Surviving the resource curse

An interdisciplinary study of Botswana and Norway

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Introduction

Jeffrey Sachs calls it "one of the surprising features of modern economic growth": economies having an abundance of natural resources have a tendency to grow less quickly than those deficient in natural resources (Sachs, 1995) In his influential work *Sustaining Development in Mineral Economies: The Resource Curse Thesis* Richard M. Auty coins the term resource curse to describe the paradox of plenty. He says:

> *"Not only may resource-rich countries fail to benefit from a favourable endowment, they may actually perform worse than less well-endowed countries."*

The resource curse phenomenon has been researched extensively. The scope of this research is broad; researchers may focus on a specific country, a specific transfer channel through which the curse works, compare different countries where the curse is observed et cetera. In either of the aforementioned types of papers, scholars specifically point to a handful of special cases. These include the tedious examples like Nigeria where natural resources are very abundant, but sustainable growth lacks completely. On the other end of the spectrum we find examples like Botswana and Norway that have done relatively well. This observation is what brings us to our research question: *how come Botswana and Norway both successfully averted the resource curse?*

Aim and method

In this study we aim to identify relevant insights on the subject of the resource curse from both an economic and political perspective. Thereby we specifically focus on two special cases where policymakers have successfully overcome this phenomenon: Botswana and Norway. By reviewing the available literature we provide insights into the numerous manifestations of the resource curse and present two success stories from which we derive what is needed to avert the curse.

We think it best to approach the resource curse in an interdisciplinary manner. The resource curse is a complex problem. Explaining it from a political point of view would require a focus on institutions whereas conflict theorists primarily focus on the predation of natural resources by violent groups. Moreover, economists concentrate on production factors, endowments and resource rents. Evidently, the problem is addressed by various disciplines and each of these offers their own insights. Up until this time none of these disciplines has been able to give a comprehensive explanation of the resource curse. This puts the subject of the resource curse on the juncture of our relevant disciplines: economics, political history, international relations and conflict studies.

Structure of this study

In our study we focus on the following research question: *how come Botswana and Norway both successfully averted the resource curse?* We answer this question from the perspective of economics and political history, international relations and conflict studies. Both perspectives are discussed in separate chapters where we focus specifically on the success stories of Botswana and Norway. After that follows an integrative chapter in which we identify differences in disciplinary insights and establish a common ground. We then use this common ground to come to, what the interdisciplinary scientist Allen Repko (2008) calls a 'more comprehensive understanding'. This more encompassing view incorporates the disciplinary insights and provides a broader approach to our research subject, the resource curse. In this section we answer the main research question. We conclude with an evaluation of our research process and a suggestion for future research.

What is the resource curse?

Definition

Even though there is a growing body of literature and empirical analysis on the subject of the resource curse, a formal definition of the concept does not exist. All studies however, describe the phenomenon as a negative relation between resource abundance and lower than average economic growth. In their influential paper *Natural Resource Abundance and Economic Growth* economists, Jeffrey Sachs and Andrew Warner introduce the resource curse as follows:

"On average, countries with a high value of resource-based exports to GDP tend to have a lower growth rate. (...) The oddity of resource-poor economies outperforming resource-rich economies has been a constant motif of economic history." (Sachs & Warner, 1995)

Notably, Sachs and Warner choose not to specify the level of resource-based exports or growth rate but do point to the relevance of this counterintuitive phenomenon in the economic era.

It is important to note that the literature on the resource curse interchangeably refers to the relative abundance and/or dependence on natural resources. However, there is a difference between abundance and dependence. Countries that are natural resource abundant, own a relatively large quantity of natural resources. Resource abundance is an indication of a county's (potential) wealth. In resource dependent countries, a relatively large share of their GDP results from these resources. Resource dependency is an indication of a country's degree of economic diversification.

Importantly, it is not an abundance of natural resources per se that harms economic growth. In their study Papyrakis and Gerlagh (2004) find that excluding negative indirect effects results in a positive relation between natural resources and economic growth. However, if they include variables such as corruption, investment, openness, terms of trade and schooling, the relationship becomes negative at a 1% level of significance (Papyrakis & Gerlagh, 2004). This indicates that the transmission channels are the key to the resource curse.

Examples of the resource curse

There is a large variation in resource dependency in the world. Some countries own barely any natural resources, whereas other countries are very reliant on them. The World Bank dataset for 2012 shows that total natural resource rents as percentage of GDP is highest for the republic of Congo and lowest for countries like Malta, respectively 73,4% and 0%.

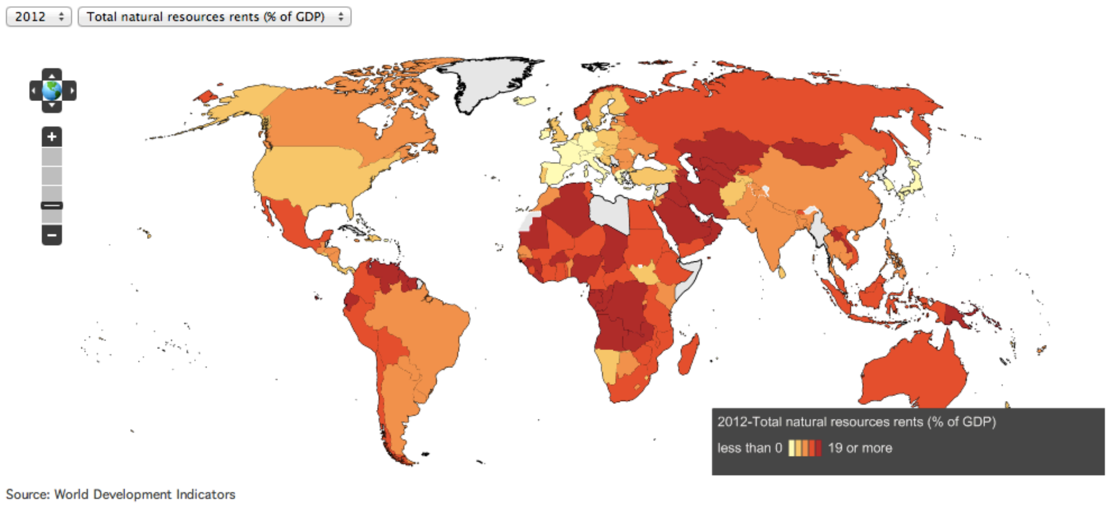


Figure 1: Natural resource rents as percentage of GDP in 2012

Obviously, not all of the resource dependent countries above have lower than average economic growth but there are numerous examples of a resource curse. In his article *Natural resources: curse or blessing* Van der Ploeg names Nigeria as one of the most 'dramatic' examples of the resource curse. He writes:

> *"Oil revenues per capita in Nigeria increased from US$ 33 in 1965 to US$325 in 2000, but income per capita has stagnated at around US$1,100 in PPP terms since its independence in 1960 putting Nigeria among the fifteen poorest countries in the world."*(Van der Ploeg, 2011: 367)

Although most countries that endure a resource curse are developing countries, the phenomenon is not exclusively limited to developing nations. Greenland suffers from another issue of resource curse: appreciation of the real exchange rate and rent seeking (Van der Ploeg, 2011: 368). Additionally, Van der Ploeg mentions both cases Botswana and Norway:

> *Forty per cent of Botswana's GDP stems from diamonds, but Botswana has managed to beat the resource curse. (...) The Botswana experience is noteworthy since it started its postcolonial experience with minimal investment and substantial inequality. (...) Norway is the world's third largest petroleum exporter after Saudi Arabia and Russia, but is one of the least corrupt countries in the world and enjoys well-developed institutions, farsighted management and market friendly policies.* (Van der Ploeg, 2011: 368)

General 'transmission channels' for the curse

There are several ways for the abundance of natural resources to result in lower than average economic growth. We follow Papyrakis and Gerlagh (2004) in naming them 'transmission channels'. We opt do divide them roughly in four classes: Dutch disease, bad quality of policy, volatility of resource rents and rent-seeking, corruption and conflict. In the next section, we will discuss all four of these transmission channels and look at Norway and Botswana to deduce their relevance in those cases. Other scholars suggest there are other phenomena besides the aforementioned four that may restrict economic growth. We shortly take notice of them in the next paragraph.

Transmission channels that are beyond the scope of this study

The relation between lower than average economic growth and natural resources may be a representation of a 'resource drag'. Torres, Afonso and Soares (2013:7) point to research that suggests that the resource sector may simply be a sector with a low productivity. Economies characterized by a great dependency on this sector may thus show relatively slower growth. Additionally, Frankel (2010:5) suggests the Prebisch hypothesis, which reasons that the demand for primary products is relatively inelastic to world income. In other words, an increase in world income will lead to lower than 1:1 increase in demand for commodities, which will lead to lower growth. However, these suggestions fail to explain how Norway, a country that relies heavily on its resources, still exhibits substantial growth.

The abundance of natural resources may also impede economic growth through oversight of education. According to Gylfason, nations may unjustly consider their natural resources to be their paramount asset and as a result be 'blind to the need for educating their children'. Again, Botswana is a remarkable exception in this case: "Its expenditure on education relative to income continues to be among the largest in the world". (Gylfason, 2001: 850-851)

The intrinsic value of the natural resources may instigate policy makers to borrow using their resources as collateral. Manzano and Rigobon (2001) suggest the resource curse may be a result from 'debt overhang' from excessive borrowing rather than the natural resource abundance alone. They state that countries that borrowed on financial market during the 70s became pray to falling commodity prices during the 80s. This in turn made it difficult for them to roll over their debt. Increased credit constraints then took their toll on economic growth. The resource curse thus may be a result from credit market imperfections. (Manzano & Rigobon, 2001:25-26)

Resource abundant countries may be less inclined to encourage openness of its economy. The resource abundance supposedly reduces the dependence on trade so that countries are more inclined to restrict it, thereby reducing the gains of trade. (Capellen & Mjoset, 2009)

Criticism on research methods

At this point we find it necessary to mention that most of the findings in the resource curse literature are based on regression analysis. However, researchers use a myriad of available data and several empirical approaches to come to their results. At best this makes comparison of the outcomes difficult (Torres, Afonso & Soares, 2013:14) but it also hinders our interpretation of the results. Brunnschweiler and Bulte among others mention possible endogeneity problems. There is evidence to suggest that variables like income (as a measure of economic growth) or even resource dependency should not be treated as exogenous explanatory variables. (Brunnschweiler & Bulte, 2008:249 ; Haber & Menaldo, 2011:4 ; Torres, Afonso & Soares, 2013:7-8 ; Van der Ploeg, 2011: 380).

The transmission channels of the resource curse

Dutch disease

Definition and explanation

The expression ‘Dutch disease’ refers to the appreciation of the real exchange rate due to the export of natural resources, thereby reducing the competitiveness of other sectors. When the Dutch found natural gas in Slochteren and started exporting it, their real exchange rate appreciated which in turn reduced the competitiveness of the Dutch manufacturing sector. (Van der Ploeg, 2011: 374-375) Economists Cordon and Neary explain this phenomenon in their influential paper *Booming Sector and De-industrialization in a Small Open Economy* (1982).

In their model, Cordon and Neary identify two effects that are triggered by a resource boom. First of all, the boom increases demand for production factors to be employed in the resource sector. The latter sector attracts factors from both the non-traded and other traded sectors, an effect called the ‘resource movement effect’. (Corden & Neary, 1982: 828 ; Van der Ploeg, 2011: 377). Corden and Neary immediately point out this effect may be rather insignificant, since the resource sector exploits relatively few resources that can be drawn from the rest of the economy. The biggest impact of the resource boom results from the ‘spending effect’. The revenue obtained from the resource sector increases real income, which in turn increases boosts consumption and output, also in the non-traded goods sector. In contrast to traded goods, the price of non-traded goods is not set internationally and can thus increase. This results in an appreciation of the real exchange rate.

How may the transmission channel of Dutch disease lead to the resource curse?

The Dutch disease reduces competitiveness of other domestic sectors, which reduces growth. The appreciation of the real exchange rate renders the sectors exporting traded goods less competitive. We presume the traded sector to be an engine of growth and a deterioration of competitiveness may leave the sector unable to fully recover when resources run out. (Van der Ploeg, 2011: 373)

Furthermore, other positive externalities such as learning by doing are hindered when employment in the traded sector is reduced. (Gylfason, 2001: 856; Van der Ploeg, 2011: 378-379)

The Dutch disease decreases the competitiveness of the export sector, thereby reducing growth. In their series of papers on the subject Sachs and Warner primarily focus on export-led growth. The appreciation due to the extraction of natural resources leaves other export sectors less competitive and consequently hinders economic development. (Sachs & Warner, 2001: 835).

The Dutch disease reduces economic growth through the 'disincentive for entrepreneurship'. Wages in the resource sector may surge to such levels that potential entrepreneurs and innovators become employees instead of pursuing their search for new economic activity. (Sachs & Warner, 2001: 837)

Scholars seem to disagree on the interpretation of empirical support for the Dutch disease. In their selective literature review on the resource curse Torres, Afonso and Soares write:

> *The empirical evidence does not provide great support for the Dutch Disease as an explanation of the resource curse (e.g., Leite and Weidmann, 2002; Sala-i-Martin and Subramanian, 2003). The case study led by Auty (2001a) also dismisses this thesis by showing the complexity and diversity of cases among natural- resource abundant countries, including several exceptions to the curse such as Norway, which has seized its oil abundance to become a rich country. (Torres, Afonso & Soares, 2013: 3)*

However, the influential economist Van der Ploeg presumes there to be substantial backing for the Dutch disease hypothesis. In *Natural Resources: Curse or Blessing?* He writes, "The macroeconomic and sectorial evidence thus seems to offer support for Dutch disease effects". (Van der Ploeg, 2011: 378) Nonetheless, in that same article Van der Ploeg alludes to various other possible causes for the resource curse. We therefore feel at liberty to say that the Dutch disease is presumably not the sole cause for the observed manifestations of the resource curse.

Solutions to the Dutch disease

Since the Dutch disease is essentially a problem of appreciation, it can be prevented or in the least subdued by reducing the demand for the domestic currency. This can be done through sterilization (the monetary authorities intervening in the money market to influence the exchange rates) but also by saving abroad. Putting away money denominated in a currency other than the domestic currency reduces the demand for the domestic currency and thereby reduces appreciation. As circumstances will have it, saving abroad is also the key to reducing the spending effect.

The factor movement effect is not reduced by saving abroad, it may be addressed with policy that limit exorbitant wage increases.

The reduced competitiveness may be directed at stimulating competitiveness of other sectors than the resource sector, investing in education and technology or protecting the lagging sectors. With regard to the Dutch disease the case studies of Norway and Botswana provide insights in preventing the Dutch disease.

Dutch disease in Norway

During the first phases of oil extraction, the Norwegians used the revenues to pay off their public debt. However, as oil extraction increased and Norway shifted from their debtor to a creditor position, increased pressure was put on their currency. In 1990 the Norwegian government established the Norwegian Petroleum Fund. (Larson, 2005: 82) In 2006 this fund was renamed The Government Pension Fund – Global, but to avoid confusion of this fund with the National Insurance Scheme Fund (which was renamed The Government Pension Fund – Norway), we will remain referring to the initial name of the fund.

Recall that the Dutch disease works through a spending effect and a factor movement effect. The spending effect increases the real exchange rate because of an increase in aggregate demand and reduces competitiveness of other sectors. In the case of Norway, about 80% of the resource rents were taxed away and put in the fund. (Gylfason, 2001: 851) This meant the revenues did not flow back into the Norwegian economy directly, thereby preventing the increase in aggregate demand. According to Van der Ploeg (2011L: 377), saving a greater fraction of revenues will decrease initial appreciation of the real exchange rate and eventually reverse it. Furthermore, since the fund is denominated in foreign currencies and invested in international capital markets, the Krone remained stable. (Capellen & Mjoset, 2009: 11-12) In addition, the competitiveness of other sectors was affected less than theory would suggest because historically the Norwegian resource-based industries were integrated with other parts of the economy. (Capellen & Mjoset, 2009: 20)

Neither the taxation scheme or the fund prevents the factor movement effect, but this effect is presumably relatively small due to the capital-intensive nature of the resource sector. Still, Gylfason notes that oil exports have crowded out the non-oil exports 'Krone for Krone' leaving total exports relative to income idle. This inertia is observed only for one other OECD country: Iceland, 'which derives almost half its export earnings and one-ninth of its national income from fish'. (Gylfason, 2001: 851).

Dutch disease in Botswana

Still, there is little evidence of a Dutch disease in Botswana. The factor movement effect is very limited since the main resource sector (diamonds) employs just about 8000 workers. (IMF, 2007: 63) However, Mogotsi (2002: 138) argues that the (small) movement of skilled labor to the new resource sector left their previous spaces open for less skilled laborers, thereby reducing productivity in the other sectors. Spending effect is limited too, since part of the resource revenues are invested abroad (Pegg, 2010: 15) and although there has been considerable spending, this has mainly been used for investment and capital expenditures. Just like in Norway, investment of resource revenues is done through investments in funds. The success of the Development Fund not in the least due to its technology driven coordination instead of politics. To curb the spending effect, policy makers established the Public Debt Service Fund, where it saves revenues. Additionally Revenue Stabilization Fund provides another buffer to be used in bust periods. (Pegg, 2010: 15-17)

Monetary policy is a troublesome subject for the Botswana government since it faces a tradeoff between the US dollar and the South African rand. On the one hand, South Africa is one of Botswana biggest trading partners because imports consist of 75% South African goods and services. On the other hand, the Botswana exports are centered on diamonds, which are priced in US dollars. Pegg cites Leith (2005: 78) by saying that "given the movement of the rand/dollar exchange rate, it was not possible for the pula to remain stable against both the rand and the dollar". Given these difficulties, it seems like Botswana has prevented the Dutch disease through appreciation relatively successfully.

Bad policy

Definition and explanation

Bad policy may be regarded as a catchall phrase for any inefficient performance by governments and policy makers. Natural resources in themselves are a source of wealth, but non-renewable resources are by definition not replaceable. The extraction of natural resources, if not managed properly can logically make a country worse off.

How may the transmission channel of bad policy lead to the resource curse?

Politicians finance projects that cannot be finances once the revenues dry up. Politicians are faced with (re) election in a democracy. In the face of an abundance of natural resources, they may use the resource rents and invest in low-return and/ or overambitious projects. (Meija & Castel, 212: 3)

An abundance of natural resources may give governments a false sense of security. As we stress in this study, these resources may be a source of prosperity but a thorough management and an adequate institutional framework is essential if these resources are to be put to effective use. Unfortunately, some policy makers fail to see this importance. Gylfason writes:

"Incentives to create wealth tend to become too blunted by the ability to extract wealth from the soil or the sea. Rich parents sometimes spoil their kids. Mother Nature is no exception." (2001:850)

The false sense of security could encourage inefficient or even unnecessary investment, keep policy makers from reforms or even stimulate them to build a welfare state, which is infeasible without the receipts from the often non-renewable natural resources. (Cappelen & Mjoset, 2009: 20; Van der Ploeg, 2011: 392)

A government's disregard of the manufacturing sector may lead to lower economic growth. The influential model established by Matsuyama (1992) found that the manufacturing sector is characterized by learning by doing (increased productivity through practice) whereas the primary sector is not. Policy that would stimulate the primary sector (including the commodity sector) deliberately over the manufacturing sector, reduces economic growth. (Frankel, 2010: 13)

Poor quality of institutions reduces economic growth. When institutions sector adequate in a sound management of resources, the benefits of these resources may not be reaped. Some researchers treat institutional quality as an endogenous variable, e.g. they evolve and improve in response to the level of income. (Frankel, 2010: 13-14).

Moreover, the lack of effective property rights and high transaction costs may result in lower than potential production, reducing economic growth. (Van der Ploeg, 2011). Finally, being assured of a steady flow of income from natural resources, policy makers may become inattentive to investment in innovation, R&D and education (Cappelen & Mjoset, 2009).

Improving policy

A forward-looking policy with regard to natural resource management is vital in maintaining sufficient economic growth. During the extraction phase, development of the resource potential lies with appropriate policies (Van der Ploeg, 2011). In the light of diminishing resource volume, technical progress in 'exploration, extraction and substitution' increases rents.

When government oversight is weak, privatization of reserves may be a solution as suggested by the American success-story in the early 20th century. Van der Ploeg writes: "In 1913, the United States was the world's dominant producer of virtually every major industrial mineral even though other countries initially seemed to have more mineral reserves." (Van der Ploeg, 2011) Capellen and Mjoset (2009) confirm this notion and stress the importance of learning and the establishment of a knowledge industry.

Policy in Norway

Norway has a long history of a stable political situation and an even distribution of income (Capellen & Mjoset, 2009). Already since the 19th and 20th century, the Scandinavian countries exported natural resources such as timber and fish. So called 'concession laws' secured the authority's control over certain resources and stimulated cooperation between national and foreign corporations focused on obtaining engineering knowledge (Capellen & Mjoset, 2009). This, Capellen and Mjoset claim has 'spread both the benefits and the costs of world market integration to large part of the economy and society'. The available institutional framework thus assured an egalitarian distribution from resource rents. (Cappelen & Mjoset, 2009; Gylfason, 2001)

Policy in Botswana

Botswana's policy is a story of relative success. Clearly, living conditions in this African country still fall below those in developed countries, but policy makers have managed their country in a surprisingly modern way. The government has been praised for the quality of its governance, the political stability and strong fiscal discipline (Leith, 2000).

Policy makers did not fail to notice the non-renewable characteristics of their resources and opted for long-term sustainable growth policy. Meijia and

Castel (2012) identify policy measures that prevented the resource curse in Botswana. First, the Botswana government strongly engages in policymaking aimed at economic diversification. They did not fail to notice that what they call 'inherited wealth' (resources) only lasts a limited time but that 'created wealth' could be a long-term stimulant. They identify restrictions on diversification, stimulate growth-enhancing projects and try to develop the non-mineral sectors too. In addition, policy makers aim at creating a business-friendly environment, stimulating business development and stimulating stability in the financial sector. Last but not in the least, Botswana knows sustainable fiscal policy that prevents exorbitant spending. Just like in Norway, the Botswana government has built a fund.

Volatility of resource rents

Definition and explanation

The volatility of resource rents refers to the large fluctuations in prices that characterize the global commodity market. Natural resource rents are especially volatile due to the low price elasticity of supply. A small change in demand causes a large change in price to equalize supply and demand. (Frankel, 2010; Van der Ploeg, 2011). Especially in countries that are very dependent on the revenues generated by their natural resources, price volatility may result in large income fluctuations and a problematic macroeconomic management (Meijia & Castel, 2012:2)

How may the volatility of resource rents lead to the resource curse?

There is a difference in the volatility effect for resource abundant countries and resource dependent countries. Brunnschweiler and Bulte (2008) conclude that resource dependence shows a negative relation to economic growth resource abundance is positively related. Econometric analysis by Van der Ploeg and Poelhekke suggests that developing countries have a more volatile output growth that developed countries, that those countries with poorly developed financial systems are more volatile, so do resource dependent countries and landlocked countries. In their article Van der Ploeg and Poelhekke point to research done by Koren and Tenreyro (2007) who stress that poor countries are more vulnerable through specialization, less diversification, more frequent and severe economic shocks and more macroeconomic fluctuations.

Volatility of rents may result in liquidity constraints, thereby reducing growth. Van der Ploeg and Poelhekke suggest that the fluctuations in the nominal exchange rate reduces access to liquidity and that real exchange rate volatility increases domestic credit market constraints. This reduces potential innovation and growth, especially when financial systems are poorly developed. (Van der Ploeg & Poelhekke, 2009: 735).

Offsetting volatility

Volatility of rents is essentially a problem of uncertainty. Policy makers can resort to stabilization measures and saving policies to build financial buffers that function as a cushion for economic shocks. Furthermore, efficient financial markets are better equipped to monitor and assess risk and offer a better insurance against shocks. Also, a diversified economy is less exposed to the effects of volatility because the broader range of production can accommodate the shocks (Leong & Mohaddes, 2011; Van der Ploeg, 2011)

Well-developed financial systems reduce the volatility effect. Van der Ploeg and Poelhekke find that countries whose financial systems are of good quality face a smaller influence from exchange rate volatility. Saving and stabilization improve the efficiency of financial markets. (Van der Ploeg & Poelhekke, 2009: 729-736)

Through the phases of economic development, countries move from production that is more volatile to more stable production sectors. Specialization decreases over time and country-specific macroeconomic shocks occur less frequent. (Van der Ploeg & Poelhekke, 2009: 732-733).

Institutional quality may offset the negative growth effects of rent volatility. Leong and Mohaddes perform regression analysis to calculate the effect of rent volatility on economic growth. Theory suggests that the quality of a country's institutional framework may offset the negative effects of volatility. Running their regressions with an included interaction term between resource rent volatility and institutional quality suggests that the total impact of rent volatility is indeed increasingly negative the lower a country's institutional quality. (Leong & Mohaddes, 2011: 7). Thereafter they estimate the minimum institutional quality required to turn the marginal effect of volatility to zero. They base their regressions on the Fraser index which is scaled from 0 to 10, 0 being the lowest institutional quality and 10 the highest. Their estimation provides a minimum value of 5,82 to offset the consequences of resource rent volatility. To put this number in perspective they show that no country besides the OECD countries has an institutional quality above this threshold. (Leong & Mohaddes, 2011: 8)

Volatility of resource rents in Norway

Cappelen and Mjoset claim Norway has developed institutions that are able to handle external economic shocks. In addition to the buffer in the Petroleum Fund, this has a stabilizing effect on the Norwegian economy. Oil revenues are invested in international capital markets, thus reducing exposure to the volatility of commodity prices. (Cappelen & Mjoset, 2009) Steadily, Norway has even displaced spending resource revenues with spending only the returns from the fund (Cappelen & Mjoset, 2009).

Volatility of resource rents in Botswana

According to Pegg, Botswana faces a relatively stable revenue flow from its natural resources, although periodically rents have fluctuated significantly. (Pegg, 2010: 15). However, because the rents are collected in the savings funds, public expenditure and resource revenues are not directly linked. The funds have functioned as a cushion and subdued the volatility effects. (Lewin, 2011: 83)

Rent-seeking, corruption and conflict

Definition and explanation

Rent-seeking refers to a situation where people increase revenue directed towards themselves, without adding to the production value. In the existence of resource rents, "imperfect markets, and poorly functioning legal systems provide ideal opportunities for rent seeking behavior of producers, thus diverting resources away from more productive activities" (Van der Ploeg, 2011: 388). The reallocation of resources to less productive destinations reduces productivity and output, and thereby economic growth.

How may the transmission channel of rent-seeking, corruption and conflict lead to the resource curse?

Rent-seeking reduces return on investment. The economist Torvik (2002) mentions research by Lane and Tornell suggesting that when productivity increases, powerful groups may exert themselves to acquire a greater share of this productivity. The rents obtained by these groups cannot flow to the actual producer of these rents, thereby reducing return on investment, which in turn reduces economic growth. This way, growth from increased productivity may be offset by this 'redistribution effect'. (Torvik, 2002: 456)

High-rents stimulate corruption. Especially in countries with extractive resources with high return, people are motivated to capture ownership instead of promoting equality (Frankel, 2010:15). Others suggest the easy access to rents from natural resources creates a situation where governments are not dependent on their tax base for income. This in turn absolves them from the need for democracy. However, according to Frankel evidence to back this claim is at best mixed.

Rent-seeking, through grabber-friendly institutions, leads to lower growth. In their famous article Mehlum, Moene and Torvik (2006) investigate the difference in institutional quality between the winners and losers of economic growth. They find that countries abundant in natural resources may be either winners or losers, depending on having either 'grabber friendly' or 'producer friendly' institutions. When institutional quality is high, the economy will be balanced in a so called 'production equilibrium' where all entrepreneurs are producers. When institutional quality is low, the economy show a 'grabber equilibrium' where some entrepreneurs are producers and some are grabbers (Mehlum, Moene and Torvik, 2006: 7-8). A grabber economy is characterized by the existence of rent-seeking which diverts resources away from more productive activities, thereby economic growth (Van der Ploeg, 2011: 388).

There is a twofold relation between conflict and lower economic growth. Numerous researchers find a negative correlation between economic dependence on oil and conflict. Interestingly, Brunnschweiler and Bulte (2009) argue that conflict increases the dependence on natural resources. Either way, the relation goes there is a negative relation between conflict and lower economic growth.

Dealing with rent-seeking, corruption and conflict.

Stabilization funds can also be used to reduce rent seeking. By providing an open and transparent process for determining how the funds are used, stabilization funds can help prevent and diminish the often-violent conflicts that have so marked resource rich countries. (Stiglitz, 2005: 16)

Economic growth reduces corruption. Although it is difficult to establish that democracy alone stimulates economic growth, one can argue that economic growth leads to democracy through the creation of the middle class. (Frankel, 2010)

Perhaps the most important set of policies are those entailing increased transparency: more information about how the government interacts with those involved in the extraction of the natural resources; the contracts that are signed; the amounts the government received; the amount of natural resource produced; and the uses to which the funds are put. Such transparency reduces the scope for corruption. After all, it is often cheaper for companies to bribe the government of a producing country than to pay market prices for the right to develop a petroleum reserve. Transparency limits the opportunities for corruption. At the very least, questions are raised: why did the government not receive full value for the country's resources?

Rent-seeking, corruption and conflict in Norway and Botswana

Rent-seeking corruption and conflict in Norway seems to be non-existent. As Van der Ploeg puts it: "Norway is one of the least corrupt countries in the world and enjoys well developed institutions, far sighted management and market friendly policies" (Van der Ploeg, 2011). A small indication of rent-seeking may have been the increased pressure on policymakers to spend money from the Fund during the 1990s. In reaction the government drew up the 'action rule', which states that only the returns to the fund could be used domestically, not the revenues in the fund itself. Even with the action rule in place, the Norwegian government has annually spend more than this rule prescribes, up to a 50% extra spending in 2003 (Larsen, 2006: 633-634)

One of the conditions of success in Botswana is the relative good government. The country continuously tops the Transparency International List for African countries and pursues a stable political system (Meijia & Castel, 2012: 12). Voice and accountability are strong, which means civil rights are protected well and the political process has to meet checks and balances. Meijia and Castel write:

> *"The presence of voice and accountability (...) is necessary for the management of resource wealth because it permits society to discipline those in authority who abuse resource extraction. By involving society in maintain a government accountable for its wealth management practices, they are better able to prevent the establishment of a rent-seeking culture."* (Meijia & Castel, 2012: 12)

The role of institutions

Fortunately, countries abundant in resources do not inevitably experience a resource curse. The best way to turn the resource curse into a blessing is by far, not getting cursed in the first place. Auty (2001) argues that mismanagement is the root of the resource curse. Following Auty, Larsen (2005) states, "resources, if well managed, will not lead to the curse. Instead, they will create faster growth". Capellen and Mjoset (2009) conclude that institutional quality in itself is not substantive; its success depends on its interaction with resources. It is precisely this insight that shows the importance of incorporating views on institutions from political history and international relations.

The Human Factor

As we have seen, corruption, rent-seeking, conflict and bad governance in relation to natural resources has been quite extensively addressed. In particular bad governance has a bad influence on the successful exploitation of natural resources, as economists blame politicians for implementing bad economic policies. Evidence has shown that primarily oil, as a primary commodity resource, is heavily prone to corruption (Fearon 2005).

As a solution for the resource curse, which partly evolves out of bad governance, economists propose good institutions to combat corruption and rent-seeking behaviour. Examples of good institutions and policy have been given, as in the case of Norway the government created an investment fund where al the revenue of exploited oil was deposited in order to control the flow of money coming from this natural resource (Cappellen and Mjoset 2009: 12). In the case of Botswana, good governance implied the investment of revenues from the cattle and diamond industry in the development of rural areas (Acemoglu et al. 2001: 18). But these economic explanations fall short, as they treat those institutions that they emphasize as static and do not explain how these institutions are formed by and influence human behaviour. In their models economists do not include the human as a factor, and therefore do not give a full explanation for the occurrence of the resource curse and how it can be averted. The answer to this question can be made more comprehensive by adding evidence and theory from the field of political history, international relations and conflict studies.

We will explore the successful aversion of the resource curse through examination of the cases of Norway and Botswana and it will be explained why these countries did developed good institutions. One phenomenon that economists fail to explain is the connection between the economic and political sector when examining the resource curse. As North et al. argue; 'Economists take open access as given and explores its consequences. Because economics provides no explanation of why and how the political system defines property rights, enforces contracts, and creates the rule of law necessary for markets, economics fails to explain an open access order's stability' (North et al. 2009: 110-111). It will become apparent that good political institutions are needed for the development of good economic institutions. Theory that explains the relation between institutions and human behaviour (Giddens 1984; Demmers 2012) and the relation between good political institutions and economic development (North et al. 2009) will be addressed to clarify the successful aversion of the resource curse. Afterwards, we will extend the economic model to include these theories. This extension will illustrate and provide a more coherent solution for the four channels where through the resource curse manifests itself. Rent-seeking, corruption and conflict and bad governance will be mainly addressed in this part because it is a well-known subject within political history and international relations. Nevertheless, the model that will evolve out of these disciplines will give an explanation for all the four forms of the resource curse.

Structure, Agency, Institutions and Discourses

The main discussion within political history and international relations concerning the resource curse is the contribution of natural resource to conflict and bad governance. As we have seen above, economists see bad governance, rent-seeking behaviour and conflict as channels through which the resource curse manifest itself. Political scientists regard primary commodities as having the characteristic of being able to contribute to corruption and conflict. Governments in resource-dependent countries tend to be more corrupt as a result of discretionary control over large resource rents (Le Billon 2006: 12). Governments within those societies that are cursed with resource abundance and dependence lack institutions that effectively control and distribute the revenues throughout the nation in a way that the majority of the population benefits from it. Without these institutions, networks of patronage (relationships that are based on personal rents and knowledge) and rent-seeking behaviour develop and wealth is concentrated into the hands of the few beneficiaries. Also, without these institutions conflicts can be easily fuelled by the revenues from the available primary commodities. As rebel groups need to find a way to fund their struggle, natural resources are an easy way to accomplish this. Hodler (2004) explores the link between fractionalization and the presence of natural resources. He argues that "here is some first evidence that the growth curse of natural resources might also increase in ethnic fractionalization.” (Hodler 2004: 13) Herbst (2005) adds to this that cutting rebel groups off from their economic resources is not always an effective policy as insurgents seems to be remarkably skilled at adapting to the loss of income (Herbst 2005: 287). So good institutions can prevent rebel groups and governments to use natural resources for financing their conflict.

But what are these good institutions and how are they formed by people? Before exploring the cases of Norway and Botswana, the relation between human behavior and institutions has to be further explained. Since decennia there has been a discussion within the social sciences about how humans conduct social actions. Some behavioral scientists have argued that humans are completely guided in their actions by their environment, and that they are not capable of making independent choices. This assertion has been countered by many social scientists of which the main contribution is that of Anthony Giddins. He has developed the structuration theory, which explains how humans influence the structure of society by their decisions and actions and how society influences the behavior of humans in return. In his model, he describes humans as agency and society as structure. Agencies are affected and constrained by structure in their actions but they also are free to change that structure. He refers to 'two sides of the same coin'; structures (or social contexts, which Giddens refers to as systems) influence people's actions, but in turn, social contexts (or 'structures') continue to exist only if they are sustained by people's repeated actions. (Giddens 1993) So in this model, humans are guided by the structure of society but some also have the will and the power to act freely and change that structure.

But where do institutions come into play within this model? As some individuals have the power to change the structure of society, this power has to be checked in order to prevent those individuals to change the structure in a way that it serves only their own needs. This is the case in authoritarian states, where society is structured in a way that the leader of the nation can freely act as he pleases and damage others. In more democratic societies, people with powers are checked and controlled in their actions by institutions. So institutions act as the control on the ability of agency in changing the structure of society. Demmers

(2012) adds the place and role of institutions to the model of Giddens. In her article she tries to explain in which ways people understand war and violence and act upon this. She states that the 'abstract notion of 'structure' becomes manifest in discourses and institutions (the formal and informal 'rules of life') and in the way people (re)produce these rules through social practices' (Demmers 2012: 121-122). Discourses are the narratives and language that humans use to understand and explain their own behavior and events in everyday life. Discourses can be held within institutions and they can change these institutions if a certain discourse that suggests this has become dominant. One example of this process are the everyday discussions within the European Parliament. Within the EP there is a continuously battle between different discourses on the same topics going on, like the discussion on how much autonomy the governments of member states are allowed to have within the European Union. If, for some reason, the discourse that proposes that the member states must have less autonomy becomes the dominant within the EP, the EP will propose these changes to European Commission. And if the European Commission agrees with these changes, the structure of the European Union will be changed. This example shows us part of the role of institutions within the European Union to control agency in its ability to change the structure of European society.

Figure 2 shows us the complete model of Demmers (2012).

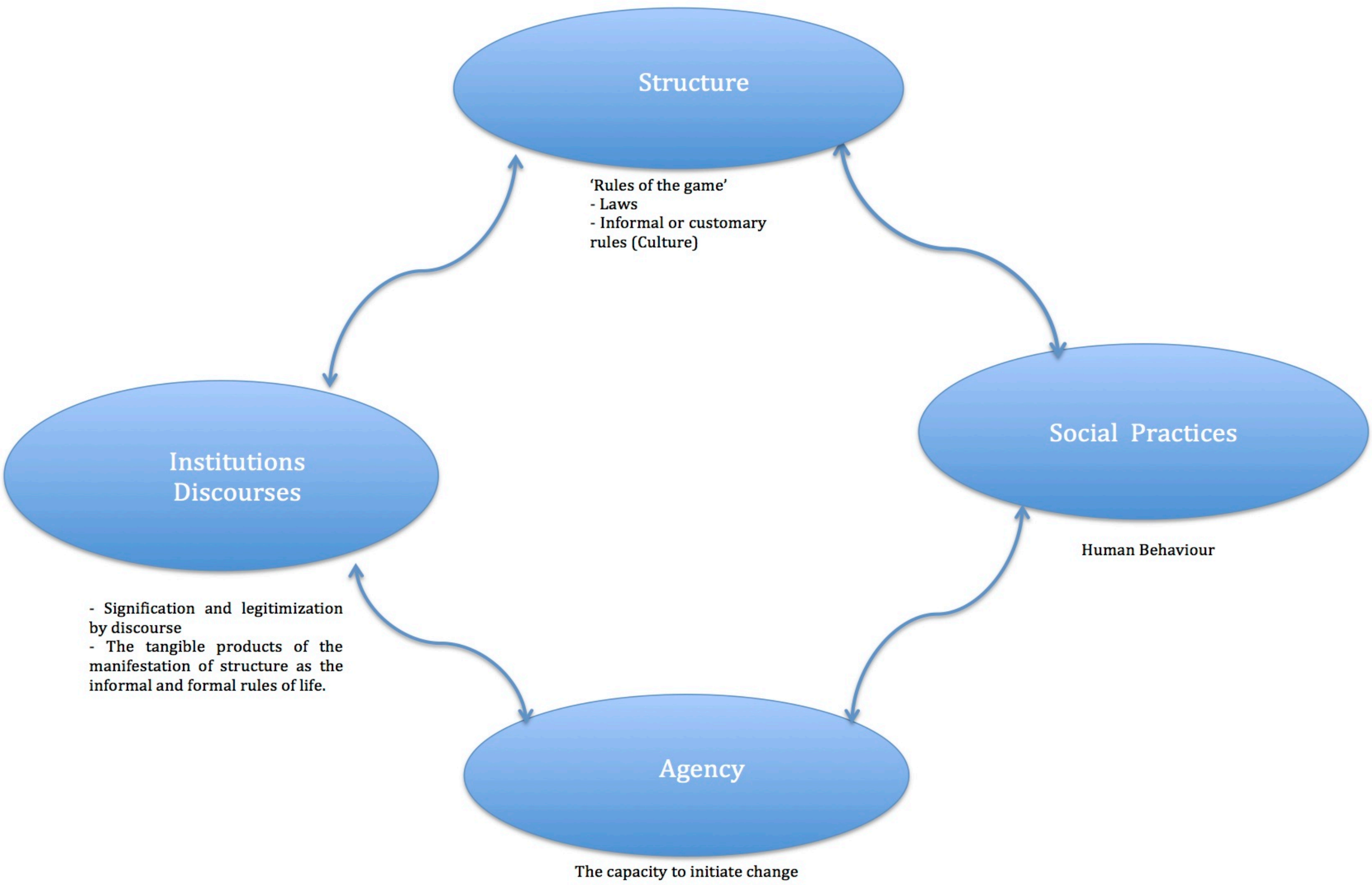


Figure 2: The structuration model of Demmers (2012)

In Figure 2 structure is explained as the 'rules of the game' and this entails the written laws and unwritten customary rules. As is argued earlier, institutions are the manifestations of the abstract structure; they prescribe, control and execute the formal and informal laws that govern society and the social practices of humans. These social practices are in turn the manifestations of agency, and thus make agency a less abstract concept in the model. In this way institutions can influence and control human behaviour via structure as they can prescribe certain rules that limited certain human behaviour.

But how does this relate to the resource curse and its occurrence or aversion? In the countries that experience a resource curse, the institutions that control agency in their social practices are of poor quality of even absent. In these countries, individuals with power are less restricted or not restricted at all in their pursue of self-enrichment. As there is a lack of institutions that prescribe and control the rules concerning the exploitation of natural resources, individuals within or outside the government can actively conduct rent-seeking behaviour and create networks of patronage that replace any existing formal institutions. Any laws that the structure holds are not effectively executed against these agencies or are even absent. For example, when a civil war broke out in Sierra Leone in 1991, the rebels used diamonds to fuel their war against the Sierra Leone government. The Revolutionary United Front (RUF) captured many diamond mines in the country and used them to finance their struggle. The government did the same with the remainder of the diamond mines. The incapability of the Sierra Leone state to provide public services and promote economic development was one of the causes of the conflict. But it also provided opportunities to any rebel force to loot the available diamonds. A one-party state served the interests of a small group of politicians and foreign diamond merchants, while basic public services disintegrated. (Bellows and Miguel 2006: 395). The inefficiency of the Sierra Leone state indicates that there were no functioning institutions and the rebels had no problems with replacing them with their own networks of patronage.

The theoretical framework by North et al. (2009) can give us a deeper understanding of the link between good institutions and the resource curse. This conceptual framework gives a new perspective on the development of societies in recorded human history. It tries to give an explanation to the fact that the modern Western forms of the organisation of societies had become the dominant ones in the world. The organisation of Western societies has changed over time, from mostly authoritarian regimes to the contemporary democratic ones. According to North et al (2009);

> 'Western human society developed during the 18th century from a natural state or limited-access society to an open-access society … This social revolution came with an economic development in the form of open markets and that makes why democratic Western societies have been so successful' (North et al. 2009: 2).

Open-access means that the structure of society is not based on personal relationships. There are no networks of patronage controlled by some powerful individuals that prescribe the rules of the game and govern the way people behave. Instead, institutions prescribe how people ought to behave and monitor that behaviour. In states with limited access, relations are personal and characterized by patrimonialism and rent-creation. In these systems change is resisted by the dominant coalition and there are no rules that prohibit them from destroying any opposition. Also these elites easily can use their 'available power resources … to destroy existing institutions and substitute new arrangements for them.' (Becker 1999: 792) A dominant coalition exists and power is gained by elites trough a system of rent-seeking and personal deals. (De Waal 2009: 102-103) Only a certain amount of elites have access to privileges and access to these privileges is limited. However, in open-access societies universal rights supplement these privileges for all citizens. Access is open and the political and economic markets are open to competition. Rent-creation is not fully eliminated but benefits large and encompassing groups when it occurs.

In countries with a resource curse the structure of society is still characterized by limited-access, as most relations are personal and not governed by effective political institutions. Because institutions do not control the individuals with political power, they can distribute any revenues from natural resources to themselves and a select group of beneficiaries. So when political access is limited, most of the time economic access is also limited. The openness in competition within the political market is what it connects it with the economic market. Both limited-and open-access social orders have public and private organizations, but natural states limit access to those organizations (North et al. 2009: 115). When competition in politics is equal then competition in economics is also equal and therefore access to wealth for more people and better distribution of that wealth. Limited political access can thus cause a resource curse. This is the link that most economists fail to explain. For countries that have a high amount of natural resources, their structure of society has to be characterized by open-access in order to avoid a resource curse. North et al

(2009) already name some characteristics of open-access that are relevant to the aversion of a resource curse. These are:

1. Entry into economic, political, religious, and educational activities without restraint, of which I will focus on the economic and political access
2. Support for organizational forms in each activity that is open to all
3. Rule of law enforced impartially for all citizens
4. Impersonal exchange
5. A widely held set of beliefs about the inclusion of and equality for all citizens

So institutions require properties that maintain these characteristics of an open-access society. With regarding to the aversion of the resource curse, institutions ought to have more specific properties. These we will be explored while examining the cases of Norway and Botswana.

Botswana

Botswana has since independence been a country with an impressive growth rate. Annual growth of the GNI has always been higher than 4%, and during the seventies it even reached growth rates of 22,5 %. The current GNI stands at a $ 7.430 per capita, making it one of the most prosperous Sub-Saharan countries (Worldbank 2014). This enormous growth has largely been fuelled by primary commodity products, especially by the discovery of diamonds in the early seventies. Before the discovery of diamonds, the cattle industry was the biggest source of economic development. It seems that somehow state elites in Botswana averted a resource curse and succeeded in making an abundance of natural resources contributing to enormous economic growth. Also, since independence Botswana has not experienced any mayor internal struggle, no civil war has occurred. Today Botswana stands out in its democratic ratings. Ranking 30th on the democracy index, it is more democratic than some European powers like Italy and Greece (The Economist Intelligence Unit 2013: 4). This indicates that Botswana somehow has developed political and economic institutions that fostered democratic and economic development. It seems that the 'rules of the game' and the institutions that support them are well developed.

If one examines Botswana's political and economic institutions, then it is remarkable that they are stable in a country that is historically very ethnically divided. Before colonization, the Batswana were called the Tswana. The Tswana ethnicity is actually a collective term for the dominant ethnic groups in pre-colonial Botswana, of which the most important ones were the Bangwato and the Bakwena (Maundeni 2012: 20). A 1936 census gave that each Tswana tribe consisted of at least 7 different ethnic groups. (Schapera 1955: 9) But despite the ethnic differences, there was much coherence in Tswana society, as many of the Tswana leaders encouraged minorities to take part in society. The Tswana even had institutions that consolidated this coherence. In every village, now matter how small, was a central gathering where every adult male could participate in the important decisions that were made within the tribe. This highly democratic institution was called the *kgotla* and in the large towns and most important, the capital, the kgotla was the place were all polity decisions were to be taken (Hjort 2010: 693). The kgotla provided political access for the whole population and acted as glue throughout society. This had in effect that the political penetration of the Tswana state throughout society was very high; the chance of session by certain ethnic groups was very low. The kgotla survived into post-colonial times and was utilized by the Botswana state as a way to reach people even in the most remote area's. The Batswana elite recognized the importance of the traditional kgotla's and combined them with more modern, Western-like institutions in order to keep the social coherence within independent Botswana. The kgotla has competition from land boards and the district councils on the local level but for most ordinary men, the kgotla remains the most important institution to gain political access. According to research performed by Picard (1979) in particular the less educated rural population had little understanding of the national Batswana government but attended at the kgotla often (Picard 1979: 66-68). Apparently traditional institutions remain to have an important place in African societies. As Seidler (2010) suggests: 'the kgotla example shows that integrating compatible informal institutions within the institutional framework of a modern state increases political legitimacy and raises the overall effectiveness of formal institutions' (2010: 26-27).

Part from integrating the coherent nature of the kgotla into a modern society, the Batswana elite introduced modern political institutions at the national level. The modern Botswana state has clear separation of the executive, legislative and judicial powers. Political access is good, as it seems that the political market is open for competition; anyone can form a democratic party. Independent political parties can form freely (BTI Botswana 2012: 6). Although there have been a continuously one-party rule by the Botswana Democratic Party (BDP), this rule has always been legitimate as there is no restriction on the formation of an opposition. Also, the political elite are checked by a good set of laws; 'Batswana political elites faced constraints on their rule and were accountable to their people' (Martin 2008: 41). The creation of a democratic political system that is based on open-access prevented the formation of any networks of patronage. Impersonal exchange is high on the national level; the Botswana state is not a BDP-state, legislative and judicative powers are independent of the party and they respect democratic processes. (BTI Botswana: 8) The rate of personal relations is also very low on the local level. This can be attributed to the inclusion of traditional political structures into a modern society. Because political access is also good on the local level via the formal institutions of the state and the informal traditional institutions, the Batswana people did not have the incentives to conduct rent-seeking behaviour and to form networks of patronage that would work against the effectiveness of the Batswana state.

Thus political access is good, the rate of impersonal exchange is high and there are no separatist feelings among the population, all due to good governance of the Batswana government. Good governance also contributed to economic development, as at independence the main economic sector, the cattle industry, was exploited in a way that it became the motor of nationwide economic growth. This was made easier because of the existence of a pre-colonial structure at independence, namely well-defined property rights. The co-existence of common and private ownership of land as well as private ownership of cattle was inherited from the colonial period and remains dominant even today (Beaulier and Subrick 2006: 7). Research shows that the existence of property rights is important for good economic growth and the lack of it halts any economic development. 'This happens because of the subsequent loss of investor trust, the vanishing of land equity, and the disappearance of entrepreneurial knowledge and incentives—all of which are essential ingredients for economic growth' (Richardson 2005: 563). The state elite did not touch the established property rights in Botswana because it was in their own interest not to do so. As the majority of the elite coalition led by the BDP where cattle owners, well-defined property rights would contribute to their prosperity. Cattle owners and non-cattle owners shared a common interest in having a prosperous ranching industry because it meant wealth for all (Taylor 2002:27). This 'beefocracy' gave the poor Batswana government the right boost to begin developing the country (Robinson and Parsons 2006: 121). These developments included investments in physical capital (infrastructure, roads) and human capital (education, wealth) (Seidler 2010: 27). Because cattle ranching was a rural economic occupation, the government invested much in the development of the rural institutions and infrastructure.

Such broad investments continued after the discovery of large deposits of diamonds. The Botswana elite used the revenues they obtained from the diamond sector to promote economic growth. Crucial factor was the changing of the traditional rights concerning the ownership of the lands where the diamonds were discovered. It was the decision of president Seretse Khama to transfer the mining rights to the government and not to any tribe (Acemoglu et al 2001: 24-25). If these rights were not transferred to the national government, it could become a source of power and conflict for the different tribes in Botswana. The tribe that obtained the ownership of the diamonds would have a powerful position within the Botswana state and could develop networks of patronage to get the best revenue for themselves from the diamonds. Because the Botswana state claimed ownership of the diamonds, this natural resource could not destabilise the authority of the Botswana nation-state. Good policy choice on the exploitation of diamonds had as effect that the whole country could benefit from diamonds. 'The broad base of BDP support led government to use the proceeds initially to finance widely popular expenditure on broad national priorities – infrastructure and human capital – because these were the priorities of both the elite and the general population' (Leith 2005: 114). Another crucial policy that was carried out by the elite was the creation of shock absorbers to protect the economy and congruously chose to keep expenditures growing at a slower pace than revenues. The Botswana government kept tight control over its expenditures, in order not to flood the economy with money and create immense inflation. Important was that 'the government controlled fiscal expenditure trough the use of National Development Plans (NDP) that determined domestic spending and investment in advance and ensured a legislative control over public expenditure' (Martin 2008: 43). One last institution that provided macroeconomic stability was the central Bank of Botswana; it managed the exchange rate of the pula, absorbed excess liquidity in the money market and managed international reserves and some other important functions (Leith 2005: 108).

Eventually, good governance was the key in averting the resource curse in Botswana. At independence, state elites created an institutional framework that could support the characteristics of open-access. Entry into political and economic activities is open to all and there are means to create organisations in those areas. Also there is a rule of law impartially enforces for all citizens, the rate of impersonal exchange is high and by combining the traditional institutions with modern ones, there exists a belief in the inclusion and equality for all citizens. Most important, this belief exists among all state elites. At independence, the BDP included the majority of the state elite into the new Botswana state and therefore creating a stable political climate. As Taylor (2002) notes;

> *'In most African countries this has been a fragmentary and incomplete process, but such a bloc has been remarkably stable in Botswana, with the ruling coalition of elites co-opting or integrating the leaders of the most important social faction within Batswana society, what we might refer to as the "assimilation of elites", as well articulating the relationship between intellectuals and the masses trough prolonged control of most lever of the media' (Taylor 2002: 6).*

This was an essential first step in creating a stable institutional framework and averting the resource curse. By creating a broad coalition among state elites and incorporating them into the institutional framework of the Botswana state, they placed every state elite under the rule of law and made them equal before the law. In this way they made it more profitable for the elites to maintain a system of impersonal exchange and averted the creation of networks of patronage and rent-seeking behaviour. In this way they also averted the appearance of 'political losers', elites that fear that the process of growth and social change will make it more likely that they will be replaced by others and there fore the session by them from the Botswana state (Acemoglu et al 2001: 21). An effective and institutionalized rule of law, thus a structure that is institutionalized and correspondents to the equalisation and inclusion of all elites and other citizens is essential in averting a resource curse in countries with many natural resources. As North et al. (2009) put it; 'rule of law for elites creates some space for impersonal relationships among members of the dominant coalition, but until those relationships can be embedded in a matrix of more sophisticated public and private organizations, impersonal relationships do not emerge historically' (2009: 158). In the case of Botswana, effective rule of law placed restrictions on the opportunity to use diamond revenue to engage in infective rent-seeking or abusive clientelism.

Norway

In modern times, Norway has always been a country of stability and wealth. It stands out in economic development and democratic ratings. On the democracy index made by the Economist Intelligence Unit, Norway tops the list with an overall democratic score of 9.93 out of 10 (The Economist Intelligence Unit 2013: 3). Also, it is one of the wealthiest nations in the world with annual Gross National Income (GNI) of $ 67.004 per capita (Worldbank 2014). Since the discovery of oil in the early 1970's, this primary commodity has contributed to the economic growth of the country; since then natural resource rents have contributed between 10 % and 21 % to the annual growth of the Gross Domestic Product (GDP) (Worldbank 2014). Moreover, before the discovery of oil Norway already relied on the export of raw materials (Capellen and Mjoset 2009: 3). It seems that Norway has not experienced any disadvantages from the existence of huge amounts of natural resources and has found a way to avert a resource curse. The stable and prosperous history of Norway indicates that the country has developed good political and economic institutions.

Historically Norway has been a very homogenous country and there have never been strong feelings of separatism in the country. It has an outstanding institutional record; there are many shared norms and values and low conflict, something that is reflected in the political-administrative system (Christensen 2003: 173). The country 'belongs to a Scandinavian administrative tradition that emphasizes the political-democratic context of the civil service, Weberian values, corporatism, equality, and a big universal welfare state' (Lægreid et al. 2008: 10). In the last couple of decades, the strong centralized character of the Norwegian state has been loosened in order to make some institutions more independent. This was accomplished 'through structural devolution; a movement of subordinate organizational units away from the political executive leaders through more independent agencies and state-owned companies' (Christensen 2005: 728). So while Norway has a strong state tradition, it has transformed its institutional framework to give less power to executive part. Nevertheless, research shows that there is a strong trust in the institutional framework by the Norwegian population (Christensen and Lægreid 2002). Also the trust in democracy and political parties has improved since the discovery of oil (Miller and Listhaug 1990). This indicates that there is a belief in the equality and inclusion present in Norway and what is sustained by the institutional framework and this not has been affected by the abundance of natural resources.

Political access, like in most Western countries, is good; political parties can form freely and elections have always been free and fair. Despite the fact that since the transformation of the Norwegian state since the 1980's the number of civil services outside the government have decreased, public institutions are still numerous, good quality and are, most important, more independent from political authorities (Lægreid et al. 2008: 17-26). Citizen rights are clearly defined and the political system has a good separation of executive, legislative and judicial powers (The Constitution of Norway 1812). The structural devolution had as effect that the constraints on the executive powers were tightened so the creation of any patronage networks was made even less possible. Furthermore, the executive powers are effectively checked by the legislative and judicial powers. The rule of law is distinct boundaries and is unbiased enforced, also for the state elites. Therefore impersonal relationships can be sustained; in effect impersonal exchange is high. It seems that the structure of the Norwegian society has all the characteristics of an open-access society and this is sustained by the institutional framework.

Because Norway had all the characteristics of an open-access society when oil was discovered in the country, the danger that it was used by corrupt elites, as part of rent-seeking behavior, was almost zero. The Norwegian government did not have any networks of patronage and thus elites did not have the incentives to use the profits from the export of oil for self-enrichment. It was more profitable for the state elites to distribute the revenues throughout society. Just as in the case of Botswana, there was no danger of the creation of political losers. Deviating from the equal distribution of the wealth and practicing corrupt actions was not profitable as it was clearly punished by the rule of law. As we have seen, the Norwegian government did execute good economic policies in distributing the wealth of the oil throughout society as they created an Oil Investment Fund. (Larsen 2005: 82) By creating this fund, it placed the huge amount of money that the oil revenues yielded in the hands of the Norwegian state and not in the government or any individuals. This solution is similar like the one the Batswana government did use; placing the natural resources not in the hands of several individuals or one organization but in a independent institution that gradually distributed this wealth throughout society. This averted the pure economic forms of resource curse; the Dutch Disease and the volatility of resource falls. The presence of a good political institutional framework made this possible and also averted the manifestation of the resource curse through the more political channels; through bad governance and rent-seeking, corruption and conflict.

Interpreting and applying the evidence

If we apply the evidence from the cases of Norway and Botswana to the model of Demmers (2012), institutions maintained a structure that effectively controlled human behaviour and prevented any divergent behaviour or the creation of other structures outside the formal one. Also the existing institutional arrangements in Norway and Botswana sustained a belief in the equality and inclusion. This is represented in the model as the absence of a discourse presented by agency that proposes the altering of the structure so that it treats certain citizens as more equal and more included or a discourse that proposes separation of the existing structure and the creation of a new one. The good political access and support of organisational forms can be depicted as the ability of agency to participate in the discourses within the most important political institutions and create new public institutions like political parties or labour unions. This is the same for economic, educational or religious access and support for organisational forms in these areas. At last, the high rate of impersonal exchange can be reproduced in the model as a strong formal structure that is controlled by institutions and has a strong influence on human behaviour, while there is not a big informal structure present that is controlled by institutions and through which human behaviour is regulated. A big informal structure is how a high rate of personal exchange or networks patronage would be represented in the model, and this would produce much rent-seeking behaviour.

At this point, we have only elaborated how open-access is presented in the model. But in order to avert a resource curse, institutions need not only to sustain open-access, but also incorporate more specific economic arrangements. These economic arrangements mainly prevent the manifestation of the resource curse through a Dutch Disease and the volatility of resource rents. These have been mainly addressed in the first section that elaborates on economic views on the resource curse. But the solutions for these forms of the resource curse can also be illustrated and explained by the model. The solutions would be represented in the model as the existence economic institutions that sustain an structure that incorporate a set of arrangements and laws that influence human behaviour in a way that it prevents problems like high inflation, collapsing prices of primary commodities and volatility of resource rents. An example of these economic institutions is a central bank that carries out stabilizing economic policies and a government that proposes sound fiscal policy designed to stabilize the economy and invest in sustainable growth.

In order to clarify how a good institutional framework would prevent the occurrence of a resource we have adapted the model of Demmers (2012) to the extent that it represents two situations; the occurrence and the absence of a resource curse. Note that figure 2 represents only one situation when a resource curse can manifest itself.

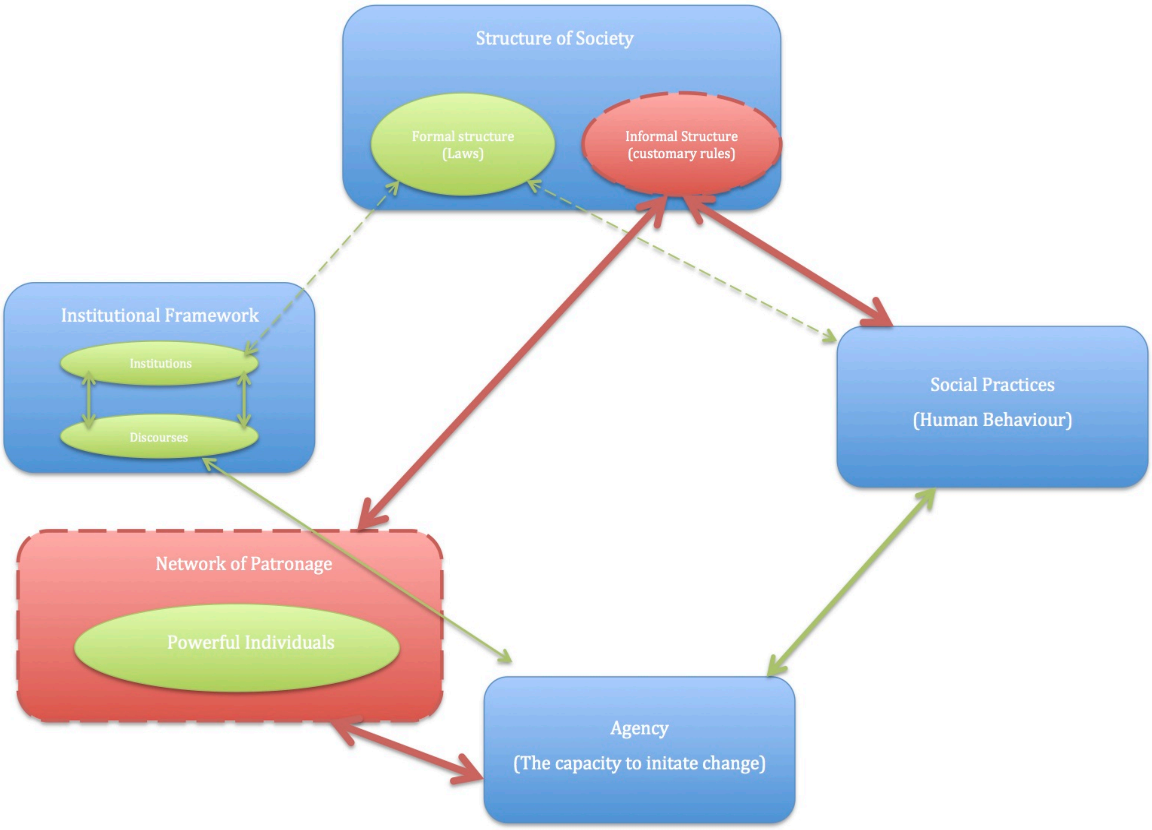


Figure 3: A limited-access society with a patronage network that manifest a resource curse

This figure illustrates the situation when a resource curse can manifest itself through one of the four channels. The thickness of the connecting arrows depicts the amount of influence and exchange between the different parts. It seems that the formal institutional framework has competition from a network of patronage. The connecting lines indicate that the network of patronage is heavily used to exchange between individuals and that certain individuals with power make the rules that govern the behaviour of humans within this society. This informal and personal network runs parallel with the impersonal and formal ways of exchange and the latter is ignored and has no influence. The existing institutional framework is clearly shortcoming; it is too small and has almost no influence in society. Any individual within society, depicted as agency, has to deal with the powerful individuals within the network of patronage as the institutional framework provides no effective services. Any revenues from natural resources are channelled trough the network of patronage and the individuals with power abuse their position to enrich themselves with wealth and power, as there are no institutions within the network to control them. At last, any economic institutions that provide economic solutions to the resource curse would not have any effect as the formal institutional framework has minimum influence on human behaviour throughout society.

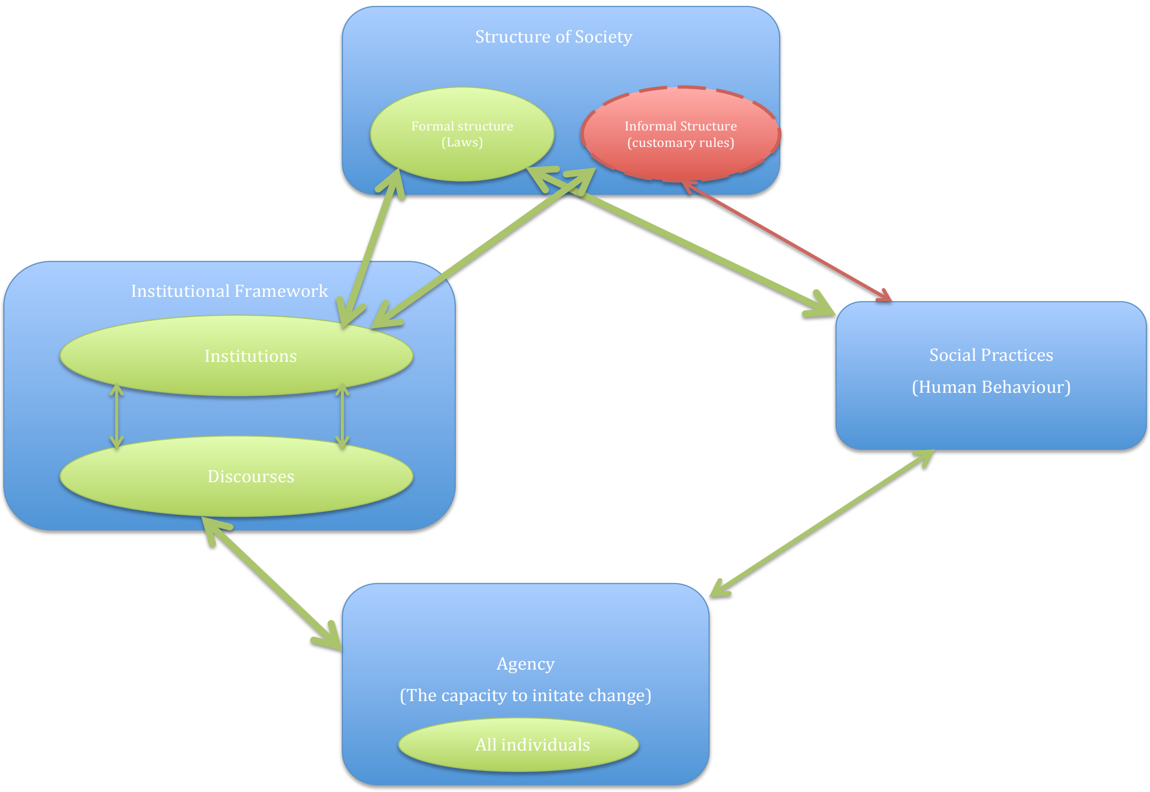


Figure 4: An open-access society that can avert a resource curse

Figure 4 portrays the situation without the occurrence of a resource curse. The chance that a resource curse can manifest itself in this situation is not present as the institutional framework is big and provides the necessary services. Also it effectively checks the ones in power as it prescribes adequate laws that are enforced unbiased (indicated by the thick green arrows that runs at and away from the formal structure of society) and has effective control of the informal structure as the latter has minimum influence on human behaviour. (indicated by the tick green arrow that runs from the institutions to the informal structure and the thin red arrow that runs to the social practices). So impersonal exchange is high within society and personal exchange is brought to a minimum. Rent-seeking behaviour and corruption is made nearly impossible. Any bad governance is not profitable for elites as they are punished by the well-enforced rule of law and can be easily replaced by new elites as every citizen has good political access. This good political access is illustrated in the figure by the thick green arrow that runs from agency to the discourses. Anyone can start a discourse that proposes the removal of the ruling elites and in the case of bad governance, like when state elites are enriching themselves with the revenues from natural resources, this discourse will most likely become the dominant one. While not specifically shown in the model, economic institutions that prevents a Dutch disease or volatility of resource falls exists and are capable of averting a resource curse because they are able to control human behaviour through the formal structure of society of which their economic policies are part of.

Concluding, the evidence from Norway and Botswana has shown that it is crucial to have institutions with certain functions that sustain a structure of open-access in order to create functioning independent economic institutions that can control the flow of revenues coming from natural resources. We have summarized these functions and these are fourfold;

1. Strong judicial and political institutions that constrain elites and prevent them to change structure to their advantage
2. Legitimate political institutions in order to avert the development of discourse that instigates secession or rebellion
3. Institutions that prevent the development of informal relations in the form of patronage networks and rent-seeking behaviour; a formal institutional framework that provides good allocation of economic and political resources.
4. Protection of basic political and economic rights of which the most important ones are property rights and political participation.

These are rather broad definitions of the functions that the institutional framework needs to have. This is because the mode of operation of these institutions can be very different as countries can be very different in their composition of population, climate, dominant culture and other factors. It does not matter how these institutions are shaped as long as they can fulfil the above-mentioned functions.

Integration

Insights

In reviewing the literature we came across some valuable insights. First of all, there are several transmission channels through which the resource curse can manifest itself. All of these channels require their own policy to avert the curse. An integrative approach may be best in solving the difficulties, but the quality of this approach depends on the institutional framework within a country. This leads to the second insight economics fails to explain the dynamics of certain institutions and see them as static. However, political scientists consider them fluid and offer an explanation why specific political institutions are needed to avert a resource curse. Crucial part of good institutions is good governance, as only agency can create those institutions and let them work properly. In this way, insights from political history, international relations and conflict studies can explain how the human factor is key in establishing a good framework of institutions.

The strengths and weaknesses of these insights

Economists provide insightful and orderly models, but fail to provide a realistic explanation of the resource curse. None of the theories succeed in modeling all transmission channels or provide the complete connection between them. Regression analysis is done using a myriad of data under various assumptions. Moreover, most studies focus on a particular transmission channel of the resource curse, but to fully explain all aspects of the resource curse a more integrative approach is needed.

The extensive literature on the resource curse provides numerous valuable insights. Regression analysis provides evidence for the relation between variables such as income equality, trade openness, education, level of investment et cetera and economic growth. Most scientists present well-organized models to describe these relations. However, none of the theories succeed in modeling all transmission channels or provide a complete connection between them, natural resources and economic growth. Moreover, the analysis is done using a myriad of data under various assumptions. For instance, there are a few studies in which researchers specifically describe the difference between resource abundance and resource dependency. In most research resource dependency is simply defined as resource exports relative to GDP as the dependent variable. We prefer to use studies like Brunnschweiler and Bulte (2008) or Van der Ploeg (2011) that are the most extensive and comprehensive interpretation of the resource curse empirics.

Theories from political history, international relations and conflict studies provide different kinds of models; ones that are less static and can cope with the ever-changing nature of human behavior. However, social scientists presume that human behavior is predictable whereas often this is not a realistic assumption. Nevertheless, there are some theories that provide a useful approach to explain human behavior within certain institutional frameworks. Structuration Theory, first coined by Giddens (1984) and later extended by Demmers (2012), provide useful insights about the interaction between humans and society through institutions. Additionally, the theoretical framework by North et al. (2009) presents some characteristics that a society needs to have in order to economically thrive as a democracy. Because these characteristics promote open-access and prevent rent-seeking and networks of patronage these are also important for averting a resource curse. It follows that these characteristics have to be incorporated in an institutional framework. It can be deduced from this which features those institutions must have to maintain open-access and avert a resource curse.

Identifying the differences in disciplinary insights

The resource curse is a complex phenomenon that can be viewed upon from several angles. The economic perspective provides models and analysis and focuses on an economic interpretation of the findings: do we observe more or less economic growth as a result of the different transmission channels? In most research, important variables such as the institutional quality are assumed exogenous and unchangeable. Political history and international relations complements the field of economics in this instance. Its sociopolitical view also incorporates the use of models but it combines it with historical and sociological evidence. It raises the question how powerful individuals shape society in a way that the resource curse occurs and how this leads to instability and even conflict within societies. It sees institutional quality as the pinnacle in solving the resource curse.

One assumption that is underlying both economics and political history and international relations is the believe that human behavior is to a certain extend predictable. Economists think that humans act rational and their economic actions are predictable with models. Political scientists think the same as they think that human behavior can be predicted on basis of historical evidence and sociopolitical models.

The differences in perspective, assumptions, theories and concepts indicate that economics and political history have a different approach with regard to the resource curse. They have a different focus and scope and thus deal with separate parts of the problem. Whereas economics mainly indicates the evidence for the resource curse, political history provides a way of dealing with this and indicates how a country's fate with regard to the curse can be altered. A common ground between both disciplines therefore lies with the importance of the institutional framework. It is this aspect that links economics and political history, which is visualized in our conceptual framework. This process is described in the next section: common ground.

Institutions form the common ground

In this study we have been searching for a way to explain the existence of the resource curse and incorporate both insights from economical and political science. We have found that both perspectives focus on a different part of the explanation, but that the importance of the institutional framework provides the common denominator in both views. Thus, we concluded that economists mainly try to explain how the resource curse comes about, whereas political history gives us tools to change the institutional framework. Both disciplines are aligned according to their function. This insight is the outcome of the organizational technique of creating common ground, as proposed by the interdisciplinary scholar Allen Repko (Repko 2008: 346).

In answering our research question in an interdisciplinary manner, we do not think it useful to define new concepts or theories. The mere reorganization of disciplinary insights provides a more integrative answer. Some concepts are used both in economics and political history and international relations. Political history and international relations elaborate on two transmission channels in particular: bad governance and rent-seeking, corruption and conflict. But in contrast with economics, political scientists do not consider them two different channels. For the political scientist, bad governance and rent-seeking, corruption and conflict are highly intertwined because rent-seeking and corruption are seen as a form of bad governance. It seems that both concepts are used for the same phenomenon but that they relate different to each other within political history and international relations than in economics. The same can be said about the concept institutions. Economists and political scientists mean the same thing when speaking about institutions; but economists see them as static and do not link them with human behavior while political scientists regard institutions as fluid and changeable by humans. When summarizing the concepts used in economics and political history and international relations concerning the resource curse and mapping the differences and similarities between them, it becomes apparent that re-organizing the concepts in a new framework is enough to create common ground.

The resource curse, an economic and political approach

In this section we provide a more integrative approach in describing how four transmission channels may lead to a resource curse and may be turned into a blessing. The following integrated model depicts the situation described earlier and shows the four resources curse that could manifest in such situation. For more clarification we provide a second integrated model that shows a second situation how a limited access society could manifest a resource curse.

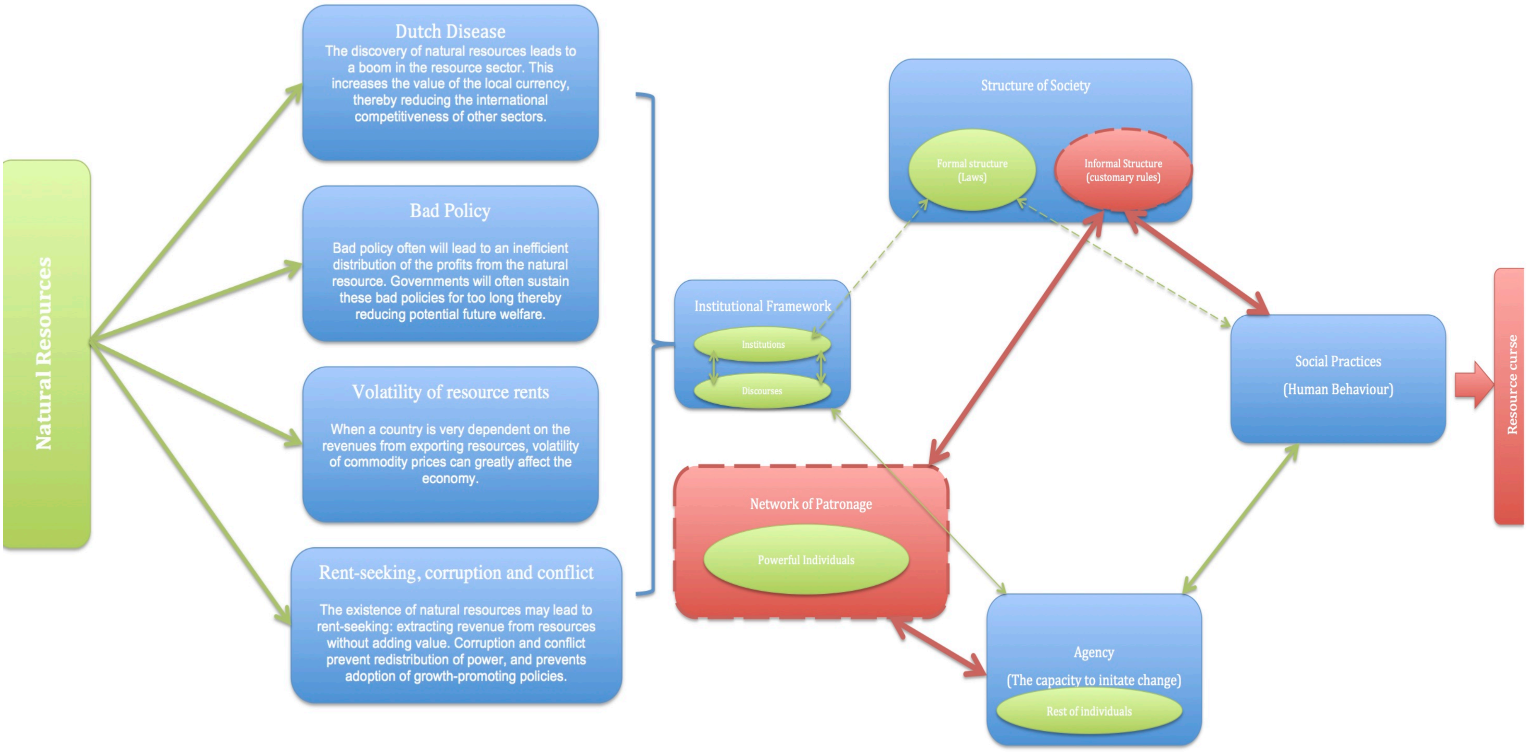


Figure 5: A limited-access society that lacks an effective institutional framework

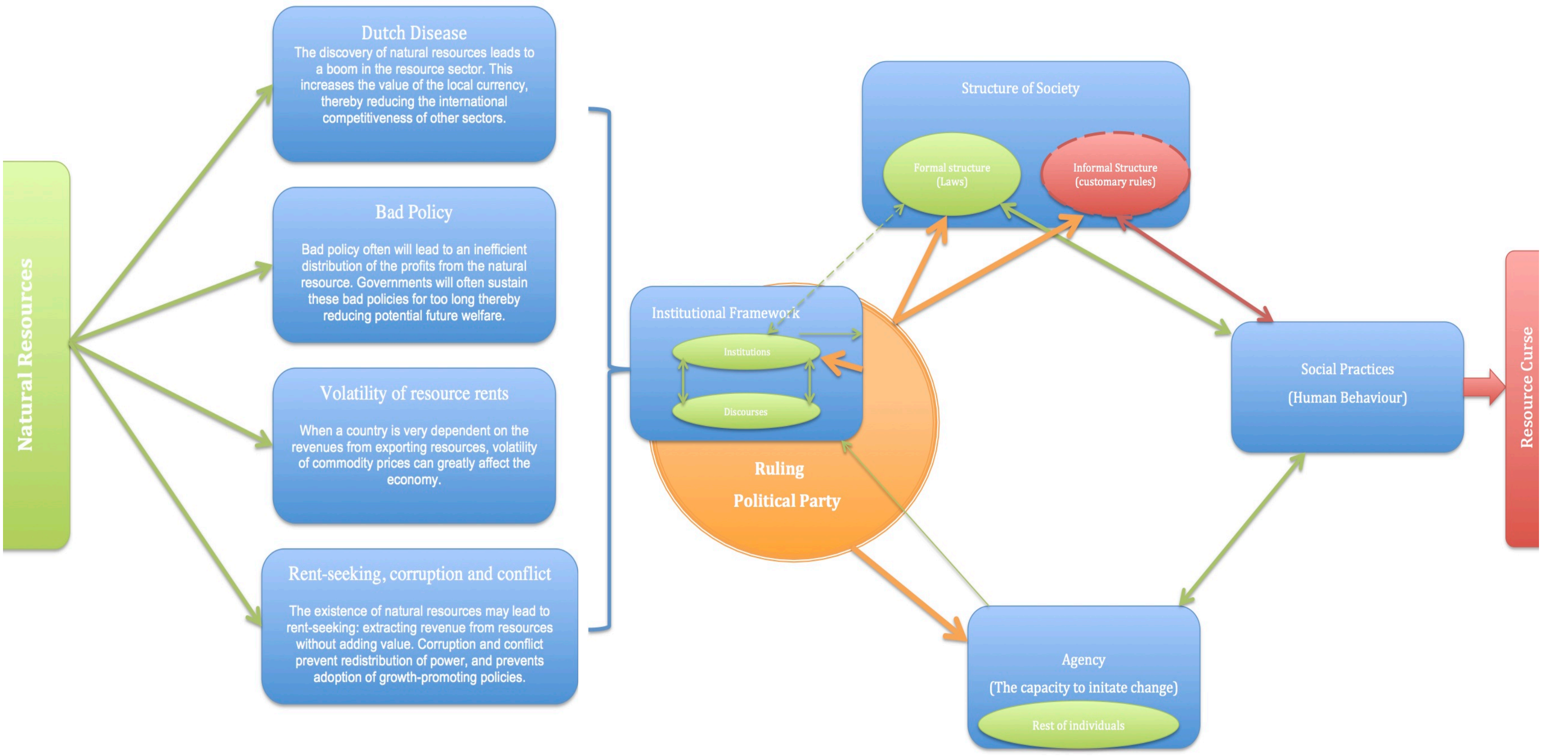
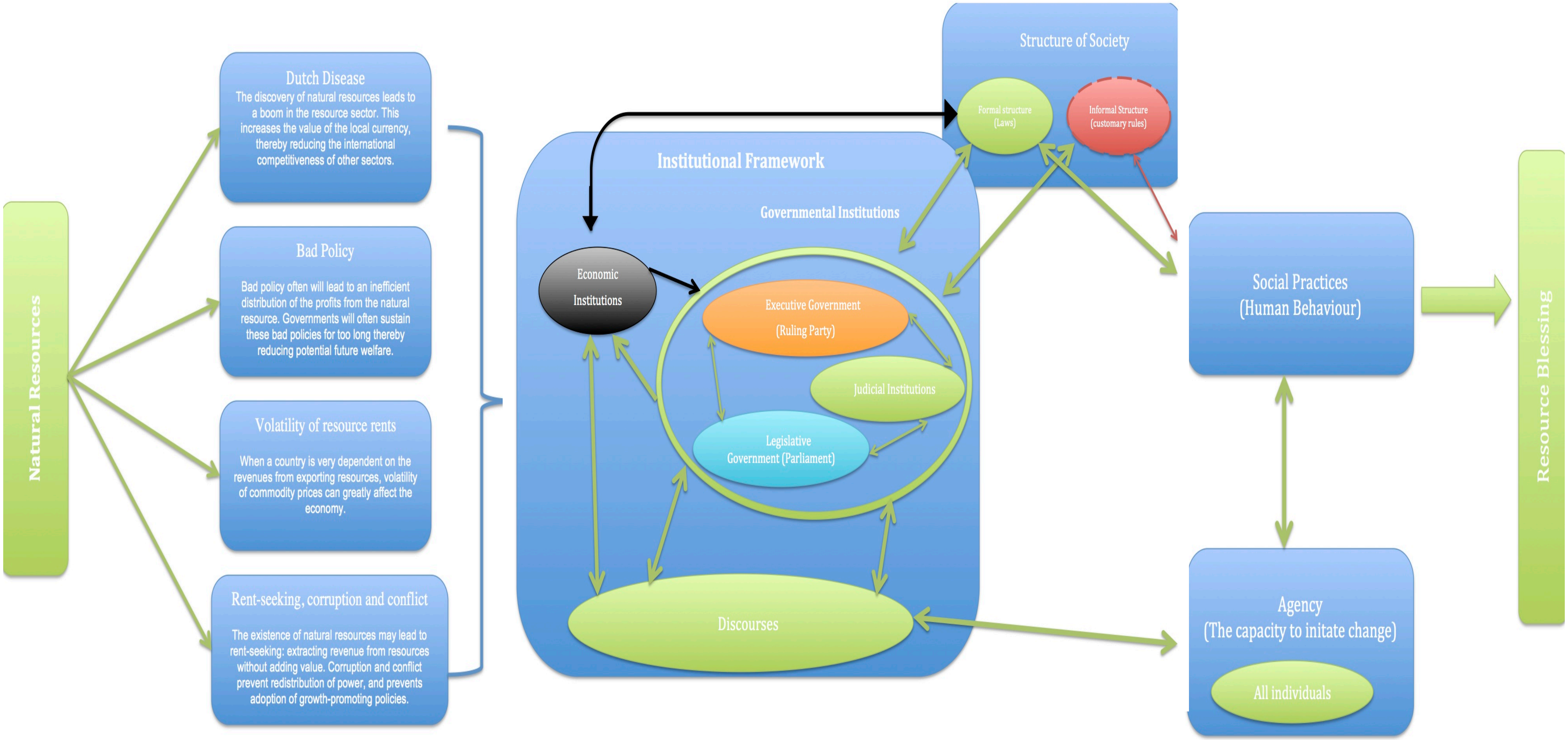


Figure 6: A limited-access society that is dominated by the ruling party

Figure 6 portrays a limited-access society where political and economic access is limited to the members of the ruling political party. The difference with the situation in figure 5 is that there does not exists an informal patronage network outside the institutional framework of the state but within the institutional framework. The institutional framework is characterized by personal exchange and controlled by the ruling party. In the model this is illustrated as the institutional framework being almost entirely engulfed by the ruling political party. The thick orange arrows running out from the ruling political party indicate that the party is in tight control of the formal and informal structure of society and agency and its behavior. Any independent institutions have almost no control of the structure of society and political access is very limited for the individuals outside the ruling political party. The revenues of natural resources will be mainly profit members of the ruling party as they have control over the institutions that regulate these profits. The formal institutional framework is in fact transformed into a network of patronage operated by the ruling party.

This model does not clarify in which way the ruling party controls the institutional framework. The thick orange arrow and thin green arrow running between the ruling political party and the institutions only depicts the tight control by the ruling party and the lack of checks by the institutions on the ruling party. For more understanding of how the resource curse manifests itself we should zoom in on the institutional framework and make the relationships between the different institutions more clear. This is crucial for our more comprehensive understanding, as good institutions are the pinnacle for our integrated model that prescribes how to avert the resource curse. We now provide this model that contains the structure of the ideal institutional framework that can avert a resource curse.


Natural Resources
Dutch Disease
The discovery of natural resources leads to a boom in the resource sector. This increases the value of the local currency, thereby reducing the international competitiveness of other sectors.
Bad Policy
Bad policy often will lead to an inefficient distribution of the profits from the natural resource. Governments will often sustain these bad policies for too long thereby reducing potential future welfare.
Volatility of resource rents
When a country is very dependent on the revenues from exporting resources, volatility of commodity prices can greatly affect the economy.
Rent-seeking, corruption and conflict
The existence of natural resources may lead to rent-seeking: extracting revenue from resources without adding value. Corruption and conflict prevent redistribution of power, and prevents adoption of growth-promoting policies.
Institutional Framework
Governmental Institutions
Economic Institutions
Executive Government (Ruling Party)
Judicial Institutions
Legislative Government (Parliament)
Discourses
Structure of Society
Formal structure (Laws)
Informal Structure (customary rules)
Social Practices (Human Behaviour)
Agency (The capacity to initate change)
All individuals
Resource Blessing

The part that was called ‘institutions’ in the preceding models is enlarged to represent the governmental and economic institutions. The governmental institutions comprise of executive, legislative and judicial institutions. These institutions monitor each other actions (depicted as the green arrows); the legislative and judicial institutions check and control the powers of the executive government. In this way the governmental institutions are stable and accessible for all. Through the participation in discourses and the creation of new ones, ordinary citizens have access to the political process that take place within the governmental institutions. Also they can create new political institutions in the form of political parties. Because political participation is present for all, all citizens feel included and there are no separatist feelings. The governmental institutions are constrained in their powers through the formal structure of society. They monitor each other’s respect for the rule of law. Impersonal exchange is thus of a high level and networks of patronage do not exist. Any bad governance is also averted as it is punished by the rule of law or by replacing the ruling party with a new one. Crucial for the aversion of the resource curse are the economic institutions. The economic institutions provide and monitor the equal distribution of the revenues of natural resources through the formal structure of society. Also they prevent the abuse of these revenues by the governmental institutions. In this way the resource curse cannot manifest itself through bad governance, rent-seeking behavior or corruption. Also the economic institutions provide sets of economic policies (depicted as the black arrow connecting the economic institutions with the formal structure) that influence human behavior in a way that a Dutch Disease and volatility of resource falls are averted.

In sum, Botswana and Norway averted a resource curse because their societies meet the above model of open-access. Their institutional frameworks, although different in practice, are similar to the one that is provided by the model. Their political institutions fulfilled the four functions that are crucial in averting a resource curse. Furthermore, their governments created a set of economic institutions that could effectively regulate the allocation of revenues coming from natural resources. In this way they were successful in averting a resource curse.

Conclusion

In this last section we look back upon the research process and evaluate the results. First of all, in the limited time that we spent we were able to only handle a fraction of all available research and literature. Evidently, this study is therefore not exhaustive. However, we do feel that the integrative approach offers in the least an additional view on the resource curse. Moreover, due to the limited time and word count we may have lost potential influential research. Our disciplinary advisor dr. Julia Swart has provided some additional studies that we failed to have included in our first bibliography, but clearly it is still limited.

Our approach presents a more comprehensive answer than economics and political science do separately, it connects those two and provides a direction for policy makers to take when faced with a (potential) resource curse. The strength of our contribution may lie in the simple, schematic approach. It is clearly therefore inevitable to have omitted crucial aspects but given the limited timeframe we never expected to fully comprehend the phenomenon.

More work needs to be done to completely describe the transmission channels of the resource curse, their (policy) solutions and the dynamic nature of all actors involved. Seeing that economists currently more or less agree on the key value of institutions, it may be time to involve other fields of study, particularly political science to see how these institutions work and incorporate them in their models.

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