

CHALLENGE # 9

THE RESOURCE CURSE

On the Trade-off between resource abundance and development

1.0 Introduction: the empirical reality of a Resource Curse¹

One of the greatest development paradoxes of our time is that wealth in extractive sectors (oil, gas and mining) in general contributes little to national, local and regional development and the alleviation of poverty. Although mineral-abundance is intuitively associated with high levels of wealth generation, growth and economic development – with the United States, Norway, Australia and Canada as the obvious examples (Cf. Power, 2002; Davis and Tilton, 2002; Wright and Czelusta, 2002; Mehlum et al., 2006) – the present experience of most mineral-rich developing countries shows a complete different picture. They have seen their economies grow disproportionately slowly or even drop back (Cf. Gelb, 1988; Auty, 1993; 1997; Sachs and Warner, 1995; 1997; Karl, 1997). Mineral-rich developing countries under-performed compared to the group of developing economies as a whole (Cf. Auty, 1993; 1997). Auty (1997), for instance, found that petroleum-poor countries grew four times more rapidly than petroleum-rich countries between 1970-1993. The gross domestic product of oil-exporting countries in 1997 had diminished compared to the GDP in 1975 (Karl, 1997). For OPEC as a whole, GDP per capita on average decreased by 1.3 percent each year from 1965 to 1998 (Gylfason, 2001).

A study conducted by UNCTAD (2002) pointed out that conditions in mineral-dependent developing countries have been steadily declining since the 1980s. The report stated that the increase in incidence of extreme poverty between the early 1980s and the late 1990s was particularly marked in mineral-exporting least developed countries (LDCs), with the proportion of people living on less than \$1 a day rising from 61 percent in the period 1981-83, to 82 percent in 1997-1999, an increase of 21 percent. A report by Weber-Fahr

¹ This issue dossier was written by Eveline van Mil. It relates to the issue of poverty and development (as elaborated in chapters 10 and 13 of the IB-SM book) with particular reference to the trade-off as presented in the Triple-E framework introduced in chapter 8 of the book. Resource abundance (Efficiency) and Development (Equity) can only be combined under the precondition of sufficient 'institutional quality' and 'good governance' (Effectiveness). Last updated: January 2008.

(2002) for the World Bank showed that during the 1990s, sub-Saharan African economies contracted by 0.8 percent on average, but mineral economies in the region saw a contraction of 1.0 percent, which is 25 percent more than the region as a whole (Cf. Pegg, 2003). This development appeared despite of the fact that African countries experienced an investment boom in their mining, oil and gas sectors in the same period – exploration investment in Africa rose from 4 percent of worldwide exploration expenditure in 1991 to 17.5 percent (US\$494 million) in 1998, whereas mineral exploration and mine development in the continent more than doubled between 1990-1997 (EIR, 2003: 16).

Mineral-rich countries occupy the lowest ranks of the *Human Development Index* and *Human Poverty Index* (Cf. Ross, 2001a), tend to be highly indebted (Cf. Manzano and Rigobon, 2001; Karl, 1997; Kretzmann and Nooruddin, 2005), face higher export earning instability, are confronted with de-industrialisation and a distorted sectoral composition of the economy, and tend to be very vulnerable to economic shocks (Gelb, 1988; Auty, 1993; Hausmann and Rigobon, 2003). Cross-country studies suggest that natural capital may on average crowd out physical and human capital (Cf. Gylfason, 2001; Gylfason and Zoega, 2001), that mineral resource-abundant countries tend to invest less in education (Cf. Birdsall et al. 1999), and that mineral resource abundance tends to evoke Dutch Disease effects, inequality, and governance problems (Auty, 1993; 1998; 2001). Mineral-led development has often resulted in unsustainable patterns of investment and consumption, a public expenditure pattern that has made the distribution of income worse, and the economy more mineral-dependent and less diversified (Cf. Gelb, 1988; Auty, 1993; Karl, 1997; Gary and Karl, 2003).

Despite persistent claims that a ‘mineral resource-based’ or ‘mineral resource-led development’ strategy could contribute to a nation’s output and lift a developing country out of its dire poverty (e.g. Weber-Fahr, 2002; Wright and Czelusta, 2002; Stijns, 2005), so far the experience is that mineral wealth does not easily translate into productive, social and human capital. On the contrary, economic, social, political and institutional forces exist that guide mineral-rich developing countries *away* from development progress and poverty reduction. This pattern of corroding dynamics triggered by a country’s reliance on mineral income is commonly referred to as ‘the Resource Curse’ or the ‘Paradox of Plenty’.

This paper aims at presenting the state-of-the-art in concepts, explanatory models and solutions of the scientific literature on the Resource Curse. The paper will first consider to what extent the Resource curse has been unequivocally supported in the scientific debate (section 2). Next, the two most important explanations for the resource curse – economic and political - will be elaborated (section 3). Is the Resource Curse inevitable? Section 4, finally, will shortly discuss the most obvious ‘way out’ of the resource curse - through governance measures. Simple solutions, however, do not exist.

2. The emergence of the ‘Resource Curse’ thesis

Since the 1950s, the relationship between mineral resources and economic development has been topic of considerable debate among development economists from diverging ideological backgrounds (Cf. Prebisch, 1950; Singer, 1950; Innis, 1951; Rostow, 1956; 1960; Rosenstein-Rodan, 1961; Baldwin, 1956; 1963; Watkins, 1963; Seers, 1964; Frank, 1966; Hirschmann, 1958; 1977; Murphy et al., 1989). Since the late 1970s research has become less ideological and increasingly empirically grounded. Serious doubts about the development potential of extractive activities started to arise in the 1980s, and a growing body of evidence, largely based on studies of individual mineral exporting countries, suggested that a favourable natural resource endowment might be less beneficial to countries at low and mid-income levels of development than the conventional wisdom supposed (Cf. Gelb, 1988; Auty, 1993; Karl, 1997). These studies demonstrated that, since the post-world-war period, mineral resource abundant developing countries showed little, no, or even negative economic growth over extended periods of time. Mineral resource-based development, it seemed, led to a form and pace of use of mineral rents that made the distribution of income worse, the economy more dependent and less diversified, export earnings more concentrated in primary products and the growth rate of the non-mineral sectors of the economy lower than they would be without the mineral development (Cf. Lewis, 1984; Nankani, 1979). Evidence from comparative country studies suggested that resource-rich countries might not only fail to benefit from a favourable endowment, they actually might perform worse than less-endowed countries (Auty, 1993; 1997; Karl, 1997). Specialisation on the exploitation and export of mineral resources proved to be far from a sufficient condition for sustained economic development.

During the 1990s, more comprehensive empirical analyses – of which the works of Sachs and Warner (1995; 1997; 1999; 2001) are considered pioneering – attempted to identify and measure the effect of extractive activities on post-war economic development, using longitudinal, cross-section samples of developing countries. Many of these studies (Cf. Auty, 1998; Gylfason and Zoega; 2001; Manzano and Rigobon, 2001; Isham et al., 2004) found that – directly or indirectly – a greater dependence on mineral resources is statistically associated with poorer economic growth, thereby contradicting the traditional view on mineral endowment, which presumes a positive relationship between mineral exports and economic growth. Sachs and Warner (1995; 1997) contended that the direct negative correlation they found holds true even after controlling for a large number of variables claimed to be important in explaining cross-country growth, such as initial GDP, trade policy (inward-looking or export-oriented), investment rates, terms of trade volatility, inequality, and the effectiveness of the bureaucracy. In a later publication, Sachs and Warner (2001) also found that there was little direct evidence that omitted geographical variables (which could influence the level of export) could explain for the curse, or that there was a bias resulting from other unobserved growth deterrents. Given the list of variables controlled for, the inverse correlation appeared quite robust. Indeed, studies by Sali-i-Martin (1997) and Doppelhofer et al. (2000) indicated that natural resources are one of the ten most robust variables in explaining economic growth. Earlier

suppositions about the negative relationship between mineral dependence and economic development seemed to be confirmed by these research results. The ‘Resource Curse Thesis’, as a ‘new’ and countervailing view to the more traditional approaches, became a legitimate, scientifically underpinned doctrine.

But consensus on the phenomenon has not stopped the debate on its causes and consequences.. Empirical assessments come to different conclusions, depending on the data, time span and methodologies used (Cf. Davis and Tilton, 2002; Weber-Fahr, 2002), and transmission channels of the effects of natural abundance on economic growth considered (Brunnschweiler, 2006). Also, different mineral-rich countries appear to have experienced different varieties of mineral-led development (Cf. Van der Ploeg, 2006). There is no simple single explanation of what exactly created the curse, nor is there any agreement on any collection of explanations (ICMM, 2006). The emerging consensus is that mineral deposits can, at least in potential, provide mineral economies with opportunities that they would not have enjoyed otherwise, and that the negative correlation between mineral dependence and economic development should not be interpreted too deterministically. The resource curse is not inevitable; ultimately, it is the result of institutional and policy failure. As the resource curse appears particularly severe for countries with weak institutions, poor legal systems and little democracy (Cf. Mehlum, Moene and Torvik, 2006; 2006a; Van der Ploeg, 2006), much seems to depend on the intentions, actual commitment, and capacity of governments to combat resource curse effects and to promote socioeconomic development in a sustainable way by managing resource rents effectively (Cf. World Bank, 2006). Institutional capacity and governance are now considered key themes in explaining development outcomes in mineral-rich countries (Cf. Thomas, 2003; DFID, 2003; Mehlum et al., 2006a; World Bank, 2006; Brunnschweiler, 2006).

3. Explanations for the Resource Curse

3.1. Economic approaches

In the economic literature, basically four types of approaches can be distinguished that provide a theoretical underpinning for the Resource Curse (Cf. Gelb, 1988; Stevens, 2003; Van der Ploeg, 2006; ICMM, 2006): linkage theory; neoclassical growth theory; export instability theory; and booming sector and ‘Dutch Disease’ theory. These strands of economic analysis should not be considered mutually exclusive; they just tend to emphasise different angles of looking at the constraints related to mineral-led development, and the different choices and policy options available that might help to lift the curse (see appendix A).

The linkage approach (Cf. Hirschmann, 1958; 1977) to the resource curse emphasises the limited scope for the establishment of backward and forward production linkages between the extractive sectors and the local economy, and the ‘enclave nature’ of in particular the oil and gas industries. The production process is largely continuous, highly capital-intensive with large inputs of capital coming from foreign sources. It also employs a relatively small number of high-skilled workers – usually between 1 and 2

percent of a country's workforce (Karl, 1997) – of which a significant part is flown in from abroad. The diffusion of technical and managerial knowledge is limited, as labour mobility in the sector is practically non-existent. The mining sector generally provides more employment opportunities for low and semi-skilled workers, though employment in mining often has a highly temporary character (Cf. Weber-Fahr et al., 2001; MMSD, 2002). Local procurement of food and housing does provide employment opportunities for local women, farmers, and craftsmen, stimulating micro and small economic activities. Support and organisational guidance to help these initiatives grow out to small and medium businesses is often lacking or insufficient.

As regards forward production linkages, the establishment of vital value-adding resource-based industries is a peculiarity (Cf. Pegg, 2003; Ross, 2001). Declined transportation costs made it no longer critical for processing industries to be in close proximity to the resource reserves. More importantly, unprocessed oil and minerals are largely free from tariffs that OECD countries place on processed goods, whereas tariffs on mineral and oil products or semi-products can amount to about 8 percent (Cf. Ross, 2001; EIR, 2003).

Mineral income may also engender 'consumption linkages', referring to spending effects emanating in increased income (Hirschmann, 1977). Generally, mineral income is, at least initially, likely to be spent on increased imports. Once demand for these imports has grown to a sufficient volume, imports can eventually be substituted for by domestic industries, which in turn stimulates local employment, accumulation and diffusion of skills, entrepreneurship and further income generating activities through production linkage effects. Gelb (1988), however, warned for the opposite effect: that the high demand for imports could destroy local industrial capacity by inducing displacement effects. Local production activities could be crowded out by the emergence of a large extractive sector that lays claim to scarce factors of production, notably skilled labour, depriving a country of its vital dynamic development forces.

Fiscal linkages deal with the income side of the economy and refer to the mineral rents that accrue to the state through taxes levied on activities and assets that involve the exploitation of mineral resources. The limited scope for beneficial production linkages makes the degree of fiscal linkages the most important determinant in the ultimate benefits that are to be derived from primary production (Cf. Auty, 1993; Gelb, 1988, Hirschmann, 1977). The actual contribution of fiscal linkages depends on (a) the share of mineral rents accruing to the state, which hinges on the ownership structure of extractive activities and the bargaining powers of the state and foreign company; and (b) the government's ability to invest taxes productively, and to diversify the economy away from mineral dependence. The latter has been extremely hard to establish (Cf. Karl, 1997; Auty, 1993; Gelb, 1988; Ross, 1999, Gary and Karl, 2003; Gary and Reisch, 2005).

Neoclassical approaches use the assumption of rational utility maximisation and the comparative statics method of equilibrium analysis, based on stable relations between factor inputs and outputs. Output growth is characterised as a process of expanding the production possibility set. In this view, mineral rents are considered a source that can help relax constraints to economic growth such as domestic savings, foreign exchange needs and fiscal revenues. Symptoms of the resource curse – such as inflation;

appreciated exchange rates that make imports ‘cheaper’ and so evoke a shift in the production structure towards non-traded sectors; and increased dependency on mineral revenues – are explained as a result of major distortions of the equilibrium situation arising from demand manipulation and market rigidities. These can be a result of, for instance, government deficit spending, exchange rate controls and monetary expansion (Cf. Gelb, 1988), i.e government failure.

Export instability approaches are concerned with the question whether unstable commodity markets, and the variability of income that emanates from it, will adversely affect or even offset the benefits of temporarily high income - the so-called ‘windfall gains’ or ‘bonanzas’. The roots of the volatility, also referred to as ‘boom-bust’ cycles, lie in the international oil and mineral markets which exhibit short- and medium-term rigidity in response to changing demand (Auty, 1993). Mineral commodities are price-inelastic in both demand and supply, with demand being very sensitive to economic activity in consuming regions. Fluctuations in demand then bring about large price and revenue shifts. Price variations of 30 percent or more within a year or two are not uncommon (Cf. Davis and Tilton, 2002).

Volatility has been proven bad for economic growth (e.g. Ramey and Ramey, 1995; Combes and Guillaumont, 2002) and investment (e.g. Aizenmand and Marion, 1999), especially in countries that are poor, institutionally underdeveloped, undergoing intermediate stages of financial development, or unable to conduct counter-cyclical fiscal policies (Cf. Hnatkovska and Loayza, 2004). Market instability makes it difficult for developing countries to count on a certain level of revenues from the mineral sectors – especially when the country’s income depends on a single mineral commodity – and so substantially complicates fiscal policy, effective budgetary planning and the efficient use of public resources for economic development (Cf. Davis et al., 2001). Policy responses of governments to price volatility have caused serious problems regarding effective mineral sector management, all boiling down to an overrapid, often inefficient injection of mineral revenues into the economy and insufficient savings to cushion subsequent downswings. During upswings, rapid injection of mineral income in mineral economies with a low absorptive or productive capacity can result in an overheated, overextended economy, inflationary pressures and an appreciation of the exchange rate that eventually harms the competitiveness of the country’s non-mineral traded sectors. In the event of a downswing, excessive spending patterns and public investment must be sharply cut at short notice, an unpopular policy measure that might also result in abandoning viable projects that are crucial to a country’s development (Cf. Auty, 1993; Karl, 1997, Lewis, 1984; Davis et al., 2001).

The costs associated with the incapacity of anticipating revenue fluctuations have been huge (Cf. Crain and Devlin, 2002). In many cases, the enormous gains made by developing mineral-rich countries during the booming years have been swamped during downswings. Enormous amounts of foreign debt service and, as a consequence, increased dependency on mineral income have been the result (Cf. Karl, 1997). Since the mid-1990s, measures to help solve the destructive monetary and economic impact of unpredictable mineral revenues have received considerable attention. In particular, these measures include (i) the creation of a stabilisation fund to which excess income is channeled during upswings and out of which budget deficits can be partly financed during downswings;

and (ii) the establishment of a savings fund that receives a constant share of mineral revenues for future generations. However, the effectiveness of stabilisation and savings funds in mitigating volatility has been found ambiguous (Devlin and Lewis, 2005; Davis et al., 2001). In specific cases – e.g. Chile, Norway and Oman – these funds appear to lead to the intended results – i.e. lower levels of volatility in government expenditure, reduced government expenditure and higher shares of gross fixed capital investment. But they were an insufficient solution for countries without a history of prudent macroeconomic management, which represents a high share of mineral dependent developing countries. In these countries, fund rules have been changed intermediately, effectively allowing government's greater discretion, thereby undermining one of the main justifications for establishing the funds (Davis et al., 2001a). For these funds to work well, fiscal discipline, the willingness to de-link expenditure streams from volatile mineral income, transparency and good governance are absolute requirements. The experience so far implies that stabilisation and savings funds only work where they are not needed (Cf. Davis et al., 2001; 2001a; Devlin and Lewis, 2005).

Booming sector and 'Dutch Disease' approach. Booming sector approaches in essence center on the sectoral reallocation of factors of production in response to a profitable shock that results from either a resource discovery or an increase in the price of an exportable commodity. If the extra income that emanates from such a profitable shock is spent rather than saved (Cf. Matsen and Torvik, 2005), a resource boom can affect an economy essentially in two ways (Cf. Cordon and Neary, 1982; Neary and van Wijnbergen, 1986). The first is by way of a 'spending' or 'demand-side' effect: higher real incomes as a result of the boom lead to extra expenditures on both traded and non-traded goods, which will result in a higher price for non-traded goods when demand increases and exceeds domestic supply. Because of this appreciation of the real exchange rate, traded goods can be imported more cheaply, which makes domestic production of these goods less attractive. The spending effect draws factors of production (i.e labour and capital) out of activities producing traded goods, which will be substituted by imports, and into the non-traded sectors (Cf. Gelb, 1988). The second effect of a resource boom on an economy is through the so-called 'resource movement' or 'supply side' effect: triggered by the prospect of higher returns in the booming mineral sector, factors of production are drawn out of other economic activities, notably agriculture and manufacturing, and into the booming resource sector. In those cases where there is little slack in the economy and sectors thus have to compete for factors of production, the resource movement effect tends to raise inflationary pressures, resulting in the appreciation of the real exchange rate. In turn, this will eventuate in a squeeze on the non-mineral tradable goods sector (Neary and Van Wijnbergen, 1986) – also referred to as 'de-industrialisation' (Cordon and Neary, 1982) – which eventually will lead to greater dependency on mineral income for foreign exchange (Cf. Gelb, 1988).

The co-existence within the traded goods sector of progressing and declining – or booming and lagging – sectors, is referred to as the 'Dutch Disease'. An indicator of Dutch Disease is the premature contraction of the agricultural and manufacturing sectors in mineral economies compared with those in non-mineral economies at a similar stage of development. An untimely contraction of these sectors can have deleterious macroeconomic side effects (Neary and Van Wijnbergen, 1986; Gylfason, 2001a). Dutch

Disease leaves the domestic traded sectors, especially manufacturing, uncompetitive, not only in the short run but for an extended period of time. Contraction deprives the industrial and services sectors from the ability to benefit from the technological progress that arises from ‘learning by doing’ (Cf. Van Wijnbergen, 1984; Krugman, 1987; Torvik, 2001), which implies lower productivity, and in turn may also discourage inward foreign direct investment (Gylfason, 2001a). Especially in developing countries, Dutch Disease appears to evoke a dynamic that policy makers seem incapable of counteracting (Cf. Karl, 1997; Neary and Van Wijnbergen, 1986).

3.2. Political-economic approaches

Since the late 1990s, there has been a surge in publications that link the disappointing economic performance of developing mineral-rich countries to political-economic issues such as rent-seeking and corruption, power-enhancing patronage and personal prestige, the use of mineral income for the financing of armed conflict and the quality of state institutions. It was argued that most developing oil and mineral-rich countries engender a political state that is factional or predatory (Cf. Renner, 2002; Auty, 2001; Bergesen et al., 2000), which distorts the economy in the pursuit of rents and personal gain. Three political approaches towards explaining the Resource can be discerned: (i) cognitive, (ii) societal and (iii) state-centred (Ross, 1999). They represent respectively, a micro, meso and macro level of analysis (see also Appendix B).

Cognitive approaches contend that mineral wealth causes some sort of shortsighted euphoric myopia or ‘petromania’ (Karl, 1997) among public and private actors. Easy mineral rents lead to either indolence and lax economic planning, or to exuberance and excessive, inefficient spending evoked by a ‘get-rich-quick’ mentality among business men and a boom-bust mind-set among policy makers (Ross, 1999). Natural wealth may induce a false sense of security and excessive optimism, leading to overconfidence and failure to take account of the adverse effects of policy actions on the next generation. This precipitates investment decisions that neglect ‘due diligence’ procedures, excessive spending patterns (public services, subsidies, relaxation of taxes, prestigious infrastructure projects) (Cf. Robinson, Torvik and Verdier, 2006; Atkinson and Hamilton, 2003) without thought of the recurrent spending implications (Cf. Sarraf and Jiwanji, 2001), and lacking precautionary measures such as savings and stabilisation funds. Excessive spending has in many cases been the result of the political need of state leaders to raise their popularity and political performance (Karl, 1997; Sarraf and Jiwanji, 2001; Auty, 2001). Ambition to make ‘the great leap forward’, to establish a new position in the world economy, and the desire to emphasise their own grandeur, the focus of political leaders’ spending spree has tended to be on short-term and easy solutions that yield quick successes. Structural, long-term beneficial solutions – such as administrative capacity building (Cf. Gelb, 1988), alignment of existing policies and human capital accumulation (Cf. Gylfason, 2001) – take time to materialise and provide few immediate rewards, and hence have often been skirted. Excessive mineral rents may also eventuate in a form of paralysis or planning inertia among policy makers. Since nearly everything can be imported, no immediate need is felt to develop, organise or stimulate productive activities, to make necessary readjustments that align policies to the new circumstances,

or to invest in projects conducive to more sustainable forms of development. During downswings, however, policymakers may suddenly be confronted with a serious deficiency in foreign capital to acquire food, goods, technologies and services needed, and with the neglected state their economy is in. Foreign borrowing then may be considered the only easy way out of these sudden financial problems. In the past, the utilisation of natural resources as a collateral for debt, drove many mineral-rich countries in a debt crisis (Cf. Manzano and Rigobon, 2001; Kretzmann and Nooruddin, 2005).

Societal approaches claim that mineral-rich countries face special difficulties in restructuring their development trajectories away from mineral dependence (Cf. Shafer, 1994; Karl, 1997). Privileged classes, sectors, client networks and interest groups all try to capture a share of the mineral rents by way of rent-seeking, and by organising their interests to maintain the status quo of a mineral-centered economy from which they profit. The share of mineral rents that can be captured by these interest groups depends on their 'political capital', i.e. the level of political influence and their success in chasing after state patronage. Mineral rents thus provide a strong incentive to form tight links with allied interest groups, politicians and civil servants, often by offering favours for benefits received. This rent-seeking dynamic between private interests and the state is self-perpetuating as long as mineral rents continue to flow, producing a 'political vicious circle'. It brings into being a kind of social contract among organised interests, or 'rentier psychology', "which disproportionately admires and rewards those who can 'milk the cow' without effort rather than those engaged in less remunerative but more productive activities" (Karl, 1997: 57). Any attempt to alter this model will have to face the opposition of powerful countervailing social classes and organised lobby groups that have grown accustomed to the benefits of a mineral-led development model, and who are able to block much needed economic reforms. As a consequence, governments may find themselves captured in a system that disables them to pursue those policies that will maximise national welfare (Cf. Lane and Tornell, 1995; 1996; Karl, 1997; Acemogly and Robinson, 2006). Cross-country studies indicate that countries where rent-seeking and corruption are rampant, suffer from lower capital accumulation, productivity and growth as resources are diverted away from the promotion of the greater good (e.g. Mauro, 1995; Keefer and Knack, 1997; Leite and Weidman, 1999; Torvik, 2002).

State-centered approaches tend to use a mixture of cognitive, societal and institutional arguments to explain how mineral rents may damage a state's ability to stimulate growth (Ross, 1999). Most of them elaborate on the concept of the 'rentier state' (Cf. Mahdavy, 1970; Beblawi, 1987; Karl, 1997) which incorporates two basic mechanisms: the so-called 'taxation effect' and the 'spending effect' (Cf. Ross, 2001b). The taxation effect lies at the heart of the lack of accountability and institutional development in developing mineral-rich countries: when governments obtain sufficient revenues from external sources – i.e. from the export of their mineral resources – they become less dependent on their inhabitants for filling up their treasuries and hence may feel less need to tax their populations and to establish an effective administrative apparatus (Cf. Tilly, 1975; Shafer, 1994; Karl, 1997; Moore, 2000). In turn, the public is less likely to demand accountability from their governments, and governments become less transparent, accountable and responsive to the societies they govern. Also, without a comprehensive tax system and the administrative apparatus to facilitate it, governments lack the

institutional capacity to extract essential economic information from society as a basis to develop sound development strategies on (Cf. Shafer, 1994; Karl, 1997; Ross, 1999).

The ‘spending effect’ refers to the notion that mineral wealth may lead to greater spending on patronage and pacifying dissent, thereby dampening latent pressures for democratisation and the formation of civic institutions (Cf. Ross, 2001b), but also for growth and development (Cf. Keen, 1998; Acemoglu et al., 2004; Acemoglu and Robinson, 2006). In many mineral-rich developing countries, spending patterns and the distribution of mineral revenues among different social groups and cronies tend to be perceived as *the* primary mechanism of statescraft as money has increasingly been substituted for authority (Karl, 1997). In countries characterised by an authoritarian regime type, a closely-knit political, economic and military elite, the absence of functional democratic institutions to check executive powers, and weak or demobilised civil societies, this may result in the so-called ‘repression effect’ (Cf. Bergesen et al, 2000; Ross, 2001b; 2001c). Resource wealth allows ‘predatory’ authoritarian state leaders to spend a substantial part of state revenues on internal security so as to keep down democratic aspirations by means of systematic oppression (Cf. Renner, 2002), or to maintain a ‘conflict economy’ for economic purposes (Keen, 1998). The predatory type of state is claimed to – directly or indirectly – produce collective ‘bads’ such as corruption, insecurity of all kinds (including the violation of basic human rights) and illiteracy, resulting in a distorted economy and reduced growth. (Bergesen et al., 2000). Several studies have found a strong link between dependence on natural resources and the risk of civil war and its prolongation (Cf. Collier and Hoeffler, 2005; 2004; 2000; Collier et al., 2003; Ross, 2001; 2004; Renner, 2002), whereas numerous non-governmental organisations have reported on severe human rights abuses in mineral-rich developing countries.

Essential in most state-centered approaches in the resource curse literature is the concept of state and institution building. The contention is that the kind of revenues a state collects, how it collects it and the uses to which it put revenues, all define the nature of the state and the capacity and quality of its institutions (Karl, 1997). Many problems of rentier states have their roots in the skewed relationship between regulatory, extractive and distributive state institutions that are claimed to have developed as a result of high levels of mineral revenues flowing in at the time that these states were in their initial but critical phases of state building (Karl, 1997). Patronage, rent-seeking, corruption and intimidation then tend to become the basic mechanisms through which some form of hierarchy and distribution of power in society is being established. In this context, large amounts of mineral income appear to make bad governance worse. High dependence on mineral revenues has therefore been associated with corrosive effects on a state’s political and institutional arrangements (Cf. Karl, 1997; Isham et al., 2004), although this contention has not remained unquestioned (Cf. Brunnschweiler, 2006).

4. Institutional quality and good governance as key to ward off the resource curse

Not all mineral-rich developing countries have fallen prey to the resource curse. Notably Botswana and Chile have managed to successfully apply their mineral income to facilitate development. So why is the spell of the resource curse cast so unequally? The consensus develops that there is nothing automatic about the resource curse. The curse is not inevitable; it works through people, incentives, and institutions. Although quantitative work on the link between the resource curse and institutional quality still tends to be limited, recent empirical studies suggest that differences in income across natural resource abundant countries can be explained by the effectiveness of their institutions (Acemoglu et al., 2001). There may only be a curse when natural resource wealth occurs together with low-quality institutions (Brunnschweiler, 2006). Managing a mineral economy is complex and requires well-developed state capacities and a ‘developmental’ mindset (Cf. Auty, 2001; Bergesen et al., 2000) among state leaders and policy makers. In most mineral-rich developing countries, however, the quality of planning is poor and decision-making by state institutions aimed at short-term gains that represent, preserve and extend the interests and authority of a small governing elite. It is reactive, self-interested and at times greedy rather than visionary.

‘Governance’ and institutional quality are currently considered key themes in explaining development outcomes (Cf. ICMM, 2006); following the principles of ‘good governance’ – i.e. voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption (Cf. Kaufman, Kraay and Zoido-Lobato, 1999) – as a promising way out of the vicious cycle of the resource curse. But to set in motion a ‘consolidating’ instead of a ‘corroding’ development loop (Auty, 1993), elemental political (regime resolve, goals, governance), economic (preconditions, macro and sectoral policy) and institutional (capacity, quality) constraints related to managing a mineral economy have to be addressed simultaneously. The macroeconomic aspects of the resource curse and the requirements to manage them are by now claimed to be well-understood. However, up till now no single model has yet synthesized the dynamic interplay of institutional, social and political factors that is behind the resource curse. The common tools of static analysis – mostly focused on understanding problems, not on finding solutions – do not allow the capture of important aspects of how effective and efficient institutions and governance structures emerge and are built over time. Moreover, comparative political economists are rather sceptical of too broad generalizations across time and between countries, as is suggested in cross-national econometric studies (ICMM, 2006: 25). Hence, a full picture of an effective integrated strategy, based on an appropriate framework of proven methods to ward off the adverse effects of mineral-based development, is still to emerge.

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Appendix A: Economic approaches to the Resource Curse: bottlenecks, likely causes and suggested policy directions

<i>Economic Approach</i>	<i>Identified Bottlenecks with regard to Mineral-led Development</i>	<i>Likely Causes</i>	<i>Suggested Policies</i>
<i>Linkage Theory</i>	<ul style="list-style-type: none"> - Limited scope for establishment of production linkages - Limited scope for establishing vital forward linkages - Crowding out of local industries / displacement effects - Lack of learning-by-doing externalities - Ineffective and / or inefficient use of fiscal linkages - 'Subsidy'-culture impedes entrepreneurship - Increased dependency on mineral income 	<ul style="list-style-type: none"> - Enclave, capital and know-ledge-intensive nature of EI² sector - (Non)tariff barriers on processed oil and minerals - Rise in revenue income increases demand for imported goods - Insufficient and/or lacking human capital and decision-making capacity - Lack of functional absorption capacity 	<p>Implement a sound tax regime that is sensitive to profitability;</p> <p>Stimulation/ facilitation of non-mineral economy through prudent, clearly focused and well-targeted public investment in demand or supply-side of the economy by means of investment in social infrastructure, industrial / sectoral investment and/or transfers to the private sector.</p>
<i>Neo-classical Growth Theory</i>	<ul style="list-style-type: none"> - Impeded growth due to market distortions and rigidities, causing disequilibria such as: <ul style="list-style-type: none"> ▪ Demand exceeding production → inflation ▪ Appreciated exchange rates, which make imports 'cheaper' and so evoke a shift in the production structure towards non-traded sectors - increased dependency on mineral revenues 	<ul style="list-style-type: none"> - Lack of critical factors of production (domestic savings, foreign exchange, fiscal revenues) - Policy interventions that thwart market forces, like: <ul style="list-style-type: none"> ▪ Government deficit spending ▪ Exchange rate controls ▪ Monetary expansion ▪ Demand manipulation 	<p>Reduction of policy interventions that impede market processes, and encouragement of market forces → privatisation and libera-lisation.</p> <p>In such an economic environment, mineral booms will help to relax constrains in factors of production.</p>
<i>Export Instability Theory</i>	<ul style="list-style-type: none"> - Economic planning difficulties <p><u>During upswing:</u></p> <ul style="list-style-type: none"> ▪ Overheated economy, with its increased (public) consumption level and lack of productive capacity, triggers inflation and cost overruns ▪ Appreciated exchange rates evoke increased importation, damaging local industry ▪ Lower allocation efficiency / misallocation of resources due to government spending spree and misplaced optimism ▪ Loss of competitiveness of non-mineral traded sectors 	<ul style="list-style-type: none"> - Volatility in mineral income (boom-bust cycles) due to short and medium-term rigidities in international oil and mineral markets - Overrapid injection or redrawing of revenues in economy - No financial reserves to cushion downswing due to insufficiency of savings - Establishment of unsustainable consumption and investment patterns, reinforced by path dependency of past investment decisions and 'sunk costs' - Focus on mineral sectors 	<p>Sterilise the monetary effects by accumulation of savings (mineral stabilisation fund, held in foreign, stable currencies) during upswing period to:</p> <p>(1) slow the rate of domestic windfall absorption and so avoid an overheated, overextended economy; and</p> <p>(2) provide a cushion to ease adjustment during subsequent downswing.</p> <p>Could be done by, for</p>

² EI refers to Extractive Industries.

	<p>(agriculture and manufacturing) in medium and long run</p> <ul style="list-style-type: none"> ▪ Increased dependency on mineral income for generating foreign exchange and keeping up consumption and investment levels <p><u>During downswing:</u></p> <ul style="list-style-type: none"> ▪ Depreciation of exchange rate: importing of goods and food which cannot / can no longer be produced nationally becomes more expensive ▪ Budget deficits and building up of debts ▪ Postponement or cancellation of large-scale investment projects → no output yielded, waste of money invested ▪ Unemployment ▪ Increased dependency on mineral sector to fill financial gaps and to pay off debt service 	<p>/ neglect of lagging non-mineral sectors</p> <ul style="list-style-type: none"> - Tardy adjustment to post-boom downswings 	<p>instance, domestic investment in overseas financial instruments or the establishment of an offshore escrow account.</p> <p>A sound taxation regime, which effectively creams off windfall revenues without deterring long-term investment in the mining sector, is considered a prerequisite for the establishment of a mineral stabilisation fund.</p>
<p>Booming Sector and Dutch Disease Theory</p>	<ul style="list-style-type: none"> - Inflationary pressures - Appreciation of real exchange rate increases importation, harming domestic output of traded goods - 'De-industrialisation', which eventually leaves manufacturing sector uncompetitive - Establishment of unsustainable subsidy policies to support the lagging non-mineral sectors - Increased dependency on mineral sectors for bringing in foreign exchange - Increased dependency on imported goods and food from abroad - Capital flight during downswings accelerates and deepens contraction of economy → building up of debts - Unemployment due to premature shrinkage of non-mineral traded sectors 	<ul style="list-style-type: none"> - Spending / demand-side effect: higher real incomes as a result of a boom lead to higher (public) consumption levels - Resource-movement / supply-side effect: factors of production are drawn out of non-mineral traded sectors and into the booming oil or mineral sector, triggered by the prospect of higher returns in these booming sectors - Backwash effects: skilled labour and capital is drawn from the hinterland, leaving the non-export sectors poorer than before - Premature squeeze of the non-mineral traded sectors (agriculture and manufacturing), and overrapid, distorting growth of services, transportation, construction and other non-tradeables - Persistent rigidities in economic adjustment mechanisms and imperfect markets in most developing countries 	<p>In case of insufficient functional absorption capacity or in cases where the risk of too high an absorption rate is present:</p> <p>Siphon off / sterilise extra income emanating from resource boom (via tight fiscal policies) by:</p> <ul style="list-style-type: none"> - saving of funds abroad (in foreign, stable currencies); - investment in overseas financial instruments; or - the establishment of an offshore escrow account <p>Do not put all eggs in one basket: strive for sound and balanced allocation of resources towards mineral and non-mineral sectors → diversification of the economy</p>

Source: Van Mil (2006), p. 64-65, table 3.2.

Appendix B: Political approaches to the Resource Curse: mechanisms and symptoms that impede sound socio-economic policymaking

	Underlying mechanisms	Symptoms
Cognitive explanations	<ul style="list-style-type: none"> ▪ Euphoric myopia / ‘petromania’ (excessive but often misplaced optimism and overconfidence) ▪ Short-sightedness ▪ Political ‘need’ to raise popularity among constituents and emphasise own grandeur and prestige 	<ul style="list-style-type: none"> ▪ Indolence and lax economic planning; ▪ Exuberance and excessive, inefficient spending; ▪ ‘Get-rich-quick’ mentality; ▪ ‘Boom-and-bust’ mindset; ▪ Easy ‘solutions’ that yield quick ‘successes’ as an answer to fundamental and complex socio-economic problems; ▪ Neglect of finding and implementing structural, long-term beneficial solutions that do not directly pay off; ▪ Blindness to socio-economic consequences of policy choices; ▪ Blindness to the possibility of economic downswings; ▪ Frantic, brash policy measures to unanticipated, acute socio-economic problems or just the opposite reaction: paralysis, indecisiveness and inertia.
Societal explanations	<ul style="list-style-type: none"> ▪ Organised interest or social groups (multinational oil and mining companies; domestic ‘bourgeoisie’; working class; the urban and rural poor, etc.) that fight to maintain their status quo or that try to enhance their socio-economic and political position 	<ul style="list-style-type: none"> ▪ High barriers to depart from current policy direction due to powerful countervailing pressures from social classes or interest groups; ▪ Self-perpetuating rent-seeking dynamic between private interests and the state; ▪ System rewards those with a rentier psychology or ‘milk-the-cow’ mentality, thereby reinforcing this behaviour and making it socially accepted, if not socially expected; ▪ Bargaining position (political capital) of an interest group is determined by its access to fuel or non-fuel mineral wealth; ▪ Political arbitration tends to be in favour of the ‘haves’, instead of the ‘have nots’ ▪ Collaboration between interest groups to build up political pressure; ▪ Manipulation of the less well-off or poor and jobless majority of people by powerful elites / channelling of mass anger / populism; ▪ Government uses subsidies and public means to keep an angry and dissatisfied mass quit; ▪ Political instability and social unrest.

State-centered explanations	[underlying mechanism]	[symptoms]
	<ul style="list-style-type: none"> ▪ The kind of revenues a state collects, how it collects them and the uses to which it puts them all define the process of state building, and thus the nature of the state and the capacity and quality of its institutions. ▪ Fuel and non-fuel mineral states are ‘rentier states’, which usually are characterised by the presence of ... <ul style="list-style-type: none"> - Taxation effect - Spending effect - Group formation effect - Repression effect 	<ul style="list-style-type: none"> ▪ Lack of accountability; ▪ Lack of transparency; ▪ Spending patterns and the distribution of mineral rents become perceived as the primary mechanism of statescraft; <ul style="list-style-type: none"> ▪ Weak state with weak, poorly qualified and ineffective institutions, prone to patronage, favouritism, nepotism and other forms of clientelistic relationships; ▪ Institutionalised rentier mentality permanently skews the delicate relationship between regulatory, extractive and distributive state institutions → blurring of strict formal separation between political authority and private economic activity, and the mixing up of public and private pockets; ▪ The state’s authority lags behind its jurisdictional influence; ▪ Inability and lack of institutional capacity to extract essential economic information from society as a basis to develop sound development strategies on; ▪ Politicisation of state institutions, which inhibits efficacious government; ▪ Civil servants use favouritism and discretionary powers to expand own power domains, thereby undermining institutional efficiency, responsibility, caution and accountability, and reinforcing the state’s vulnerability to pressures from private interest groups; ▪ High levels of corruption among all state levels; ▪ Impediment and repression of democratic developments, demobilisation of civil society, systematic oppression (by using force and intimidation) to keep down democratic aspirations; ▪ Relatively high incidence of human rights abuses, e.g. forced delocation; ▪ High spending on internal security; ▪ Fostering of a ‘conflict economy’ by predatory state leaders, backed by interest group elites; ▪ Factionalist and separatist sentiments, regional conflict, and a stimulating influence on civil war (incidence and/ or duration).

Source: Van Mil (2006), pp. 96-97, table 4.1.