RESOURCE IMPACT - CURSE OR BLESSING?

A LITERATURE SURVEY

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EXECUTIVE SUMMARY

1. INTRODUCTION

Common sense and economic theory argue that large revenues from natural resources should generate wealth. Yet much evidence suggests the opposite and that such countries suffer from "resource curse". The paper provides a survey of the growing academic literature on the impact of natural resources on an economy.

2. A HISTORY OF INTEREST IN RESOURCE IMPACT

The topic has long attracted interest from a variety of sources. Initially this was focussed on primary products generally, but after the oil shocks of the 1970s, attention switched to the impact on oil exporters. An interest that subsequently extended to other minerals. More recently interest has revived and attracted a wider audience due to growing pressure from a variety of NGO's. This has produced a number of results. The World Bank has instituted an "Extractive Industry Review" to consider the Group's role in such projects. The more responsible multinationals are also looking at the impact of such projects and how to mitigate negative consequences. These concerns are heightened because a number of countries are about to receive large oil and mineral revenues and are therefore vulnerable. Also those financing such projects are concerned that negative impacts will threaten the viability of the projects themselves.

3. THE PRESENCE OF RESOURCE CURSE

There is a large body of empirical work that tries to establish a negative relationship between resource abundance and poor economic performance. For the most part this evidence appears to support the "resource curse" hypothesis. However, such work is not without criticism. The results are very sensitive to the period chosen. How "natural resources" are defined is also important. The methodology used also attracts criticism from some quarters. Apart from the negative impact on economic performance, the impact on poverty also attracts attention, as does the tendency of resource abundance to create conflict and to retard political change. However, despite fairly compelling evidence of the presence of "resource curse", the literature also asserts that some countries managed to avoid it and instead receive a "blessing". A recent study attempts to establish which these countries might be and concludes that some mineral rich countries have succeeded. Thus the paper argues for dropping the term "resource curse" and instead using the term resource impact and then determining whether it was a curse or a blessing.

4. THE TRANSMISSION MECHANISM BETWEEN LARGE RESOURCE REVENUES AND POOR PERFORMANCE

There exists a huge literature on why countries might suffer "resource curse". The paper considers six transmission mechanisms – a long-term decline in terms of trade; revenue volatility; Dutch disease; crowding out effects; increasing the role of the state; and finally the socio-cultural and political impacts. The paper considers the literature in each of these areas. The increasing role of the state in addition to general issues, considers bad decision-making, enhanced corruption and rent seeking, the nature of investment decisions, and industrial policy. Socio-cultural and political impacts considers why the apparently successful policies to avoid problems were actually undertaken by the political and bureaucratic institutions. Much of the discussion concerns the nature of rentier societies, the nature of regimes and in particular the role of "developmental states" versus "predatory states".

A clear conclusion from this section is that there is no simple single explanation of what creates a "blessing" rather than a "curse". Nor is there any agreement on any collection of explanations. This argues for a case-by-case approach rather than trying to force some sort of generalization and adds support to the argument to substitute the term "resource impact" for "resource curse" and then evaluate the nature of the impact. Another aspect is making the distinction between macro-economic policy that may aggravate or avoid problems and why that particular policy was followed in the first place. Thus it is not just what the transmission mechanisms were but why they were allowed to operate (or not as the case may be). This lack of clarity on the transmission mechanisms presents a serious challenge. If it is not clear what causes the problem, then treatment is likely to prove equally elusive.

5. HOW NEGATIVE IMPACTS MIGHT BE AVOIDED – THE THEORY AND THE PRACTISE

This section considers what policy decisions the governments actually made and why they made those decisions and not others. Various options to avoid problems are analysed. These include - not developing the mineral deposits; diversifying the economy away from dependence on oil, gas and mineral exports; sterilizing the incoming revenue; the use of stabilization and oil funds; and finally reconsidering investment policies. The section finishes by assessing what political reforms might be needed to carry out the necessary policies. This involves two possible strands. The first is to develop democracy although the evidence suggests this is far from being a necessary condition. The other strand is the need to remove corruption and contain rent seeking. The issue of transparency as an aid in this process is also considered. The importance of the presence of a "developmental state" is emphasised together with the need for an alignment of interests within the society. Of particular importance is the institutional capacity of the society to translate a developmental ideology into effective policies.

6. CONCLUSIONS

Clearly the whole issue of what causes a "curse" rather than a "blessing" and how to enjoy the latter and avoid the former is an extremely complex issue. The literature is divided on both causes and cures although there is a growing consensus that essentially it is something to do with governance and the answer lies more in political economy than macro-economic analysis. Hence the key question is not what was done? It is why was it done?

Several further areas of study are identified: -

- What are the implications of an attack of "resource curse" for the actual project economics and how might these implications be fed into the project appraisal process?
- How can the work on resource impact at a national level be fed into the impact at a regional level?
- What role might civil society play in converting a predatory into a developmental state and what role can the IFI's and the Multinationals play in encouraging civil society?
- Is the impact from oil and gas projects different from the impact from mineral projects. Both are what the literature has termed "point resources" but arguably their effects may well differ in terms of such issues such as volatility and their various linkages.

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1. INTRODUCTION[1]

Large revenues accruing from natural resources should generate wealth for an economy, promote economic progress and reduce poverty. The logic behind this assertion can be based upon simple common sense, which suggests that while money cannot buy happiness it is a good down payment[2]. It can also be based on various strands of economic development theory. Thus for example, many held the view that development is constrained by low levels of investment - "capital fundamentalism" (Lewis, 1955; Rostow, 1960). Others hold that simply saving more will not lead to investment and growth because saving in domestic currency may not allow capital imports which require foreign exchange - "dual gap analysis" (Joshi, 1970; El Shibley and Thirwall, 1981). There has also been a long held view in development economics that poor countries must experience a "big push" to break out of a self-feeding circle of poverty (Rosenstein-Rodan, 1943, 1961; Murphy et al., 1989). Thus large windfall revenues accruing to an economy from (say) oil, gas or mineral projects should overcome capital and foreign exchange constraints and generate the required "push"[3].

Yet for many years, casual empiricism suggests the opposite. Many resource rich countries appear to have experienced a worse performance in terms of economic progress and poverty reduction than countries without such apparent "benefits". Over the years, in the economics literature, this has become know as the "resource curse" thesis.

The term was first used 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 allegedly did not. Thus the "resource curse" phenomenon "… is not an iron law, rather it is a strong recurrent tendency" (Auty, 1994a, page 12).

This paper provides a survey of the growing academic literature on the subject. Section 2 provides a history of interest in the topic together with an explanation for the sudden revival of interest in the last couple of years. Section 3 examines the evidence for the presence of a "curse" versus that of a "blessing". Section 4 considers the various explanations of the transmission mechanism from large-scale natural resource revenues to a poor economic performance. Section 5, based both on the theoretical literature and the experience of countries that appear to have avoided the "curse", considers what might be done to avoid negative impacts and instead enjoy a "blessing". It also considers what role the various players might play. Finally, Section 6 considers what issues in the field might be worth future consideration.

2. A HISTORY OF INTEREST IN RESOURCE IMPACT

Concern over the impact of great wealth on a society goes back at least as far as the writing of the 14th Century Arab philosopher Ibn Khaldun in which he identifies the fifth stage of the "state" as one of waste and squandering (Ibn Khaldun, 1967). More recently, there is the delightful quote of the sixteenth century French philosopher Jean Bodin cited in Sachs and Warner, 1999 "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." (Page 14). In the seventeenth century, the wealth of Spain from the new world appeared to lead to an inexorable decline in that country's fortune[5]. More specifically, observers such as Adam Smith suggested that mining projects instead of replacing capital, absorbed it. Therefore he argued that the "prudent law giver" wishing to increase capital "would least chuse (sic) such projects". (Quoted in Wright and Czelusta, 2002, page 2).

Concern about the potential negative impacts of being a natural resource producer emerged among development economists in the 1950's and 1960's. Initially the concern was associated with Raul Prebisch

[1] The author would like to thank the International Petroleum Industry Environmental Conservation Association (IPIECA) both for funding this research and for allowing me to publish it without constraint. I would also like to thank my research assistant Olly Stevens for many long and often tedious hours of gathering, collating and processing the large number of bits and pieces which constitute the growing literature on this subject. Finally, I would like to thank a number of people who made critical comments on an earlier draft. Of course, errors and idiosyncrasies remain the responsibility of the author.

[2] As a variant on that theme … "Wealth is not without its advantages, and the case to the contrary although it has often been made, has never proved widely persuasive." Galbraith, 1958.

[3] Richard Auty has pointed out to the author in a private communication that he is deeply sceptical of the "Big Push" thesis on the grounds that where practised, they tend to outstrip domestic implementation capacity and thereby inflict substantial macro-economic damage.

[4] To the best of this author's knowledge, the first use of the term was by this author writing under the pseudonym "David Brook" in an Arab trade press journal "Middle East Money" published in Beirut in early 1975. The full reference 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".

[5] Because of the long historical ties between the Arab World and Spain, this observed trend of decline attracted much discussion in the Arab World in the 1970's following the first oil shock of 1973-4.

and Hans Singer (Prebisch 1950, 1964; Singer, 1950). They argued that primary product exporters (the periphery) would find themselves disadvantaged in trading with the industrialized countries (the centre) because of deteriorating terms of trade. Others (Hirschman, 1958; Seers 1964; and Baldwin, 1966) reinforced this negative consequence by arguing that linkages from primary product exports would be limited compared to manufacturing, although by contrast some tried to argue that primary products could promote growth (Roemer, 1970; Lewis 1989).

Thus far, concern was focussed on primary products and natural resources generally. However, in the 1970's attention began to focus on the experience of the oil exporters following the first oil shock. The aftermath gave rise to speculation that large-scale revenues might be bad news for the development prospects of the oil exporters (Neary and Van Wijnbergen, 1986; Mabro and Monroe, 1974; Mabro, 1980). This saw the start of the development of a literature specifically concerned with oil, gas and mineral projects with which this paper is primarily concerned.

The experience of the Netherlands in the 1970s following the discovery of the Groningen gas field gave rise to concern over "Dutch disease". This was defined explicitly as the contraction in the non-hydrocarbon traded sector following an real appreciation of the exchange rate. For the Netherlands this meant a decline in manufacturing. However, economists also began to observe that for developing countries, it was agriculture that took the hit[6].

In the 1990's, it was the impact of oil, gas and mineral revenues on government behaviour that attracted attention. Large windfall revenues from oil, gas and mineral projects somehow appeared to change the way in which governments behaved with resulting damage to growth and development prospects (Gelb 1986; Auty, 1990)[7]. This thread ran parallel to the wider developments in economic theory relating to the economic theory of politics, theories of public choice and principal-agent analysis. These schools of thought laid the ideological basis to argue government involvement in the allocation of resources generally would lead to a misallocation of these resources.

In the last couple of years, several factors explain a revival of interest in the subject, which has also brought "resource curse" to a much wider audience. For some time, non-governmental organizations (NGO's) have expressed growing concern claiming that oil, gas and mineral projects in poor developing countries were having very negative effects. They were seen to damage prospects for economic progress and poverty reduction and at the same time to promote conflict. For example, Oxfam America in its study "Extractive Sectors and the Poor" (Michael Ross, 2001) argues that "oil and mineral dependence are strongly associated with unusually bad conditions for the poor … (and also) … has a harmful effect of governments … (they) tend to suffer from unusually high rates of: corruption; authoritarian government; government ineffectiveness; military spending; civil war" (page 4). The study then comes to the rather despairing conclusion that "the best course of action for poor states would be to avoid export-orientated extractive industries altogether." (Page 17).

This growing NGO concern has produced several results. The World Bank Group has set up an "Extractive Industry Review". This Review (with Emil Salem as the "Eminent Person" based in Jakarta) is required to consider the role of the Bank's involvement in such projects. It is currently gathering evidence and is due to report in June 2003. At the same time, the larger, more responsible oil and mining companies are considering the impact of their projects on host countries and what might be done to mitigate negative consequences for the macro-economy and poverty. For example, the Azerbaijan International Oil Consortium led by BP will present to the IFC a "Regional Review" assessing the impact of the BTC pipeline and other oil and gas developments on Azerbaijan, Georgia and Turkey. This interest from the companies is driven by concern over their reputation in a world where ethical investment is becoming increasingly important. Thus it is perceived that if countries develop "resource curse" this will be laid at the doors of the companies operating in that country. It is also driven by an as yet unsubstantiated view that negative effects could themselves threaten the economics of the project.

Another cause for this revival of interest is that a number of countries are on the brink of receiving large-scale oil, gas and mineral revenues and there is general concern about the impact and use of these revenues. A good example has been the oil operations in Chad and Cameroon where enormous effort, especially by the international financial institutions (IFI's), has gone into setting up an institutional context to try and ensure the

[6] Dutch disease is discussed in detail in section 4.3.
[7] This will be explored in detail in section 4.5.

revenues do not produce a "curse". Thus countries as diverse as Azerbaijan, Angola, Kazakhstan, PNG and numerous others are considering what should be done to maximize the benefits from the projects and minimize negative effects.

Finally, many of the institutions financing such extractive projects are beginning to realize that the potential for "resource curse" flowing from the projects potentially threaten the viability of the projects themselves and hence ultimately the value of their investments[8].

2.1 CONCLUSION

All of these concerns, past and present, carry significant implications for the future of investment in extractive industry projects. Clearly they will influence the magnitude and geographic direction of such investments in the future. If the Bank's "Extractive Industry Review" paints a very gloomy picture, this could inhibit investment from the larger companies, especially in areas that could be regarded as at high risk of misusing revenues. However, while money is to be made, there will always be willing investors. The danger is that the oil and mining industry divides into ethical, responsible companies and a group of companies that are irresponsible, unethical and only interested in the proverbial "quick buck". Such an outcome would be highly undesirable both for the host countries and the wider industry, which would certainly be tarnished by its less than respectable rump.

3. THE PRESENCE OF RESOURCE CURSE

Much of the empirical work in this area is aimed at countries rich in natural resources. Thus the scope is wider than fuels and minerals. There is a very large body of work that tries to establish a negative relationship between abundance of natural resources and poor GDP performance (Auty, 1986; 1993; 2001a; 2001b; Bulmer-Thomas, 1994; Lal & Myint, 1996; Ranis, 1991; Sachs & Warner, 1995b; 1997; 1998). For the most part, the evidence appears to support the negative link. For example, Sachs and Warner, 1997 from a sample of 95 developing countries, found a clear negative relationship between natural resource based exports (agriculture, minerals and fuels) and growth in the period 1970-90. They found only two countries in the list of resource-abundant countries – Malaysia and Mauritius – that …"sustained even 2 percent per annum growth during 1970-80". (Page 27). Sachs and Warner in their various publications put the data through all sorts of torture in order to try and eliminate or confirm a great variety of explanatory variables. At the end of the process they remain 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 between two to three times faster than those of the resource abundant countries" (page 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" (page 3).

However, such empirical work does tend to be very sensitive to the period chosen and there is evidence that before the 1970's, resource abundant countries did grow faster than resource deficient ones (Auty, 2001a). Also, because of oil price fluctuations certain periods are clearly likely to distort results. For example, one study bases the argument about poor performance on per capita GDP growth between 1985-97 (Auty, 2001a). Yet in this period, real oil prices ($1999) fell from $42.70 to $20.04 (BP, 2000). Therefore where oil is significant in GDP, it is hardly surprising that per capita GDP registers a fall[9].

There is also considerable debate over how to define natural resource abundance. Variations on the theme have been tried including 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 & Chenery, 1989). However, the results appear to hold with respect to "… different classifications and definitions … and how it can be measured" (Auty, 2001a, page 3). Auty, 2001a does make an important distinction between rents derived from "point" resources such as mining and rents derived

[8] This relatively new idea is developed below in section 5.1.

[9] This point is controversial since GDP in real terms in theory is supposed to account for changes in oil prices. However, the extent to which the happens is practise is debatable.

from "diffuse" sources such a peasant farming. Observing the growth collapse of many resource rich countries after the mid 1970s, he argues that the collapse was greater in countries where "point" resources dominated.

There are a few dissenting voices to this empirical work although the dissent is often based on methodology rather than the overall conclusions. Wright & Czelusta, 2002 note statistical problems with some of the work pointing out that "Cross-country regressions are notoriously subject to selection bias" (page 2). The study goes on to point out that the experience of the USA is an example of a resource rich country which avoided "the curse" although they argue that the USA were …"not rentiers living passively off their mineral royalties" (page 5). They also suggest out the world is now different with lower transport costs and the "global economy". Stijns, 2001 argues, "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." (Page 1).

One source that challenges both methodology and conclusions is Maloney, 2002. Thus "… there is little long term evidence that natural resource abundant countries generally under perform." (Abstract) rather "… natural resources have played an integral role in the success of many successfully industrialized countries." (Page 1). His argument starts from 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." (Ibid). This remark was aimed very much at the work done by Sachs and Warner. Another source concludes … "What seems to matter for economic growth is not the abundance of natural resources per se, but rather the quality of their management, and of economic management and institutions in general." (Gylfason, 2001, abstract) This view links into one possible explanation of "resource curse" which reverses the causality. Thus the story goes that for a variety of institutional reasons there exist failing economies for which the only viable sector is oil, gas or minerals. Hence the sector is a beacon of success in what would other wise be a sea of failure.

Another recent work (de Ferranti et al., 2002) that seeks to explain how successful economies have been built upon primary commodity exports, argues that empirical work shows that the negative growth effect comes simply from the impact of resource production on the concentration of exports rather than its impact on government investment, or crowding out of manufacturing, education or entrepreneurship. Yet another work cited in Davis and Tilton, undated by Lederman and Malone in the context of Sachs and Warner's statistical testing "… find that the negative association between resource abundance and labour productivity disappears when a more modern and appropriate statistical test is used." (Page 37)[10].

Mineral exporting economies also have attracted empirical work to assess the prevalence of "resource curse" (Auty 1993; Nankani, 1979). In general this work supports the view that poor per capita performance was "especially manifest in mineral exporting countries" (Mikesell, 1997 page 191) although in that study, "mineral exporting countries" included a number of oil exporting countries. Oil exporters have also been studied, again providing support for the "resource curse" hypothesis (Gelb 1988). Thus "… some OPEC countries however, 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 page 978). Saudi Arabia, Mexico and Venezuela are singled out as having lower than average annual growth rates of GDP (Mikesell, 1997). Mexico in particular is often held up as a good example of "resource curse" whereby … "By 1982 virtually the entire non-oil economy became non-tradable i.e. in need of total protection or subsidies" (Auty, 1994a page 22)

Another dimension of the presence of "resource curse" apart from a negative growth impact is the prevalence of poverty and the observation that oil, gas and mineral rich economies have a poor record in poverty alleviation. This is a central theme of much of the literature, most vehemently the Oxfam America Report (Ross, 2001). Much of the emphasis is also on the observation that resource abundance tends to worsen income inequality (Auty, 1994b; Fields, 1989; Sarraf & Jiwanji, 2001).

Yet another dimension of the "curse" is that it tends to be associated with greater conflict in a society (Collier and Hoeffler, 2000; Ross, 2001)[11]. Several factors explain. Large-scale resource revenues create a pot that is worth fighting for since whoever is in power is better able to plunder that pot. Such revenues also tend to

[10] The concern arises because of the "simultaneity problem" when the same variable effectively appears on both sides of the estimated equation.

[11] 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).

generate much higher levels of military spending. The projects themselves can often alienate local populations, especially if there already exists separatist tendencies. This can happen either through causing local environmental damage or because there is a feeling that resources are being siphoned away from the region to the capital. However, not all the literature supports this view. For example, Smith, 2001 argues, based upon 109 countries between 1957 and 1990, that oil wealth does not have the uniformly destabilizing effects commonly assumed.

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 against effects. Fighting or expectations of fighting also absorb resources that could otherwise go to improving economic performance and alleviating poverty.

Yet another characteristic of "resource curse" is that natural resource abundance "retards political change" (Auty, 2001b, page 11) and entrenches regimes. Thus an abundance of resources "significantly weakened 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" (Ibid. page 10)

A final dimension of "resource curse" is the regional impact of the projects. Thus while the effect at a national level might be debated, because of the heavy local impact of the projects, clear damage is done especially in terms of both the environment and human rights. Meanwhile, the benefits appear to flow to central rather than regional authority[12]. However, this aspect of the "curse" tends to be neglected in the economics literature, which invariably considers the economic dimension of the problem and also has a strong aggregated macro-impact orientation[13]. While this paper does not pursue this aspect of the issue, it is an important dimension to the problem and one that has of itself prompted much of the NGO concern discussed in section 2. In addition it is important since the causes and cures for localized "resource curse" are likely to be quite different than those for the national phenomenon.

However, while evidence of the presence of "resource curse" appears quite convincing, there does exist, scattered throughout the literature examples of countries where there appears to have been a "blessing" rather than a "curse". For example, the Oxfam America report which is the most vociferous in its belief in "resource curse", acknowledges that "There are exceptions: some states with large extractive industries - like Botswana, Chile and Malaysia – have overcome many of the obstacles described in this study, and implemented sound pro-poor strategies" (Ross, 2001 page 16). Norway has also been claimed as a country that has avoided "the curse" (Wright & Czelusta, 2002). Other countries that get mentioned in this regard include Indonesia before 1997, Australia and Canada.

A recent study (Stevens, forthcoming) attempts to establish which countries having had large oil, gas and mineral revenues might be part of the list of those who avoided "the curse", the so-called "usual suspects"[14]. The study begins by identifying the target group of countries that may be vulnerable. This is simply defined as any country in the period 1965-1995 where fuel and mineral exports exceeded 30 percent of merchandise exports[15]. Excluding countries that re-export such as Singapore, there are 54 countries. Two criteria are then applied. The first is non-oil, gas or mineral traded GDP. The second uses benchmarking to establish what happened to 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 the fact that Botswana, Chile, Indonesia, Malaysia and Norway avoided the curse while a few countries such as Colombia, Suriname, Trinidad and Tobago and Tunisia arguably did less badly than the large number of countries who did appear to perform badly[16].

3.1 CONCLUSION

Based upon the works cited above, there is a case for dropping the automatic use of the term "resources curse" and starting to use instead the term "resource impact" and then to consider whether the outcome was a

[12] However, there is a growing body of evidence that the projects via wages and spending can have significant multiplier effects on the local economy. Several examples are cited in Davis and Tilton, undated, Page 20.

[13] A large part of the explanation for lack of work on the regional economic impact is because of the absence of regional economic data in most developing or transition economies.

[14] The study is unusual in that virtually all of the academic work to date addresses the question of why countries suffered the "curse". This study examines why some experienced a "blessing" and avoided a "curse".

[15] Nankani, 1979 uses 40 percent of mineral exports as the cut-off.

[16] The study, as well as comparing performance of the potentially vulnerable countries, also compares performance to regional and income groups as defined by the World Bank.

"curse" or a "blessing". Some countries clearly managed to stay immune from the negative effects. This gives rise to the obvious question of what causes the presence of the "curse".

4. THE TRANSMISSION MECHANISM BETWEEN LARGE RESOURCE REVENUES AND POOR PERFORMANCE

The empirical work cited in section 3 is trying to establish a statistical connection between large resource revenues and poor economic performance. The more interesting question is what the transmission mechanism is between the two variables. This section considers this in some detail.

There is now a huge literature on why countries might suffer a "curse" rather than a "blessing" following a large inflow of oil, gas or mineral revenues. There are various categorizations of the transmission mechanisms. Auty, 2001a for example cites three exogenous causes – structuralist policies, Dutch disease and export based theory – and two endogenous – policy failure and inefficient investment and rent seeking and political economy.

This section considers the following categories of explanation: – long term decline in terms of trade, revenue volatility, Dutch disease, crowding out effects, increasing the role of the state, and the socio-cultural and political impacts.

4.1 LONG TERM DECLINE IN TERMS OF TRADE

This explanation, based upon the ideas of Prebisch and Singer in the 1950s cited in section 2 would be that over time, the oil, gas and mineral export revenue would be able to buy less and less imports of capital goods thereby inhibiting development-creating investment in an economy. The issue of declining terms of trade is controversial and "… Both the empirical and the theoretical ground marked out … has been much contested." (Toye, 1987, Page 106) [17]. Thus earlier works did challenge the empirical basis of the argument (Kindleberger, 1956; Maizels ,1968; Mikesell, 1997). However, some of the more recent empirical work appears to support the existence of a long-term secular decline in primary product prices (Brohman, 1996) although others remain uncertain (Bleaney & Greenaway, 1993, Pindyck, 1999). Nevertheless it is difficult to see why a slow decline in prices would explain the sort of deterioration in economic performance associated with "resource curse". Economies constantly face changing relative prices. If they take place gradually, economies might be expected to adjust unless other factors are at work.

However, at times, the fall in price implied by the terms of trade arguments has been large and has occurred over a relatively short period of time[18]. For example, UNCTAD, 1985 argued that for the "South" as a whole between 1980 and 1984, the fall in major commodity export prices caused a $55 billion loss, equivalent to 63 percent of commodity exports in 1980. For oil (and gas in so far as there is a link between gas and oil prices) the view of declining real prices over time has empirical support. Thus taking a five-year moving average of oil prices from 1970 in $1999 (Arabian light to 1985, Brent thereafter), the price in 1974 was $15.72 per barrel rising steadily to a peak of $61.5 in 1983 and then an inexorable decline sets in falling to $18.5 by 1999. Certainly managing rapidly rising revenues followed by a period of declining revenues would stretch the competence of any government and could go some way to explain a resulting poor economic performance.

4.2 REVENUE VOLATILITY

Both Auty, 1998 and Mikesell, 1997 offer revenue volatility as a possible explanation for "resource curse." The basic argument is that oil, gas and mineral revenues are very volatile, especially driven by violent fluctuations in prices over relatively short periods of time. Certainly there is plenty of empirical support for the existence of such volatility[19]. Thus Mikesell, 1997 found that between 1972-92, regions with high primary export shares experienced terms of trade volatility two to three times greater than industrial countries in the same period. Potentially this volatility could cause a variety of problems. Fluctuating revenue profiles make it very difficult to pursue a prudent fiscal policy. This creates problems in the economy ranging from aggravating investor uncertainty to "stop go" spending policies. There is also concern that windfall revenues from fluctuating export

[17] An obvious but important point is that a tonne of wheat today is much the same as a tonne of wheat fifty years ago. However, a "manufactured good" is clearly a very different proposition. Thus comparing like with like is extremely problematical.
[18] Whether this constitutes a "terms of trade" or a "revenue volatility" argument (see section 4.2) is a moot point.
[19] For a technical discussion of some of the empirical issues see Greenaway and Morgan, 1999 Part II

prices would be consumed rather than invested (Sachs and Warner, 1998) although empirical evidence does throw doubt on this view (Macbean, 1966; Behrman, 1987). The permanent income hypothesis would argue that windfall gains would be more likely to be saved and invested than consumed. However, Sachs and Warner 1997 found no strong evidence to suggest that resource rich countries have higher savings rates.

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 in so far as it forces much needed economic reform that would not occur absent … "less stressful conditions" (Davis and Tilton, undated, Page 16).

However, intuitively it is attractive to imagine fluctuating revenues, in the absence of effective stabilizing measures, creating problems for government fiscal policy and macro-economic management more generally.

4.3 DUTCH DISEASE

Originally, Dutch disease had a very specific meaning[20]. It referred to the appreciation of the real exchange rate. This as a result of inflation arising from spending the revenues leading to an overheated economy plus an appreciation of the nominal exchange rate as the domestic currency attracted higher demand. The result was a contraction in the non-oil, gas or mineral traded sector. Thus "… the output of the non-resource traded goods sector is lower than it was initially." (Fardmanesh, 1991 page 712)

However, over time, the meaning has developed. In some cases it has taken on a much wider meaning to encompass all of the negative macro-economic effects associated with "resource curse". In other cases the meaning has become much narrower. For example, Sarraf & Jiwanji, 2001 describe it as a " …failure of resource abundant economies to promote a competitive manufacturing sector" (page 3).

These changes of meaning are reflected in the differing theoretical approaches. Corden and Neary, 1982 and Corden, 1984 outline the various types of theoretical approaches to Dutch disease. Corden and Neary, 1982 split the impact of an oil boom into a "resource movement effect" and a "spending effect". In the case of the former, a higher marginal product in the booming resource sector "… draws (mobile) resources out of other sectors." (Farmanesh, 1991, page 712) Thus factors move into the oil sector bidding up wages and causing other sectors to contract. The "spending effect" is when, as a result of the windfall, demand rises in both tradables and non-tradables. Since tradables have prices determined by the international market, greater demand is met by higher imports. However, prices in non-tradeables rise relative to tradeables and so resources shift from tradeables to non-tradeables. For example, McMahon, 1997 shows that the consequence is a shift of both labour and capital to non-tradeables. If the resource sector is an enclave and does not participate in domestic factor markets then there will be no "resource-movement effect" and the "spending effect" ensures the non-tradeables will expand but at the expense of the non-resource tradeables. Oil is seen as having such enclave properties (McKinnon, 1976;Van Wijnbergen, 1984b).

This approach forms the basis for much of the subsequent analysis in the literature. There is debate however, as to whether the impact differs between the importable and the exportable sectors. If world markets do not determine domestic prices for certain tradeables then the impact differs (Benjamin et al., 1989).

Over time other dimensions of Dutch disease – defined simply as a contraction of the tradable sector - have emerged. Thus one argument (Auty 1994b) is that subsidies used to protect non-resource tradeables that are weakened by the boom, aggravate the sector's problems and eventually become unsustainable. Another is the "leap frog effect" when governments tend to miss the labour intensive phase on industrialization and move straight to the heavy, capital intensive phase with negative effects for the tradable sector (Sarraf & Jiwanji, 2001). Other papers 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. 1997) All assume that because learning by doing benefits only accrue from tradeables, a contraction in that sector implies lower productivity. A variation on this theme is developed by Torvik, 2001 who assumes "learning by doing" to be present in more than one sector. Here, the model suggests that production and productivity in both tradable and non-tradable "can go either way depending on the characteristics of the economy". (Page 304)

[20] According to Corden, 1984, the first use of this term was in the Economist, November 26th 1977.

In much of the literature on Dutch disease attention is focussed on the effect on manufacturing (Sachs and Warner, 1997). This reflects the simple fact that much of the earlier work on Dutch disease concentrated in the developed countries (Benjamin et al, 1989). This raises the question whether a contraction of that particular sector should be an issue for concern. Sachs and Warner, 1997 argue that if neo-classical competitive conditions prevail then a declining manufacturing sector implies no harm. However, when this is not the case – which is the norm – then contraction of manufacturing through Dutch disease can be a source of "chronic slow growth" (page 6). Thus the natural resource sector in contrast to manufacturing lacks positive externalities. The argument is that manufacturing maximizes forward and backward linkages (Hirschman, 1958) and creates "learning by doing" externalities (Matsuyama, 1992). Certainly there is a general assumption in much of the literature that productivity growth in manufacturing is fastest (Echevarria, 1997; Wood & 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 could lead to a fall in demand for education and Birdsall et al, 1997 found evidence that different incentives might exist to invest in education as between resource abundant and resource deficient countries. Others (Baldwin, 1966; Hirschman, 1958; and Seers, 1964) put forward the argument that linkages between a primary sector and the rest of the economy were minimal. Auty and Evia, 2001 put forward similar arguments for the case of Bolivia. Yet another area relates to 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 resource rich countries. One explanation for this is that limited natural resources promote early industrialization forcing 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)"[21].

Such views about the role of industrialization are not without challenge and Auty,1994a claims that there is a lack of evidence that the creation of a manufacturing industry can have a positive effect on an economy. Also Stijns, 2001 argues there is little statistical evidence to suggest a decline in manufacturing has a negative effect on learning by doing and growth. However, as the condition of Dutch disease began to be attributed to developing countries then attention did switch to agriculture as the main source of tradeables (Benjamin et al, 1989).

If there is controversy over the exact nature of the theory of Dutch disease, there is also controversy over whether empirical evidence supports its existence. In general terms, Sachs and Warner, 1997 found that growth in manufacturing and services was slower in natural resource intensive economies. However, while claiming "tentative support to the view that dynamic Dutch disease effects … are important" (page 26), they do acknowledge that they cannot distinguish between true effects and potential bias from measurement errors in 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. A number of country studies also give support to the existence of Dutch disease. These include studies on Bolivia (Auty and Evia, 2001), Venezuela (Rodriquez & Sachs, 1999) Mexico and Brazil and Venezuela (Auty 1994a), and Venezuela and Peru (Mikesell, 1997), Algeria, Ecuador, Indonesia, Nigeria and Venezuela (Farmanesh, 1991); UK (Forsyth and Kay, 1980). However, often the situation is complicated by extraneous factors. Thus for example, Love, 1994 argues that in Botswana there was a Dutch disease effect on agriculture but this was confused by two serious droughts in the 1980s. Also the countries cited above all experienced industrialization based upon the "parasitic import substitution model" enjoying protection[22].

However, Mikesell, 1997 concludes that Dutch disease was not the major factor in explaining the growth pattern for more than half the countries investigated. McMahon, 1997 found no "substantive evidence" of Dutch disease (quoted in Sarraf & Jiwanji, 2001, page 5). Neary and Van Wijnbergen, 1986 argue that some de-industrialization may be the result of adjustment towards a new equilibrium. Whether the UK contracted an attack of Dutch disease is also much debated (Rowthorn and Wells, 1987). Furthermore, for oil-exporting countries, after the oil boom of the 1970s, while agriculture did contract, manufacturing tradeables actually expanded in most cases studied – Algeria, Ecuador, Indonesia, Nigeria and Venezuela (Fardmanesh, 1991). Explanations offered for this include a free trade effect (Neary and Van Nijnbergen, 1986), imperfect substitution (Benjamin et al, 1989) and a world price effect (Fardmanesh, 1991). Also a specific case study of Algeria (Conway and Gelb, 1988) actually found substantial exchange rate depreciation and an improvement

[21] Richard Auty in a private communication.
[22] See note 20.

in both manufacturing and agriculture, counter to the Dutch disease theory. However, it is acknowledged this is very different from the experience of most oil exporters (Gelb, 1986).

4.4 CROWDING OUT EFFECTS

This is a variation of the "resource movement effect" described as a feature of Dutch disease. This is when an oil, gas or mineral investment project, which is large relative to the rest of the economy, effectively stakes first claim on scarce resources. Thus the rest of the economy finds it difficult to secure the factors needed to develop. This issue is especially relevant in smaller countries when the size of the investment project is large or where there are strong regional dimensions to an economy and the project is focussed in one region. In particular, the concept is potentially very important in the transition economies where the process of transition has effectively destroyed the old productive base and a new and private tradable sector is struggling to emerge. Little work has been done in the area in terms specifically of oil, gas and minerals projects. This probably simply reflects the fact that transition economies are a relatively new phenomenon. What work has been done has tended to be linked into the impact of foreign investment more generally (Buffie, 1986 and 1993; Brecher and Diaz, 1977; Brecher and Finlay, 1983; Ruffin, 1984; Srinivasan, 1983; Young and Miyagiawa, 1986). It has also tended to be highly theoretical with the analysis based on modelling rather than empirical work.

4.5 INCREASING THE ROLE OF THE STATE

4.5.1 GENERAL ISSUES

If the "Washington Consensus" is to be believed, then greater government intervention in an economy and it's working is, of itself, a bad thing. Given that in most legal regimes, oil, gas and minerals are the property of the state, the revenues in the first instance accrue to the government. This inevitably invites greater government intervention. Many of those writing on "resource curse" see a major part of the explanation of the phenomenon as essentially political, relating to the role of the government (Ascher, 1999; Auty, 1998; Auty & Mikesell, 1998; Sarraf & Jiwanji, 2001; McMahon, 1997; Ross, 1999 and 2001; Stevens 1986). Mikesell, 1997 for example 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. Also many argue that it was good government decisions that enabled a few countries to avoid the worst excesses of "resources curse". Botswana (Sarraf & Jiwanji, 2001; Hill and Mokegthi, 1989) and Chile (Mikesell, 1997) are often cited in this context[23].

Again, as with crowding out, the issue is especially sensitive in the transition countries simply because the prime objective of transition is to reduce the level of government intervention in the economy[24]. Thus as Mikesell, 1997 argues "All 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" (page 195). More generally, Lal & Myint, 1996 attribute underperformance of resource rich countries to policy failure. Others have also stressed the role of policy failure. Thus Easterly & Levine, 1997 emphasise the vulnerability of factional, heterogeneous political societies to such failure. Krueger et al, 1991 emphasis the effect of how the rents are captured and transferred on poor policy. Usui, 1997, while acknowledging that in many cases, active policies have aggravated "resource curse", goes on to claim that there is little consensus on which countries suffered as a result.

However, while many would agree with the sentiments of the last paragraph, why oil, gas and mineral exporting countries should be more vulnerable to policy failure requires further explanation. Several strands of argument are possible.

4.5.2 BAD DECISION MAKING

The first strand argues that large windfall revenues lead to poor general decision-making by governments. Several factors explain: -

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[23] For a discussion of this specific issue see Stevens, forthcoming

[24] For more work on minerals in transition economies see Auty, 2001d, and Auty 2002.

- The development of oil, gas or minerals raises expectations among the population. This therefore pressures government to "do something" which encourages speedy responses. Often quick, ill coordinated decisions are bad decisions. Also, spending revenues too quickly is more likely to introduce distortions into the way the economy works, if only because there is less chance for the economy to adjust naturally (Auty 2001b).
- Having more money to play with tends to weaken prudence and normal procedures of "due diligence". Thus the importance of making the "right choices" seems somehow less important. Of particular importance is when governments decide on capital spending without thought to the recurrent spending implications (Sarraf & Jiwanji, 2001).
- Because, in the first instance, the revenues accrue to government, decision making is then concentrated in fewer hands compared to say peasant cash crops where a much greater number of economic agents are involved in the decision how to spend any windfalls (Auty 2001b).

4.5.3 ENHANCED CORRUPTION AND RENT SEEKING

Corruption and rent seeking are different. Corruption is simply stealing resources while rent seeking can be viewed as a normal legitimate human reaction based on self-interest. However, sometimes the distinction becomes somewhat blurred. Mbaku, 1992 gives the example of Ghana where he argues that corruption can be seen as rent seeking behaviour. None the less, both lead to a diversion of resources away from the promotion of the greater good.

Having large amounts of money to play with is bound to increase the temptation for corruption and rent seeking on the part of the decision makers (Leite, 1999). However, this is a complex and controversial area. Some have argued (Mbaku, 1992) that corruption evolves from "… the clash between traditional values and foreign norms" (page 253). For example it has been argued (Apter, 1963 and Alam, 1989) that in Africa, bureaucrats are under an obligation to share the benefits of their office with their kin, a characteristic common of a great many other societies. If this is the case then because the oil, gas and mineral projects in developing countries almost invariably involve foreign companies this alone helps explain why resource rich countries may experience greater levels of corruption (Hall, 1999). However, the criteria to determine whether public authority has been misused are debatable. (Alam, 1989; Bayley, 1996; Gillespie and Okruhlik, 1991) Also some have claimed, for example in the context of the Caspian, that levels of corruption do not vary between the hydrocarbon rich and hydrocarbon poor countries (Auty 2001b). Furthermore corruption is widespread in many countries where it is commonplace in politics. Examples often cited include Italy and Japan[25] both of which can be viewed as successful economies.

Thus it is not clear when corruption damages or enhances economic progress. Also one source (Davis, 1999) argues that there is limited basis for the assertion that "… mineral production engenders bureaucratic incapacity, that this … stifles growth …" (page 218). Rather he sees that "… the noted negative outcomes are not a general rule, but case specific and a function of the economic meter used." (ibid.)

Rent seeking concerns how people compete for "artificially contrived transfers" (Tollison, 1982 page 576). Most studies examine the behaviour of interest groups seeking to capture transfers created by government but the concept can also cover efforts to get the government to create transfers (Mbaku, 1992). The result is that the expenditure creates no social value and, arguably more importantly, distorts markets and hence the way the economy operates (Tollison, 1982).

There is a large a growing literature on the role of rent seeking in the way an economy operates (Baland & Francois, 2000; Lane and Tornell, 1995, 1996; Svensson, 2000; Tornell & Lane, 1999; Torvick 2002). More specifically, several explanations can be offered why rent seeking is greater in countries with large oil, gas or mineral revenues. Most obviously, the larger the public purse, the less noticeable is the leakage to interest groups although this may not be true if the result is a "feeding frenzy" (Lane and Tornell, 1995).

One group argues that rent seeking is greater because wealth is concentrated in the public sector or possibly in a small number of companies (Auty, 1998; McMahon, 1997). Thus "… the bulk of the rents created in these economies are channelled by bureaucrats, the majority of whom are members of the politically dominant group…" (Mbaku, 1992, page 250).

[25] To be fair, it may simply be that more scandals emerge in these two countries and that others are simply less able to uncover such behaviour.

There is general agreement that rent-seeking behaviour produces undesirable results for the economy. Thus Bhagwati, 1992 argues that rent-seeking behaviour imposes significant losses on many economies. Auty, 1998 argues such behaviour distracts attention from goals of long-term development towards maximizing rent creation and capture. Thus rent seeking will "lower steady state income and therefore growth along the steady state" (Sachs & Warner, 1997, page 9). A view supported by Auty, 1990 and Gelb, 1988. Also rent seeking creates extremely powerful lobby groups who are able to block much needed economic reforms. For example Auty, 1995 cites the case of Brazil in this context. In similar vein, Olsen argues that societies face severe impediments to innovation as a result of the behaviour of special interest groups (cited in Sachs & Warner 1997 page 9). Rent seeking makes it more difficult for governments to adjust spending when faced with revenue fluctuations (Auty 2001b). A common consequence of rent seeking is the creation of monopoly power in an economy and one study has shown that the social costs of monopolization are higher if the costs to maintain that monopoly are added (Wenders, 1987).

However, such issues are far from clear-cut. An important dimension is what happens to the rewards of corruption and rent seeking once they have been secured. If they are used for productive investment within the economy, the outcome will be very different than if they are used for conspicuous consumption or to enhance foreign bank accounts. After all, at the risk of being simplistic, the whole point of capitalism is for a few greedy, selfish and unscrupulous individuals to "grab" resources and put them to productive use to secure even more resources. The Robber Barons who did so much to develop the US economy in the 19th Century (very resource rich by any definition) indulged in some very dubious business practises, not least in the oil sector (Sampson, 1975; Yergin 1991).

4.5.4 The Nature Of Investment Decisions

Often, the nature of investment decisions in countries that have large windfall oil, gas and mineral revenues create problems for economic progress. Part of this is explained by the bad decision-making generally outlined in section 4.5.2. However, other dimensions imply that often the investments made by resource rich governments fail to develop the productive base of the economy. Furthermore, if borrowing funds this investment, then this compounds the problem since the loan must be serviced and repaid. Often, the prospects of large oil revenues tempt governments to borrow on the strength of these revenues thereby aggravating the decision problems associated with an influx of foreign exchange. Mexico is often cited as the classic example (Usui, 1997).

Thus " … unproductive investment booms were evident in many countries" (Sarraf & Jiwanji, 2001, page 7). Similarly, Lal and Myint, 1996 identified a collapse in the efficiency of investment in resource rich countries. Thus there was a tendency to invest in non-tradeables, especially in the military and in projects that offered very low rates of return although this often reflected limited absorptive capacity in some of the countries (McMahon, 1997). Often, public sector projects are associated with low investment returns. Also in many cases there was also a temptation to indulge in prestige projects ranging from palaces to international airports creating infrastructure that was quite inappropriate for the countries concerned.

4.5.5 Industrial Policy

A specific area that combines poor decision-making and bad investment decisions in the case of many resource rich countries concerns the industrial policy adopted following the resource revenue windfall. It is quite noticeable that resource rich countries have failed to promote a competitive manufacturing sector (Krause, 1995; Mikesell, 1997; Ranis, 1991; Sachs and Warner, 1995a).

Many resource rich countries, especially in the 1970s and 1980s adopted an industrial policy based upon import substitution. This was driven initially because some economists saw this, plus a greater intervention from the state, as the means to break out of the circle of underdevelopment – a variant of the "big-push" argument outlined above. (Auty & Kiiski, 2001). Such policies also started to seem attractive when existing industries came under pressure as a result of the sort of macro-economic forces discussed under Dutch disease.

This policy invariably had two components - the introduction of subsidy and growing protectionism.

Subsidy – Very often a boom in resource revenues prompted the introduction of heavy subsidies, usually based on some sort of infant industry argument. The problem was that these subsidies became unsustainable when revenues fell. However, their creation and the subsequent rent seeking created powerful

interest groups who opposed their removal (Sarraf & Jiwanji, 2001). Thus the policies become fixed because of the interest and power of "entrenched urban groups" with a "vested interest in rent seeking behaviour" (Auty, 1994a, page 18). However, in certain circumstances subsidies can have positive effects. Thus it has been argued in the case of Malaysia, one of the resource-rich success stories, that the subsidy element in infrastructural support services and tax exemptions were important in attracting foreign companies to set up plant (Rajiah & Shari, 2001)[26].

Protectionism - Lal and Myint, 1996 saw the trade regime as the most important element in a policy environment. Sachs and Warner, 1995b found a positive correlation between dependency on primary products and a closed trade regime. However, they also discovered that above a certain level of resource export dependence, in capital surplus oil exporters such as Saudi Arabia trade policy began to open up. Another study also established that larger countries tended to be more closed to international trade than smaller countries (Perkins & Syrquin, 1989). Sachs and Warner, 1997 looking at two periods – 1970-80 and 1980-89 – found that open trade countries grew faster than closed economies in both periods.

Once these elements of policy –subsidy and protection - were in place, then continuing resource revenues reduced the incentive to create competitive manufacturing industries. Since many development economists regarded competitive manufacturing as a principal source of technological progress, this has serious implications for economic progress. Furthermore such protectionist policies also imposed "substantial infrastructure demands that severely challenge the implementation capacity of any government" (Lal & Myint, 1996 page 42). Also, the resulting industries are incapable of earning foreign exchange (Auty 1994a). The other obvious problem is that infant industries have a strong tendency not to grow up (Bell et al, 1984). Overall the key problem is that " …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 & Kiiske, 2001, page 28). In similar vein, Krugman, 1987 finds that a temporary resource boom leads to an "enduring" loss of competitiveness.

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

4.6 SOCIO-CULTURAL AND POLITICAL IMPACTS

This strand of explanation for the poor economic performance of countries dominated by oil, gas or mineral projects has long been recognized in the literature. By its nature it tends to be rather vague and diffuse and not amenable to serious empirical work although increasingly efforts are made to measure various dimensions of this transmission mechanism. It is however central to the discussion although its role is much disputed. One study (Isham et al, 2002) presents evidence which it argues shows 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" (page 1). By contrast, Acemoglu et al., 2001 argues that while differences in income can be explained by the effectiveness of institutions, this is a legacy of colonialism and there is no discernable impact from natural resource abundance.

Previous explanations in this section related to the macro-economic causes of the "curse". Those who avoided the "curse" did so by the adoption of specific policies to minimize damage. These are discussed further in section 5. Those "cursed" failed to adopt such policies. However, of equal interest to the specific policies adopted is why such policies were or were not adopted in the first place. To be sure the "usual suspects" did possess small groups of highly qualified bureaucrats. In Chile they were called the "Chicago Boys" (Hojman, 2002) in Indonesia "the Berkeley Mafia" (Booth, 1995) in Malaysia "the Backroom Boys" (Shamsul, 1997) while in Botswana it was a mixture of expatriates and highly talented black South Africans driven north by apartheid (Modies, 1999; Tsie, 1996). These groups with their training in economics were well able to direct macro-economy policy to produce a blessing. The interesting question is why the various political elites allowed them to do so. The answer to this lies in the nature of the society and its politics and as such is a crucial part of the explanation of the transmission mechanism from large-scale revenues to "curse".

[26] The presence of subsidies on energy to 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 the oil to the mass of the population.

Much of the discussion revolves around the nature of rentier societies (Beblawi & Luciani, 1987; Boon, 1990; Mahdavi, 1970; Okruhlik. 1999; Shambayati, 1994). These can be simply defined as societies in which there is no connection between reward and effort and largesse flows as if manna from heaven[27]. Thus the argument implies that easy access to riches bred idleness and provided no incentive to accumulate or innovate. While this explanation can seem attractive, it is not conducive to analytical rigour. How precisely can one determine whether people are idle and feckless and how idle and how feckless? Most university professors have problems in answering this question in relation to their students (and indeed their colleagues) let alone measuring such concepts for whole nations. It also smacks a little of stereotyping which apart from any other potential problems rather condemns the recipients to a life with no hope of redemption.

Other strands of the literature relate to the nature of regimes. A particularly fruitful area of enquiry concerns the categorization of states along the lines suggested by Lal, 1995. For example, "developmental states" are states which 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." (Auty and Gelb, 2001, page 127)[28]. The examples that are often quoted include Indonesia, Malaysia and Botswana and arguably Chile could also be included. These are among the most quoted examples of countries that avoided the "curse" and secured a "blessing" from their oil, gas and mineral revenues. By contrast, Auty, 2001b implies that dependence on primary exports for any length of time will result in "predatory" and "factional governments" both 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" (page 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" (Ibid. page 8).

These concepts of developmental versus predatory states offer rich ground for further analysis. There is a danger that defining a developmental state simply becomes a matter of tautology. Thus a developmental state is one that develops. However, it is possible to argue (Mkandawire, 2001) that despite having all the necessary elements in place to be a developmental state, a country simply cannot make it because the hill to climb is too steep or some form of exogenous shock blocks progress. In short, with the best will in the world, the capacity to develop is simply not enough given the circumstances. Thus it might be argued that those countries that avoided the "curse" were developmental states that simply got lucky. As has been described in Botswana. Their success was … "a consequence of luck and the presence of the right personalities in the right places at the right times" (Cobbe, 1999, Page 133). A similar argument has also been put forward for Indonesia (Temple, 2001) whereby the Pertamina crisis of 1975 removed any temptation to waste revenues in the oil sector (unlike Mexico), the green revolution gave a boost to agriculture while there was a regional economic takeoff to encourage exports. The intervention of luck could be an important part of the story since it may be argued that many resource rich developmental states simply did not have sufficient capacity to succeed. Thus when possible cures are considered below in section 5, the question of capacity building will be considered.

Another issue is the dividing line between a developmental state and a predatory state. In the former, the ruling elite faces some form of constraint that inhibits it from ransacking the economy for its own purposes. This can be some form of "social anchor" linking the elite into society more generally (Mkandawire, 2001) or might be some other constraint. For example, in Indonesia arguably it was the army that provided limits on the ability of Suharto to ransack the economy (Booth, 1995). As will be discussed below in section 5, it is interesting to speculate on the extent to which the IFI's and also civil society might be able to provide such a constraint to limit the ability of a developmental state to become a predatory state.

It is tempting to attribute poor performance by resource rich countries to a lack of democracy. Lal, 1995 has suggested a positive relationship between growth and the political system and has pointed out that resource rich countries tend to be oligarchies rather than democracies. However, the argument is debatable. Thus … "Democracy does not insure good government, nor are all oligarchies poorly governed" (Mikesell, 1997, page 198). Furthermore, the democratic credentials of Malaysia, Indonesia, Pinochet's Chile and indeed Botswana (which is a "… de facto one party state through the ballot box" (Tsie, 1996, page 600)) are highly debatable and yet these countries avoided the "curse".

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[27] It is important to be clear that this is different from "rent seeking".

[28] For a more general discussion of the issue in the context of Africa see Mkandawire, 2001.

4.7 CONCLUSION

Economists are always looking for the "One Big Explanation" which covers all eventualities. However, one clear conclusion from this section is that there is no simple single explanation of what creates a "blessing" rather than a "curse". Nor is there any agreement on any collection of explanations. This conclusion argues for a case-by-case approach rather then trying to force some sort of generalization. This adds support for the conclusion to section 3 to substitute the term "resource impact" for "resource curse" and then evaluate the nature of the impact.

Another aspect is making the distinction between macro-economic policy that may aggravate or avoid the "curse" and why that particular policy was followed in the first place. Thus it is not just what the transmission mechanism was but why it was allowed to operate (or not as the case may be). To be sure, some of the more recent literature on political economy issues attempts to make these connections but while this can be done for specific countries, a more generic explanation remains elusive although as suggested above, further work on the "developmental states" analysis may be of use.

This lack of clarity on the transmission mechanisms presents a serious challenge for the next section. If it is not clear what causes the problem, then treatment is likely to prove equally elusive.

5. HOW MIGHT RESOURCE CURSE BE AVOIDED –THE THEORY AND THE PRACTISE

Analytically, there are two separate issues that must be considered. The first is what policy decisions the government actually makes and the second is why the government makes those decisions and not others. The two issues can be connected but it is complex. Thus the right policy decision may be made for the right reason, the right decision can be made for the wrong reason and the wrong decision can be made for the right reason.

As to the actual decisions these can be further subdivided into decisions over endogenous variables where the government has direct control and decisions in the context of exogenous variables where the government cannot control the variable but can influence the impact of the variable. Thus governments can determine where revenues can be spent but cannot determine the price of oil.

Possible ways to avoid the resource impact turning into a "curse" in the literature have a number of different analytical strands.

5.1 LEAVE IT IN THE GROUND

In one sense, this is the extreme solution to the problem and indeed, as indicated above, implicitly, is the conclusion to the Oxfam study (Ross, 2001). However, while this cannot be regarded as a serious option, it does raise issues about the speed with which the oil, gas or mineral project is undertaken and hence the consequent production/revenue profile.

Conventional wisdom in terms of project economics argues that from a commercial viewpoint, the faster the development of the resource the better. This is simply because the discounted cash flow methodology which underlines project appraisal –even the more sophisticated methods – reduces the present value of future revenue flows. Thus the slower the production for the project, the lower the total revenue stream in terms of present value. However, in terms of "resource curse", if a country is in danger because it is about to become a new producer, the slower the development of the project, the greater the chance the economy and the society has to adjust to the inflow of revenue. Common sense argues that a slow steady trickle of revenues should be easier to handle than a sudden surge. Revenue management problems are easier, the "resource movement effect" and crowding out is likely to be less. Furthermore, slow development is likely to allow the development of a service industry based on the project whereas swift development must be based upon imported services. The relative experience of the UK and Norway provides a useful illustration of this (Hallwood, 1990).

The problem is persuading the investors to slow development. At one level, such a strategy goes against the economics of the project in conventional terms. However, if rapid development generates a "curse" and if this threatens the viability of the project because of the political fall-out, a slower development may well be justified

on purely commercial grounds. A great gap in the literature on "resource curse" is how the phenomenon might affect the economics of the project itself.

One obvious connection is that in so far as the "curse" embodies increased conflict within a country this could directly physically threaten the project's equipment and infrastructure. This would be especially relevant where the "curse" had a strong regional dimension as a result of the local impact of the project.

Also there is a potential link between the curse and the project via the obsolescing bargain. This concept, (Vernon, 1971) argues that once a natural resource project is underway, relative bargaining power swings to the government who tries to squeeze ever more rent out of the agreement. The "bygones rule" means that at least in theory, more than just rent can be extracted. Thus providing the project is covering its variable costs and making some contribution to the fixed costs, a loss-minimizing owner will continue to operate even if losses are incurred. Several elements argue why a country with the "curse" would be more likely to pursue the obsolescing bargain route. First, by its very nature, the "curse" demands ever-greater resources to feed the errors underlying the policy. Second, unilateral abrogation of agreements inhibits others from investing. The presence of the "curse" will itself inhibit other foreign investment that is often the only constraint preventing the government from being too greedy. This whole area is one that needs much greater thought and analysis.

A variant on the theme of slowing development is the nature of the revenue flow from the projects. This in turn is a function of the nature of the agreement between the resource owner (the state) and the company undertaking the project. Thus differing forms of extractive agreements – concession based on royalty and taxes, joint ventures, production sharing agreements, service agreement etc. – will create differing patterns of revenue flow. Thus for example, in the case of Botswana, the agreement with De Beers on diamond sales effectively smoothes the revenue flow to the government[29].

Thus while development of the project may still be rapid, the revenue flow could be controlled by the agreement rather than leaving it to the vagaries of some sort of stabilization fund (see section 5.4). A good example would be where the project was expected to create a short-lived revenue peak lasting several years. In this case the project could flatten the peak by providing revenue up front before the project is fully operational and afterwards when the project has finished. Of course this implies that de jure it is the company that controls the revenue flow rather than the government. This raises obvious issues of sovereignty although it must be assumed the government would enter such an arrangement willingly.

5.2 DIVERSIFICATION

An obvious solution to the problems created by a dominant oil, gas or mineral sector is to reduce the importance of the sector in the economy by developing other sources of value added. Indeed this is one of the recommended solutions in the Oxfam Report (Ross,2001). Also Auty, 1994b argues that lack of diversification is an important explanation of poor economic performance in mineral based economies. However, while diversification may be an obvious solution it has proved to be an extremely elusive one to achieve. Since the early 1970s oil-exporting countries have paid lip service to the diversification of their economies away from dependence on crude oil exports (Eden, 1979; Kubursi, 1984; Rumaihi, 1986). Despite this, the record in general has been very poor with huge amounts of public money being poured into inefficient and uncompetitive industries[30].

Several factors explain. The consequence of Dutch disease and crowding out is a contraction of an existing non-oil, gas or mineral tradable sector. Therefore it is hardly surprising if the mechanisms that destroy, such as over-valued exchange rates, also inhibit the rise of a new tradable sector. Another explanation which is favoured in many of the countries themselves (and the Oxfam Report) is that trade restrictions imposed by the OECD countries exclude the outputs from such activities. While both arguments may have validity there is a third explanation that is more powerful. In most cases, the diversification policy has consisted of governments trying to pick winners. Thus much of the new economic activity has been government owned enterprises. One does not have to be a rabid supporter of a "market forces philosophy" to see that governments are generally very bad at picking winners and, that if the public enterprise is a monopoly, such enterprises tend to be high cost and inefficient. Not simply because they are in the public sector but because they do not face the

[29] Private communication

[30] One of the few examples cited in the literature of an economy that has significantly decreased dependence on oil and mineral domination is Tunisia (Davis, 1995).

pressure of competition. Also because they are government initiatives, it is more likely they will attract subsidies and protection that will eventually inhibit their development.

The only really effective diversification comes from private sector investment, although governments can play an important role in this process as can be seen from the experience of the Asian tigers (World Bank, 1993). This suggests that one of the solutions to the problem of diversification is to maximize the resource revenue flow to the private rather than the public sector, an issue to be developed in section 5.5 below. This was certainly an important part of the explanation for why Australia, Canada and the USA avoided the "curse". Of course this then raises important issues of income distribution and private economic power leading to concentrations of political power. This links to the extremely complex and controversial issues of how much political repression is worth accepting for an improved standard of living – a constant theme of more general literature over the centuries.

A further dimension to encourage successful diversification relates to trade policy. It was quite noticeable that the "usual suspects" who avoided the curse – Botswana, Chile, Indonesia and Malaysia - all pursued a policy of trade openness with the rest of the world coupled with a deliberate policy of exchange rate depreciation to ensure the competitiveness of non oil, gas and mineral exports.

5.3 Revenue Sterilization

Economic theory and the example of those countries that managed to avoid the "curse" argue that a key factor is the macro-economic policy adopted by the government. Specifically the policy adopted to try and neutralize the impact of the large windfall revenue inflow on the rest of the economy. This has several dimensions. The first is the need for fiscal prudence to prevent the revenues translating immediately into greater aggregate demand and inflation. This requires the government to resist spending pressures and either to accumulate budget surpluses or to channel the revenues into some form of fund – see section 5.4 on stabilization funds. Of course, eventually the revenue will be spend and how this is done is also a key part of the story – see section 5.5.

An important sub-issue here is that the government should avoid using the revenue and promises of more revenue to increase borrowing. For example, Usui, 1997 points to the serious dangers of utilizing an increase in "boom based borrowing capacity" (page 157). Increased foreign borrowing also has a further disadvantage of helping appreciate the exchange rate thus directly contributing to the Dutch disease effect although another source (Mansoorian, 1991) argued that heavy external borrowing eventually leads to depreciation. Very often in the case studies, the experience of Indonesia who did not borrow is compared to the experience of Mexico who did (Usui, 1997).

Another important strand to macro-policy is to avoid exchange rate appreciation. Several options are available. First, to avoid a fixed exchange rate policy when domestic inflation of any magnitude exists. The second is to encourage currency devaluation[31]. However, this has no effect on the real exchange rate "… without appropriate demand management policies such as the accumulation of budget surpluses." (Usui, 1997, page 155). Again, this is illustrated by the comparative experience of Indonesia and Mexico (ibid.). This difficulty of maintaining depreciation is reinforced by empirical evidence (Connolly and Taylor, 1976). One option is for the central bank to purchase foreign exchange to hold down the nominal rate (Mikesell, 1997). However, another strand of the literature (Bevan et al, 1990; Corden, 1984; Corden and Neary, 1982; Neary and Purvis, 1983; Rattso and Torvik, 1998; Torvik, 2001) implies that a "foreign exchange gift" can actually lead to an exchange rate depreciation.

One common factor in the case of those who recently avoided a "curse" – Botswana, Chile, Indonesia and Malaysia is that all four experienced significant depreciation of the real exchange rate as a result of explicit policy choices (Stevens, forthcoming).

5.4 Stabilization and Oil Funds

There is general agreement that trying to stabilize spending to ensure stable and moderate growth is an important part of the story. Gelb and Associates, 1988 argue that because markets are far from fluid, there exists a significant asymmetry between the economic impacts of excess aggregate demand versus deficient aggregate demand likely to arise from fluctuating government spending. Thus excess leads to inflation and a

[31] It is worth remembering that because of its impact on the price of imported goods, devaluations are normally politically very unpopular.

high propensity to import while deficient demand causes falling real output, unemployment and falling real income. Hence the economic benefits from a mineral boom might be more than offset by the adjustment costs during any following recession. Often Indonesia's apparent success is attributed to a form of balanced budget principle to try and stabilize spending linked into management of the exchange rate (Usui, 1996).

Preventing fluctuating resource revenues from disturbing economic progress can be done in several different ways. Trying to somehow stabilize the international price is no longer a serious option and indeed, probably never was despite a large literature on commodity stabilization schemes – See Greenaway and Morgan Part III. Thus … "Commodity agreements fit uneasily in world in which markets are becoming globalized and increasingly competitive" (Gilbert, 1996, page 366). One possible solution is however, to stabilize prices by using futures markets to lock in price stability (Lindhal, 1996). This has many potential benefits. For example, it is argued "… hedging is superior to maintaining a reserve as a method of smoothing a volatile revenue stream. Saving windfalls to cushion shortfalls is difficult, and government forecasts of oil prices are typically over estimated." (Ibid page 4 of a downloaded version). However, there are problems. Most obviously for very large producers, the danger is that their involvement in the paper markets would simply swamp their operation. Who would bet against a position by Saudi Arabia on oil prices in a paper market? Also such insurance obviously costs. While having guaranteed prices in a falling market would result in praise for the decision makers, in a rising market there is bound to be criticism. Another solution might be to use the extractive agreement itself to smooth revenue flows as suggested in section 5.1

Yet another mechanism is to create some form of Revenue Fund. Such funds can fulfil three functions. They can be used to insulate the economy from large revenue windfalls along the lines required in section 5.4. This is done simply by investing them outside the domestic economy. The fund can also be used to stabilize revenues. This is done by setting a price assumption for budgetary purposes. If world prices exceed this price then the fund absorbs the windfall. If prices are lower then the fund's assets are used to top up the budget. Finally, such funds can be used to put assets aside for future generations. Thus the revenue is accumulated in the fund and only the earned income is spent, leaving the capital sum intact to allow future generations to benefit from what is a depletable resource.

In recent years the role of such funds has become extremely controversial, not least within and between the World Bank and the IMF. There are essentially two schools of thought. One school argues that the conditions for such funds to work are such that if they are present, the revenue windfall can be managed within the normal budgetary process. Hence the funds are not needed. Thus Davis et al, 2001 concluded, "… countries with more prudent expenditure policies tended to establish an NRF [natural resource fund], rather than the NRF itself leading to increased expenditure restraint." (Page, 2). Also they established that in many cases integrating the fund into the overall fiscal policy "has proven problematical, and despite the operation of a fund, the stabilization of expenditure has remained elusive…" (Ibid.) The other school argues that even if conditions are not ideal, the creation of such funds can make some contribution to avoiding the worst excesses of "resource curse" if only because of the role of the Fund in dampening spending expectations.

Within this debate there are many examples cited of successful funds such as in Chile and Indonesia (Mikesell, 1997; Usui, 1997) and many examples of serious failures such as in Venezuela (Hausmann, 1995)[32].

The empirical evidence is inconclusive. Devlin and Lewen, 2002 report on preliminary empirical evidence (panel data for 71 countries 1970-2000) which shows resource funds are correlated with reduced government spending as a percentage of GDP and higher investment shares. However, the results also suggest that as the size of the fund increases, the impact on budget surpluses may be negative. Davis et al 2001 report that their econometric evidence suggests that in some countries with such funds, expenditure have tended to be less correlated with changes in non-resource export earnings than in those without funds " … although this experience is not uniform." (Page, 2). They also discovered the creation of a fund had no identifiable impact on government spending.

The following summarizes some of the arguments for and against such funds and how they should operate (Davis et al, 2001; Devlin and Lewin, 2002; Fasano, 2000; Heilbrunn, undated). On the positive side:-

[32] The bibliography in Davis et al, 2001 contains many references to specific country's experience.

- Such funds can help avoid rent seeking and corruption and create a focal point/constituency for proper management of the revenue
- They can allow the significant accumulation of assets for future use.
- They can improve fiscal policy impact by defusing spending pressures by sterilizing revenue inflows when prices are high.
- Investing abroad may help reduce any tendency to exchange rate appreciation.
- If sufficiently insulated, they may keep revenues out of the hands of kleptocracies until accountable democracies emerge although the ability to insulate in such a context is clearly problematical.

On the negative side:-

- Funds are no guarantee of an appropriate fiscal stance and indeed are no substitute for sound fiscal and macro-economic management.
- In many cases, the rules governing the operation of the funds are constantly changed to suit political circumstances.
- They are always a temptation to encourage corruption and fraud.
- Control of the fund endows considerable patronage that may lead to the entrenchment of a regime.
- The creation of a fund gives a false sense of security which may undermine the basic need for real fiscal discipline

As for operating rules the following points are seen as key:-

- Professional management of the fund is essential as is reporting to an independent board of control. Income for expenditure or to finance non-oil deficits should be transferred to fiscal authorities with oversight by the independent monetary authority.
- The fund should not have independent spending authority otherwise it undermines the budgetary process.
- There needs to be simple general rules for accumulation and withdrawal and the government needs to define clear goals for the fund to fulfil.
- There is a need for transparency and accountability via regular reporting, audits, press releases etc. This can be done best by accountability through "… appropriate representative bodies and other state agencies that interweave lines of supervision." (Helibrunn, undated, page 2)
- Need to enhance citizens' interest in prudent use of the resources.

5.5 Investment Policy

The investment policy adopted by the government for the oil, gas and mineral revenues will play a crucial role both in avoiding many of the macro-economic pitfalls described in section 4 and in encouraging the process of economic diversification by creating alternative source of value added to the depleting resource sector. For example, when Indonesia invested it was aimed at strengthening the productive base of the tradable sector, especially agriculture while Mexico's investment, as a result of pressure from Pemex, was strongly orientated towards the oil sector where rent seeking was rife. (Usui, 1997)

Ideally, investment is best carried out by the private sector (Bevan et al., 1993). Although as pointed out above, the experience of the Robber Barons in 19th Century USA illustrates this does not guarantee everyone lives happily ever after. However, private sector investment is more likely to be sustainable than the government trying to pick winners. Thus "… Governments tend to invest in projects with low rates of return compared to the private sector" (Sarraf & Jiwanji, 2001, page 11). But again these views are not always universally valid. Thus Botswana is often held up as an example where public sector investment was an important part of the success story (Ibid; Hope, 1998; Love,1994; Tsie, 1996). Equally, it has been argued that Malaysia enjoyed a "blend of government intervention and markets [which] helped make export orientated industrialization a success" (Rasiah & Shari, 2001, page 58).

5.6 Political Reforms Needed To Carry Out the Corrective Politics

In the literature two strands of political change emerge as desirable to encourage a "blessing" rather than a "curse".

The first is the need to develop democracy. However, as already discussed in section 4.6, while this may well be highly desirable for many reasons, it appears not to be a necessary condition for successful economic performance[33].

The second strand is the need to remove corruption and contain rent seeking. One difficulty is that "corruption thrives in an environment where there is no consensus on what it is" (Gillepsie & Okrhlik, 1991, page 80). Thus they argue that any clean-up campaign must start with an agreement on a common standard of morality. Options to solve include incorporating controls in legal codes and encouraging independent (and fearless) enquiries. A further solution (Mbaku, 1992) would be to reduce rent-seeking opportunities by de-politizing resource allocation. Thus deregulation allows free markets, which takes politicians and bureaucrats out of the resource allocation process. The theory, with some empirical support (Gregoire, 1992), is that competition squeezes out illicit margins. While this is probably true it still requires competition and often, simple deregulation and privatisation is not sufficient to achieve this.[34]

Much is also made of the need for transparency as an aide to reduce corruption. While this can play some role, there is a danger its effectiveness can be over-stated. For example, many have called for the oil companies to disclose how much money they provide to the government in the form of revenue so the public can see how much money is being "diverted"[35]. This neglects the fact that often very large sums accrue to the national oil company as a result of the agreements, especially joint ventures and production sharing agreements. It also bestows upon both the public and the local media a degree of sophistication that may be misplaced. This is not to argue there is no place for transparency, just that it is far from a sufficient condition to reduce corruption.

There is also the issue discussed earlier that from an economic point of view, it is not so much the presence of bribes and rent that is the problem. Rather it is how they are used. As suggested above, leaving aside moral issues, bribes and rent productively invested equals a successful capitalist economy. The economic problems arise when they are diverted into conspicuous consumption or foreign bank accounts[36].

Following from the previous discussion in section 4.6, a key issue relates to securing a developmental rather than a predatory state as a way of minimizing the risk of suffering a "curse". Developmental states require two components. A strong elite with an ideology that is conducive to economic development and whose interests are aligned with the population. It also requires the institutional capacity to implement the necessary policies without being captured by narrow private interests. Thus the legitimacy of government derives from its ability to deliver development, simply defined as an improved standard of living for the majority. A predatory state by contrast lacks the linkages into the population or any other constraint that prevents the elite from ransacking the economy.

Securing an alignment of interests is crucial. The great danger is as one observer has commented that "… rulers usually have had no concept of a wider national interest, beyond that of their immediate circle, and certainly no concept of economic growth as a legitimate social objective." (Booth, 1995, page 284). By contrast in Indonesia, one of the "usual suspects" success stories, the Suharto government was "… able to insulate themselves from pressures from powerful vested interests and pursue policies which have given top priority to the achievement of rapid rates of growth." (Ibid. Page 287).

Of course one route to achieve this alignment is democracy where the government must satisfy public interests or be voted out. However, while that may seem to many the optimal route morally, as argued previously it is not the only route. Thus for example, Chile under Pinochet together with Malaysia, Indonesia and indeed Botswana as a "one party democracy" managed the alignment quite well. Although it has been commented that in Malaysia "… a strong state … bulldozed through policies that were clearly resented by workers' representatives" (Rajiah & Shari, 2001, page 67). However, at the same time the Malaysian constitution was described as a social contract (Shamsul, 1997) that led to the acceptance of a "plural-society model" as the model of nationhood. Auty, 2001b who argues for this alignment approach goes as far as to

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[33] Richard Auty in a private communication has suggested it is useful to distinguish between consensual democracies which are likely to deliver rising social welfare because economic policy is reasonably consistent despite changes in government and polarised democracies which may not deliver.

[34] A classic example was the experience of British Gas in the first ten or so years after privatisation (Robinson, 1993). For a more general discussion see also Stevens, 1998.

[35] It has been suggested from several quarters that this should be a requirement of the relevant stock exchange regulations to prevent governments from pressuring companies not to reveal data for fear of losing their agreement.

[36] Controversially, it might be argued that the more the national economy is linked into the global economy – generally regarded by the "Washington Consensus" as a "good thing", the greater the chance that the ill-gotten gains from corruption and rent seeking will leave to country seeking higher returns outside thereby contributing to the presence of "resource curse".

suggest educating "predatory" leaders with "dynastic ambitions" towards the domestic consequences of their rent deployment strategies by drawing from the examples of other countries (page 11). How realistic this laudable suggestion is remains somewhat debatable.

Of course what constitutes an "ideology that is conducive to economic development" is also a moot point. Clearly, simple mantras based upon "leave it all to the market" are inappropriate. However, the experience of the "usual suspects" suggests that while their governments did intervene extensively, they did so to push the economy towards a market-based system linked into the global economy and towards the encouragement of a vibrant private sector.

The ability of the elite to translate this ideology into effective policies is a function of institutional capacity. Clearly both the IFI's and the investing companies have a role to play with training up those elements of the bureaucracy who could play a key role in policy making. This can be done by a mixture of seconding expertise (assuming acceptance by the governments) and training nationals both in terms of short quick professional training courses and more long term basic provision of university postgraduate training.

All this is feasible and can be made to work such that the economy progresses. The real problem arises when the ruling elite lacks any social anchor and alignment with the public and the state has become a predatory state. In so far as the state may be dependent upon IFI good will for financing and debt management then the IFI's can be in a position to provide the constraints required to reign in predatory behaviour although this obviously raises sensitive issues of sovereignty. However, such an outcome has the seeds of its own destruction since once the resource revenues begin to flow, the IFI leverage seeps away and with it the constraint. One possibility is that the strengthening of civil society might begin to provide both the constraints and alignment necessary to switch the state from being predatory to developmental. Again the IFI's and companies can help strengthen civil society but the trick is that this means more than just giving the NGO's more money although what precisely it does mean is uncertain and needs further thought and analysis. Also, it assumes the predatory state will tolerate the growing influence of civil society, which for obvious reasons of its own survival it may not.

Of course one solution is for the international community to refuse to invest in predatory states[37]. However, this raises the prospect discussed in section 2 of the unethical rump of the industry investing to add further to the plunder of an economy by their own elite. It also raises the prospects of creating ever more failed states harbouring resentment against the West.

6. CONCLUSION

Clearly the whole issue of what causes a "curse" rather than a "blessing" and how to enjoy the latter and avoid the former is an extremely complex issue. The literature is divided on both causes and cures although there is a growing consensus that essentially it is something to do with governance and the answer lies more in political economy than macro-economic analysis. Hence the key question is not what was done? It is why was it done?

From the preceding study a great many questions have been raised which are worthy of further study. However several areas clearly deserve further consideration: -

- What are the implications of an attack of "resource curse" for the actual project economics and how might these implications be fed into the project appraisal process?
- How can the work on resource impact at a national level be fed into the impact at a regional level?
- What role might civil society play in converting a predatory into a developmental state and what role can the IFI's and the Multinationals play in encouraging civil society?
- Is the impact from oil and gas projects different from the impact from mineral projects. Both are what the literature has termed "point resources" but arguably their effects may well differ in terms of such issues such as volatility and their various linkages.

[37] In Spring 2002, this author had several conversations in Washington with a variety of academics who were arguing in favour of the concept of "certifying" governments. Only those who received approval would be eligible to receive foreign investment. Of course the obvious weakness with any such scheme is who or what would do the "certification" and what would happen to those states that were not "approved" of and therefore entered the realms of failed states?

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