

Research Paper Appendix

Paul Stevens

Energy, Environment and Resources | August 2015

The Resource Curse Revisited

Appendix: A Literature Review

Contents

1	Introduction	3
2	A History of Interest in the Economic Impact of Natural Resources Exploitation	5
3	The Existence of the Resource Curse	7
4	The Transmission Mechanisms between Large Resource Revenues and Poor Performance	12
	Bibliography	28

1. Introduction

This appendix accompanies the research paper *The Resource Curse Revisited* by Paul Stevens, Glada Lahn and Jaakko Kooroshy.¹ The literature on issues associated with the concept of the ‘resource curse’ is huge. Furthermore, it has expanded exponentially in the last few years. To refer to that literature in the main body of the text of the research paper would swamp the key arguments, which are intended to guide policy decisions by vulnerable governments. But not to cite it would reduce the analysis in the research paper to casual empiricism. This appendix provides the evidence for many of the analytical assertions made in the research paper. In essence it is an updated and expanded version of the literature survey carried out by Paul Stevens titled ‘Resource Impact: Curse or Blessing?’ (Stevens, 2003).² It also draws on other works published by the author including Stevens and Mitchell (2008), *Resource Depletion, Dependence and Development: Can Theory Help?* and Stevens and Considine (2013), ‘The Economic Case for the Staged Development of Extractive Industry Projects in the Presence of Potential “Resource Curse”’. Other sources referred to in this appendix are listed in the bibliography.

It is generally assumed that large revenues accruing from the sale of hydrocarbon resources should promote economic growth and reduce poverty. Various strands of economic development theory support that assumption. For example, many held the view that development is constrained by low levels of investment – so-called ‘capital fundamentalism’ (Lewis, 1955; Rostow, 1960). That view was the basis of the Harrod-Domar growth model, which dominated much economic thinking in the 1960s and depended to a large extent on adequate capital spending. Others have argued that simply saving more will not lead to investment and growth because saving in domestic currency may not allow capital imports that require foreign exchange – the so-called ‘dual gap analysis’ (Joshi, 1970; El Shibley and Thirlwall, 1981).

At the same time, a long-held view in development economics is that poor countries must experience a ‘big push’ in order to break out of a self-feeding circle of poverty (Rosenstein-Rodan, 1943 and 1961; Murphy et al., 1989).³ Accordingly, large windfall hydrocarbon revenues accruing to an economy should overcome capital and foreign-exchange constraints and thus provide the required ‘push’. Furthermore, the theory of comparative advantage argued that countries should focus on developing commodities in those areas where they are relatively abundant. Some economic historians used that theory in relation to minerals in order to explain Canada’s development (Innis, 1956; Macintosh, 1964).

Yet for many years casual empiricism has suggested the opposite of such theories. Many resource-rich countries appear to have fared worse in terms of economic progress and poverty reduction than countries without such apparent ‘benefits’; and this seems to have been the case for oil-exporting

¹ www.chathamhouse.org/publication/resource-curse-revisited.

² It should be pointed out that there is a considerable body of theoretical literature that examines hydrocarbon economies in the context of the relationships between the various players in the upstream industry (Stevens, 2008; Victor et. al., 2011). A further body of literature considers the issue of optimal depletion in a hydrocarbon economy (Stevens and Mitchell, 2008). But since these areas are not explored in the research paper, they are not considered relevant to this appendix.

³ This view of development is debatable – as reflected in the ‘balanced’ versus ‘unbalanced’ growth debate of the 1960s. Auty (1994a) points out that the countries that tried this strategy at various points in their history – Brazil, India, South Korea and China – all came to grief: they absorbed the increase in investment in heavy industry too rapidly and thereby destabilized the economy, which led to a macroeconomic outcome similar to that of Dutch disease (see Section 4.3 below).

countries, in particular. In the economics literature, that performance has over the years led to the emergence of the ‘resource-curse’ thesis, or that of the ‘paradox of plenty’.

The term ‘resource curse’ was first deployed in the formal economics literature in 1993 (Auty, 1993).⁴ However, while many countries did appear to suffer a ‘curse’ as a result of the influx of large natural resource revenues, others did not. Thus the resource-curse phenomenon ‘is not an iron law, rather it is a strong recurrent tendency’ (Auty, 1994a, p. 12). More recent literature supports that view. For example, Kaznacheev, 2013 (p. 66) is sceptical about the “resource curse” hypothesis and the idea that mineral-exporting countries are doomed to stagnation’.

Section 2 of this appendix provides a history of interest in the topic as well as an explanation for the revival of interest in the last few years. Section 3 examines the evidence for the existence both of a ‘curse’ and of a ‘blessing’. Section 4 considers the various mechanisms whereby large-scale hydrocarbon revenues lead to poor economic performance.

⁴ To the best of the author’s knowledge, the first use of the term ‘the curse of oil’ was by this author writing under the pseudonym ‘David Brook’ in the Arab trade press journal *Middle East Money* (published in Beirut) in March 1975. The full reference for that article has long been lost, but the article concluded that ‘oil to the Arab World in the twentieth century would be what the Mongol hordes were to the Arab world in the thirteenth century – namely an unmitigated disaster’.

2. A History of Interest in the Economic Impact of Natural Resources Exploitation

Concern about the impact of great wealth on a society goes back at least as far as the fourteenth century, when the Arab philosopher Ibn Khaldun (1967) identified the fifth stage of the ‘state’ as one of waste and squandering.⁵ Two centuries later, the French philosopher Jean Bodin made the delightful comment, cited in Sachs and Warner (1999, p. 14), that ‘Men of a fat and fertile soil are most commonly effeminate and cowards; whereas contrariwise a barren country makes men temperate by necessity, and by consequence careful, vigilant and industrious.’ And in the seventeenth century, the wealth that Spain had acquired from the New World appeared to trigger the inexorable decline in that country’s fortune.⁶

In the 1950s and 1960s, some development economists became concerned about the potential negative impacts of producing and exporting natural resources – including, initially, Prebisch (1950 and 1964) and Singer (1950), who argued individually that primary-product exporters (the periphery) would find themselves disadvantaged in trade with industrialized countries (the centre) because of the deteriorating terms of trade. Others (Hirschman, 1958; Seers, 1964; Baldwin, 1966) reinforced the argument of the negative consequences of producing and exporting natural resources by pointing out that linkages from primary-product exports would be limited compared with manufacturing. However, some economists sought to argue that primary products could promote growth (Roemer, 1970; Lewis, 1989).

While the focus of concern was initially on primary products and natural resources in general, attention began to shift in the 1970s to the experience of the oil exporters. The aftermath of the first oil price shock gave rise to speculation that large-scale revenues might be bad news for the development prospects of the oil exporters. Amid such speculation, a literature specifically devoted to hydrocarbons began to emerge (Neary and Van Wijnbergen, 1986; Mabro and Monroe, 1974; Mabro, 1980).

The experience of the Netherlands in the 1970s, following the discovery of the Groningen gas field, gave rise to unease about ‘Dutch disease’ – defined explicitly as the contraction in the non-hydrocarbon traded sector following a real appreciation of the exchange rate. For the Netherlands, this meant a decline in manufacturing. However, economists began to observe that it was agriculture that usually took the biggest hit in developing countries.⁷

In the 1990s, it was the impact of oil, gas and mineral revenues on government behaviour that became the focus of attention. Large windfall revenues from such projects appeared to change the way in which governments behaved, causing damage to both growth and development prospects (Gelb, 1986; Auty, 1990).⁸ This research thread ran parallel to wider developments related to the economic

⁵ In the Judaeo-Christian tradition, there is a strong streak of fundamental disapproval of excessive consumption: see, for example, ‘When I have brought them into the land ... that floweth with milk and honey ... they shall waxen fat, then will they turn unto other gods’ (Deuteronomy 31:20).

⁶ Because of the long-standing historical ties between the Arab world and Spain, this observed decline attracted much discussion in the Arab world in the 1970s following the first oil price shock (of 1973–74).

⁷ Dutch disease is discussed in detail in Section 4.3 below.

⁸ This is explored in detail in Section 4.5 below.

theory of politics, theories of public choice and principal-agent analysis – all schools of thought that laid the ideological foundation for arguing that government involvement in the allocation of resources would tend to lead to their misallocation. The obvious linkage was that since in most jurisdictions the state owns the subsoil hydrocarbons, the revenue accrues to the government, thereby inevitably increasing its role in the economy.

In the past two decades, there has been a revival of interest in this subject; and as a result, the concept of the ‘resource curse’ has reached a much wider audience.⁹ Several factors explain this development. For some time, non-governmental organizations (NGOs) have expressed growing concern, claiming that oil, gas and mineral projects in poor developing countries have a very negative impact.¹⁰ Such projects are seen to damage prospects for economic progress and poverty reduction while at the same time promoting conflict (Collier and Hoeffler, 2004; Collier, 2010). For example, in its study titled *Extractive Sectors and the Poor* (cited by Ross, 2001, p. 4), Oxfam America argued that ‘oil and mineral dependence [is] strongly associated with unusually bad conditions for the poor ... [and] has a harmful effect on governments ... Such countries tend to suffer from unusually high rates of corruption; authoritarian government; government ineffectiveness; military spending [and] civil war’.

Another reason for the revival of interest is that a number of countries are about to start receiving large-scale oil and/or gas revenues and hence could become victims of the resource curse. Between 1998 and 2006 alone, the number of oil- and/or gas-producing countries increased from 38 to 57 (Ross, 2012). States as diverse as Angola and Papua New Guinea, as well as many countries in East Africa, are considering what should be done to maximize the benefits from oil projects and minimize their negative effects. At the same time, the number of potential victims of the resource curse has increased owing to the inexorable rise in international oil prices: the crude oil price (Dated Brent) rose from US\$19.09/bbl in 1997 to US\$54.52/bbl in 2005 and US\$111.67/bbl in 2012 (BP, 2015).

⁹ Auty has suggested in a personal communication with the author that Gelb et al. (1988) encouraged Sachs and Warner (1995) to undertake statistical analysis to identify the resource curse and what drives it.

¹⁰ In July 2001 NGOs succeeded in persuading the World Bank to set up the Extractive Industry Review, headed by Dr Emil Salem, a former environment minister in Indonesia. A five-volume report was published in January 2004 (World Bank, 2004). The findings of that report were somewhat ambivalent, but the document itself generated a debate and eventually led to some changes in the bank’s approach to lending for oil, gas and minerals projects.

3. The Existence of the Resource Curse

3.1 The negative growth impact

Much of the empirical work on the existence of the resource curse is focused on countries rich in natural resources in general; thus its scope goes beyond the hydrocarbons sector. There is a very large body of work that has sought over the years to establish a negative correlation between abundance of natural resources and GDP performance (Auty, 1986, 1993, 2001a, 2001b; Bulmer-Thomas, 1994; Lal and Myint, 1996; Luong and Weinthal, 2006; Frankel, 2012; ODI, 2006; Ranis, 1991; Rosser, 2006; Sachs and Warner, 1995b, 1997, 1998). Initially, the evidence appeared to support the theory of a negative link. For example, from a sample of 95 developing countries, Sachs and Warner (1997) found a clear negative correlation between natural resource-based exports (agriculture, minerals and fuels) and growth during the period 1970–90; only two countries included on the list of resource-abundant states – Malaysia and Mauritius – had ‘sustained even 2 per cent per annum growth during 1970–80’ (p. 27). In their various publications, Sachs and Warner subjected the data to all manner of scrutiny in order to try to eliminate or confirm a large number of diverse explanatory variables. In the end, they remained strongly convinced that resource abundance does have some innately damaging effects on economic performance.

Similarly, Auty (2001a) found that ‘between 1960 and 1990, the per capita incomes of resource-poor countries grew ... two to three times faster than those of the resource-abundant countries’ (p. 3). While Auty concedes that crop-led resource abundance would be expected to have lower growth than its manufacturing equivalent, the difference is greater than expected and the mineral-driven countries have been ‘among the weakest performers’. For his part, Van der Ploeg (2011) pointed out that ‘OPEC as a whole saw a decline in GNP per capita while other countries with comparable GNP per capita enjoyed growth’ (p. 368).

However, such empirical work tends to be very sensitive to the period chosen (Wright and Czelusta, 2004; Stijns, 2005; Alexeev and Conrad, 2009; Haber and Menaldo, 2011). In particular, much of the earlier work in this area focused on the period between 1970 and 1990, when ‘the oil-producing states were indeed economically troubled’ (Ross, 2012, p. 190). There is evidence that before the 1970s, resource-abundant countries did grow faster than resource-deficient ones (Auty, 2001a). Moreover, owing to oil-price fluctuations, results are likely to be distorted for certain periods: for example, one study bases its argument about poor performance on per capita GDP growth between 1985 and 1997 (Auty, 2001a); but in this period real oil prices (US\$1999) fell from US\$42.70/bbl to US\$20.04/bbl (BP Amoco, 2000). Thus it is hardly surprising that in a country where oil makes a significant contribution to GDP, per capita GDP should fall in tandem with the oil price.¹¹ During the period 1990–2006, when oil prices were largely rising, oil-producing countries’ GDP grew around 40 per cent faster than that of the rest of the world (Ross, 2012).

There is also the argument that the high oil prices of the 1970s triggered a borrowing boom among oil producers, creating a debt problem that led to subsequent slower growth (Manzano and Rigobon,

¹¹ This point is controversial since, in theory, GDP in real terms takes into account changes in oil prices. However, the extent to which this happens in practice is debatable.

2001). In addition, Luciani (2011) argues that there is evidence that since 1990 many resource-rich countries have learned various lessons and developed policies more favourable to growth – in particular, how to manage price volatility. That development can be attributed in part to the World Bank and the IMF stipulating that assistance is conditional on countries' managing the debt that accumulated during the economic growth collapse. More prudent macro policies and the creation of a more market-friendly business environment resulted from that approach.¹²

Meanwhile, the debate over how to define natural-resource abundance has raged. Dependence on primary products (Sachs and Warner, 1995a), per capita land area (Wood and Berge, 1997), labour force in the primary sector (Gylfason et al., 1999) and export orientation and population size (Syrquin and Chenery, 1989) are among the proposed values for that definition. However, Auty (2001a) argued that results relating to impact of natural-resource abundance hold with respect to 'different classifications and definitions ... and how [natural-resource abundance] can be measured' (p. 3). He went on to make an important distinction between rents derived from 'point resources' such as mining and those derived from 'diffuse' resources such as peasant farming. Examining the growth collapse of a large number of resource-rich countries after the mid-1970s, he asserted that growth plummeted most precipitously in those countries in which 'point resources' dominated.

Until recently, there were only a few dissenting voices to the results of this empirical work, and what dissent existed was often based on objections to methodology rather than the overall conclusions (Brunnschweiler, 2008; Brunnschweiler and Bulte, 2008; Di John, 2011; Lederman and Maloney, 2008; Nunn, 2008). Wright and Czelusta (2002) noted statistical problems with some of the work, pointing out that '[c]ross-country regressions are notoriously subject to selection bias' (p. 2). They went on to suggest that the US is an example of a resource-rich country that has avoided the 'curse' but the US authorities are 'not rentiers living passively off their mineral royalties' (p. 5). They also suggested that the world is now different since transport costs are lower and there is a 'global economy'. Stijns (2005) argued that:

Data on energy and minerals suggest that natural resource abundance has not been a significant structural determinant of economic growth between 1970 and 1989. The story behind the effect of natural resources on economic growth is a complex one that typical growth regressions do not capture well (p. 1).

More recently, Van der Ploeg and Poelhekke (2010) have asserted that the regressions which form the cornerstone of much of the empirical debate can be criticized on 'econometric grounds' – that is, the extent to which the variables are endogenous. And according to Van der Ploeg (2011), the negative correlation between growth performance and resource depletion may 'merely be picking up cross-country variations in per capita income' (p. 371).

One source that has challenged both methodology and conclusions is Maloney (2002), who wrote that 'there is little long term evidence that natural-resource abundant countries generally underperform ... [rather] natural resources have played an integral role in the success of many successfully industrialized countries' (p. 1). His argument starts with the not unreasonable proposition that 'growth processes take place across the very long run and probably cannot be convincingly summarized by cross-section regressions of one highly turbulent 20-year period at the end of the 20th century' (p. 1). This remark was aimed very much at the work done by Sachs and Warner. Gylfason (2001a) concludes that '[w]hat seems to matter for economic growth is

¹² Private communication between the author and Auty.

not the abundance of natural resources per se, but rather the quality of their management and of economic management and institutions in general' (abstract). This view dovetails with one possible explanation of the resource curse that reverses the causality: for various institutional reasons, there exist failing economies for which the only viable sector is oil, gas and/or minerals – in other words, that sector is a beacon of success in what would otherwise be a sea of failure.

According to another source (De Ferranti et al., 2002) that seeks to explain how successful economies have been built on primary commodity exports, the empirical work shows that the negative growth effect comes simply from the impact of resource production on the concentration of exports, rather than from its impact on government investment or the crowding out of manufacturing, education or entrepreneurship. Yet another work, cited in Davis and Tilton (undated) in the context of Sachs and Warner's statistical testing, asserts that the 'negative association between resource abundance and labour productivity disappears when a more modern and appropriate statistical test is used' (p. 37).¹³

Empirical work has also been carried out in relation to mineral-exporting economies in order to determine the prevalence of the resource curse (Auty 1993; Nankani, 1979). In general, that work supports the view that poor per capita performance is 'especially manifest in mineral-exporting countries' (Mikesell, 1997, p. 191) – although in that study, such countries included a number of oil-exporting countries. Oil exporters have been studied, too; and in this context, support for the resource-curse hypothesis has been found (Gelb et al., 1988). Thus 'some OPEC countries ... show a negative relationship between oil revenues and GNP in the long run and also between oil revenues and investment in the short run' (Shams, 1989, p. 978). Saudi Arabia, Mexico and Venezuela are all identified as having lower-than-average annual GDP growth rates (Mikesell, 1997). Mexico, in particular, is often held up as an example of a country that has suffered from the resource curse: Auty (1994a), for example, pointed out that 'by 1982 virtually the entire non-oil economy became non-tradable i.e. in need of total protection or subsidies' (p. 22).

3.2 Other characteristics

Besides the negative growth impact, there are four characteristics related to the existence of the resource curse. The first such characteristic is the prevalence of poverty, along with the observation that oil-, gas- and/or mineral-rich economies have a poor record in poverty alleviation (Karl, 1997). This is a central theme of much of the literature and is most vehemently discussed in the annual *Oxfam America Report* (Ross, 2001). There is also considerable emphasis on the observation that resource abundance tends to increase income inequality (Auty, 1994b; Fields, 1989; Sarraf and Jiwanji, 2001).

Second, the resource curse is often associated with increased social conflict (Collier and Hoeffler, 2004; Di John, 2007; Fearon, 2005; Le Billon, 2003 and 2005; Ross, 2001; Rosser, 2006).¹⁴ There are several reasons for this. Large-scale resource revenues create a pot that is worth fighting for, and whoever holds power is better able to plunder that pot. At the same time, they generate much higher levels of military spending. The projects themselves can alienate local populations, especially if separatist tendencies are already evident. This can happen either through causing local environmental damage or because there is a perception that resources are being diverted away from the region to the capital. However, not all the literature supports the view that resource wealth increases social conflict. For example, on the basis

¹³ The concern arises because of the 'simultaneity problem', whereby the same variable is, in effect, on both sides of the estimated equation.

¹⁴ A variant on a theme is that where the oil, gas or mineral project is based upon agreements with governments (which in most cases they are) conflict between companies and governments can often be generated by the mechanism of the obsolescing bargain (Stevens, 2000 and 2008).

of data for 109 countries released during the period 1957–90, Smith (2001) argues that oil wealth does not have the uniformly destabilizing effects that it is commonly assumed to have.

Moreover, conflict links into the poverty issue in several ways. War and strife (like inflation) are regressive – i.e. they hurt the poor more than the rich since the poor lack the resources to mitigate their effects. At the same time, fighting or expectations of fighting absorb resources that could otherwise be used to improve economic performance and alleviate poverty.

A third characteristic of the resource curse is that natural resource abundance ‘retards political change’ and ‘significantly weakens nascent democratic institutions, repressing political parties so that power is weakly contested, public finances are opaque and corruption both by the elite and bureaucracy is rampant’ (Auty, 2001b, p. 11 and p. 10, respectively). However, the latest research challenges such assertions. For example, Haber and Menaldo (2011) found from a survey of 53 countries that had gained independence that the effects of natural resource wealth were politically neutral for almost half (26 countries) – i.e. they were already authoritarian before any resource boom and failed to democratize thereafter – and appeared to contribute to democratization in the case of 19 countries. In a similar vein, Ross (2012) found, after having analysed 50 years of data for 170 countries in all regions of the world, that there was ‘little evidence for some of the claims made by earlier studies that ... extracting oil ... makes governments weaker, more corrupt, or less effective’ (p. 3). Meanwhile, other scholars argue that pre-existing weaknesses in institutions before the discovery of oil contribute to increased authoritarianism (David and Wright, 1997).

Finally, a fourth characteristic of the resource curse is the regional impact of natural resource projects. While the national impact might be subject to debate, it is clear that at the regional or local level, damage is done, especially to the environment and in terms of human rights. Meanwhile, the benefits appear to flow to the central rather than the regional authorities.¹⁵ However, this aspect of the curse tends to be neglected in the economics literature, which invariably focuses on the national dimension of the problem and has a strong orientation to aggregated macro-economic impacts.¹⁶ While this aspect of the resource-curse issue is not considered in the current appendix, it is important and has prompted much of the NGO concern discussed in Section 2 above. Moreover, the causes of and cures for the resource curse at the local level are likely to be quite different from those at the national level.

3.3 Conclusion

Evidence of the existence of the resource curse is mixed, but the tendency is towards dismissing some of the earlier claims that there is slower growth in hydrocarbon- and resource-rich economies. The latest published research (Torres et al., 2012) concludes that ‘oil abundance is not significant to economic growth, but oil concentration benefits growth in the presence of fiscal responsibility (and good institutions in general)’ (p. 142). Such ambivalence is further compounded by the observation that in some cases (Peru and Ghana, for example), although macro-economic performance has been good in recent years and the local operating companies have sought to make a significant contribution to development, no analytical explanation has been offered as to why individual projects appear to have a negative impact at the local and regional levels (Dietsche, 2014).

¹⁵ However, there is a growing body of evidence that through wages and spending, natural resource projects can have significant multiplier effects on the local economy. Several examples are cited in Davis and Tilton (undated, p. 20).

¹⁶ The lack of research on the regional economic impact can be largely explained by the absence of regional economic data in most developing or transition economies.

Scattered throughout the literature are examples of countries in which there appears to have been a resource ‘blessing’ rather than ‘curse’. For example, the annual *Oxfam America Report*, which has been the most vociferous in expressing its belief in the resource curse, acknowledges that ‘[t]here are exceptions: some states with large extractive industries – like Botswana, Chile and Malaysia – have overcome many of the obstacles [associated with the resource curse] and implemented sound pro-poor strategies’ (cited by Ross, 2001, p. 16). Norway, too, has been identified as a country that has avoided the curse (Wright and Czelusta, 2002), as have Indonesia before 1997, Australia and Canada. One convincing explanation for the avoidance of the resource curse runs as follows:

Successful resource extraction is actually dependent on innovation, a scientific knowledge culture, and enabling social and political institutions which help expand rather than just deplete the resource base and to ensure positive political linkages with other sectors of the economy (Ericsson and Söderholm, 2013).

Stevens (2005) attempted to establish which countries with large oil, gas and mineral revenues might be included on the list of those that have avoided the resource curse – the so-called usual suspects.¹⁷ The study begins by identifying the target group of countries that may be vulnerable to the curse – namely, those in which fuel and mineral exports had exceeded 30 per cent of merchandise exports during the period 1965–95.¹⁸ Excluding re-exporters such as Singapore, there are 54 countries in that group. Two criteria are applied to them: non-oil GDP, gas- and/or mineral-traded GDP and the level of poverty based on the three components of the ‘physical quality of life index’ – infant mortality, life expectancy and illiteracy. The results provide strong support for asserting that Botswana, Chile, Indonesia, Malaysia and Norway avoided the resource curse, while several countries, including Colombia, Suriname, Trinidad and Tobago, and Tunisia, arguably fared less badly than the large number of countries that appeared to perform badly.¹⁹

On the basis of the works cited immediately above, there is a case for dropping the automatic use of the term ‘resource curse’ in favour of the term ‘resource impact’ and then considering whether the outcome was a ‘curse’ or ‘blessing’. Some countries have clearly managed to remain immune to the negative effects, as shown by the analyses mentioned in the previous paragraphs. In what can be seen as a variation on this theme, Kaznacheev (2013) has suggested that ‘instead of battling with various “curses” and “diseases”, governments would do a better job by looking inwards and analysing their own performance, along with the institutional conditions in the economies that they govern’ (p. 66).

This gives rise to the inevitable question of what might cause the existence of the resource curse, regardless of how that phenomenon is defined. In particular, what are the mechanisms whereby large resource revenues lead to poor performance – whether in terms of economic or political development?

¹⁷ The study is unusual because it examines why some countries appeared to experience a ‘blessing’ rather than a ‘curse’, whereas virtually all previous academic work had addressed the question of why countries suffered the ‘curse’.

¹⁸ Nankani (1979) uses 40 per cent of mineral exports as the cut-off level.

¹⁹ In addition to comparing the performance of the potentially vulnerable countries, this study compares the performance to regional and income groups as defined by the World Bank.

4. The Transmission Mechanisms between Large Resource Revenues and Poor Performance

The empirical work cited in Section 3 seeks to establish a statistical connection between large resource revenues and poor economic performance. This section considers in some detail what the transmission mechanisms between the two variables might be.

Within the huge literature now available on why countries might suffer a ‘curse’ rather than a ‘blessing’ following a large inflow of oil, gas and/or mineral revenues, various types of transmission mechanism are identified. Auty (2001a), for example, cites three exogenous causes (structuralist policies, Dutch disease and export-based theory) and two endogenous ones (policy failure and inefficient investment and rent-seeking).

Below we consider the following categories of transmission mechanism: long-term decline in the terms of trade, revenue volatility, Dutch disease, the crowding-out effect, the increased role of the state, and socio-cultural and political impacts.

4.1 Long-term decline in the terms of trade

Based on the ideas of Prebisch and Singer developed in the 1950s (and cited in Section 2 above), this is a mechanism whereby oil, gas and/or mineral export revenues are, over time, able to buy fewer and fewer imports of capital goods, which inhibits development-creating investment in an economy. The issue of declining terms of trade is controversial – indeed, ‘both the empirical and theoretical ground marked out ... has been much contested’ (Toye, 1987, p. 106).²⁰ Thus while some earlier works did challenge the empirical basis of the argument (Kindleberger, 1956; Maizels, 1968; Mikesell, 1997), others appear to support the existence of a long-term secular decline in primary-product prices (Brohman, 1996); still others remain undecided (Bleaney and Greenaway, 1993; Pindyck, 1999). It is true that during the commodities boom of the last century, the terms of trade of most developing countries improved, while those of the East Asian countries in which manufacturing exports dominate deteriorated (UNCTAD, 2008). But it is difficult to see how a slow decline in prices can explain the sort of deterioration in economic performance associated with the resource curse: relative prices are constantly changing; and if those changes are gradual, economies might be expected to adjust – unless, that is, other factors are at work.

That said, the fall in price implied by the ‘terms of trade’ arguments has tended to be large and has occurred over a relatively short period.²¹ For example, UNCTAD (1985) argued that for the ‘South’, i.e. developing countries as a whole, the fall in major commodity export prices between 1980 and 1984 caused losses totalling US\$55 billion – equivalent to 63 per cent of commodity exports

²⁰ An obvious but important point is that a tonne of wheat today is the same as a tonne of wheat 50 years ago, while a ‘manufactured good’ is clearly a very different proposition. Thus comparing like with like is extremely problematic.

²¹ Whether this constitutes a ‘terms of trade’ or a ‘revenue volatility’ argument (see Section 4.2 below) is a moot point.

(in US\$ 1980). For oil (and gas insofar as there is a link between gas and oil prices), there is empirical support for the view of declining real prices over time: on a five-year moving average of oil prices (in US\$ 1999) from 1970 onwards (Arabian light until 1985 and Brent thereafter), a barrel of oil cost US\$15.72 in 1974 and the price rose steadily to a peak of US\$61.5 in 1983; thereafter it declined inexorably, falling to US\$18.5 by 1999. It is clear that managing rapidly rising revenues and then having to deal with declining revenues would stretch the competence of any government; this may therefore go some way towards explaining poor economic performance.

4.2 Revenue volatility

There is empirical evidence of a positive correlation between macroeconomic volatility and growth (Van der Ploeg and Poelhecke, 2009). For this reason, given the volatility of oil prices, it is not unreasonable to make the connection between oil revenues and poor growth performance (Mabro, 2005; Luciani, 2011; Cavalcanti et al., 2011; Saad-Filho and Weeks, 2013). At the same, evidence suggests that in low-income economies – which are characteristic of many oil-producing countries – financial markets are weaker; this means investors find it more difficult to hedge against risk (Ross, 2012). Or, as Van der Ploeg (2011) argues, ‘liquidity constraints are more likely to bite and thus innovation and growth will fall’ (p. 372). Van der Ploeg also cites evidence to show that during the period 1870–1939 volatility harmed growth in the commodity-dependent ‘periphery’ nations compared with Europe or the US. This links into the ‘terms of trade’ arguments cited above.

Both Auty (1998) and Mikesell (1997) suggest that revenue volatility may be an explanation for the ‘resource curse’. The basic argument is that oil, gas and mineral revenues are very volatile – in particular, they are subject to sharp fluctuations in prices over relatively short periods. And there is considerable empirical support for the theory that resource-abundant countries suffer more from such volatility. For example, Mikesell (1997) found that between 1972 and 1992, regions with high primary export shares experienced terms of trade volatility two to three times greater than did industrial countries during the same period. Volatility of this magnitude can cause various problems. Not least, it makes pursuing prudent fiscal policy very difficult, and this, in turn, exacerbates investor uncertainty and can lead to ‘stop-go’ spending. At the same time, there is concern that windfall revenues from fluctuating export prices will be consumed rather than invested (Sachs and Warner, 1998). According to the ‘permanent income’ hypothesis, windfall gains are more likely to be saved and invested than consumed. However, the empirical evidence does throw doubt on that view (Macbean, 1966; Behrman, 1987; and Sachs and Warner, 1997) found no strong evidence to suggest that resource-rich countries have higher savings rates than resource-poor ones.

Gylfason et al. (1999) argued that the level of domestic investment was inversely related to dependence on primary-product exports. Furthermore, Sachs and Warner (1995a) failed to find any strong relationship between ‘terms of trade’ volatility and per capita income growth. An alternative view is that a downturn in the commodity cycle may well be of benefit insofar as it forces a country to undertake much-needed economic reform that might not be implemented under ‘less stressful conditions’ (Davis and Tilton, undated, p. 16).

However, in the absence of effective stabilizing measures, it is not unreasonable to suggest that fluctuating revenues may create problems for fiscal, policy and macroeconomic management in general. Most governments find it difficult to resist political pressure to absorb revenue into the domestic economy at rates that exceed domestic absorptive capacity. They may also find it difficult to cut back

on social spending during revenue downswings, leading to the accumulation of debt.²² Interestingly, the more recent literature (Dietsche, 2014) cautions against advocating special fiscal measures such as sovereign wealth funds rather than improving the overall management of public finances.

4.3 Dutch disease

Originally, Dutch disease had a very specific meaning.²³ It referred to the appreciation of the real exchange rate as a result of inflation arising from spending natural-resource revenues; this, in turn, leads to an overheated economy as well as an appreciation of the nominal exchange rate as the domestic currency – seen as a ‘petro-currency’ – attracts higher demand. The result is a contraction in the non-oil, -gas and/or-mineral traded sector. Thus ‘the output of the non-resource traded goods sector is lower than it was initially’ (Fardmanesh, 1991, p. 712).

But, over time, the term has evolved to mean other things. In some cases, its meaning has been broadened to encompass all the negative macroeconomic effects associated with the ‘resource curse’. In other cases, its meaning has become much narrower; for example, Sarraf and Jiwanji (2001) define Dutch disease as the ‘failure of resource-abundant economies to promote a competitive manufacturing sector’ (p. 3).

These changes of meaning are reflected in the various theoretical approaches to Dutch disease, which are outlined by Corden and Neary (1982) and Corden (1984). Corden and Neary divide the impact of an oil boom into a ‘resource-movement effect’ and a ‘spending effect’. In the ‘resource-movement effect’ a higher marginal product in the booming resource sector ‘draws [mobile] resources out of other sectors’ (Farmanesh, 1991, p. 712); factors move into the oil sector, bidding up wages and causing other sectors to contract. The ‘spending effect’ occurs when, as a result of the windfall, demand rises in both tradables and non-tradables. Since tradables have prices determined by the international market, increased demand is met by higher imports; however, prices in non-tradables rise relative to tradables and so resources such as labour and capital shift from tradables to non-tradables (see, for example, McMahan, 1997). If the natural-resource sector is an enclave and does not participate in domestic factor markets, there will be no ‘resource-movement effect’, while the ‘spending effect’ ensures that the non-tradables expand but at the expense of the non-resource tradables. Oil is seen as having such enclave properties (McKinnon, 1976; Van Wijnbergen, 1984b).

Such arguments form the basis of much of the subsequent analysis in the literature. There is a debate, however, as to whether the impact of the importable sector differs from that of the exportable one (Benjamin et al., 1989).

Other features of Dutch disease – defined simply as a contraction of the tradable sector – have emerged over the years. Thus one argument (Auty, 1994b) is that subsidies that are used to protect non-resource tradables weakened by the revenue boom exacerbate the tradable sector’s problems and eventually become unsustainable. Another argument is based on the ‘leap-frog effect’, whereby governments tend to miss the labour-intensive phase of industrialization and move straight to the heavy, capital-intensive phase, which has negative effects for the tradable sector (Sarraf and Jiwanji, 2001). Other scholars address the issue of ‘learning by doing’ in the context of Dutch disease (Van Wijnbergen, 1984a; Krugman, 1987; Sachs and Warner, 1995b; and Gylfason et al., 1999). All assume

²² Private communication to the author from Auty.

²³ According to Corden (1984), the term was first used by *The Economist* in its 26 November 1977 issue.

that because the benefits of learning by doing accrue only from tradables, a contraction in that sector implies lower productivity. A variation on this theme is developed by Torvik (2001), who asserts that learning by doing exists in more than one sector; his model suggests that production and productivity in both the tradable and non-tradable sectors ‘can go either way depending on the characteristics of the economy’ (p. 304).

In much of the literature on Dutch disease, attention is focused on what effect the phenomenon has on manufacturing (Sachs and Warner, 1997). That focus reflects the fact that the bulk of earlier work on Dutch disease concentrated on the developed countries (Benjamin et al., 1989). Against this background, the question inevitably arises of whether a contraction of the manufacturing sector is necessarily cause for concern. Sachs and Warner (1997) argue that if neo-classical competitive conditions prevail, a decline in that sector implies no harm. However, if such conditions do not prevail – which is the norm – the contraction of manufacturing through Dutch disease can be a source of ‘chronic slow growth’ (p. 6). Thus the natural-resource sector, unlike manufacturing, lacks both positive externalities and the benefits of learning by doing associated with other tradable sectors. The argument is that manufacturing maximizes forward and backward linkages (Hirschman, 1958) and creates ‘learning by doing’ externalities (Matsuyama, 1992).

There is a general assumption in much of the literature that productivity growth is faster in manufacturing than in any other sector (Echevarria, 1997; Wood and Berge, 1997; Auty and Kiiski, 2001). This is attributed to accelerated human capital accumulation from learning by doing. Matsuyama argues that a downturn in manufacturing can lead to a fall in demand for education, while Birdsall et al. (1997) found evidence that the incentives to invest in education in resource-abundant countries differ from those in resource-deficient ones. Others (Baldwin, 1966; Hirschman, 1958; Seers, 1964) put forward the argument that the linkages between a primary sector and the rest of the economy are minimal. For their part, Auty and Evia (2001) argued along the same lines in the case of Bolivia. However, there is a growing argument that the services sector can make a significant contribution to economic development (McKinsey, 2012).²⁴

Another factor to consider in this context is the impact of natural resources on social capital. It has been suggested (Woolcock et al., 2001) that resource-poor countries accumulate social capital faster than do resource-rich countries. One explanation for this is that limited natural resources promote early industrialization and thus earlier urbanization. ‘This weakens bonding social capital (which stifles entrepreneurship) by allowing people to escape from villages into an urban environment with greater anonymity and better functioning markets. At the same time this confers a saving dividend by reducing the dependency ratio. However, this assumes urbanization is not based upon the state provision of rent-seeking employment (as in Saudi Arabia).’²⁵

Such views about the role of industrialization have not gone unchallenged. Auty (1994a) claims that there is a lack of evidence to show that the development of a manufacturing industry inevitably has a positive effect on an economy. Similarly, Stijns (2005) argues that statistics showing that a decline in manufacturing has a negative effect on learning by doing and growth are few and far between or unavailable. However, when developing countries were diagnosed as being vulnerable to Dutch disease, they did begin to turn their attention to agriculture as the main source of tradables (Benjamin et al., 1989).

²⁴ Auty goes as far as to suggest that the ‘deification of manufacturing may well be plain wrong’ (private communication with the author).

²⁵ Auty in a private communication with the author.

Just as there is controversy over the exact nature of the theory behind Dutch disease, so the debate has raged over whether the empirical evidence supports endowing the impact of the phenomenon with any great significance. In general terms, Sachs and Warner (1997) found that growth in manufacturing and services was slower in natural resource-intensive economies; however, while offering ‘tentative support to the view that dynamic Dutch disease effects ... are important’ (p. 26), they acknowledge that they cannot distinguish between true effects and potential bias from errors in measuring the independent variables. More broadly, Weisman (1990) and Younger (1992) produced empirical support for an appreciation of the exchange rate after large-scale aid inflows, which mimic the effect of a natural-resource revenue windfall.

Meanwhile, a number of country studies support the existence of Dutch disease. These include papers on by Auty and Evia (2001) on Bolivia; Rodriquez and Sachs (1999) on Venezuela; Auty (1994a) on Mexico, Brazil and Venezuela; Caselli and Michaels (2009) on Brazil; Mikesell (1997) on Venezuela and Peru; Fardmanesh (1991) on Algeria, Ecuador, Indonesia, Nigeria and Venezuela; and Forsyth and Kay (1980) on the UK. However, extraneous factors often complicate the situation. For example, Love (1994) argues that while agriculture in Botswana suffered from the effects of Dutch disease, two serious droughts in the 1980s made a significant contribution to the woes of that sector.

Meanwhile, Mikesell (1997) concludes that Dutch disease was not a major determinant of the growth pattern for more than half the countries so far investigated in the context of that phenomenon. McMahon (1997) found no ‘substantive evidence’ of Dutch disease (cited by Sarraf and Jiwanji, 2001, p. 5). Van Sarraf and Jiwanji (2001) argue that some de-industrialization may be the result of adjustment towards a new equilibrium. Whether the UK contracted Dutch disease is another subject of much debate (Rowthorn and Wells, 1987). Furthermore, after the oil boom of the 1970s most oil-exporting countries investigated – namely, Algeria, Ecuador, Indonesia, Nigeria and Venezuela – saw agriculture contract but manufacturing tradables expand (Fardmanesh, 1991). Various explanations for this have been offered, including a free trade effect (Neary and Van Wijnbergen, 1986), imperfect substitution (Benjamin et al., 1989) and the impact of world prices (Fardmanesh, 1991). Moreover, in their case study of Algeria, Conway and Gelb et al., (1988) found that, contrary to Dutch disease theory, the country had witnessed substantial exchange-rate depreciation and an improvement in both manufacturing and agriculture. However, Gelb (1986) acknowledged this was very different from the experience of most oil-exporting countries.

Some recent evidence appears to support the existence of Dutch disease. A study of 135 countries based on data from the years 1975 to 2007 suggests that aggregate non-resource exports decreased by 35–70 per cent while non-resource imports increased by between zero and 35 per cent (Harding and Venables, 2011). Similarly, Ismail (2010) found that a 10 per cent oil windfall is associated with an average fall of 3.4 per cent in value added in manufacturing. And Van der Ploeg (2011) concluded that ‘the macroeconomic and sectoral evidence ... seems to offer support for Dutch disease effects’.

4.4 Crowding-out effect

The crowding-out effect constitutes a variation on the ‘resource-movement effect’, which is described above as a feature of Dutch disease. It comes into play when an oil, gas or mineral investment project that is large relative to the rest of the economy effectively stakes first claim to scarce resources; as a result, the rest of the economy finds it difficult to secure the factors needed to develop. This issue is especially relevant in smaller countries, not least if there are large regional dimensions to the

economy and the project is concentrated in one region. Moreover, it was potentially very important in the countries of the former Soviet Union, where the process of transition has, in effect, destroyed the old productive base and a new and private tradable sector is struggling to emerge.

However, little work has been done to date on the impact of the crowding-out effect on oil, gas and minerals projects. What work has been done is linked mainly to the impact of foreign investment in general (Buffie, 1986 and 1993; Brecher and Diaz, 1977; Brecher and Finlay, 1983; Ruffin, 1984; Srinivasan, 1983; Young and Miyagiawa, 1986). It also tends to be highly theoretical – analysis is based on modelling rather than empirical work.

4.5 Increased role of the state

4.5.1 General issues

If the ‘Washington Consensus’ is to be believed,²⁶ greater government intervention in the economy and its workings is a bad thing in itself. In most legal jurisdictions, oil, gas and minerals are the property of the state, and thus the revenues accrue in the first instance to the government. This inevitably invites more government intervention. Many scholars writing about the resource curse believe the phenomenon can be explained mainly in political terms – namely, the role of government (Ascher, 1999; Auty, 1998; Auty and Mikesell, 1998; Sarraf and Jiwanji, 2001; McMahon, 1997; Ross, 1999 and 2001; Stevens, 1986 and 2005). For his part, Mikesell (1997) argues that in the case of Venezuela, it was bad government management that caused the problems rather than direct distortions from the export booms of the 1970s and 1980s. By the same token, many argue that it was good government decisions that enabled several countries to avoid the worst excesses of the resources curse. Botswana (Sarraf and Jiwanji, 2001; Hill and Mokegthi, 1989) and Chile (Mikesell, 1997) are often identified as such countries.²⁷

As in the case of the crowding-out effect, the level of government intervention in the economy is an especially sensitive issue in transition countries because the prime objective of transition is to reduce such intervention. Mikesell (1997) argues that ‘[a]ll countries experience shocks from a loss of major export markets ... from sharp increases in prices of essential imports, or from shifts in capital movements. How the shocks are handled determines whether they will prevent sustainable development’ (p. 195). Lal and Myint (1996) attribute the underperformance of resource-rich countries to a more general problem – that of policy failure. Kaznacheev (2013) stresses the role of policy failure, too, while Easterly and Levine (1997) emphasize the vulnerability of factional, heterogeneous political societies to such failure. Krueger et al. (1991) focus on how rents are captured and transferred in a poor policy environment. Usui (1996) acknowledges that, in many cases, active policies have exacerbated the resource curse, but he goes on to note that there is little consensus about which countries have suffered as a result.

While many would agree with the arguments laid out in the previous paragraph, there remains the question of why oil-, gas- and/or mineral-exporting countries should be more vulnerable to policy failure. Several strands of argument are examined immediately below.

²⁶ The author is of the strong opinion that this ‘consensus’ should not be believed.

²⁷ For a discussion of this issue, see Stevens (2005).

4.5.2 Bad decision-making

The first strand argues that large windfall revenues lead to poor government decision-making in general. There are several reasons for this. First, the development of oil, gas and/or minerals raises expectations among the population; this puts pressure on the government to ‘do something’, which, in turn, encourages speedy responses. Often hasty and ill-coordinated decisions are bad decisions. Second, spending revenues too quickly is more likely to introduce distortions into the economy because there is less chance for the economy to adjust naturally (Auty, 2001b). Third, following the two oil price shocks of the 1970s, Auty has also pointed out that the investment of oil rents into resource-based industrialization took place all at once.²⁸ This not only pushed up the construction costs of projects and exacerbated cost overruns but also glutted global markets. As a result, prices had been driven down by the time projects came on stream at the start of the recession following the second oil price shock of 1979–80, and those projects proved to be a drain on public finances rather than making the positive contribution that had been expected.

Having more money to spend tends to weaken prudence and ‘due diligence’. Thus the importance of making the ‘right choices’ seems somehow less important. Of particular importance is that governments do not make decisions on capital spending without taking into account the recurrent spending implications (Sarraf and Jiwanji, 2001). This is relevant, above all, for ‘prestige projects’ that might (unkindly but accurately) be described as a form of ‘edifice complex’.

Because in most cases revenues accrue to government in the first instance, decision-making is concentrated in fewer hands than in the case, say, of peasant cash crops, in which a much larger number of economic agents are involved in deciding how any windfalls are spent (Auty, 2001b). Much has been written about how such ‘point resources’ distort incentives for the ruling elites (Mahdavy, 1970; Yates, 1996; Clark, 1997). First, they reduce the need to raise domestic taxes, which lowers accountability (Beblawi and Luciani, 1987). Second, they raise the issue of political patronage in the distribution of rents (Karl, 1997; Keefer and Knack, 2007). Third, as discussed in Section 4.5.3 below, they encourage the diversion of both resources and efforts towards rent-seeking, not least owing to the size of the trough to be accessed (Torvik, 2002; Le Billon, 2003; Humphreys et al., 2007). The case of the US is rather different, since in that country subsoil hydrocarbons are the property of the landowner. This means that revenues are much more widely distributed, including among private-sector players.

At the same time, it has been argued (Acemoglu and Robinson, 2006) that the political elites have strong vested interests to block technological and institutional improvements because such changes may weaken their political power and control. Ross (2012) writes that ‘[m]any scholars ... claim that petroleum wealth leads to “bad institutions” making governments weaker, more corrupt, less competent, and less able to maintain wise fiscal policies’ (p. 209). In a similar vein, Isham et al. (2005) conclude that resource wealth allows governments to pacify opposition, avoid accountability and prevent modernization, thereby lowering the quality of institutions.

4.5.3 Increased corruption and rent-seeking

Corruption and rent-seeking are two different things. Put simply, corruption is stealing state assets (including natural resources), while rent-seeking can be viewed as a normal and often legitimate human reaction based on self-interest. However, sometimes the distinction between the two

²⁸ Private communication to the author from Auty.

becomes somewhat blurred. Mbaku (1992) cites the example of Ghana, where, he argues, corruption can be seen as rent-seeking behaviour. Regardless of definition, it is clear that both corruption and rent-seeking lead to the diversion of assets away from the promotion of the greater good.

If large sums of money are available to spend, the temptation among decision-makers to engage in corruption and rent-seeking inevitably increases (Leite, 1999). But there are often more complex, albeit contested, reasons why such behaviour manifests itself. Some scholars have argued (Mbaku, 1992) that corruption evolves from ‘the clash between traditional values and foreign norms’ (p. 253). Apter (1963) and Alam (1989) pointed out that in Africa, bureaucrats are under an obligation to share the benefits of office with their kin – which is also a characteristic of many societies elsewhere in the world. Given that oil, gas and mineral projects in developing countries almost invariably involve foreign companies, this sense of duty (only) to one’s kin helps explain why resource-rich countries may experience higher levels of corruption (Hall, 1999). However, there is a debate about which criteria should be used to determine whether public authority has been misused (Alam, 1989; Bayley, 1966; Gillespie and Okruhlik, 1991).

Some scholars have claimed – for example, in the context of the Caspian region – that levels of corruption in hydrocarbon-rich countries do not differ from those in hydrocarbon-poor states (Auty, 2001b). Bhattacharyya and Hodler (2010) established on the basis of data for 99 countries released during the period 1980–2004 that natural resources induced corruption only in those countries that had had a non-democratic regime for more than 60 per cent of the years since 1956. Furthermore, economic corruption is widespread in many countries where political corruption is commonplace; examples often cited include Italy and Japan,²⁹ both of which can be viewed as successful economies.

Thus it is difficult to determine whether corruption damages economic progress or enhances it. Davis (1998), meanwhile, argues that there are limited grounds for the assertion that ‘mineral production engenders bureaucratic incapacity [and] that this ... stifles growth’ (p. 218). Rather, he believes that ‘the noted negative outcomes are not a general rule, but case-specific and a function of the economic meter used’ (p. 218).

As regards rent-seeking, this concept refers to ‘artificially contrived transfers’ (Tollison, 1982, p. 576). Most studies examine the behaviour of interest groups seeking to capture transfers created by government, but the concept can also cover efforts to persuade the government to create transfers (Mbaku, 1992). The result is that government expenditure creates no social value and – arguably, more important – distorts markets and hence the way in which the economy operates (Tollison, 1982).

There is a large and growing literature on how rent-seeking helps determine how an economy operates (Baland and Francois, 2000; Lane and Tornell, 1995 and 1996; Svensson, 2000; Tornell and Lane, 1999; Torvick, 2002; Mehlum et al., 2002 and 2006). Various explanations are offered as to why rent-seeking is more widespread in countries that have large oil, gas and/or mineral revenues. But it is clear that the larger the public purse, the less noticeable the leakage to interest groups – although this may not be the case if there is a ‘feeding frenzy’ (Lane and Tornell, 1995).

One group argues that rent-seeking is more widespread in oil-, gas- and/or mineral-exporting states because wealth is concentrated in the public sector or possibly in a small number of companies (Auty, 1998; McMahan, 1997; Mbaku, 1992). Thus ‘the bulk of the rents created in these economies are channeled by bureaucrats, the majority of whom are members of the politically dominant group’ (Mbaku, 1992, p. 250)

²⁹ To be fair, it may be that more scandals come to light in these two countries precisely because they are more able than others to uncover such behaviour.

It is generally agreed that rent-seeking behaviour produces undesirable results for the economy. Bhagwati (1992) argues that such behaviour imposes significant losses on many economies, while Auty (1998) opines that it diverts attention from the goal of long-term development towards the pursuits of maximizing rent creation and capture. Thus, rent-seeking will 'lower steady state income and therefore growth along the steady state' (Sachs and Warner, 1997, p. 9). This is a view supported by both Auty (1990) and Gelb et al., (1988).

At the same time, rent-seeking creates extremely powerful lobby groups that are able to block much-needed economic reforms. Auty (1995) points to the case of Brazil in this context. Similarly, Olsen (cited in Sachs and Warner, 1997, p. 9) argues that societies face severe impediments to innovation as a result of the rent-seeking behaviour of special interest groups.

With regard to the economy as a whole, rent-seeking makes it more difficult for governments to adjust spending when faced with revenue fluctuations (Auty, 2001b). In addition, it can lead to the creation of monopoly power in the economy. One study has shown that the social costs of such a development are higher if the cost of maintaining the monopoly is added (Wenders, 1987).

For their part, Mehlum et al. (2006) suggest that rent-seeking does most damage when it competes with production. Such damage is inflicted when institutions are weak ('grabber friendly'). In this context, the term 'rent-seeking grabbing' has been coined. The more the quality of institutions improves, the less profitable grabbing becomes. As a result, it will be more rewarding to be involved in production.

However, such issues are far from clear-cut. What happens to the rewards of corruption and rent-seeking once they have been secured is an important factor. If those rewards are used for productive investment in the economy, the outcome will be very different from what will happen if they are used simply for conspicuous consumption or to boost foreign bank accounts. After all, one could argue, somewhat cynically, that the whole point of capitalism is for a few greedy, selfish and unscrupulous individuals to grab assets and put them to productive use to obtain even more. The robber barons who in the late nineteenth century did so much to develop the US economy (very resource-rich, by any definition) indulged in some very dubious business practices, not least in the oil sector (Sampson, 1975; Yergin, 1991). But they reinvested their ill-gotten gains in productive activities and indeed went on to engage in philanthropy in order to share the rewards. By contrast, when such rewards are secured by politicians and bureaucrats, they are used solely for personal benefit. And since oil and gas revenues accrue to the state in the first instance, this is the more likely outcome of corruption in a resource-rich country.

4.5.4 The shortcomings of investment decisions

It is often the case that investment decisions in countries that have large windfall oil, gas and/or mineral revenues fall short of promoting economic progress. Of course, bad decision-making, as outlined in Section 4.5.2 above, is a large part of that problem. But it may also be that investments made by the governments of resource-rich countries fail to develop the productive base of the economy – usually understood to mean mining, agriculture and manufacturing. That failure is compounded if borrowing funds since the loans must be serviced and repaid. Indeed, the prospect of large oil revenues often tempts governments to borrow on the strength of those anticipated earnings, and this can add to the problem of deciding how to deal with an influx of foreign exchange (Monzano and Rigobon, 2011). Mexico is often cited as the classic example in this context (Usui, 1997).

According to Sarraf and Jiwanji (2001), ‘unproductive investment booms’ have been evident ‘in many countries’ (p. 7). Similarly, Lal and Myint (1996) identified a collapse in the efficiency of investment in resource-rich countries, while McMahon (1997) points to the tendency to invest in non-tradables, especially the military and projects that offered very low rates of return – although such investments may have reflected the limited absorptive capacity of some countries. Often, public-sector projects are associated with low investment returns. Moreover, in many cases, the temptation to indulge in ‘prestige projects’ – ranging from presidential palaces to international airports – has proved too great, leading to infrastructure that is quite inappropriate for the countries concerned.

4.5.5 Industrial policy

In the case of many resource-rich countries, bad decision-making in general and poor investment decisions in particular are evident in the industrial policy adopted following the resource revenue windfall. Above all, such countries have frequently failed to promote a competitive manufacturing sector (Krause, 1995; Mikesell, 1997; Ranis, 1991; Sachs and Warner, 1995a).

Especially in the 1970s and 1980s, many resource-rich countries adopted an industrial policy based on import substitution. Initially, the driver for such an approach was the view of some economists that import substitution, combined with greater state intervention, was the means of breaking out of the vicious circle of underdevelopment. This was a variant of the ‘big-push’ argument outlined above (Auty and Kiiski, 2001). An industrial policy based on import substitution started to seem attractive when existing industries came under pressure as a result of the sort of macroeconomic ailments associated with Dutch disease (discussed above in section 4.3). Invariably, it had two components: the introduction of subsidies and protectionism in the form of closed trade regimes.

Subsidies

It has very often been the case that a boom in resource revenues has prompted the introduction of heavy subsidies, usually justified on the grounds of an ‘infant industry’ argument. But those subsidies have proved unsustainable when revenues fall. Rent-seeking following their introduction invariably leads to the emergence of powerful interest groups that oppose the removal of the subsidies (Sarraf and Jiwanji, 2001). Thus the policy becomes fixed because of the power of ‘entrenched urban groups’ that have a ‘vested interest in rent-seeking behaviour’ (Auty, 1994a, p. 18).

However, in certain circumstances subsidies can have positive effects. Thus in the case of Malaysia – one of the success stories among resource-rich countries – both subsidies granted to infrastructure support services and tax exemptions (which, in themselves, can be a form of subsidy) are seen as having played an important role in attracting foreign companies to set up plants (Rasiah and Shari, 2001).³⁰

Finally, there is the question of how to define a subsidy. For example, in the case of Saudi Arabia, low domestic energy prices are, technically speaking, not a subsidy (Stevens and Alyousef, 2011). But the Saudi government safeguards such prices since they offer significant protection for the Saudi petrochemical industry within the framework of WTO rules.

³⁰ Subsidizing energy for final consumers in oil-exporting countries is sometimes justified on the grounds that it is an effective way of distributing some of the benefits of oil resources among the population as a whole.

Closed trade regimes

Lal and Myint (1996) saw the trade regime as the most important element of a policy environment. Sachs and Warner (1995b) found a strong correlation between dependency on primary products and a closed trade regime. However, they also found that above a certain level of resource-export dependence, trade policy began to open up a capital surplus in oil exporters such as Saudi Arabia. Another study established that larger resource-exporting countries tend to be more closed to international trade than do similar, smaller countries (Perkins and Syrquin, 1989). In research that focused on the years 1970–80 and 1980–89, Sachs and Warner (1997) concluded that open-trade countries had grown faster than closed economies in both periods.

Once these two policy elements – subsidies and closed trade regimes – are in place, continuing resource revenues reduce the incentive to create competitive manufacturing industries. Since such industries are seen by many development economists as one of the main drivers of technological progress, this has serious implications for economic growth. Furthermore, protectionist policies impose ‘substantial infrastructure demands that severely challenge the implementation capacity of any government’ (Lal and Myint, 1996, p. 42). In addition, the resulting infant industries are incapable of earning foreign exchange (Auty, 1994a).

Another problem is that infant industries have a strong tendency not to grow up (Bell et al., 1984). Overall, ‘the relaxation of market discipline and associated accumulation of economic distortions ... retards competitive diversification and lies at the heart of the underperformance of the resource-abundant countries’ (Auty, 1994a). In a similar vein, Krugman (1987) found that a temporary resource boom leads to an ‘enduring’ loss of competitiveness.

By contrast, a competitive industrial policy based on a strong export orientation maintains the competitiveness of established industries and encourages entities able to capitalize on comparative advantage (Auty, 1994a).

4.6 The political economy of the transmission mechanisms: socio-cultural and political impacts

This strand of explanation for the poor economic performance of countries dominated by oil, gas and/or mineral projects has long been recognized in the literature. In recent years, the blossoming of ‘institutional economics’ associated with Douglas North and others has reinforced this view (North, 1998). Furthermore, the World Bank’s extractive industries review has supported the argument that the benefits to resource-rich countries depend on putting in place measures associated with good governance.

By its nature, such analysis tends to be rather vague and diffuse and thus not compatible with serious empirical work, although increasingly efforts are made to measure various dimensions of this transmission mechanism.³¹ The transmission mechanism is, however, central to the discussion, even if its role is much disputed. Isham et al. (2002) claim to have evidence showing that ‘countries that are abundant (scarce) in point-source natural resources [such as mineral or oil projects] have weaker (stronger) institutional capacities; and that the endogenously determined institutional capacities are significant and large determinants of growth since the oil shock’ (p. 1). By contrast, Acemoglu et al.

³¹ A major problem is that researchers often choose proxies to measure the state of institutions whose original purpose was other than measuring ‘good governance’. (Arndt and Oman, 2006).

(2001) argue that while differences in income can be explained by the effectiveness of institutions, they are a legacy of colonialism rather than the discernible result of natural-resource abundance. Blanco et al. (2014) seek to examine what the impact of oil resources may be on the development of the different types of institution. In particular, they highlight the negative effects of oil rents on both the quality of the bureaucracy and socio-economic conditions.

The political economy of resource curse has numerous strands of analysis and these are discussed below.

4.6.1 Why were good policies followed in some cases?

Previously, scholars focused on the macroeconomic causes of the resource curse rather than socio-cultural or political ones. Those countries that avoided the curse did so by the adoption of specific macroeconomic policies to minimize the damage, while those that were 'cursed' failed to adopt such policies. However, of equal interest is why such policies were or were not adopted in the first place; and a possible answer to that question points to a political factor. As noted above, much of the literature (not least post-2000) argues that mineral wealth can distort the incentives of policy-makers and thus lead to bad policy choices (Rosser, 2006; Keefer and Knack, 2007; Van der Ploeg, 2011). Such analysis contends that good institutions constrain individual behaviour through the creation of checks and balances, and it is possible to ensure that private rent-seeking gives way to public officials fulfilling their duty to serve public objectives.

In the countries referred to above as the 'usual suspects', small groups of highly qualified bureaucrats could be found during the period in which they were developing their natural resources. Such officials were called the 'Chicago boys' in Chile (Hojman, 2002), the 'Berkeley mafia' in Indonesia (Booth, 1995) and the 'backroom boys' in Malaysia (Shamsul, 1997), while in Botswana they were largely expatriates and highly talented black South Africans driven north by apartheid (Modise, 1999; Tsie, 1996). Trained in economics, these groups were able to direct macroeconomic policy so that a resource blessing rather than curse ensued. The interesting question is why the various political elites in those countries allowed them to do so; and the answer is to be found in the nature of the society in question and its politics – and thus is a crucial part of the explanation of the transmission mechanism from large-scale resource revenues to curse. A recent study of the oil-rich states of the former Soviet Union (Jones et al., 2010) concluded that oil wealth leads to weakened state institutions only when the government has a dominant role in the petroleum industry. Thus the presence of international oil companies in the sector is likely to strengthen fiscal institutions, which, in turn, means a broader-based tax system and greater transparency.

4.6.2 The role of rentier societies

Much discussion revolves around the nature of rentier societies (Beblawi and Luciani, 1987; Boone, 1990; Hodges, 2004; Karl, 1997; Mahdavi, 1970; Okruhlik, 1999; Shambayati, 1994; Schwartz, 2008). These can be defined as societies in which there is no connection between reward and effort, and in which largesse flows like manna from heaven;³² the economy can be sustained without a strong productive domestic sector and with just a small number of actors generating the rent. In such an economy, the government is the dominant actor and is responsible for distributing the rent; and this inevitably creates rentier elites that have strong vested interests to maintain the status quo.

³² It is important to clarify the difference from 'rent-seeking'. A rentier economy is one in which external rents dominate exports and government revenue.

The argument continues that easy access to riches breeds idleness and provides no incentive to accumulate or innovate. While this explanation can seem attractive, it does not withstand analytical rigour. How precisely can one determine whether people are idle and feckless, and how idle and how feckless they might be? Most university professors have problems in answering this question in relation to their students (and indeed their colleagues), let alone in measuring such concepts for whole nations.

4.6.2 The role of gender

Another strand of the argument regarding transmission mechanisms developed by Ross (2012) concerns the role of women in the economy. Ross argues that the presence of oil tends to create an economic structure that inhibits the employment of women and that this has negative consequences for the economy. Thus ‘while manufacturing draws women out of the home and into the workforce, oil wealth encourages them to remain at home, erasing a key pathway towards economic and political empowerment’ (p. 117).

4.6.3 The nature of regimes: developmental versus predatory states

A particularly fruitful area of enquiry is the categorization of states along the lines suggested by Lal (1995). Auty and Gelb (2001), for example, argue that ‘developmental states’ are states that have ‘a determined developmental elite, in a weak and subordinated civil society, which confers relative autonomy that is deployed by a powerful, competent insulated bureaucracy in the effective management of non-state interests, while political legitimacy is conferred first by repression and then by performance’ (p. 127).³³ As noted above, the examples often cited in this context include Indonesia, Malaysia and Botswana as well as (arguably) Chile (these countries are also among those most frequently cited as having avoided the curse and secured a blessing from their oil, gas and/or mineral revenues).

By contrast, Auty (2001b) suggests that dependence on primary exports for a period of any length will result in a ‘predatory’ and/or ‘factional’ government – either of which might be associated with poor economic performance. Thus, ‘the economy is locked into a staple trap in which burgeoning slow-maturing industry and bloated public service depend on transfers from commodity-producing sectors with waning competitiveness whose share in GDP declines due to both diminished incentives and ongoing structural change’ (p. 4). The ‘staple trap’ is defined as ‘a dependence upon one out of a handful of commodity exports with declining viability and shrinking size relative to GDP’ (p. 8).

While the concept of developmental versus predatory state provides fertile ground for further analysis, there is a danger of the definition of the developmental state being overly simplistic: for example, the developmental state is one that develops. At the same time, it is possible to argue (Mkandawire, 2001) that, despite having all the necessary elements in place to become a developmental state, a country may be unable to achieve that status if the hill to be climbed is too steep or some form of exogenous shock blocks progress. In short, even with the best will in the world, a country’s capacity to develop may not be enough under certain circumstances.

It follows that, on the basis of such arguments, it could be claimed that those countries that avoided the curse were developmental states that simply got lucky. Indeed, Botswana has been identified as just such a country. According to Cobbe (1999), its success was ‘a consequence of luck and the

³³ For a more general discussion of the issue in the context of Africa, see Mkandawire (2001).

presence of the right personalities in the right places at the right times' (p. 133). A similar argument has been made in the case of Indonesia (Temple, 2001): namely, that the Pertamina crisis of 1975 removed any temptation to waste revenues in the oil sector (unlike in Mexico), the green revolution gave a boost to agriculture and the regional economic takeoff encouraged exports.

The problem is where to draw the dividing line between a developmental state and a predatory one. In the former, the ruling elite faces some form of constraint that inhibits it from ransacking the economy for its own purposes. Such a constraint might be a 'social anchor' linking the elite to society in general (Mkandawire, 2001). Or, as was arguably the case in Indonesia, it might be the army – Suharto's ability to ransack the economy is seen as having been kept in check by that institution (Booth, 1995). Here, a related area of enquiry might be the extent to which international financial institutions and civil society are able to act as or provide constraints that prevent a developmental state becoming a predatory one.

4.6.4 The absence of democracy

It is tempting to attribute the poor performance of resource-rich countries to a lack of democracy.

Lal (1995) suggested a positive correlation between growth and the extent to which the political system can be seen as democratic and pointed out that resource-rich countries tend to be oligarchies rather than democracies. However, that assertion is debatable. According to Mikesell (1997), 'Democracy does not ensure good government, nor are all oligarchies poorly governed' (p. 198). Furthermore, the democratic credentials of Malaysia, Indonesia, Pinochet's Chile and, indeed, Botswana – which Tsie (1996) describes as a 'de facto one-party state through the ballot box' (p. 600) – are far from being beyond dispute; and yet all these countries avoided the resource curse.

A variation on the role of democracy is the impact of 'economic freedom' on economic performance as well as the impact of natural resources on such freedom. 'Economic freedom', defined essentially in terms of property rights (specifically those related to the acquisition and protection of property), is measured by the *Economic Freedom of the World* annual report, published by the Canadian Fraser Institute. According to Kaznacheev (2013), the evidence shows that 'the economic and social performance of resource economies depends primarily on the strength of their institutional framework, of which economic freedom is the best measure' (p. 32).

More recently, Andersen and Aslaksen (2008) concluded that the curse occurs in presidential rather than parliamentary democracies. The logic of their argument is that presidential systems are less representative and less accountable and that, for this reason, they provide more scope for rent-seeking. However, the nature of the correlation between the type of government and economic performance is very sensitive to the data used (Haber and Menaldo, 2011).

4.6.5 Fiscal dependency

Another political economy dimension to the transmission mechanism concerns fiscal dependence on extractive revenues (Di John and Putzel, 2000; Moore, 2004; Di John, 2007; Brautigam et al., 2008; Dietsche, 2007). This argues that heavy reliance on extractive revenues implies that strong elites may capture public funding and use it to serve their particular interests. Fiscal dependence on extractive revenues may also strengthen alliances between political and economic elites, which might collaborate to support 'bad' political regimes that served their interests to the detriment of those of the wider public (Dietsche, 2014).

4.6.6 The role of good governance and institutions

The new conventional view is that the resource curse can be explained by equating good outcomes from oil revenues with good governance and good institutions.³⁴ That view is supported by a range of studies which, based on cross-country statistical work, seek to prove that poor governance and institutions can explain poor outcomes (Gylfason, 2001b; Ross, 2001; Robinson et al., 2003; Atkinson and Hamilton, 2003; Sala-i-Martin and Subramanian, 2003; Jenson and Wantchekon, 2004; Papyrakis and Gerlagh, 2004; Korhonen, 2004; Collier and Hoeffler, 2004; Dietz et al., 2006; Luong and Weinthal, 2006; Robinson et al., 2006; Mehlum et al., 2006; Norman, 2009; Torvik, 2009; Andersen and Aslaksen, 2008; Pessoa, 2008; Stoeber, 2012). In some cases, formal models are used to analyse how institutions mediate the impact of natural-resource endowment on development outcomes; others have merely equated correlation with causation.

Such studies have taken the typical line that natural-resource abundance leads to poor collective outcomes because of the rents that accrue to governments. Rents entice government officials to engage in politically rational but economically inefficient decision-making. What may appear to be 'policy mistakes' reflect the rational political strategies of politicians and state officials who are responding to the incentives induced by natural-resource rents. However, good institutions can prevent the negative collective outcome because they can constrain the predatory behaviour of those who hold political power. Thus they are a mechanism with which to sever the otherwise negative link between natural-resource abundance and poor outcomes.

Several difficult questions remain to be answered. For example, what makes for the good governance and good institutions? Why are the institutions in some natural resource-abundant countries better than those in the majority of such states? And how have some countries acquired the constraining institutions that support good outcomes? Only a few quantitative studies have taken governance and institutions as a dependent variable in order to explore the links between natural-resource wealth and outcomes.

Meanwhile, some studies have sought to identify which institutions matter in the context of the resource curse (Drelichman, 2005; Keefer and Knack, 2007; Drelichman and Voth, 2008; Rothstein and Teorell, 2008; Kolstad, 2009; Di John, 2011). Several conclusions have been drawn. First, the presence of large-scale rents is likely to lead to the deterioration in the quality of institutions – depending, that is, on the quality of institutions before windfall revenues become available. According to this argument, a country with weak institutions is more likely to suffer from the resource curse. And since the strength of institutions is closely correlated to the 'age' of a country, OECD countries are more likely to have better-quality institutions. Second, rule-based institutions aimed at promoting the private sector tend to curb rent-seeking (Mehlum et al., 2006). In this context, the key factors are the mechanism that defines and executes policy, and how power is exercised, as well as the impartiality of the institutions and the presence of checks and balances (see the above discussion about developmental versus predatory states). Third, if a country's institutions are already weak, the discovery of natural resources will contribute to increased authoritarianism and greater reliance on those resources (David and Wright, 1997; Norman, 2009). The logic of this argument is that the political elites often decide to speed up the extraction of natural resources in order to buy their own survival.

Two lines of further investigation are suggested by studies such as those cited immediately above. First, in order to understand the persistence of different types of bad policy and institution, it

³⁴ The rest of this subsection draws heavily on Stevens and Dietsche (2008).

is necessary to explore how conflicts of interests and incentives differ from one social group to another and from one country to another. It is not sufficient to assume – as does the conventional economic analysis of politics – that interests and incentives are the same among every social group and in every country. Second, in order to understand in what conditions positive institutional change can take place, we need to have an insight into how some powerful groups manage to become more predatory than others. To gain such an insight, further research may be required. But positive institutional change, loosely defined, could take place if a decisive internal or external event alters the structure of social conflicts.

Bibliography

- Acemoglu, D., Johnson, S., and Robinson, J. (2001), 'The colonial origins of comparative development: An empirical investigation', *American Economic Review*, 91(5): 1369–1401.
- Acemoglu, D. and Robinson, J. (2006), 'Economic backwardness in political perspective', *American Political Science Review*, Vol. 100: 115–31.
- Alam, M. S. (1989). 'Anatomy of corruption: An approach to the political economy of underdevelopment', *American Journal of Economics and Sociology*, 48(4): 441–56.
- Alexeev, M. and Conrad, R. (2009), 'The elusive curse of oil', *Review of Economics and Statistics*, 91(3): 586–98.
- Apter, D. E. (1963), *Ghana in Transition* (New York: Atheneum).
- Andersen, J. J. and Aslaksen, S. (2008), 'Constitutions and the resource curse', *Journal of Development Economics*, Vol. 87: 227–46.
- Arndt, C. and Oman, C. (2006), 'Uses and abuses of governance indicators', OECD Development Centre Studies, Paris.
- Ascher, W. (1999), *Why Governments Waste Natural Resources* (Baltimore: Johns Hopkins University Press).
- Atkinson, G. and Hamilton, K. (2003), 'Savings, Growth and the Resource Curse Hypothesis', *World Development*, 31(11), pp. 1793–1807.
- Auty, R. (1986), 'Resource-based industrialisation and country size: Venezuela and Trinidad and Tobago', *Geoforum*, Vol. 17: 325–38.
- Auty, R. (1990), *Resource-based Industrialisation: Sowing the Oil in Eight Developing Countries* (New York: Oxford University Press).
- Auty, R. (1993), *Sustaining Development in Mineral Economies: The Resource Curse Thesis* (London: Routledge).
- Auty, R. (1994a), 'Industrial policy reform in six newly industrializing countries: The resource curse thesis', *World Development*, 22(1): 11–26.
- Auty, R. (1994b), 'The resource curse thesis: Minerals in Bolivian development, 1970–90', *Singapore Journal of Tropical Geography*, 15(2): 95–111.
- Auty, R. (1995), 'Industrial policy, sectoral maturation and post-war economic growth in Brazil: The resource curse thesis', *Economic Geography*, 71(3): 257–72.
- Auty, R. (1998), *Resource Abundance and Economic Development: Improving the Performance of Resource-rich Countries*, report published by the United Nations University World Institute for Development Economics, Helsinki.

- Auty, R. (ed.) (2001a), *Resource Abundance and Economic Development* (Oxford: Oxford University Press).
- Auty, R. (2001b), 'Why resource endowments can undermine economic development: concepts and case studies', paper prepared for the BP-Amoco Seminar, Lincoln College, Oxford University, 28–29.
- Auty, R. and Evia, J. L. (2001), 'A growth collapse with point resources: Bolivia', in Auty (2001a).
- Auty, R. and Gelb, A. (2001), 'Political economy of resource abundant states', in Auty (2001a).
- Auty, R. and Kiiski, S. (2001), 'Natural resources, capital accumulation, structural change and welfare', in Auty (2001a).
- Auty, R. and Mikesell, R. F. (1998), *Sustainable Development in Mineral Economies* (Oxford: Clarendon Press).
- Baland, J. M. and Francois, P. (2000), 'Rent-seeking and resource booms', *Journal of Development Economics*, Vol. 61: 527–42.
- Baldwin, R. E. (1966), *Economic Development and Export Growth: A Study of Northern Rhodesia, 1920–1960* (Berkeley and Los Angeles, CA: University of California Press).
- Bayley, D. H. (1966), 'The effects of corruption in a developing nation', *The Western Political Science Quarterly*, 19(4): 719–32.
- Beblawi, H. and Luciani, G. (eds) (1987), *The Rentier State* (London: Croom Helm).
- Behrman, J. R. (1987), 'Commodity price instability and economic goal attainment in developing countries', *World Development*, 15(5): 559–73.
- Bell, M. et al. (1984), 'Assessing the performance of infant industries', *Journal of Development Economics*, Vol. 16: 101–28.
- Benjamin, N. C., Devarajan, S. and Weiner, R. J. (1989), 'The "Dutch" disease in a developing country', *Journal of Development Economics*, Vol. 30: 71–92.
- Bhagwati, J. (1982), 'Directly Unproductive Profit-Seeking Activities', *Journal of Political Economy*, Vol 90, 988–1002.
- Bhattacharyya, S. and Hodler, R. (2010), 'Natural resources, democracy and corruption', *European Economic Review*, 54(4): 608–21.
- Birdsall, N., Ross, D. and Sabot, R. (1997), 'Education, growth and inequality', in Birdsall, N. and Jasperson, F. (eds), *Pathways to Growth: Comparing East Asia and Latin America* (Washington, DC: Inter-American Development Bank).
- Blanco, L. R., Nugent, J. B. and O'Connor, K. J. (2014), 'Oil curse and institutional changes: Which institutions are most vulnerable to the curse and under what circumstances?', *Contemporary Economic Policy* (Wiley Online Library).
- Bleaney, M. and Greenaway, D. (1993), 'Long-run trends in relative prices of primary commodities and in the terms of trade of developing countries', *Oxford Economic Papers*, 45(3): 349–63.

- Boone, C. (1990), 'The making of a rentier class: Wealth accumulation and political control in Senegal', *Journal of Development Studies*, 26(3): 425–49.
- BP Amoco (2000), *BP Amoco Statistical Review of World Energy* (London: BP Amoco p.l.c).
- BP (2015), *BP Statistical Review of World Energy*, June 2015, at <http://www.bp.com/content/dam/bp/pdf/Energy-economics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-full-report.pdf>.
- Booth, A. (1995), 'The state and the economy in Indonesia in the nineteenth and twentieth century', in Harris, J., Hunter, J. and Lewis, C. M. (eds), *The New Institutional Economics and Third World Development* (London: Routledge).
- Brautigam, D., Fjeldstad, O.-H. and Moore, M. (eds) (2008), *Taxation and State-Building in Developing Countries: Capacity and Consent* (Cambridge: Cambridge University Press).
- Brecher, R. and Diaz Alejandro, C. F. (1977), 'Tariffs, foreign capital and immiserizing growth', *Journal of International Economics*, Vol. 7: 317–22.
- Brecher, R. and Findlay, R. (1983), 'Tariffs, foreign capital and national welfare with sector-specific factors', *Journal of International Economics*, 13(3–4): 277–88.
- Brohman, J. (1996), *Popular Development: Rethinking the Theory and Practice of Development* (Oxford: Blackwell).
- Brunnschweiler, C. N. (2008), 'Cursing the blessings? Natural-resource abundance, institutions and economic growth', *World Development*, 36(3): 399–419.
- Brunnschweiler, C. N. and Bulte, E. H. (2008), 'The resource curse revisited and revised: A tale of paradoxes and red herrings', *Journal of Environmental Economics and Management*, 55(3): 248–64.
- Buffie, E. F. (1986), 'Quantitative restrictions and the welfare effects of capital inflows', *Journal of International Economics*, Vol. 19: 291–303.
- Buffie, E. F. (1993), 'Direct foreign investment, crowding out and underemployment in the dualistic economy', *Oxford Economic Papers*, Vol. 45: 639–67.
- Bulmer-Thomas, V. (1994), 'The economic history of Latin America since independence', *Cambridge Latin American Studies*, Vol. 77 (New York: Cambridge University Press).
- Bulte, E. and Damania, R. (2008), 'Resources for sale: Corruption, democracy and the natural resource curse', *The B.E. Journal of Economic Analysis and Policy*, 8(1).
- Caselli, F. and Michaels, G. (2009), 'Do oil windfalls improve living standards? Evidence from Brazil', National Bureau of Economic Research (NBER) Working Paper 15550.
- Cavalcanti, T. et al. (2011), 'Commodity Price Volatility and the Sources of Growth', *Cambridge Working Papers in Economics*, Vol. 1112, Faculty of Economics, University of Cambridge.
- Clark, J. (1997), 'Petro-Politics in Congo', *Journal of Democracy*, 8(3): 62–76.
- Cobbe, J. (1999), 'A book review of Samatar, A. I. (1999), *An African Miracle: State and Class Leadership and Colonial legacy in Botswana's Development*, Heinemann, Portsmouth N.H.', *International Journal of African Historical Studies*, 32(1).
- Collier, P. (2010), *The Plundered Planet* (New York: Oxford University Press).

- Collier, P. and Hoeffler, A. (2004), 'Greed and Grievance in Civil War', *Oxford Economic Papers*, Vol. 56: 563–95.
- Conway, P. and Gelb, A. (1988), 'Oil windfalls in a controlled economy', *Journal of Development Economics*, Vol. 28: 63–81.
- Corden, W. M. (1984), 'Booming sector and Dutch disease economics: Survey and consolidation', *Oxford Economic Papers*, Vol. 36: 359–80.
- Corden, W. M. and Neary, J. P. (1982), 'Booming sector and Dutch disease economics: A survey', *The Economic Journal*, Vol. 92.
- David, P. A. and Wright, G. (1997), 'Increasing returns and the genesis of American resource abundance', *Industrial and Corporate Change*, 6(2): 203–45.
- Davis, G. A. (1998), 'The minerals sector, sectoral analysis, and economic development', *Resources Policy*, 24(4): 217–28.
- Davis, G. A. and Tilton, J. E. (undated), 'Should developing countries renounce mining? A perspective on the debate', unpublished manuscript.
- De Ferranti, D., Perry, G. E., Lederman, D. and Maloney, W. F. (2002), *From Natural Resources to the Knowledge Economy: Trade and Job Quality* (Washington, DC: World Bank).
- Devlin, J. and Lewin, M. (2002), 'Issues in oil revenue management', paper for the World Bank/ESMAP Workshop in Petroleum Revenue Management. Washington, DC, 23–24.
- Di John, J. (2007), 'Oil abundance and violent political conflict: A critical assessment', *Journal of Development Studies*, 43(6): 961–86.
- Di John, J. (2011), 'Is there really a resource curse? A critical survey of theory and evidence', *Global Governance*, 14(2).
- Di John, J. and Putzel, J. (2000), 'State capacity building, taxation and resource mobilization in historical perspective', paper presented at the Development Studies Institute (DESTIN) Conference on New Institutional Theory, Institutional Reform and Poverty Reduction, London School of Economics and Political Science, 7–8.
- Dietsche, E. (2007), 'Why the quality of institutions is not a cure for the “resource curse”', *Journal of Energy and Development*, 32(2).
- Dietsche, E. (2014), '“Good Governance” of the Extractive Resources Sector: A Critical Analysis', PhD thesis, University of Dundee, Scotland.
- Dietz, S., Neumayer, E. and De Soysa, I. (2006), *Corruption, the Resource Curse, and Genuine Savings* (re-revised edition).
- Drelichman, M. (2005), 'The curse of Montezuma: American silver and the Dutch Disease', *Explorations in Economic History*, 42(3).
- Drelichman, M. and Voth, H. J. (2008), 'Institutions and the resource curse in early modern Spain', in Helpman E. (ed.), *Institutions and Economic Performance* (Cambridge, MA: Harvard University Press).

- Easterly, W. and Levine, R. (1997), 'Africa's growth tragedy: Policies and ethnic divisions', *Quarterly Journal of Economics*, Vol. 112: 1203–1250.
- Echevarria, C. (1997), 'Changes in sectoral composition associated with economic growth', *International Economic Review*, Vol. 38: 431–52.
- El Shibley, M. and Thirlwall, A. P. (1981), 'Dual-Gap analysis for the Sudan', *World Development*, 9(2): 193–200.
- Ericsson, M. and Söderholm, P. (2013), 'Minerals depletion and peak production', in Dannreuther, R. and Ostrowski, W. (eds), *Global Resources: Conflict and Cooperation* (London: Palgrave Macmillan).
- Fardmanesh, M. (1991), 'Dutch disease economics and the oil syndrome: An empirical study', *World Development*, 19(6): 711–17.
- Fearon, J. D. (2005), 'Primary commodity exports and civil war', *Journal of Conflict Resolution*, 49(4): 483–507.
- Fields, G. (1989), 'Change in poverty and inequality in the developing countries', *World Bank Research Observer*, 4(2): 167–85.
- Forsyth, P. J. and Kay, J. A. (1980), 'The economic implications of North Sea oil revenues', *Fiscal Studies*, Vol. 1: 1–28.
- Frankel, J. (2012), 'The natural resource curse: A survey', in Shaffer, B. and Ziyadov, T. (eds), *Beyond the Resource Curse*, (Philadelphia: University of Pennsylvania Press).
- Galbraith, J. K. (1958), *The Affluent Society* (London: Hamish Hamilton).
- Gelb, A. H. (1986), 'Adjustment to windfall gains', in Neary, J. P. and Van Wijnbergen, S. (eds), *Natural Resources and the Macroeconomy* (Oxford: Basil Blackwell).
- Gelb, A. H. et al. (1988), *Windfall Gains: Blessing or Curse* (New York: Oxford University Press).
- Gillespie, K. and Okruhlik, G. (1991), 'The political dimensions of corruption clean-ups: A framework for analysis', *Comparative Politics*, 24(1): 77–95.
- Greenaway, D. and Morgan, C. W. (eds) (1999), *The Economics of Commodity Markets* (Cheltenham: Edward Elgar).
- Gylfason, T. (2001a), 'Nature, power and growth', *The Scottish Journal of Political Economy*, 48(5): 558–88.
- Gylfason, T. (2001b), 'Natural Resources and economic Growth: What is the connection?', CESifo Working Paper 530.
- Gylfason, T., Herbertson, T. T. and Zoega, G. (1999), 'A Mixed Blessing: Natural Resources and Economic Growth', *Macroeconomic Dynamics*, Vol. 3: 204–25.
- Haber, S. and Menaldo, V. (2011), 'Do natural resources fuel authoritarianism? A reappraisal of the resource curse', *American Political Science Review*, 105(1): 1–26.
- Hall, D. (1999), 'Privatisation, multinationals, and corruption', *Development in Practice*, 9(5): 539–56.
- Harding, T. and Venables, A. J. (2011), 'Exports, imports and foreign exchange windfalls', unpublished paper.

- Heilbrunn, J. R. (undated), 'Governance and Oil Funds', mimeo prepared on behalf of the World Bank for the Government of Azerbaijan.
- Hill, C. and Mokgethi, N. (1989), 'Botswana: Macroeconomics and management of commodity booms, 1975–1986', *Successful Development in Africa* (Economic Development Institute of the World Bank).
- Hirschman, A. O. (1958), 'The strategy of economic development' (New Haven, CT: Yale University Press).
- Hirschman, A. O. (1977), 'A generalized linkage approach to development, with special reference to staples', *Economic Development and Cultural Change*, 25 (supplement).
- Hodges, T. (2004), *Angola: Anatomy of an Oil State* (Bloomington and Indianapolis: Indiana University Press).
- Hojman, D. E. (2002), 'The political economy of Chile's fast growth: An Olsonian interpretation', *Public Choice*, 111: 155–78.
- Humphreys, M., Sachs, J. D. and Stiglitz J. E. (eds) (2007), *Escaping the Resource Curse* (New York: Columbia University Press).
- Ibn Khaldun (1967), *The Muqaddimah* (Princeton: Princeton University Press, translated from Arabic by Franz Rosenthal).
- Innis, H. (1956), *Essays in Canadian Economic History* (Toronto: Toronto University Press).
- Isham, J., Woolcock, M., Pritchett, L. and Busby, G. (2002), 'The varieties of rentier experience: How natural resource endowments affect the political economy of economic growth', unpublished mimeo.
- Isham, J., Woolcock, M., Pritchett, L. and Busby, G. (2005), 'The varieties of the resource experience: How natural-resource export structures affect the political economy of economic growth', *World Bank Economic Review*, 19(2).
- Ismael, K. (2010), 'The structural manifestations of the Dutch Disease: The case of oil-exporting countries', IMF Working Paper 10/103 (Washington, DC).
- Jenson, N. and Wantchekon, L. (2004), 'Resource wealth and political regimes in Africa', *Comparative Political Studies*, Vol. 37: 816–41.
- Jones, L., Weinthal, P. and Weinthal, E. (2010), *Oil Is Not a Curse: Ownership Structure and Institutions in Soviet Successor States* (New York: Cambridge University Press).
- Joshi, V. (1970), 'Saving and foreign exchange constraints', in Streeten, P. (ed.), *Unfashionable Economics* (London: Weidenfeld and Nicolson).
- Karl, T. L. (1997), *The Paradox of Plenty: Oil Booms and Petro-States* (Berkeley, CA: University of California Press).
- Kaznacheev, P. (2013), 'Resource Rents and Economic Growth', paper published by the Russian Presidential Academy of National Economy and Public Administration.
- Keefer, P. and Knack, S. (2007), 'Boondoggles, rent-seeking and political checks and balances: Public investment under unaccountable governments', *Review of Economics and Statistics*, 89(3): 566–72.
- Kindleberger, C. (1956), *Terms of Trade: A European Case Study* (New York: Wiley).

- Kolstad, I. (2009), 'Human rights and assigned duties: Implications for corporations', *Human Rights Review*, Vol. 10: 569–82.
- Korhonen, I. (2004), 'Does democracy cure a resource curse?', Discussion Paper 18, Bank of Finland Institute for Economies in Transition.
- Krause, L. B. (1995), 'Social capability and long term economic growth', in Koo, B. H. and Perkins, D. H. (eds), *Social Capability and Long-term Economic Growth* (New York: Macmillan).
- Krueger, A. O., Schiff, M. and Valdes, A. (1991), *Political Economy of Agricultural Pricing Policies* (Baltimore, MD: Johns Hopkins University Press).
- Krugman, P. (1987), 'The narrow moving band, the Dutch disease and the competitive consequences of Mrs Thatcher: Notes on trade in the presence of dynamic scale economies', *Journal of Development Economics*, Vol. 27: 41–55.
- Kuhn, T. S. (1996), *The Structure of Scientific Revolutions*, 3rd ed. (Chicago, IL: University of Chicago Press).
- Lal, D. (1995), 'Why growth rates differ', in Koo, H. K. and Perkins, D. (eds), *Social Capability and Long-term Economic Growth*.
- Lal, D. and Myint, H. (1996), *The Political Economy of Poverty, Equity and Growth* (Oxford: Clarendon Press).
- Lane, P. and Tornell, A. (1995), 'Power concentration and growth', Harvard Institute of Economic Research Discussion Paper 1720.
- Lane, P. and Tornell, A. (1996), 'Power, growth and the voracity effect', *Journal of Economic Growth*, Vol. 1: 213–41.
- Le Billon, P. (2003), 'Fuelling war: Natural resources and armed conflict', *Adelphi Papers*, Vol. 357 (Oxford: Oxford University Press).
- Le Billon, P. (2005), *The Geo-politics of Resource Wars* (London: Routledge).
- Lederman, D. and Maloney, W. F. (2007), *Natural Resources: Neither Curse Nor Destiny* (Washington, DC: World Bank and Stanford University Press).
- Lederman, D. and Maloney, W. F. (2008), 'In search of the missing resource curse', World Bank Policy Research Working Papers Series 4766 (Washington, DC).
- Leite, C. and Weidmann, J. (1999), 'Does mother nature corrupt? Natural resources, corruption and economic growth' IMF Working Paper 99/85 (Washington, DC).
- Lewis, A. (1955), *The Theory of Economic Growth* (London: Allen & Unwin).
- Lewis, S. R. (1989), 'Primary Exporting Countries', Chapter 29 in Chenery, H. and Srinivasan, T. N. (eds), *Handbook of Development Economics, Volume II*, Amsterdam: North-Holland, 1989: 1541–1600.
- Love, R. (1994), 'Drought, Dutch disease and controlled transition in Botswana's agriculture', *Journal of Southern African Studies*, 20(1): 71–83.
- Luciani, G. (2011), 'Price and revenue volatility: What policy options and role for the state?', *Global Governance*, 17(2): 213–28.

- Luong, P. J. and Weinthal, E. (2006), 'Rethinking the resource curse: Ownership structure, institutional capacity and domestic constraints', *Annual Review of Political Science*, Vol. 9: 241–63.
- Mabro, R. (1980), 'Oil revenues and the cost of social and economic development', *Energy in the Arab World*, Vol. 1, published by AFESD and OAPEC, Kuwait.
- Mabro, R. (2005), 'The international oil price regime: Origins, rationale and assessment', *Journal of Energy Literature*, 11(1): 3–20.
- Mabro, R. and Monroe, E. (1974), 'Arab wealth from oil: Problems of its investment', *International Affairs*, 50(1).
- Macbean, A. I. (1966), *Export Instability and Economic Development* (Cambridge, MA: Harvard University Press).
- Macintosh, W. (1964), *The Economic Background of Dominion-Provincial Relations* (Toronto: McClelland and Stewart).
- Mahdavi, H. (1970), 'The patterns and problems of economic development in rentier states: The case of Iran', in Cook, H. (ed.), *Studies in the Economic History of the Middle East* (Oxford: Oxford University Press).
- Maizels, A. (1968), *Experts and Economic Growth of Developing Countries* (Cambridge, MA: Cambridge University Press).
- Maloney, W. F. (2002), 'Innovation and growth in resource-rich countries', Central Bank of Chile Working Paper 148.
- Manzano, O. and Rigobon, R. (2001), 'Resource curse or debt overhang', National Bureau of Economic Research Working Paper 8390 (New York).
- Matsuyama, K. (1992), 'Agricultural productivity, comparative advantage and economic growth', *Journal of Economic Theory*, Vol. 58: 317–34.
- Mbaku, J. M. (1992), 'Bureaucratic corruption as rent-seeking behaviour', *Konjunkturpolitik*, 38(4): 247–65.
- McKinnon, R. I. (1976), 'International transfers and non-traded commodities: The adjustment problem', in Leipsiger, D. (ed.), *The International Monetary System and the Developing Nations* (Washington, DC: Agency for International Development).
- McKinsey (2012), *Manufacturing in the Future: The Next Era of Global Growth and Innovation* (New York: McKinsey).
- McMahon, G. (1997). 'The Natural Resource Curse: Myth or Reality?', mimeo published by World Bank Institute.
- Mehlum, H., Moene, K. and Torvik, R. (2002), 'Institutions and the Resource Curse', Memorandum 29/2002 of the Department of Economics of the University of Oslo.
- Mehlum, H., Moene, K. and Torvik, R. (2006), 'Institutions and the resource curse', *The Economic Journal*, Vol. 116: 1–20.
- Mikesell, R. (1997), 'Explaining the resource curse, with special reference to mineral-exporting countries', *Resources Policy*, 23(4): 191–99.

- Mkandawire T (2001), 'Thinking about developmental states in Africa', *Cambridge Journal of Economics*, Vol. 25: 289–314.
- Modise, M. D. (1999), 'Managing mineral revenues in Botswana', in Mayer, J., Chambers, B. and Farooq, A. (eds), *Development Policies in Natural-Resource Economies* (Cheltenham: Edward Elgar in association with UNCTAD).
- Moore, M. (2004), 'Revenues, state formation, and the quality of governance in developing countries', *International Political Science Review*, 25(3): 297–319.
- Murphy, K., Schleifer, A. and Vishny, R. W. (1989), 'Industrialisation and the big push', *Journal of Political Economy*, 97(5): 1003–1026.
- Nankani, G. T. (1979), 'Development problems of mineral-exporting countries', World Bank Staff Working Paper 354 (Washington, DC).
- Neary, P.J. and Van Wijnbergen, S. N. (eds) (1986), *Natural Resources and the Macroeconomy* (Cambridge, MA: MIT Press).
- Norman, C. (2009), 'Rule of law and the resource curse: Abundance versus intensity', *Environmental and Resource Economics*, Vol. 43: 183–207.
- North, D. C. (1998), 'The new institutional economics and third-world development', in Harriss, J., Hunter, J. and Lewis, C. M. (eds), *The New Institutional Economics and Third-world Development* (London: Routledge).
- Nunn, N. (2008), 'The long-term effects of Africa's slave trades', *Quarterly Journal of Economics*, 123(1): 139–76.
- ODI (2006), 'Meeting the Challenges of the "Resource Curse". International Experience in Managing the Risks and Realising the Opportunities of Non-Renewable Natural Resource Revenues', at http://www.odi.org.uk/PPPG/activities/country_level/odpci/msp/ODI_Extractive_UNDPResCurse.pdf.
- Okruhlik, G. (1999), 'Rentier wealth, unruly law and the rise of opposition: The political economy of oil states', *Comparative Politics*, 31(3): 295–315.
- Papayrakis, E. and Gerlagh, R. (2004), 'The resource curse hypothesis and its transmission channels', *Journal of Comparative Economics*, 32(1):181–93.
- Perkins, D. H. and Syrquin, M. (1989), 'Large countries: the influence of size', in Chenery, H. and Srinivasan, T. N. (eds), *Handbook of Development Economics*, Vol. II (Amsterdam: North Holland).
- Pessoa, A. (2008), 'Natural Resources and Institutions: The "Natural Resource Curse" Revisited', Munich Personal RePEc Archive (MPRA) Paper 8640.
- Pindyck, R. (1999), 'The long-run evolution of energy prices', *The Energy Journal*, 20(2): 1–27.
- Prebisch, R. (1950), *The Economic Development of Latin America and Its Principal Problems* (Lake Success, NY: UN).
- Prebisch, R. (1964), 'Toward a new trade policy for development', in Proceedings of the United Conference on Trade and Development, New York, Vols I–VIII (New York: UN).

- Ranis, G. (1991), 'Towards a model of development', in Krause, L. B. and Kim, K. (eds), *Liberalization in the Process of Economic Development* (Berkeley, CA: University of California Press).
- Rasiah, R. and Shari, I. (2001), 'Market, government and Malaysia's new economic policy', *Cambridge Journal of Economics*, Vol. 25: 57–78.
- Robinson, J. A., Torvik, R. and Verdier, T. (2003), 'Political Foundations of the Resource Curse', Centre National de la Recherche Scientifique (CNRS) Working Paper 2003–33, at <http://ideas.repec.org/p/cpr/ceprdp/3422.html>.
- Rodriguez, F. and Sachs, J. D. (1999), 'Why do resource abundant economies grow more slowly? A new explanation and application to Venezuela', *Journal of Economic Growth*, Vol. 4: 277–303.
- Roemer, M. (1970), *Fishing for Growth; Export-led Development in Peru, 1950–1967* (Cambridge, MA: Harvard University Press).
- Rosenstein-Rodan, P. (1943), 'Problems of industrialisation of Eastern and South-Eastern Europe', *Economic Journal*, Vol. 53: 202–11.
- Rosenstein-Rodan, P. (1961), 'Notes on the theory of the big push', in Ellis, H. S. and Wallich, H. C. (eds), *Economic Development for Latin America* (New York: St Martin's Press).
- Ross, M. (1999), 'The political economy of the resource curse', *World Politics*, 51(2): 297–322.
- Ross, M. (2001), *Extractive Sectors and the Poor* (Oxfam America), at <http://www.oxfamamerica.org/static/oa3/files/extractive-sectors-and-the-poor.pdf>.
- Ross, M. (2012), *The Oil Curse: How Petroleum Wealth Shapes the Development of Nations* (Princeton and Oxford: Princeton University Press).
- Rosser, A. (2006), 'The political economy of resource curse: A literature survey', Institute of Development Studies (IDS) Working Paper 268.
- Rostow, W. (1960), *The Stages of Economic Growth* (Cambridge: Cambridge University Press).
- Rothstein, B. and Teorell, J. (2008), 'What is quality government? A theory of impartial government institutions', *Governance*, 21(2): 165–90.
- Rowthorn, R. E. and Wells, J. R. (1987), *De-industrialization and Foreign Trade* (Cambridge: Cambridge University Press).
- Ruffin, R. (1984). 'International factor movements', in Jones, R. and Kenen, P. (eds), *Handbook of International Economics* (Amsterdam: North Holland).
- Saad-Filho, A. and Weeks, J. (2013), 'Curses, diseases and other resource confusions', *Third World Quarterly*, 34(1): 1–21.
- Sachs, J. D. and Warner, A. M. (1995a), 'Economic convergence and economic policy', NBER Working Paper 5039.
- Sachs, J. D. and Warner, A. M. (1995b), 'Natural-resource abundance and economic growth', NBER Working Paper 5398.

- Sachs, J. D. and Warner, A. M. (1997), *Natural-resource Abundance and Economic Growth* (Cambridge, MA: Center for International Development and Harvard Institute for International Development, Harvard University).
- Sachs, J. D. and Warner, A. M. (1998), 'The big push, natural resource booms and growth', mimeo.
- Sachs, J. D. and Warner, A. M. (1999), 'The Big Rush, Natural Resource Booms And Growth', *Journal of Development Economics*, 59(1): 43–76.
- Sala-i-Martin, X. and Subramanian, A (2003), 'Addressing [the natural resource curse: An illustration from Nigeria]', NBER Working Paper 9804.
- Sampson, A. (1975), *The Seven Sisters: The Great Oil Companies and the World They Made* (London: Hodder and Stoughton).
- Sarraf, M. and Jiwanji, M. (2001), 'Beating the resource curse: The case of Botswana', *Environmental Economics Series*, Paper 83.
- Schwartz, R. (2008), 'The political economy of state-formation in the Arab Middle East: Rentier states, economic reform and democratization', *Review of International Political Economy*, 15(4): 599–621.
- Seers, D. (1964), 'The mechanism of an open petroleum economy', *Social and Economic Studies*, Vol. 13: 233–42.
- Shams, M. (1989), 'The impact of oil revenues on the OPEC economy', *Energy Economics*, 11(4): 245–6.
- Shambayati, H. (1994), 'The rentier state, interest groups, and the paradox of autonomy: State and business in Turkey and Iran', *Comparative Politics*, 26(3): 307–31 .
- Shamsul, A. B. (1997), 'The economic dimension of Malay nationalism: The socio-historical roots of the New Economic Policy and its contemporary implications'. *The Developing Economies*, 35(3): 240–61.
- Singer, H. W. (1950), 'The distribution of trade between investing and borrowing countries', *American Economic Review*, 40(2): 473–85.
- Smith, B. (2001), 'Rethinking the politics of the resource curse: Oil wealth and political stability', unpublished mimeo.
- Srinivasan, T. N. (1983), 'International factor movements, commodity trade and commercial policy in a specific factors model', *Journal of International Economics*, Vol. 14: 289–312.
- Stevens, P. (1986), 'The impact of oil on the role of the state in economic development: A case study of the Arab world', *Arab Affairs*, 1(1).
- Stevens, P. (2000), 'Pipelines or Pipe Dreams? Lessons from the History of Arab Transit Pipelines' *Middle East Journal*, Spring: 224–41.
- Stevens, P. (2003), 'Resource impact: Curse or blessing? A literature survey', *Journal of Energy Literature*, 9(1): 3–42.
- Stevens, P. (2005), 'Resource curse and how to avoid it', *Journal of Energy and Development*, 31(1): 1–20.

- Stevens, P. (2008), 'National oil companies and international oil companies in the Middle East: Under the shadow of government and the resource nationalism cycle', *Journal of World Energy Law and Business*, 1(1).
- Stevens, P. and Dietsche, E. (2008), 'Resource curse: An analysis of causes, experiences and possible ways forward', *Energy Policy*, 36(1), January: 56–65.
- Stevens, P. and Mitchell, J. V. (2008), 'Resource Depletion, Dependence and Development: Can Theory Help?', Chatham House Programme Paper.
- Stevens, P. and Alyousef, Y. (2011), 'The cost of domestic energy prices to Saudi Arabia', *Energy Policy*, Vol. 39: 6900–6905.
- Stevens, P. and Considine, J. (2013) 'The Economic Case for the Staged Development of Extractive Industry Projects in the Presence of Potential "Resource Curse"', *Energy Politics*, Fall.
- Stijns, J. C. (2005), 'Natural-resource abundance and economic growth revisited', *Resources Policy*, 30(2): 107–30.
- Stoever, J. (2012), 'On comprehensive wealth, institutional quality and sustainable development: Quantifying the effect of institutional quality on sustainability', *Journal of Economic Behavior and Organization*, 81(3): 794–801.
- Svensson, J. (2000), 'Foreign aid and rent-seeking', *Journal of International Economics*, Vol. 51: 437–61.
- Syrquin, M. and Chenery, H. B. (1989), 'Patterns of development, 1950 to 1983 World Discussion Paper 41 (Washington, DC: World Bank).
- Temple, J. (2001), 'Growing into trouble: Indonesia after 1966', unpublished mimeo (15 August).
- Thirlwall, A. P. (1981), *Growth and Development* (London: Macmillan, 2nd edition).
- Tollison, R. D. (1982), 'Rent-seeking: A survey', *Kyklos*, 35(4): 575–602.
- Tornell, A. and Lane, P. R. (1999), 'The voracity effect', *American Economic Review*, Vol. 89: 22–46.
- Torres, N., Afonso, O. and Soares, I. (2012), 'Oil abundance and economic growth: A panel data analysis', *The Energy Journal*, 33(2).
- Torvik, R. (2001), 'Learning by doing and the Dutch disease', *European Economic Review*, Vol. 45: 285–306.
- Torvik, R. (2002), 'Natural resources, rent-seeking and welfare', *Journal of Development Economics*, Vol. 67: 455–70.
- Torvik, R. (2009), 'Why do some resource-abundant countries succeed while others do not?', *Oxford Review of Economic Policy*, 25(2): 241–56.
- Toye, J. (1987), *Dilemmas of Development* (Oxford: Basil Blackwell).
- Tsie, B. (1996), 'The political context of Botswana's development performance', *Journal of Southern African Studies*, 22(4): 599–616.
- UNCTAD (1985), *Trade and Development Report, 1985*, published on the occasion of the United Nations Conference on Trade and Development, New York.

- UNCTAD (2005), *Trade and Development Report, 2005*, published on the occasion of the United Nations Conference on Trade and Development, New York.
- UNCTAD (2008), *Trade and Development Report, 2008*, published on the occasion of the United Nations Conference on Trade and Development, New York.
- Usui, N. (1996), 'Policy adjustments to the oil boom and their evaluation: The Dutch disease in Indonesia', *World Development*, 24(5): 887–900.
- Usui, N. (1997), 'Dutch disease and policy adjustments to the oil boom: A comparative study of Indonesia and Mexico', *Resources Policy*, 23(4): 151–62.
- Van der Ploeg, F. (2011), 'Natural resources: Curse or blessing?', *Journal of Economic Literature*, 49(2): 366–420.
- Van der Ploeg, F. and Poelhekke, S. (2009), 'Volatility and the natural-resource curse', *Oxford Economic Papers*, 61(4): 727–60.
- Van der Ploeg, F. and Poelhekke, S. (2010), 'The pungent smell of "red herrings": Sub-soil assets, rents, volatility and the resource curse', *Journal of Environmental Economics and Management*, 60(1): 44–55.
- Van Wijnbergen, S. (1984a), 'The Dutch disease: A disease after all?', *The Economic Journal*, Vol. 94: 41–55.
- Van Wijnbergen, S. (1984b), 'Inflation, unemployment and the Dutch disease in oil-exporting countries: A short-run dis-equilibrium analysis', *Quarterly Journal of Economics*, Vol. 99: 233–50.
- Vernon, R. (1971), *Sovereignty at Bay: The Multinational Spread of US Enterprises* (London: Longman).
- Victor, D. G., Hults, D. R. and Thurber, M. (eds) (2011), *Oil and Governance* (Cambridge: Cambridge University Press).
- Weisman, E. (1990), 'Aid as a booming sector: Evidence from a computable general equilibrium model of Papua New Guinea', Islands/Australia Working Paper 90/13 (Canberra: National Centre for Development Studies at the Research School of Pacific Studies of the Australian National University).
- Wenders, J. T. (1987), 'On perfect rent dissipation', *American Economic Review*, Vol. 77: 456–59.
- Wood, A. and Berge, K. (1997), 'Exporting manufactures: Human resources, natural resources and trade policy', *Journal of Development Studies*, Vol. 34: 35–59.
- Woolcock, M., Pritchett, L. and Isham, J. (2001), 'The Social Foundations of Poor Economic Growth in Resource-rich Countries', in Auty (2001a).
- World Bank (2004) *Striking a Better Balance: the World Bank Group and Extractive Industries – the final report of the extractive industries review*. (Washington, DC: World Bank), at <http://documents.worldbank.org/curated/en/2004/09/5138809/striking-better-balance-world-bank-group-extractive-industries-final-report-extractive-industries-review>.
- Wright, G. and Czelutsa, J. (2002), *Resource-based Economic Growth, Past and Present* (Palo Alto: Stanford University).
- Wright, G. and Czelutsa, J. (2004), 'The myth of the resource curse', *Challenge*, 47(2): 6–38.

Yates, D. A. (1996), *The Rentier State in Africa: Oil-rent Dependency and Neo-colonialism in the Republic of Gabon* (Trenton, NJ: Africa World Press).

Yergin, D. (1991), *The Prize* (New York: Simon & Schuster).

Young, L. and Miyagiwa, K. (1986), 'International investment and immiserizing growth', *Journal of International Economics*, Vol. 20: 171–8.

Younger, S. D. (1992), 'Aid and the Dutch disease: macroeconomic management when everybody loves you', *World Development*, 20(11): 1587–1597.

Independent thinking since 1920

Chatham House, the Royal Institute of International Affairs, is an independent policy institute based in London. Our mission is to help build a sustainably secure, prosperous and just world.

Chatham House does not express opinions of its own. The opinions expressed in this publication are the responsibility of the author(s).

© The Royal Institute of International Affairs, 2015

The Royal Institute of International Affairs
Chatham House
10 St James's Square, London SW1Y 4LE
T +44 (0)20 7957 5700 F +44 (0)20 7957 5710
contact@chathamhouse.org www.chathamhouse.org
Charity Registration Number: 208223