. GHF is a long term fund made to save funds for future generations after the oil reserves are depleted (Ayensu, 2013). Roles, responsibilities and operational principles of the sovereign wealth fund are defined in the Petroleum and Revenue Management Act 2011 (PRMA) (Chalamish and Opatá, 2012).

According to Chalamish and Opatá the PRMA gives absolute ownership of the petroleum funds to the government of Ghana. Responsibility for investment strategies is given to Ghana’s Ministry of Finance and Economic Planning, while the operational management is

conducted by the central bank. An investment advisory committee provides advice to the Ministry on investment recommendations which published to enhance transparency. Reporting requirements from the PRMA adheres to the guidelines from the Santiago Principles.

The allocation of petroleum revenues is guided by the PRMA. According to Ayensu (2013) a maximum of 70 percent of benchmark petroleum revenue can be used in the budget. Ayensu note that “this predetermined amount is to be approved by parliament as part of the budget and should be based on the absorptive capacity of the economy, prudent macroeconomic management and the medium/long-term national development plan”. GHF and the GSF attract 30 percent and 70 percent, respectively, of the total receipts into the GPFs. Of the revenues not included in the “Annual Budget Funding Amount” 70 percent is transferred to the GSF and 30 percent to the GHF. Numbers from the 2013 Annual Report on The Petroleum Funds presented by Terpkker (2013), Ghana’s Minister for Finance, show that 221 million US dollars have been transfer to the GSF and 95 million to the GHF. Compared to the inflows of the largest sovereign wealth funds like that of Norway, the transfers to the Ghana Petroleum Funds are still small. The estimated value of the Ghana Petroleum Funds as of April 2014 is 450 million US dollars (The Revenue Watch Institute, 2014).

The Revenue Watch Institute, a New York-based non-governmental organization, has found that Ghana Petroleum Funds “feature clear deposit, withdrawal and investment rules, effective oversight, and other essential attributes of good governance”. They found that there was still a lack of public disclosure of external audits and the detailed responsibilities of fund managers and staff, but Ernst & Young have been engaged to conduct an external audit of the funds

Venezuela

SWF Institute (n.d.b) states that Venezuela created the Macroeconomic Stabilization Fund (FEM) in 1998, following advice from the International Monetary Fund. Inflow to the fund mainly comes from profits from the national oil company PdVSA. While the other Sovereign Wealth Funds examined in this analysis have been able to accumulate foreign reserves, the fund has remained empty and inactive since 2003 (The Economist, 2014). Looking at the extremely weak and nontransparent institutions of Venezuela, this is hardly surprising. While Norway’s fund has grown to around 150,000 US dollars per citizen, Venezuela has accumulated debt equal to 7,000 US dollars per person (ibid).

In 2005, Chavez's government founded another resource fund Fondo de Desarrollo Nacional (FONDEN). According to Plummer (2012) 100 billion US dollars have entered FONDEN since then. Pallais (2011) notes that FONDEN operates outside the national budget to fund domestic development projects, like highways, schools, factories and hospitals. The fund is operated without public scrutiny, and is directly controlled by the president and his closest allies. Several sources including, Coronel (2013) and Pallais (2011) claim that FONDEN is one of the main channels of corruption in the government. Investigations reveal that nearly 30 billion US dollars from FONDEN is missing or unaccounted for (Pallais, 2011).

5.4.5. Monetary policy

Ghana

Like in Norway and Botswana, the central bank in Ghana uses an inflation target for its monetary policy. The Bank of Ghana (n.d.) states that the objective of monetary policy is to ensure price stability through low, stable inflation, and support the government's objectives for economic growth and employment creation. Price stability is defined by the government's inflation target, which is currently below 10 percent annual CPI increase. However, this target has not been met recent years. While the inflation has been reduced from around 40 percent in year 2000 (Epstein and Heintz, 2006), it is still a problematic feature of the Ghanaian economy. According to the Republic of Ghana Ministry of Finance (2014) inflation rose during 2013 and has continued to rise up to 14.5 percent in March 2014. The Ministry of Finance argues that the increasing inflation is caused by the removal of subsidies on petroleum prices and utility tariffs as well as pass-through effects of exchange rate depreciation. The stated objectives are similar to those of Norway and Botswana, but the inflation target is considerably higher.

Epstein and Henitz (2006) criticize the focus of reducing inflation to low single digits, a policy that has been imposed on Ghana by IMF and The World Bank in order to be granted funding. Limiting inflation reduce prospects for rapid economic growth and employment generation. Epstein and Heintz suggest an alternative monetary policy that focuses more on promoting employment. Since the Bank of Ghana uses the short term interest rate to conduct monetary policy, the negative impact of increasing the interest rate is problematic. They point

to several adverse effects of interest rate increases, which are particularly detrimental for a country that is struggling with poverty and unemployment. A further discussion of these mechanisms is beyond the scope of this thesis however. The most important concern for Ghana is perhaps that the high cost of credit. According to The Global Competitiveness report 2013-2014 (World Economic Forum, 2014) access to financing is by far the most problematic factor for doing business in Ghana. Increasing interest rates is a great obstacle for the Ghanaian private sector, especially small enterprises (Epstein and Heintz, 2006)

According to Appiah and Adetunde (2011) Ghana's currency, the cedi, was fixed to the British pound before the government pegged it to the US dollar in 1966. Since 1986 the exchange rate policy of the Bank of Ghana has been a managed floating exchange rate. Fiscal deficits and high inflation cause losing competitiveness and signal weak fundamentals of the economy, which has led the cedi to depreciate heavily. The cedi lost 25 percent of its value against the US dollar in 2013, and continues to depreciate in 2014 (Blas, 2014).

Venezuela

Expansionary monetary policy conducted to reduce fiscal deficits (El Universal, 2013) has contributed to high inflation rates, among the highest in the world. The annual rate rose to 57.3 percent in February 2014 (Reuters, 2014).

Venezuela has maintained a fixed exchange rate, where the currency, the bolivar, is pegged to the currency of its most important trading partner; USA. The official bolivar to dollar exchange rate was devaluated from 4.29 to 6.29 in 2013 (Hanke, 2013). Hanke estimates that even after the devaluation, the bolivar was still overvalued by 74 compared to the black market exchange rate. To fight inflation the government of Venezuela pursue intense price control. This policy is unsustainable and problematic however, as price constraints leads to squeezed producer margins and thereby reduced output (Auty, 2009). Christensen (2013) state that "the high level of inflation combined with insane price controls have led to massive food and energy shortages in Venezuela in recent years."

The central banks' inability to maintain price stability is another outcome of the excessive expenditure. Printing more currency to cover deficits is arguably not a sustainable solution to cover fiscal deficits, but the weak institutions undermine long term progress as previously

explained. The economic situation with high inflation and increasing debt is unlikely to improve under the current regime. A regime change will neither bring any more benefits unless the ruling elite is given incentives pursue countercyclical policies.

5.5. Recommendations for Ghana and Venezuela

5.5.1. Policy lessons from Norway and Botswana

Which of the economic policies that have been successfully implemented in Norway and Botswana should Ghana and Venezuela adopt in order to escape the resource curse?

The answers to this research question are tied to institutional features discussed in the previous chapter. Country specific solutions are necessary to study because of different national issues, and varying institutions that affect the ability of countries to successfully implement and maintain generally advocated policies.

- **Building human capital**

Both Norway and Botswana have invested heavily in education. Norway score well in worldwide comparisons. Botswana has achieved enormous results compared to an almost non-existent educational sector in 1966. Ghana and Venezuela have also spent large sums on education, and must continue to prioritize their human capital in order to diversify their economies. The focus has been on expanding enrollment however, and the governments need to balance the objective of universal education with educational quality.

- **Adopt a centralized wage negotiation system**

Norway has succeeded in making manufacturing the wage leader in the labor market, not the resource extraction sector. Productivity increases in the manufacturing sector is institutionalized as the accepted wage increase ceiling. Ghana and Venezuela should encourage large unions of employers and employees in the private sector to consider aggregate interests to avoid unsustainable appreciation of wages.

- **Accumulate expertise and know-how through domestic participation in the resource sector**

Spillover-loss in Norway may have been much lower than in other oil producing countries because of accumulation of domestic know-how and expertise in offshore extraction. This was achieved by letting experienced international oil companies lead in the beginning. After a gradual accumulation of competence, Norwegian firms have been given an increasingly important role, both in extraction and supply of inputs. This has spurred important linkages from oil to different resource industries and through downstream links to processing industries.

Ghana has initiated the same strategy, but with a more ambitious goal of 90 percent participation by 2020. The country must ensure that it manages to avoid cost and risks associated with giving key roles to underqualified domestic companies. In Venezuela, the national petroleum company PdVSA already holds a majority stake in all new and existing oil projects. Venezuela has a long history of petroleum production, but it has not enjoyed the same productive linkages to the rest of the economy as in the case of Norway. As foreign companies are discouraged from investments by the heavy government intervention in the petroleum sector, transfer of knowledge from international companies to the domestic industry will be limited. This may be particularly concerning because the majority of Venezuela's oil reserves is difficult and expensive to extract.

- **Countercyclical fiscal policy**

Norway and Botswana have exercised prudent fiscal policy during boom cycles by paying back debts and saving foreign exchange through resource funds. Resource revenues must be de-linked from public expenditure to avoid unsustainable levels of public expenditure. Both Ghana and Venezuela struggle with fiscal deficits. Ghana faces low revenues from low prices on gold and cocoa. When gold and cocoa prices rise and oil revenues increase it will be important that Ghana follows the prudent fiscal management of Norway and Botswana. A procyclical increase of public consumption during boom cycles will cause dangerous, long term effects for the economic development. Venezuela has vastly increased government spending during a period of high oil prices, and need to tighten fiscal policy to sustainable levels. The electoral cycle may have undermined stabilization policies.

- **Increasing revenue through taxation**

This is as emphasized the benefits of a social contract between the government and its citizens in resource-rich countries, where citizens forego some rights and income in order to hold the government accountable for the provision of public goods and services. Norway's tax system is characterized by high rates, but the oil sector is particularly high taxed to make sure Norway reaps a large share of the oil revenues generated. Taxation is viewed as stable and transparent however, which increase the attractiveness investments from international oil companies. Botswana on the other hand has relatively low tax rates, but a vigorous tax administration has ensured that revenue targets have always been surpassed.

Ghana has managed to double tax revenues' share of GDP between 1990 and 2005. However, revenue collection remains a major challenge for Ghana's oil management. Venezuela has also low tax rates. Non-oil taxation is minimal. Increasing tax rates may be necessary to restore fiscal balance and achieve sustainable growth.

- **Accumulate wealth in a transparently managed fund.**

Accumulated assets can then be used to fuel demand during bust cycles to avoid prolonged recessions and debt overhang, save wealth for future generation and easy transition when scarce resource become depleted. All the countries in this comparative analysis have established Sovereign Wealth Funds, but only Norway and Botswana has been able to accumulate significant assets so far. The Norwegian Pension Fund in particular has been hailed for its good governance and transparent investments.

Ghana's newly founded funds are found share these traits, as well as the same structure and division of roles as both Norway and Botswana's funds. The country should ensure that an increasing share of resource rents enters the funds as commodity prices increase and petroleum production grows. Venezuela's Sovereign Wealth Fund however, is characterized by lack of transparency, and the government has failed to accumulate any assets despite enormous oil revenues. The current institutions make it unlikely that this will change without large reforms.

- **Adopt strict fiscal rules for distribution of resource rents**

Norway has the so-called "spending rule" which aims to reduce expenditure pressure and insulate the budget from oil price volatility. The fiscal rule guarantees that the Norwegian Pension Fund Global will never be reduced in expected terms. Botswana use a Sustainable

Budget Index (SBI) based on the Hartwick rule to monitor how well revenue from mining is reinvested in the national budget. Resource rents can be invested in public sector capital (infrastructure), human capital (education and health care) and in foreign financial assets. By substituting all resource rents with productive investments, wealth will theoretically never decline.

The Distribution of oil rents in Ghana is guided by legislation, but the majority is allowed to supplement the budget. Venezuela's resource rents are poured into both the ordinary budget and FONDEN projects. Both countries need to restrict spending of resource rents, and view resource extraction as asset sales rather than value added in production. Resource rents that do enter the budget should be invested in capital that is capable of stimulating growth.

- **Balancing monetary policy objectives of price stability with high economic growth and employment creation.**

Norway and Botswana have successfully managed to maintain a monetary police with a low, a low, stable inflation target, while at the same time achieving high grow rates. Norway in particular, has been able to keep unemployment low as well.

The Bank of Ghana states the same objectives, but the country has not been able to keep inflation equally low. The relative poverty level and infrastructural needs of Ghana, means the urgency of rapid economic growth and employment generation is higher than in Norway and Botswana. Limiting inflation by increasing interest rates too much will have great high consequences for the Ghanaian private sector, which is already struggling with lack of access to affordable credit.

Venezuela's inflation is among the highest in the world and needs to be contained for domestic companies to regain international competitiveness. The expansionary monetary policy cannot continue. The government needs to reduce fiscal deficits by cutting expenditures and raise taxes, instead of expanding the monetary base. Economic growth and employment will suffer, but due to high petroleum prices there is no better time to restore fiscal balance.

5.5.2. Social and political reforms necessary to avoid the resource curse

This part seeks to answer the fourth research question:

- *Are social or political reforms needed to avoid the resource curse in these countries?*

As presented in the theoretical framework and further discussed in the analysis, institutional quality is instrumental for the ability of resource-rich countries to successfully implement and maintain policies that promote sustainable growth. Without transparency, accountability and a strong rule of law, producers will pursue rent-seeking instead of productive activities and the ruling elite will have incentives to increase and maintain power through patronage.

- **Ghana**

In light of the newly discovered oil revenues, the maturing democratic government of Ghana has implemented policies successfully followed by the likes of Norway and Botswana. Institutional quality in Ghana is still weaker than in Norway and Botswana, but developments are positive. If the country is able to continue the path of political stability and increase transparency further, there should be no need for drastic social or political reforms in order to avoid the resource curse. Research shows that presidential regimes are inferior to parliamentary democracies in term of promoting growth. The country may therefore benefit from adopting a parliamentary democracy instead. Furthermore, the importance of cultural differences like Norway's egalitarian values and Botswana's traditions of involving the civil society, are difficult to determine, but the culture in these countries has undoubtedly influenced developments in a positive way. Both Ghana and Venezuela would benefit from institutions that reflect such values.

- **Venezuela**

Unlike in Ghana, many of the policies suggested to escape the resource curse are unlikely to be implemented and maintained because of extremely weak institutions. Equilibrium forces will most likely inhibit increased transparency and accountability as regimes maintain power through patronage. The underlying incentives of the ruling elite must be changed, so that they are aligned with the long term interest of the population.

Similarly to Ghana, Venezuela has a presidential type of democracy. Presidential regimes with proportional voting systems are found to be particularly corrupt, as they are associated

with lack of accountability and dysfunctional policies. Adopting a parliamentary democracy with a majority rule voting system, will likely increase institutional quality. As the electoral cycle of Venezuela leads to short term policy horizons and unwillingness to reduce public expenditure, the prospects for sustainable growth are low. This problem would be solved by abolishing democracy. An autocracy brings other negative consequences however, but a further discussion of this proposal is beyond the scope of this thesis.

5.5.3. Possible generalizations

Can these findings provide some general guidelines for resource-rich developing countries? Although the number of comparative cases in this study is limited to four, it seems evident from the literature study, and the comparison of institutions in the four countries, that institutional quality must be high to successfully manage resource wealth. This is seen from the diverging growth rates and institutional levels of the successfully countries and the vulnerable countries, particularly between Norway and Venezuela.

Diversification through investments in human capital and focus on keeping the non-resource sectors competitive is important for all resource-rich countries dependent nonrenewable resources that will eventually be depleted. The possibility of creating spillover effects to other sectors seems largely dependent on the individual characteristics of the resource sector. While Botswana has successfully managed its resource rents in most ways, it has not managed to create productive linkages between mining and other sector of the economy. Developments in the Norwegian offshore industry created technological developments beneficial for both other resource sectors and downstream industries, but the mining sector of Botswana do not share the same requirements for innovative technologies.

A major finding in this thesis is the importance procyclical government spending, exemplified by both Norway and Botswana. Prudent fiscal and accumulation of foreign reserves during boom cycles should be applied by all countries dependent on volatile commodity prices. On the other hand, a general recommendation for exchange rate policy is difficult to argue for, given the seemingly successful management of both a floating exchange rate in Norway and a fixed exchange rate in Botswana.

Chapter 6

CONCLUSION

This comparative study has reviewed institutions and economic policies in two countries that have successfully managed to avoid the resource curse, and two countries that remain vulnerable to the resource curse mechanisms. Norway and Botswana are often hailed as examples of countries that have managed their resource wealth well. Previous studies and expert opinions, as well as survey data, show that institutions of these countries are considerably better than those of those of the vulnerable countries; Ghana and Venezuela. While Ghana ranks average on the surveys gathered by the Worldwide Governance Indicators (2013b), Venezuela ranks among the worst in the world in all dimension of good governance, particularly in control of corruption, regulatory quality and rule of law. Rossi (2011) emphasize that the economic framework is founded on patronage instead of economic fundamentals.

All countries have aimed to diversify their economies, but only Norway is found to have some success in this area. Larsen (2004) argue that Norway has managed reduce spillover-loss effects from accumulation of offshore competencies, it has managed to make the manufacturing sector the wage leader and has been able to build high levels of human capital. The governments in the four countries have all been strongly involved in the resource sectors, but Venezuela is found to have scared off foreign companies through heavy government intervention for instance by expropriation of companies in key sectors.

Fiscal policy is found to be countercyclical and very prudent during boom cycles in both Norway and Botswana. Venezuela on the other hand, has exemplified bad fiscal management by its strong procyclical expenditure, leading to unsustainable public consumption, debt overhang, and thereby high vulnerability to falling petroleum prices. All the countries compared have established resource funds to stabilize the economy and save for future generations. The Norwegian fund is by far the largest, and is praised for transparent management. The other countries have not managed to accumulate as much wealth. Ghana's fund is newly established after the discovery of oil reserves, but initial reports by The

Revenue Watch Institute (2014) claim that it is being managed well. Venezuela's Sovereign Wealth Fund FEM, stands as an example of the government's failure to promote policies that create sustainable growth. According to The Economist (2014) it has been empty and inactive since 2003.

Norway, Botswana and Ghana have all pursued a monetary policy of keeping price stability through low, stable inflation. They have aimed to maintain a competitive exchange rate tied to fundamentals. Despite high oil prices, Venezuela's monetary policy has been expansionary recent years to cover fiscal deficits. Inflation has soared, but instead of devaluating the overpriced fixed exchange rate, the government has opted to intense price controls, which cause undersupply of domestic goods and services.

The comparative analysis of institutions and policies provides a foundation to suggest lessons Ghana and Venezuela can learn from the management of resource revenues in Norway and Botswana. Possible solutions are strategies that Norway implemented to diversify its economy, procyclical expenditure through prudent fiscal management during boom cycles and increased taxation, transparent distribution of resource rents and Sovereign Wealth Funds, and monetary policy that balances objectives of price stability with high economic growth and employment creation.

Ghana's management democratic development and resource management recent years, suggest that no drastic social or political reforms in order to avoid the resource curse. Venezuela on the other hand, needs to change the underlying incentives of the rule elite to achieve sustainable growth. While democratic accountability is found to promote good economic policies in Norway, Botswana and Ghana, the combination of oil production and democracy may actually turn into a curse in Venezuela.

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