

# **Steppe-ing Forward? Mongolia, Mining, and the Resource Curse**

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## Abstract

Many countries that are economically dependent on the export of mineral resources experience lower than expected levels of economic and human development. This paper's objective is to expand the body of knowledge on the resource curse using a case study of Mongolia, a country newly transitioned to a market economy and democratic government. Economic, human development and institutional quality data are used to develop our understanding of the state of Mongolia's people and economy, and the changing role of mineral resources since 1990. The brief period during which large-scale mineral development has occurred precludes a robust statistical analysis. Instead, a political economy approach is taken, examining actions of the Mongolian government in light of literature on 'mechanisms by which the curse casts its spell'. Mongolia is found to have taken measures to capture a greater share of mineral rents, however there is little evidence of large-scale rent seeking for personal or political gain.

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## **1. Introduction**

The importance placed on a country's natural resources and on their role in development has varied over the past few centuries. The late twentieth century saw an increased concern in some circles regarding both the finite nature of many of those resources and the role of developing nations as suppliers of raw materials to industrialized nations. Greater attention to natural resources and their role in development in the academic literature led to the observation that many resource-rich developing countries seem to lag behind their less well-endowed counterparts in terms of economic growth and development. This counter-intuitive phenomenon, known as the resource curse, is supported by a large body of empirical work (e.g. Auty, 1990; Gelb, 1988; Sachs and Warner, 1995). As empirical evidence for the curse has mounted, a wide variety of explanations, both economic and political-institutional, have also arisen.

The resource curse is generally considered in the context of developing nations endowed with point resources (i.e. minerals, fuels, or plantation agriculture) and whose economies are largely dependent on the exploitation and export of those resources. While a large proportion of developing countries fall into this category, case studies have been limited to a small number of countries, particularly oil exporters and a few mineral exporting countries in Africa and Latin America (Ross, 1999). While developing countries are most frequently the subject of resource curse literature, natural resources occasionally represent a

'curse' in developed countries as well, for example following the development of natural gas in the Netherlands, leading to the coining of the term Dutch Disease. The objective of this paper is to expand the body of knowledge on the resource curse by examining the case of Mongolia in the light of recent explanations for the curse in the academic literature.

Over the past two decades, many developing countries have instituted liberal economic reforms with the goal of attracting foreign direct investment (FDI). Bridge (2004) points out that much of the research on the impact of these reforms to global patterns of investment has related to manufacturing and services. However, resource extraction industries are critically important to many developing countries and organizational, technological, and regulatory shifts in these industries have resulted in the development of new geographies of resource extraction, and new patterns and scales of inequality and uneven development (*ibid*).

According to Bridge (2004), in order for a non-traditional mining country to attract FDI, it needs to have three things: a rich natural endowment of mineral resources (preferably copper or gold), to be perceived as a low-risk investment (i.e. have political stability, a strong regulatory framework, and protection of property rights), and finally there needs to be a boom in both commodity prices and overall levels of mining investment. Commodity prices have been high over the last few years, partly driven by high demand from China and India, encouraging investors to look outside of the mining investment box,

and satisfying the third criterion. The current situation in Mongolia meets the first two criteria: firstly it is thought to have great mineral potential and secondly its mineral sector has expanded dramatically since it transitioned to a market economy after 1990, representing nearly 20 percent of the country's GDP and close to 60 percent of its export value (World Bank, 2006b). This is indicative of growing investor confidence and a low perception of risk.

Countries like Mongolia that do succeed in attracting investment for mineral exploration and development next face the challenge of employing revenues from the mineral sector to strengthen and diversify their economy and improve the quality of life of their citizens in a sustainable manner. Ongoing high commodity prices have translated into increased tax and royalty revenue for Mongolia and other mineral exporting countries, providing temptations for individual actors and the government to attempt to appropriate a greater share of resource rents. These factors make it an interesting time to undertake a case study of the resource curse. Mongolia's mineral endowment, success to-date in attracting mining investment, and its minute presence in the current literature make it an excellent choice of subject. The selection of Mongolia for this case study has an added element of interest for a Canadian scholar as much of the foreign direct investment (FDI) that has gone into its mineral sector has come from Canadian mining firms.

This paper is organized as follows. Chapter 2 begins with a brief look at the mainstream perspectives on the role of mineral resources in development.

Chapter 3 discusses the empirical evidence for the resource curse and Chapter 4 continues with a review of the literature on a variety of explanations for the apparent curse. Chapter 5 provides a background on Mongolia, the people, history, and economy. Particular attention is paid to the development of the country's mineral sector since the end of Soviet influence and then beginning of the transition to a market economy in 1990. Chapter 6 outlines the types and sources of secondary data employed in this case study as well as a critical discussion of those sources. Chapter 7 presents data gathered on measures of resource dependence, economic and human development in Mongolia as well as on measures of institutional quality in that country. Chapter 8 offers a critical discussion of the findings and I will present my conclusions and identify avenues for further study in Chapter 9.

## **2. Role of Mineral Resources in Development**

Views on the main source of a nation's wealth have changed dramatically since the industrial revolution. In the 18<sup>th</sup> century, land held primacy of place as a source of wealth as agriculture was the main source of employment and agricultural products were the cornerstones of the economy. However, the importance of rural areas was being overtaken in some people's view (e.g. Adam Smith) by towns – the centres of commerce, manufacturing, and innovation. In the early 19<sup>th</sup> century, Ricardo and Malthus focused on the challenges of feeding an ever expanding population and the importance of fertile soil (or the resource 'land') to a nation's continued wealth. Along with the perceived importance of land and its associated resources came the belief that those resources were finite in nature and that all humans were in a zero-sum competition for control of them. The discovery and control of colonial territories could thus be interpreted as both enhancing one's own wealth as well as depriving rivals of potential wealth (Chisholm, 1982).

The 19<sup>th</sup> century and most of the 20<sup>th</sup> century saw a shift in what was considered the primary source of wealth from agriculture to manufacturing. Manufacturing was experiencing increasing returns on investment while agriculture was seeing declining returns. Chisholm (1982) outlines the primary reasons for the decline in perceived importance of land as a factor of production. Faster and more energy efficient means of transportation opened up enormous swaths of land, lessening the feeling of land as a finite resource. New inventions

allowed for the exploitation of land that before was difficult to put into commercial production. Technological developments allowed for more efficient use of fuels and raw materials in manufacturing. Newly accessible lands were being systematically mapped, resulting in the discovery of mineral deposits that occasionally dwarfed those that had long been worked in Europe and eastern North America. Lastly, Britain's free trade doctrine became the leading regulatory framework for international trade. While the developed nations of the time experienced periods of relative shortage, "the limiting situation imposed by natural resources... was lifted so far above the growth path that had been achieved that its actual or potential existence ceased, during the nineteenth and early twentieth centuries, to be a matter for concern" (Chisholm, 1982, p.30-1). For the most part, this optimistic view held sway until the late twentieth century, when the limits of the Earth's land, resources, and ecosystem services again became a matter for concern.

While land's importance as a source of national wealth declined, primary commodities continued to dominate world trade into the 20<sup>th</sup> century. They are generally thought to have formed an economic base for the development of countries like Canada, the United States, and Australia and this success is still being stressed by some. However, historic levels of resource intensity (as a percent of GDP) in these countries were a great deal lower than the levels of resource intensity experienced in developing countries in the late 20<sup>th</sup> century (Sachs and Warner, 2001). In the early and mid-twentieth century, mainstream

economists continued to argue that the export of primary commodities was the best way for developing countries to generate necessary foreign exchange and achieve development. Harold Innis, a Canadian economic historian, suggested that the exploitation of a country's raw natural resources, or staples, would provide the necessary economic stimulus, through linkages, for diversification and eventual industrialization (Watkins, 1963).

Many European colonies were located in the tropics and had a vastly different colonial experience than did Canada, the United States, and Australia. List, a popular late 19<sup>th</sup> century scholar, outlined several stages of development through which countries pass. Like many other geographers of the period, his views were strongly influenced by ideas of environmental determinism. List's views on the development potential of tropical regions and their role in the global economy are summarized by Hoselitz (1960):

"Whereas all countries have presumably passed through the early stages of development, only the countries in the temperate zone are suited for manufactures. A country of the torrid zone would make a very fatal mistake, should it try to become a manufacturing country. Having received no invitation to that vocation from nature, it will progress more rapidly in riches and civilisation if it continues to exchange its agricultural productions for the manufactured products of the temperate zone" (Hoselitz, 1960, p.200).

The system put forward by List seems to describe a world with an industrialized core that uses an un-industrialized periphery as both a source of

raw materials for manufactures and as a market for those manufactured products. Inherent to this core/periphery model of the world is an unequal geographic distribution of power (Wallerstein, 1974), with economic and social might concentrated in core regions such as Western Europe since the industrial revolution, the United States since the late 19<sup>th</sup> century, Japan in the 20<sup>th</sup> century, and Russia during the Soviet era. The division of countries into either the 'core' or 'periphery' categories elides a degree of internal diversity (even with the inclusion of Wallerstein's semi-periphery category). Also it is important to note there can be movement between the categories, as can be seen by the growing list of 'core' countries (Chisholm, 1982). The experience of former-communist states has been slightly different. According to Esanov *et al* (2001), during the Soviet era, many of the Central Asian nations were used as a source of raw materials for the industrialized regions of the Soviet Union and were sold manufactured goods in exchange. The resource periphery received transfer payments from the Federation to make up for the difference in value between the exported raw materials and the imported manufactured goods.

There are two different perspectives on how the core/periphery model has worked out for the poorer nations of the world in general. One perspective is that the development of the richer nations has by and large been beneficial to everyone. The other perspective is that the development of the wealthy nations has directly caused the poverty of the rest, that they have extracted an unequal and unfair share of the benefits of global progress (Chisholm, 1982). This

second perspective became more prominent in the latter half of the 20<sup>th</sup> century, coinciding with the emergence of radical and Marxist schools of political and academic thought.

During the inter-war and immediate post-war periods, there was a general feeling that commodity prices had been experiencing and would continue to experience a long-term decline. Out of this came work by Prebisch (1950) and Singer (1950) who proposed that, over time, developing countries were experiencing declining terms of trade as a result of a secular deterioration in commodity prices (the Prebisch-Singer hypothesis). According to Singer, on the one hand industrialized countries controlled and earned profits from the majority of manufacturing, regardless of its physical location. On the other hand, developing countries had been encouraged to specialize in the production of food and raw materials. The end result of this was that people in developing countries had to purchase expensive manufactured goods from overseas while technological change reduced the price of and demand for their primary exports. Similarly, Prebisch projected a downward trend in developing countries' terms of trade and argued that dependence on natural resources left those countries vulnerable to fluctuating world commodity prices. Work by both Prebisch and Singer was largely rejected by mainstream economists (Auty and Mikesell, 1998).

Dependency theorists, particularly in Latin America, argued that resource-led development was not a solution to poverty in developing nations, merely an instrument that kept them dependent on developed markets. Proponents of this

theory such as Cardoso and Faletto (1979) and Frank (1967) reasoned that the only way for poor countries to attain their development goals was to break ties with the industrialized nations and become self-sufficient. The popularity of this theory, aided by soaring oil prices, has been credited for the widespread nationalization of foreign mineral and oil firms during this period (Cohn, 2005).

Perceptions of the importance of land as a factor of production and the role of mineral resources in development have changed over the past three centuries. A sense of the finite nature of land and its resources contributed to colonial expansion which, for a time, resulted in an illusion of infinite space and resources. The evolution of a core/periphery model of global production resulted in an ongoing concentration of power in industrialized nations and structural barriers to diversification out of primary production for the nations of the periphery. This reliance on primary production, particularly on mineral exports, is the setting in which the resource curse makes its appearance.

Before looking at the evidence for the resource curse, it is important to understand what type of resources we are discussing as well as what constitutes a resource dependent developing country. In the resource curse literature, 'resources' refer specifically to point resources, or those resources that are extracted from a narrow economic base and whose spatial concentration means that they can be protected and controlled for a modest cost (Bulte *et al*, 2005). Minerals and fuels can be included in this definition, as can plantation agriculture. Forestry and non-plantation agriculture, or what Auty (1997) refers

to as yeoman agriculture, are diffuse resources. The majority of the resource curse literature employed in this paper limits the definition of 'resources' to include only minerals and (occasionally) fuels. In the context of Mongolia, this makes sense as there is little or no plantation agriculture.

Auty (1993) defines a country as being resource-rich if it generates at least eight percent of its GDP and forty percent of its export earnings from the mineral sector (p.3). Auty does not provide any basis for this measurement; however, Gelb (1988) makes reference to work done by Nankani (1979) who provided a similar definition. According to Nankani, a country could be classified as a 'mineral economy' if it had a population of over one million people and if mining exceeded ten percent of its output and forty percent of its exports. It appears that when 'resource abundance' is mentioned in a discussion of the resource curse, what is meant is an economic dependence on the export of point resources, particularly minerals and fuels. From here on I will refer to it as resource dependence.

Mongolia certainly fits the definition of resource dependence outlined above. It has a population of just under three million people. In 2003, exports of ores and minerals represented 17 percent of the country's GDP and 43 percent of its total exports (World Bank, 2006). If fuels and raw agricultural products are included (as Auty (1995) does) then the figures rise to 24 percent of the GDP and 59 percent of exports. Since 2003, at least one large gold mine has come on line and development of the massive Oyu Tolgoi copper-gold

deposit has commenced. This, combined with high commodity prices, has increased the share of exports accounted for by ores and minerals to 68 percent in the first nine months of 2007 (Economist Intelligence Unit [EIU], 2008).

### **3. Empirical Evidence for the Resource Curse**

There is a great deal of empirical evidence for the existence of a resource curse. One important early study was done by Gelb (1988) who undertook to understand why countries receiving windfall gains from the oil shocks of the 1970s failed to use the money to increase economic growth and diversify their economies. Gelb studied the cases of six oil-exporting countries that differed in many political and economic dimensions but which had several similarities in terms of the size and importance of their oil sectors, their desire to modernize and diversify, and aspirations towards nationalization of key economic sectors. Gelb found that the large oil revenues reduced social pressures for institutional change and where in principle those windfalls represented funding for projects deemed to be of greatest social value, in practice they went to fairly conventional ends, reflecting the priorities and capabilities of pre-oil shock administrations. All of the countries studied achieved their pre-existing goals of nationalizing their hydrocarbon sectors. However, their progress towards economic diversification was disappointing, as all six countries were found to have started and finished the oil-boom period with uncompetitive manufacturing and agricultural sectors and an even greater dependence on oil than before.

Auty (1990) provided another important early investigation into the resource curse, examining the different degrees of success among eight oil-exporting countries in employing oil windfalls to achieve resource-based industrialization. Finding that all eight countries had failed to achieve the

expected level of industrialization, Auty concluded that the economic stimulus from resource based industrialization may be inherently muted and lagged due to high plant construction costs and the remoteness of many of the countries studied from major markets. Auty argued that if the hurdle of initial investment costs were overcome then ongoing scale and linkage benefits would be achieved. However, Auty cautioned that a modest geographic area would limit backward linkages while small local markets and dependence on export sales would limit forward linkages. Resource based industrialization was thus not found to be a desired path for any but the largest of developing nations to pursue.

The seminal work on the resource curse was done by Sachs and Warner (1995) who studied the economic growth experienced by a large number of resource-exporting developing nations over the past three decades. They found a high correlation between initial abundance of natural resources and low rates of economic growth. In this and subsequent studies (Sachs and Warner 1997a, 1999, 2001) they found that this held true even when controlling for a wide range of variables that are sometimes credited for negatively impacting economic growth in these countries. The variables include: geography (i.e. landlocked-ness, fraction of land in the tropics, a malaria index, fraction of land within 100 kilometers of the sea), initial GDP, trade policy, investment rates, terms of trade volatility, inequality, effectiveness of bureaucracy, openness, and ethno-linguistic fractionalization.

There is some controversy in the literature over Sachs and Warner's findings that these factors are not linked to the resource curse. In fact, some of the variables that have been discounted by Sachs and Warner – namely inequality, effectiveness of bureaucracy, openness, and ethno-linguistic fractionalization – form part of one of the currently favoured explanations for how the resource curse operates. The literature dealing specifically with these variables will be discussed in detail in Chapter 4 and weighed in terms of its applicability to a case study of Mongolia.

All three of the studies outlined above were highly empirical in nature, looking only at economic data to assess the use of oil windfalls and the outcomes of resource abundance in a variety of countries. They have answered the question of whether or not an economic curse exists, demonstrating that countries well endowed with natural resources and receiving large financial windfalls have historically failed to use that situation to their economic advantage. The question of *how* the resource curse operates will allow the incorporation of facets other than the purely economic (e.g. the historical and political) into our discussion.

## **4. Literature Review – Explanations of the Resource Curse**

Given the existing large body of well respected empirical work on the resource curse, I will take it as given that an abundance of natural resources almost always has a negative impact on the economic growth and diversification of developing countries. However, as Sala-i-Martin and Subramanian (2003) state, "[from] a policy perspective, while it is important to know if a curse exists, it is perhaps more important to know the mechanism by which it casts its spell" (p.5). There are many explanations for the curse in the literature. Some of the arguments involve structures not in the control of the country in question, for example the fluctuations of the international commodity markets and the structure of the global mining industry. A second explanatory category is the Dutch Disease. The third explanatory category is the largest and covers factors that are endogenous to a country, for example corruption, rent seeking, and the development of certain standards of governance and institutional structures, and the neglect of human capital. These factors are all best understood by considering them in light of the political background on which they are set. This chapter will examine the main schools of thought regarding the mechanisms by which resource dependence impedes growth and the potential applicability of each mechanism to the case study.

I will begin with a discussion of the explanations that involve factors exogenous to a country. These include: declining terms of trade, variability of international mineral prices, and the structure of the global mining industry. Next, the Dutch Disease explanation will receive its own category. Finally, I will move on to a discussion of the various resource curse explanations that involve factors endogenous to the country in question, namely rent seeking, institutional quality, and the neglect of human capital.

### ***(4.1) Exogenous Explanations***

#### **(4.1.1) Primary Commodity Prices, Terms of Trade, and Growth**

International prices for primary commodities are influenced by a large number of factors on both the supply and demand sides, leading to a high degree of variability. Individual actors, including resource exporting states and multinational mining firms, are frequently at the mercy of the global market's invisible hand. Commodity price variability translates into variability in the export earnings of resource-exporting nations and extreme swings can lead to terms of trade shocks. Several studies on the linkages between the vicissitudes of the international commodities market and economic growth can be found in the literature. Dawe (1996) and Lutz (1994), for example, both found there to be a negative and robust association between export instability and growth.

More generally, the negative role of declining terms of trade on resource-exporting developing nations was championed by Prebisch (1950) and Singer

(1950), as described in chapter 2. Some more recent empirical work supports the idea that terms of trade and economic growth are linked. Barro and Sala-i-Martin (2004) employed a cross-country regression on various empirical determinants of growth. They found a positive and significant relationship between terms of trade and GDP growth rates. Easterly *et al* (1993) found that terms of trade shocks could statistically explain much of the variance seen in the growth rates of individual countries over decade long periods. Mendoza (1997) also demonstrated a relationship between persistent economic growth and rising terms of trade.

Not everyone supports the idea that declining or volatile terms of trade are to blame for the poor economic performance of many resource dependent developing nations. Cuddington (1992) examined trends in the prices of 26 primary commodities using individual commodity prices rather than the aggregate price indices used by Prebisch and Singer and employed more modern statistical methods. The study found that sixteen of the commodities included exhibited no price trends, five had positive price trends and five had negative price trends, raising questions about the universality of the Prebisch-Singer Hypothesis. Sachs and Warner (1995) found that the resource curse was in effect even when controlling for terms of trade volatility. Behrman (1987) also argues that fluctuations in primary commodity prices have only small effects on developing countries' macroeconomic goal attainment and that what effects there are, are as likely to be positive as negative.

In summary, much of the terms of trade and export variability literature reports little or no link between those variables and growth. Furthermore, the studies that have found a negative association generally consider the effects over decades-long periods. Economic data for Mongolia are predominantly available only from 1990 onwards and significant mining activity did not commence until even more recently, not providing the necessary time span for this type of analysis.

#### **(4.1.2) Mining Industry, Enclaves, and Economic Linkages**

The second exogenous explanation for the resource curse that I will address here is that of the characteristics of the mining industry and their direct and indirect economic impacts on mineral-exporting countries. According to Auby (1993) and Gelb (1988), the particular characteristics of mineral production – namely capital intensiveness, a small (if well paid) workforce, and reliance on foreign capital inputs – mean that the sector displays enclave tendencies. These tendencies include modest local production linkages and low revenue retention as, by and large, earnings go to service foreign capital investment (Auby, 1993). As a result, the mineral sector's contribution to the domestic economy primarily consists of fiscal linkages in the form of taxes and royalties.

While large in area, Mongolia has a very small population and relatively small economy. Auby (1990) found that small mineral-rich countries faced greater obstacles in achieving resource-based industrialization than did their larger counterparts, due in part to their inability to capture linkages from mining.

According to Auty, a small country will have limited backward linkage opportunities. Forward linkages will also be limited as a small local market restricts possibilities for domestic sales of downstream goods with greater value added. This in turn leads to a larger dependence on export sales, with revenues diminished by transportation costs and international trade barriers. This is particularly true in landlocked Mongolia where ore must be shipped through foreign ports.

Auty (1990) also argues that small developing countries face a significant hurdle to resource-led industrialization in the extremely high initial capital requirements for concentrators, smelters, and refineries. Even a very long lived mine will not typically be in operation long enough to justify the construction of a refinery in close proximity. Smelters and particularly metal refineries are built near cheap sources of power, in locations that facilitate the delivery of raw materials from mines around the world, e.g. deep water ports. They are also designed to last several decades with periodic refits and upgrades. Reliant both on rail linkages to far away sea ports in Russia and China, and expensive energy imports from Russia, Mongolia seems a very unlikely candidate to attract such a facility and thus will be unable to capture any large degree of value added on the metals mined from its soil. These conclusions regarding the ability of small resource dependent nations to capture linkages and value added do not support following a staples model of development as suggested by Innis in the 1930s.

## **(4.2) Dutch Disease**

The term Dutch Disease is a reference to the experience of the Netherlands in the 1960s following the discovery and development of natural gas in the North Sea. Sachs and Warner (2001) explain Dutch Disease through a 'crowding out' logic where a booming sector crowds out other economic activities that are thought to be important drivers of growth, namely manufacturing. Post-war growth theorists such as Hirschman (1958) considered manufacturing to be an important driver of economic growth because it provides many linkages to other sectors of the economy, aiding in diversification. Matsuyama (1992) and Torvik (2001) both point out that manufacturing also contributes more to the economy through learning-by-doing than do primary industries, leading to growth in the research and development sector of the economy<sup>1</sup>.

Dutch Disease begins with a boom in the resource sector triggered, for example, by rising commodity prices, the discovery of a new deposit, or a cost-reducing (and thus rent-increasing) technological innovation (Auty and Mikesell, 1998). The model is generally considered in terms of a well developed three sector economy, i.e. natural resources, manufacturing (non-resource tradeables), and services (non-tradeables) (Sachs and Warner, 2001). A boom in the resource sector means larger rents are available for the taking, drawing capital and labour away from manufacturing. Without changes to the state's financial

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<sup>1</sup> Although Auty and Mikesell (1998) dispute this, arguing that the Canadian and US mining industries are at least as innovative as the manufacturing sector. On the other hand, this innovation occurs in and primarily benefits core nations as opposed to the resource dependent periphery.

policies (e.g. adjustments to interest rates and taxation), high revenues from the resource sector tend to result in an appreciation of the country's currency, making its exports uncompetitive in the international market and domestic products uncompetitive with imports (Auty & Mikesell, 1998). This may occur despite a government's best efforts to adjust financial policies. As the cost of manufactured goods rises and the number of well paid resource sector employees rises, non-tradeables (e.g. services) experience a demand-led increase in price relative to tradeables (Sachs and Warner, 1995). The result is that resources are shifted from the manufacturing sector to the service sector, with an associated increase in wages in the service industry, etc (Auty and Mikesell, 1998). A study by Sachs and Warner (2001) found that in developing countries "resource abundance tended to render the export sectors uncompetitive and that as a consequence resource-abundant countries never successfully pursued export-led growth" (p.835).

Ross (1999) disagrees with naming Dutch Disease as the guilty party in the resource curse, contending that Dutch Disease is much less commonly observed in developing countries where the curse finds its primary targets. He argues that the model is based on the assumptions of full employment prior to the boom and of fixed supplies of labour and capital, neither of which are tenable in the case of many developing countries. Regarding the first assumption, Ross points out that many developing countries suffer from high unemployment and thus a large labour surplus. While a large portion of this

surplus labour pool is unskilled, it is often cheaper for mining firms to train and employ locals than to employ ex-pats at high salaries. As to the second assumption, Ross argues that labour and capital supplies are generally not fixed and any shortages can be filled with foreign workers and capital.

Mongolia has very high unemployment and thus a labour shortage as a result of a mining boom is unlikely to be an issue. The issue of supply of capital is more relevant to Mongolia's situation, although, again, Ross' argument that foreign capital will fill domestic shortfalls is problematic. It seems likely that foreign capital, whether private or from development agencies, is just as likely to be attracted to the high-rent booming sector as is domestic capital. To illustrate, in 1998, 57 percent of foreign aid dollars entering Mongolia went into the mineral and energy sectors while another nearly 20 percent went into transportation (Rossabi, 2005. p.92), i.e. roads and rails to service the mineral and energy sectors. In 2003, 70 percent of foreign direct investment in Mongolia went into the mineral sector (Rossabi, 2005).

While Dutch disease has been found to be a factor in some situations, there are far more resource-rich countries whose poor economic performance cannot be attributed to a crowding out of manufacturing. Sala-i-Martin and Subramanian (2003) conducted a case study of the impact of oil development on Nigeria and found Dutch disease to be an unsatisfactory explanation. They found that while relative prices of manufactured goods did change, the changes were not correlated with oil prices. They concluded that "how windfalls were

used rather than oil prices *per se* were more important in determining relative prices" (p.17). They also found growth in the size of the bureaucracy (in the Nigerian case, an attempt by certain segments of the population to appropriate resource rents) to be a significant issue.

The Dutch Disease argument might be applicable to more resource dependent developing countries if entrepreneurs were considered instead of labour and capital. Rising mineral prices, or the discovery of new deposits, promise full wallets to innovative and determined individuals and firms. Their particular attributes are thus dedicated to the high-rent resource sector, and not to more productive sectors with better linkages to the domestic economy. A study by Torvik (2002) found that an abundance of natural resources leads more entrepreneurs in a country to engage in rent seeking activities as opposed to productive activities. He found that the income generated from the additional resources (and the resultant multiplier effect) was insufficient to compensate for the income lost to lower productivity.

While Dutch Disease can be a significant problem in industrialized countries, developing countries are less susceptible to it. Like many other developing countries, Mongolia has a relative paucity of non-mineral industries and a very high rate of unemployment. As a result, Dutch Disease is unlikely to be an issue in Mongolia at the present time. The rent-seeking aspects of Dutch Disease are, however, a very important factor to consider in a study of the resource curse and will be explored further in the next section.

## **(4.3) Endogenous Explanations**

### **(4.3.1) Rent Seeking**

The concept of rent was developed by Ricardo in the late nineteenth century and is defined by Auty (1993, p.3) as revenues in excess of production costs and a normal return on capital. ‘Normal’ here implies that the economic activity is situated in a competitive market. In the literature, rent-seeking is often studied in the context of windfall gains from sources such as resource booms or foreign aid (Svensson, 2000; Torvik, 2002). While the vast majority of resource curse research has been conducted from a positivistic perspective, the literature related to rent-seeking as an explanation for the resource curse often approaches the issue from a political economy perspective. The main argument found in this portion of the literature is that “it is the lobbying for and allocation of the rents associated with [mineral and fuel] resources which is detrimental to economic and political institutions” (Sala-i-Martin and Subramanian, 2003, p.10; Tornell and Lane, 1999) and that rent-seeking activities fundamentally affect the shape of politics and governance in resource dependent states. In this section I will address two aspects of rent seeking – corruption and disincentives for reform – that may provide insight into how the resource curse manifests and discuss them in terms of Mongolia.

The mineral sector is attractive to investors and entrepreneurs because of the high rents available for capture. States also receive a portion of these rents through royalties and taxation. However, studies have shown that government

officials may also act so as to appropriate a share of the wealth making its way into commercial and state coffers, either for personal enrichment or for redistribution to a particular social group. Leite and Weidmann (2002) found that the negative effects of natural resource abundance on economic performance operated indirectly through increased corruption. In a case study of Nigeria, Sala-i-Martin and Subramanian (2003) found that corruption as a result of oil-wealth was rife. They state that "in fundamental ways, the politics of Nigeria has been shaped by getting access to the revenues from oil" (p.14).

Just as mineral rents can be diverted for private gain, so can they be used as leverage by government officials and a country's elite to empower certain social groups relative to others or to maintain the political and economic *status quo*. In the case of Nigeria, Sala-i-Martin and Subramanian (2003) noticed an increase in the size of the government following booms in oil revenues. This was interpreted as an attempt by northern social groups to appropriate rents by selectively hiring individuals from those groups for new civil service positions. Tornell and Lane (1999) found that a similar effect was present in a broader group of resource-dependent developing states, particularly those boasting the presence of several powerful social groups or in other words, a 'factionalization of the ruling elite'. In these cases, argue Tornell and Lane, "discretionary fiscal redistribution [is] a key mechanism by which such groups appropriate national resources for themselves" (p.22).

If, as Sala-i-Martin and Subramanian (2003) state: "oil corrupts and excess oil corrupts more than excessively" (p.11), then it is interesting to consider the situation of a developing country lacking resource rents and how its politics and economics are shaped by that void. Esanov *et al* (2001) explore this situation, comparing the transitional experiences of two groups of Central Asian states, one that lacked significant mineral-resource revenues at the time of transition and the other where mineral-resource revenues were substantial. The authors argue that in transitioning countries possessing well developed endowments of natural resources such as fuel or minerals, governments (and other powerful social groups) had the option of appropriating and redistributing mineral rents to their supporters in order to maintain their power and influence. In such a situation, there would be little incentive for those holding the reins of power to make a shift towards a liberal democracy. This was the experience of Turkmenistan and Uzbekistan, where elites used resource rents to shut out reformers and maintain the *status quo* (Esanov *et al*, 2002).

In the case of countries that have poor or poorly developed mineral resources (like Mongolia), mineral rents are not available for the country's elites to appropriate to bolster their power. The government must search elsewhere for capital to fill budget deficits left by the disappearance of transfer payments from Russia. According to Esanov *et al* (2002), the solution in these cases has often taken the form of seeking foreign aid from development agencies. This money frequently comes with strings attached, namely a requirement to institute

liberal economic policies and democratic reforms. Such reforms have been found to lead to both a reduction in rent-appropriation by elites and in an increase in opportunities for private business (Dalmazzo and de Blasio, 2001). If this in turn leads to economic diversification and an increase in local economic linkages, then such improvements in institutional quality might reduce the resource curse effect.

Another scenario in which mineral rents impede economic reform involves the use of rents to foster other profitable economic activities. For example, some developing countries have opted to adopt protectionist policies in order to safeguard their burgeoning manufacturing sector, using mineral rents to subsidize production. While the manufacturing sector may succeed domestically, the subsidies do not assist it in becoming globally competitive and thus the country's market cannot be opened without dire consequences. In this societal explanation for the resource curse, individuals and firms who benefit from subsidized, protected industries under this model of import substitution may use resource booms to enhance their leverage with the state against economic reform (Ross, 1999).

Ross (2004) raises the interesting idea that the importance of resource rents as a source of state revenue renders the government less accountable to its citizens and thus less inclined to reform. If the primary source of revenues is from resource rents and not taxes, and the people's basic needs are met, then the people are thought to be less likely to complain as much about corruption,

lack of transparency, questionable spending habits, etc. The state also has the funds to employ armed security forces to maintain their power. If revenues come from taxes, people hold the government more accountable for the way in which the product of their blood, sweat, and tears is spent. Ideally, the end result is democratic reform.

The two categories of rent seeking described here – corruption and disincentives for reform – are also found within much of the literature focusing on institutional quality as the medium through which the resource curse operates. While both categories have been found to be correlated with resource dependence and economic growth, they are perhaps better understood within the broader context of a country's institutional framework as discussed in the next section.

### **(4.3.2) Institutional Quality**

In the resource curse literature, the concept of institutional quality is gaining in popularity as the mechanism through which resource dependence might 'cast its spell' and negatively affect economic growth and diversification. Both corruption and the state of economic and political reforms, as described above, are integrated into most measures of institutional quality. In empirical studies, institutional quality is generally represented by calculating a score for a variety of variables, most commonly a variation on the following: rule of law (especially related to private property rights and contract enforcement), bureaucratic effectiveness, corruption in government, voice and accountability,

and political stability. The resulting score is useful for private investors and aid donors but provides no information on the political and cultural forces behind the numbers. In this section I will review the literature on the linkages between natural resources, institutional quality, and economic growth and diversification with particular reference to those studies that do contribute a political economy perspective to the matter.

Numerous empirical studies have found that institutional quality has an effect on growth and that this effect is negatively correlated with point resources (Bulte *et al*, 2005; du Plessis and du Plessis, 2006; Sachs and Warner, 1997b; Sala-i-Martin and Subramanian, 2003). According to Bulte *et al* (2005), given a certain fixed level of institutional quality and resource price volatility, natural resources did not appear to have any separate effect on economic growth. In a case study of Nigeria, Sala-i-Martin and Subramanian (2003) found that the marginal negative impact of natural resources on institutions depends positively on the level of natural resources (hence "excess oil corrupts more than excessively" (p.11)). Sachs and Warner (1997b) conducted a cross-country study and found that institutional quality was an important factor in the slow growth of economies in sub-Saharan Africa as well as other developing economies around the world.

While the mining industry in many developing countries functions largely as an enclave, some financial remuneration accrues to the host country through fiscal linkages, such as taxes and royalties. It has been suggested that the

source of the 'curse' of natural resources is to be found in the domestic policies instituted by the governments of mineral-dependent countries. According to Auty (1993), "a striking feature of the policy response of governments in mineral economies is the persistent tendency towards over-optimism concerning future mineral prices" (p.21). This leads to resource misallocation, lack of caution in maintaining competitiveness in the mining sector, and a "failure to safeguard the mining sector and mining-driven tradeables from damaging politically driven intervention, such as the imposition of mining taxes which are not related to profitability" (p.21-2).

Another interpretation of policy decisions that lead to slow economic growth and lack of diversification is provided by Svensson (2000), who argues that economically irrational responses to windfalls may, on closer examination, be politically rational. Svensson's work is based on a game theory model where economic policies are created jointly by a number of powerful players. In the long term, they are better off if they co-operate but the short term benefits of deviating from the group and seizing control of the government's budget are very high and the incentive to deviate increases with the size of the 'prize' (p.455-6). Drawing on a study of timber and Southeast Asia, Ross (2001) similarly reached the conclusion that large rents from resources create strong incentives to gain control over the process of rent allocation. This was found to lead to a weakening of the institutional framework regulating the use of public funds. According to Svensson's (2000) model, the higher the quality of a

country's institutional structure, the better able it is to prevent such rent-seeking behaviour. Robinson *et al* (2006) agree, stating that "the overall impact of resource booms on the economy depends critically on institutions since these can determine the extent to which political incentives map into policy outcomes" (p.450). While this perspective has some merit, it cannot be ignored that the institutions being referred to here are themselves a product of the socio-political landscape in which they were developed and the interaction of agents with differing goals acting across a variety of scales.

This high-level rent-seeking effect is one avenue by which natural resource abundance might negatively impact a country's institutional quality, however the picture is likely much more complicated. Large mineral rents have been found to have a deleterious effect on institutional quality, a factor that is given much weight when mining firms are deciding where to make the large investment necessary to develop and operate a mine. In this way, good institutional quality can be seen to lead to greater resource dependency, which would theoretically erode the quality of the country's institutional framework. Bulte *et al* (2005) suggests that countries 'cursed' with resource abundance may find themselves in a Catch-22 situation where the effects of resource dependency could be mitigated by the adoption of 'enlightened' social and economic policies. Such reforms, possibly instituted due to pressure from foreign donor agencies, would require a strong institutional framework in order to be successful. However, resources have a strongly negative effect on institutional

quality... It may not be possible to determine a single direction of causation in this situation.

Another avenue through which resource dependence might negatively impact institutional quality and thus economic growth and development is through its destabilizing social effects. Collier and Hoeffler (2004) found that resource dependency increased the statistical likelihood of rebellion and civil war in a country more than other factors such as religious or ethnic diversity. Similar findings were reported by de Soysa (2000), particularly when looking at mineral resources. Sala-i-Martin and Subramanian (2003) characterize civil conflict as an extreme manifestation of institutional collapse, highlighting for us the importance of considering the politics and social tensions pre-existing in a country in order to understand how the introduction of resource rents often fails to translate into economic or social development.

Watts (2004) provides a critique of some of the scholarship along the avenue of institutional quality, stating that it tends "to steadfastly ignore how oil's contribution to war or authoritarianism builds upon pre-existing (pre-oil) political dynamics" (p.75). In order to broaden our understanding Nigeria's experience of the resource curse, Watts (2004) charts the relationship between extractive resources, specifically oil, and violence in the Niger Delta by applying Foucauldian ideas of governmentality and notions of governable space derived from those ideas. Watts argues that oil's violent history and ability to generate conflict:

"can only be decoded if we are attentive to the unique qualities of oil itself, to the powerful corporate and state institutions for which it becomes a bearer, and not least to the ways in which oil becomes an idiom for doing politics as it is inserted into an already existing political landscape of forces, identities, and forms of power" (p.76).

In the case of Nigeria, Watts emphasizes that the institutions into which oil or mineral revenues have been inserted were weak to begin with. This acknowledgement that revenues accruing to a state from investments in mineral development and exploitation do not occur in a political or cultural vacuum can be found to varying degrees elsewhere in the resource curse literature. Revenues from mineral exports, particularly during boom periods, merely give politicians the freedom to act with less accountability to the public (as in Ross, 2004), allowing them to realize political and social goals whether they be getting re-elected (du Plessis and du Plessis, 2006), empowering a particular ethnic group (Sala-i-Martin and Subramanian, 2003), or waging war (Collier and Hoeffler, 2004).

#### **(4.3.3) Neglecting Human Capital**

The final explanatory theory for the resource curse that I will discuss is one championed by Gylfason (2001), for whom education is an important determinant of growth. His work found that "school enrollment at all levels tends to be inversely related to natural resource abundance, as measured by the

share of the labor force engaged in primary production<sup>2</sup>, across countries" (Gylfason, 2001, p.850). The impact of natural resource abundance on education is important to consider because of the weight that has been placed on education as a driver of economic development. For example, Barro and Sala-i-Martin (2004) found a positive relationship between years of school for males and economic growth.

Gylfason (2001) considers three measures of education (public expenditure on education, expected number of years of schooling for females, and secondary-school enrolment) in relation to a country's natural resource abundance. He finds that all three measures are inversely related to natural resource abundance. Assuming that economic growth varies inversely with natural resource abundance, Gylfason concludes that "natural resource abundance seems likely to deter economic growth... by weakening public and private incentives to accumulate human capital" (p.854-5).

In a different vein, neglect of human capital might be attributed to a decline in institutional quality, possibly as a result of the resource curse. Increased corruption, decreased transparency and public accountability, and a decline in the rule of law might all result in a lack of incentives for government spending on any number of public services, including education. This conclusion is supported by the findings of a study by Mauro (1995). A neglect of human capital development might also be the result of a change in funding priorities due

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<sup>2</sup> Primary production here refers to extraction of mineral and fuel resources.

to macroeconomic reforms initially demanded by donor agencies such as the IMF, as has been the case in Mongolia. If this is true, then some measure of human development ought to be considered alongside measures of economic growth and development when assessing whether the resource curse is at work in a country.

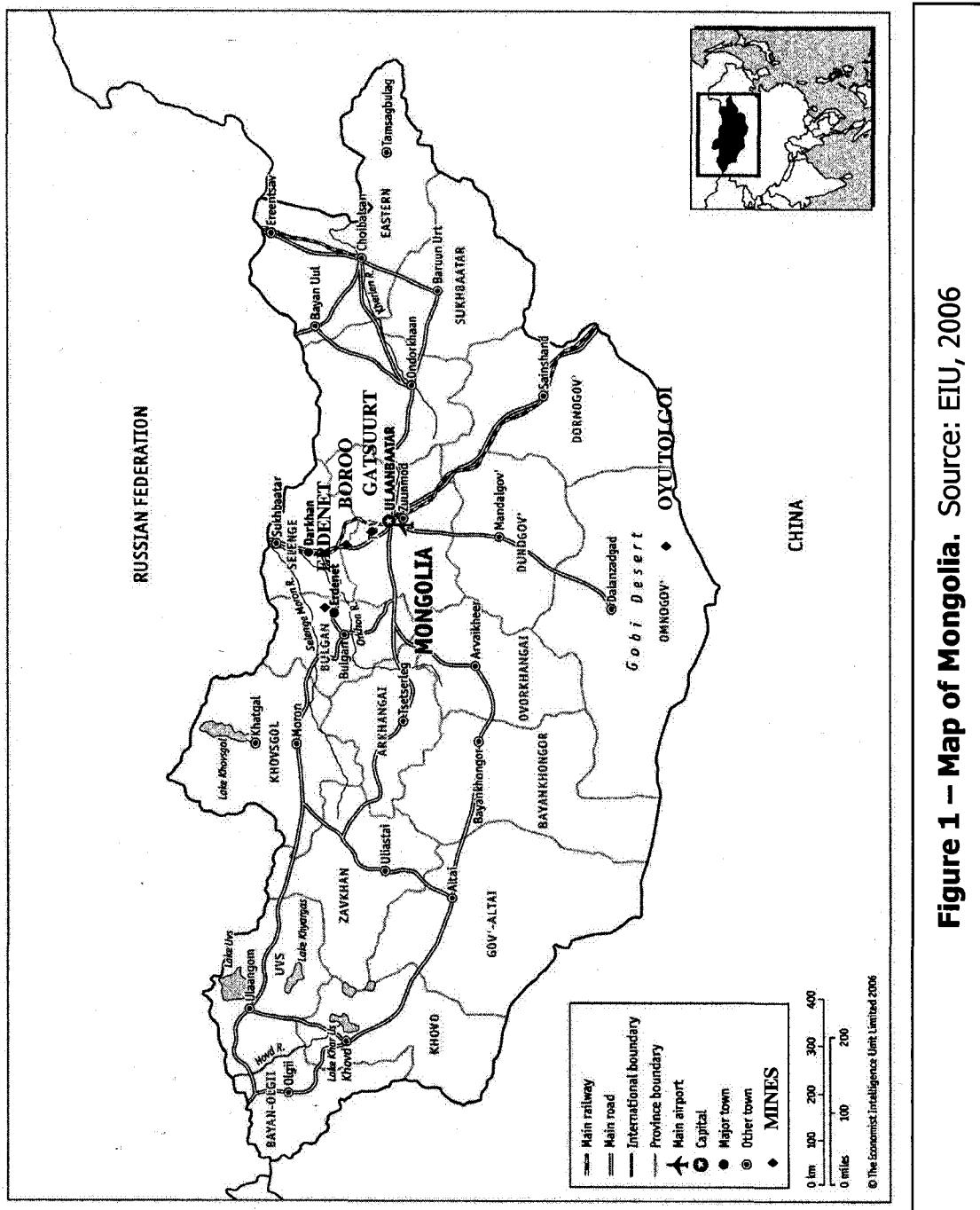
#### **(4.4) Conclusion of Literature Review**

Working with the premise that a resource curse exists, I have reviewed the various explanations for the resource curse offered in the academic literature. Exogenous explanations such as price volatility, declining terms of trade, and the structure of the mining industry are more applicable to a long term cross-country econometric examination of the effects of natural resource dependence than to a case study and thus will not be addressed further in this paper. It seems unlikely that Dutch Disease is a factor in Mongolia, given the labour surplus and limited size of the manufacturing sector, so it will also be excluded from the case study.

Institutional quality has been increasingly recognized as an important determinant of development. The political forces at work in a country are also given weight in the literature as being important to fully understanding the rationality of ‘economically irrational’ political and economic decisions. As an explanation for how the resource curse operates, these perspectives offer the most potential for contributing to this case study.

## **5. Mongolia**

Before getting into the case study proper, I will provide some background information on Mongolia, its land, people, history and economy. Mongolia is a land-locked nation sandwiched between the giants of Russia and China (see Figure 1). It is a relatively large country with more than 1.5 million square kilometers, making it roughly the same size as the province of Quebec. The climate is continental with hot dry summers and cold dry winters. Winters are often harsh, with numerous local terms for severe winter conditions. In the winters of 2000-01, brutal weather resulted in the loss of roughly ten million animals or one third of the country's livestock (Rossabi, 2005). Precipitation decreases from north to south, thus vegetation grades from forested areas and rivers in the north, to grassy steppe in the large central region, and the Gobi Desert in the south. Mongolia is thought to have extensive mineral resources with more than six thousand showings or deposits of eighty different minerals (World Bank, 2004).



## **(5.1) People**

Despite its size, Mongolia is home to just 2.8 million people, roughly 60 percent of whom live in urban areas and more half of them in the capital city of Ulaan Baatar (Economist Intelligence Unit (EIU), 2007). Large families were encouraged during the period from 1960 to 1990 and during those three decades, the country's population doubled. As a result, Mongolia's population is quite young, with a third of the population under fifteen and three quarters under thirty-five years of age (EIU, 2007). Unemployment has been roughly 20 percent, higher in urban areas, for many years. This represents a growing problem as the large numbers of young people entering the workforce every year fail to find sufficient employment. Poverty is widespread, with 27 percent of the population living on less than a dollar a day and 75 percent living on less than two dollars a day (World Bank, 2006b, p.65). These figures do not however take into account household inputs from subsistence herding (Odgaard, 1996). There appears to be a fluidity to rural and urban living as people from rural areas are galvanized to move to the city by growing income disparities, while individuals in the city who are unable to find work or housing return to rural areas, essentially using herding as a social safety net to fall back on during times of economic hardship (Rossabi, 2005).

The population has high ethno-linguistic homogeneity, with over 90 percent of the population being ethnic Mongolian and speaking mutually-understandable dialects of the Mongolian language. Roughly 70 percent of the

population speaks the Khalkha dialect, the dialect now used in government and state administration (Gilberg and Svantesson, 1996). The next largest ethno-linguistic group (5 percent) is Kazakh, and is generally concentrated in the western region of the country (Rossabi, 2005). This high degree of homogeneity is significant in terms of this case study because of work done by Easterly and Levine (1997) on linkages between high ethno-linguistic fractionalization and increased social instability. The occurrence of social instability would lower a country's score on most indices of institutional quality, rendering it a less desirable investment destination.

Lamaist Buddhism has been present in the area that is now Mongolia since the 13<sup>th</sup> century. Buddhist temples were, and in some cases still are, the only permanent structures in settlements of *gers*<sup>3</sup>. Monasteries developed all over the region, many of which were co-opted as feudal centres by the Chinese during the period from the 17<sup>th</sup> century to 1911. At the end of this period, the monasteries had an income roughly equivalent to that of the state and controlled education, health care, and the judiciaries. In 1935, it is estimated that 48 percent of adult males were monks (Gilberg and Svantesson, 1996). In the mid-30s, the communist government began to wrest power away from the monasteries, discouraging their participation in public life; the religion was ultimately suppressed, sometimes violently. Despite this, Buddhism continued to be practiced to some degree in private. Freedom of religion was guaranteed in

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<sup>3</sup> The traditional felt tents of Mongolian herders.

the early 90s and since then there has been a revival of both Buddhism and shamanism. This revival has encouraged economic and political ties with other Buddhist states in South and South East Asia.

### **(5.2) History**

During the seventeenth century, the region that is now Mongolia was taken over by the forces of China's Qing Emperor. A feudal system was implemented with Buddhist monasteries, co-opted by the Chinese, acting as feudal centres. After decades of decline, the Qing Dynasty collapsed in 1911. The northern portion of the Mongolian territory, known as Outer Mongolia, declared its independence from China and a decade of infighting ensued. The southern portion of the Mongolian territory, known as Inner Mongolia, remains Chinese territory to this day. In the years following World War One, Mongolia's neighbours also faced difficult political situations. China was dealing with increased political divisions and the rise of local warlords. In Siberia, the Bolshevik revolutionaries were fighting the White Russians. In 1919, the Japanese encouraged the Chinese to invade Mongolia and in response, the White Russian army also invaded, crushing the Chinese forces in Ulaan Baatar. After two years of harsh rule, Mongolian revolutionaries backed by Russian Bolsheviks seized control of the country. Thus the Mongolian People's Republic became the world's second communist state.

For the next five decades, Mongolia was largely under Soviet control. The organization of the government and its policies were modeled after the Soviet

example. Control of the educational, health care, and judicial systems were wrested away from the Buddhist establishment in the 1930s. From a position of great influence and enjoying an income roughly equivalent to that of the state, the monasteries were ultimately suppressed (Gilberg and Svantesson, 1996). Soviet financing and technical expertise aided in a push towards industrialization, resulting in a level of urbanization not seen in Mongolia before or after. Russia's influence could easily be seen in the cities, where Soviet-style buildings were erected and Russian was the language employed in universities and government.

There is a long-standing enmity between China and Mongolia. But during the Soviet period, Mongolia's relations with China essentially paralleled those of the USSR. Mongolia was considered a lost territory by the Chinese and it was not until 1950 that China officially recognized Mongolia's independence, although unofficial sentiments on the matter may still differ (Gilberg and Svantesson, 1996). Relations between the two countries became increasingly strained following the Sino-Soviet split in 1962 and continued to be tense into the 70s when the USSR had one hundred thousand troops stationed in Mongolia. Mongolia always claimed this was at their request, to stave off Chinese expansionist efforts. With the death of Mao in 1976 and Gorbachev's assumption of power in Moscow, Sino-Mongolian tensions eased. Official diplomatic relations were established in 1986 and an amicable settlement was reached on the official border between the countries in 1988.

Soviet Russia implemented *glasnost* and *perestroika* in the 1980s and also became less willing to bolster client regimes such as Mongolia. In 1989, a group of reformers came together in Ulaan Baatar and formed the Mongolian Democratic Union. Their aim was to overthrow the communist Mongolian People's Revolutionary Party (MPRP). The Union's leadership consisted largely of children of the ruling regime, sent abroad to universities and returned home with neo-liberal ideals (Rossabi, 2005). Demonstrations and hunger strikes were held in the capital with good effect. The government, possibly swayed by the familial relationships with some of the protestors and the possibility of Chinese intervention if violence broke out, chose to follow the path of some Eastern European countries and agree to institute political and economic reforms rather than take the path of, for example, China and Tiananmen Square (Bruun and Odgaard, 1996; Rossabi, 2005).

Unlike Eastern European countries, the old guard did not step down or dissolve the government. Rather, they quickly called an election giving the Democratic Union little time to muster resources or prepare a campaign. In July of 1990, the MPRP won 62 percent of the votes and a majority government but gave the Union a few seats in the cabinet, effectively creating a coalition government, as a gesture of goodwill (Bruun and Odgaard, 1996). Following the election, a process of genuine political reform was launched. In 1991, all government officials were required to relinquish party memberships. In 1992, a new constitution was adopted and the Mongolian People's Republic became

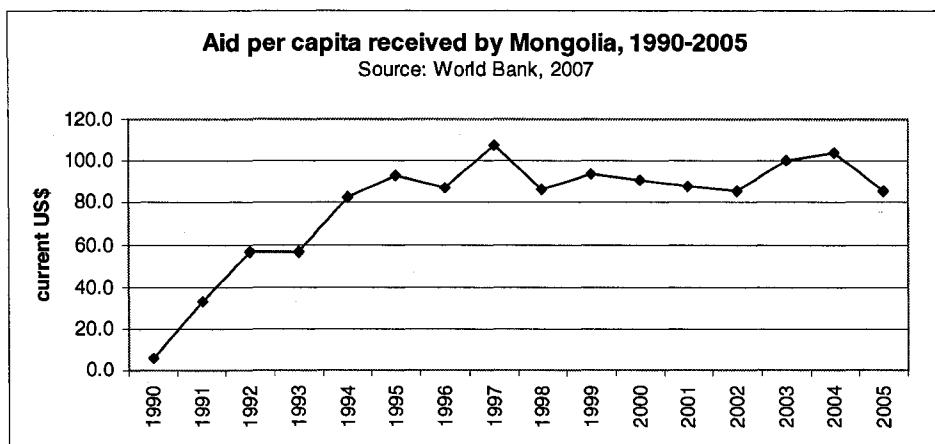
simply, Mongolia. Following the model of many western states, Mongolia's President is directly elected and is head of state, with veto power over parliamentary legislation and control of the armed forces. The Prime Minister was made head of government. The 76-seat parliament sits in the State Grand Hural, and is elected for a period of four years. Also created by the 1992 Constitution are the Security Council, Constitutional Tribunal, and the General Council of Courts. These variously act as checks on parliament and to ensure judicial independence. The country is subdivided into 21 *aimags* (provinces), whose members appoint the region's governor and are themselves elected by their member *sum* assemblies, who are in turn elected by smaller *bag* assemblies. Each family is represented in the *bag* assemblies (EIU, 2006).

Mongolia's transition was both a political transition from one party control to a democratic government and an economic transition from a command economy to a market economy. Before 1990, Mongolia's economy was bolstered by Soviet subsidies, cheap and abundant energy supplies negated the very long distances to markets, and its international trade was almost exclusively with members of the Soviet-led Council for Mutual Economic Assistance (CMEA). Once the transition began, Soviet advisors departed and CMEA's markets disappeared overnight. This led to shortages of fuel, raw materials, and food, leading to idle factories, unemployment, and decreased food security (Rossabi, 2005). Bruun and Odgaard (1996) characterize the situation as being "the most serious peacetime economic collapse any nation has faced during this century"

(p.23), with food production decreasing by half and industrial output decreasing by a third. The government's response was to launch a program of comprehensive reforms with few parallels in other CMEA states, and move towards a market economy. Like the Eastern European countries of Czechoslovakia, Poland, and Romania, they prioritized privatization, completing three quarters of the program within a year. Mongolia also embarked on a policy of price and trade liberalizations but, according to Bruun and Odgaard (1996), faced many challenges. First was a lack of market infrastructure such as banking and credit facilities and legal frameworks. Secondly was a dearth of management and other expertise necessary to run a market economy. Thirdly were geographic barriers. With fuel in very short supply, high transit taxes through China and Russia, and a small and deteriorating network of roads and railways, the distance to ports and markets once again became a major obstacle to international trade.

Cut off from the flow of Soviet subsidies and its usual trading partners, and with its limited industry floundering, Mongolia badly needed access to new markets and financial aid. In 1991, Mongolia was admitted to the World Bank, the International Monetary Fund (IMF), and the Asian Development Bank (ADB). Their assistance was conditional on dramatic macroeconomic reforms, including: liberalization of prices, elimination of subsidies, balanced budgets, continued privatization of state owned enterprises and banks, devaluation of the currency, measures to prevent inflation, and scaling back of what they deemed to be

overly-generous social welfare programs (Rossabi, 2005, p.37). Levels of foreign aid entering Mongolia are shown in Figure 2. Aid programs initially provided emergency assistance – food, medicines, fuel for heating during bitterly cold winters – but now focus more on infrastructure renovation and development (EIU, 2000).



**FIGURE 2**

The receipt of aid was a blow to Mongolians' pride and national identity. They had liberated themselves from Soviet subsidies and control only to become dependent on foreign aid donors. In the early 1990's, the amount of aid received was roughly equivalent to earlier Soviet subsidies. Mongolian officials now had to travel to Tokyo instead of Moscow to negotiate aid packages, and Russian and Eastern European supervisors were replaced by westerners. All these parallels led to a great deal of skepticism on the Mongolian political scene (Bruun and Odgaard, 1996). The country's financial dependency gave leverage to donor agencies to encourage the government to pursue particular development policies. Mongolian critics of this situation pointed out that the aid

agencies' representatives were unaccountable for their actions (very undemocratic), and often lived a colonial lifestyle (Rossabi, 2005).

It is interesting to compare this period of Mongolia's transition with those of other Central Asian States. In countries where the established elites had access to a significant source of non-tax revenue, such as mineral rents, there was little incentive to institute democratic reforms and effectively undermine their own power base (Esanov *et al*, 2001). Countries like Turkmenistan and Uzbekistan fall into this category and might be considered to have fallen under a resource curse. In a study by Esanov *et al* (2001), Azerbaijan and Kazakhstan were characterized as having poorly developed resources at the time of the breakdown of the Soviet Union, much like Mongolia. Lacking minerals rents, such countries sought capital from foreign aid to make up their large budget deficits – capital that came with caveats requiring political and economic reform (Fritz, 2002). Having avoided the resource curse once, Azerbaijan and Kazakhstan faced it again as political and economic reforms drew investors in to develop their natural resources, particularly energy resources, and generate rents. In the case of these two countries the initial phase of liberalization was followed by an increase in national assertiveness that could be construed as signs of a resource curse at work (Esanov *et al*, 2002). Changes to mineral laws instituted in Mongolia in 2006, as discussed in the next section, may be indicative of a similar effect.

## **(5.3) Economy**

### **(5.3.1) Agriculture**

With so much open grassland, it is no wonder that nearly a third of Mongolia's GDP is generated by the agricultural sector (World Bank, 2006b). The Mongolian people are traditionally nomadic herders, and this remains true today with the herding of camels, sheep, goats, and horses being the primary agricultural activity. Even while industry gained an increasingly important role in Mongolia starting in the 1960s, most individuals who made their way to the cities kept some livestock to supplement their incomes or as insurance against hard times. Mongolian tradition is that livestock are the only reliable form of wealth. This proved fortunate for many during the lean first years of the transition with animals providing food, transportation, and materials for clothing and shelter (Bruun and Odgaard, 1996).

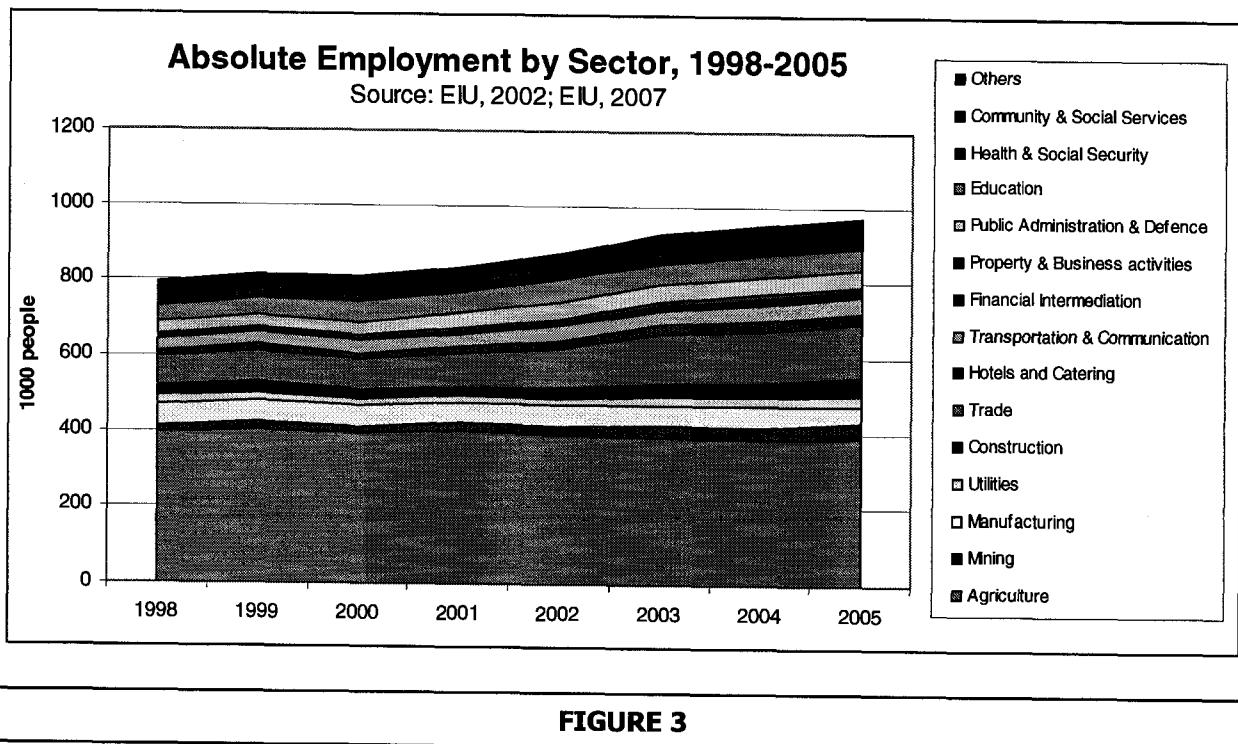
Under communist rule (1921-1990) herding was collectivized into *negdels*, with disastrous socio-economic results. Privatization of these collectives took place in 1991, resulting in a return to subsistence herding by many who were discouraged from commercial activities by low prices (due to meat rationing) and a collapse of infrastructure for delivering products to processing facilities (EIU, 2002). Economic conditions have improved somewhat since the transition began but while the agricultural sector continues to be an important contributor to the Mongolian economy, its recovery has been greatly slowed by combinations of extreme winter weather, dry summers, and animal epidemics.

since 1999. The government and the World Bank have embarked on an experimental joint-venture to create an insurance program to protect herders from losses due to extreme weather and natural disasters (EIU, 2006).

In the 1970s, industrial output finally exceeded agricultural output and in 1990, industry accounted for 36 percent of GDP and agriculture just 15 percent (EIU, 2000). This situation reversed itself following the collapse of the Mongolian economy in the early 1990s. By 2002, the two sectors were roughly at par in terms of GDP contributions but the destruction of the country's textile industry in 2005 has put agriculture's contribution back in the lead (See Figures 9a and 9b). In 2005, employment in agriculture exceeded employment in industry by an order of magnitude (EIU, 2007), as can be seen in Figure 3. Agricultural outputs cannot however compete with industrial outputs, especially those of the mineral sector, in terms of export value (See Figure 7).

Due to harsh climatic conditions and a short growing season, only a very small portion of Mongolia's arable land is under cultivation. Collective farming operations were privatized in 1991, leading to a substantial fall off in production due to a shortage of funds and a lack of expertise in managing private enterprises (EIU, 2000). The area of land under cultivation, already small, fell off steadily for several years until the point where the country has become dependent on food aid and imports. In 2005, only a third of the population's cereal needs were met by domestic production (EIU, 2005).

With rising international demand for cashmere, goats have increased in popularity to the point where cashmere is one of Mongolia's top exports and the country produces a third of the world's supply. This change in herd composition has resulted in some degree of land degradation and desertification due to overgrazing (Rossabi, 2005). With the support of the Asian Development Bank, the government is drawing up a program to intensify herding practices and reduce nomadism (EIU, 2005), which may further contribute to desertification due to overgrazing.



### **(5.3.2) Manufacturing**

During the communist era, Russia had a great deal of economic and political influence in Mongolia. As with some other Central Asian nations, Mongolia represented a source of raw materials to feed the factories of the USSR's industrial core (Fritz, 2002). Industrialization in Mongolia during this period was minimal and what existed was generally based on capital, technology, and management skills from Russia (Esanov *et al*, 2001). In the 1930s, a branch line of the Trans Siberian Railway was laid to Ulaan Baatar, sparking some minor industrial development with capital from Germany, the United States, Russia, and China (Gilberg and Svantesson, 1996). That industry was centred on the products of the pastoral economy (wool, skin, leather, etc). This continues to be true today, with the primary manufacturing activities being the processing of meat, leather, and cashmere. Proximity to China with its vast labour pool and the end of the international quota system on textiles have left Mongolia's manufacturing sector struggling to compete with foreign factories that enjoy government subsidies and access to credit (Asian Development Bank [ADB], 2007).

### **(5.3.3) Mining**

As with manufacturing, most of the large-scale mining activity that did take place in communist-era Mongolia was funded, managed, and at least

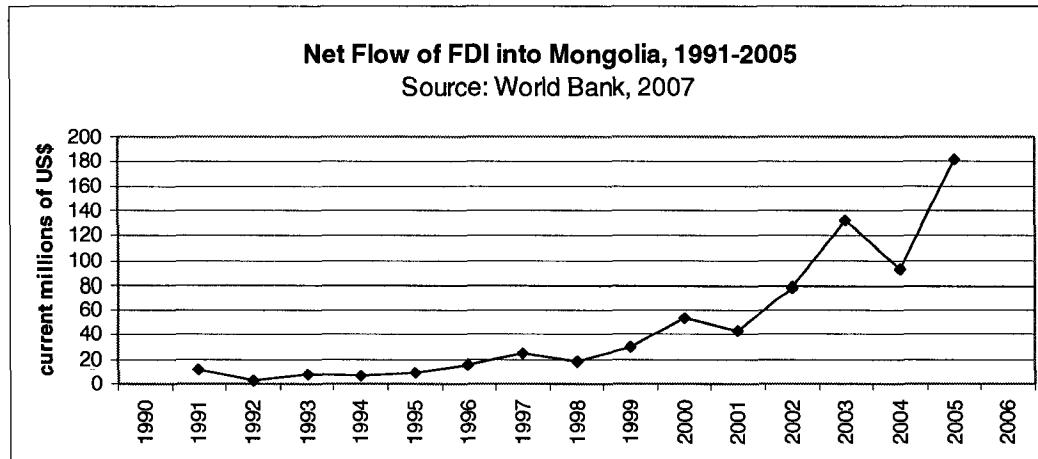
partially owned by Russia (Fritz, 2002). The majority of mining was focused on base metals, with the largest mine in operation being the Erdenet copper mine, opened in 1976 as a Russian-Mongolian joint venture. Given the nature of the government during the time, only limited production and economic data are available. Base metals were exported to Russia and other CMEA states in exchange for manufactured goods. Much state-funded geologic exploration was undertaken, both of economic and non-economic deposits (Rossabi, 2005). Aside from metals, Mongolia also possesses some coal and oil reserves: the former is used domestically for electricity production and both are exported to China.

Mining investment decisions are based on a combination of several factors, including mineral resource potential, global and domestic economic conditions, environmental challenges, mineral law regimes, political stability, etc. At each stage of the exploration and development process, these factors are reassessed to determine if the risk-reward ratio is acceptable versus investment opportunities elsewhere. Since 1990, Mongolia has worked to make its mineral sector an attractive investment opportunity for highly mobile foreign capital. A new legal and administrative framework has been developed, state owned mines have been privatized, and improvements to transportation, communication, and energy infrastructure have been undertaken. These, combined with high mineral prices, have increased the country's attractiveness to potential foreign investors.

Figure 4 illustrates Mongolia's inward FDI figures between 1991 and 2005. In

2003, 70 percent of FDI entering Mongolia was invested in mineral exploration and development, largely by Canadian firms (Rossabi, 2005). Since 1990, copper production has nearly quadrupled and gold production has increased ten-fold (United Nations, 2004). As of 2006, mining accounts for 17 percent of Mongolia's GDP, 65 percent of industrial value added, and 58 percent of exports (World Bank, 2006b). The sector also employs nearly 40 percent of the Mongolian labour force (EIU, 2007).

To encourage foreign investment in the Mongolian mineral sector, the country has worked to develop a regulatory framework for the industry. Mongolia's policies are thought by some to have been strongly influenced by western donor agencies such as the World Bank and the International Monetary Fund (IMF), which has an office in the country's parliament buildings. The result is that Mongolia has had a very open trade policy since 1990 with a few interesting exceptions. In 1997 the Mongolian Parliament passed the Minerals Act, which promises free trade in minerals. However, the IMF encouraged the Mongolian government to enact a tax on gold exports. A 10 percent tax was levied in 1998 and increased to 13 percent in 2001. The result was a temporary shut down of operations by several foreign gold mining firms and the tax was repealed in 2002.

**FIGURE 4**

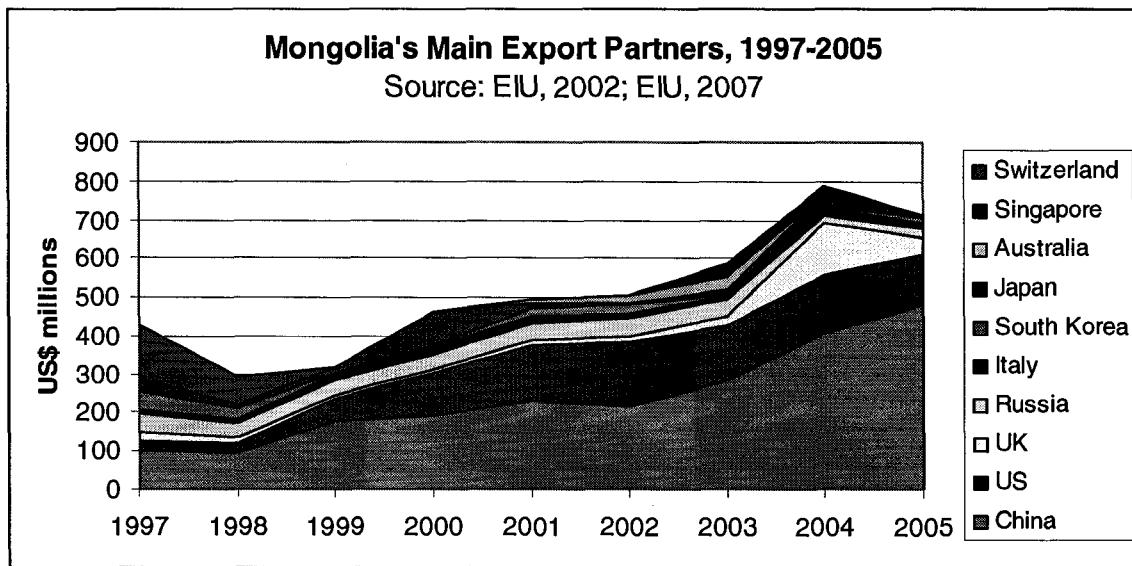
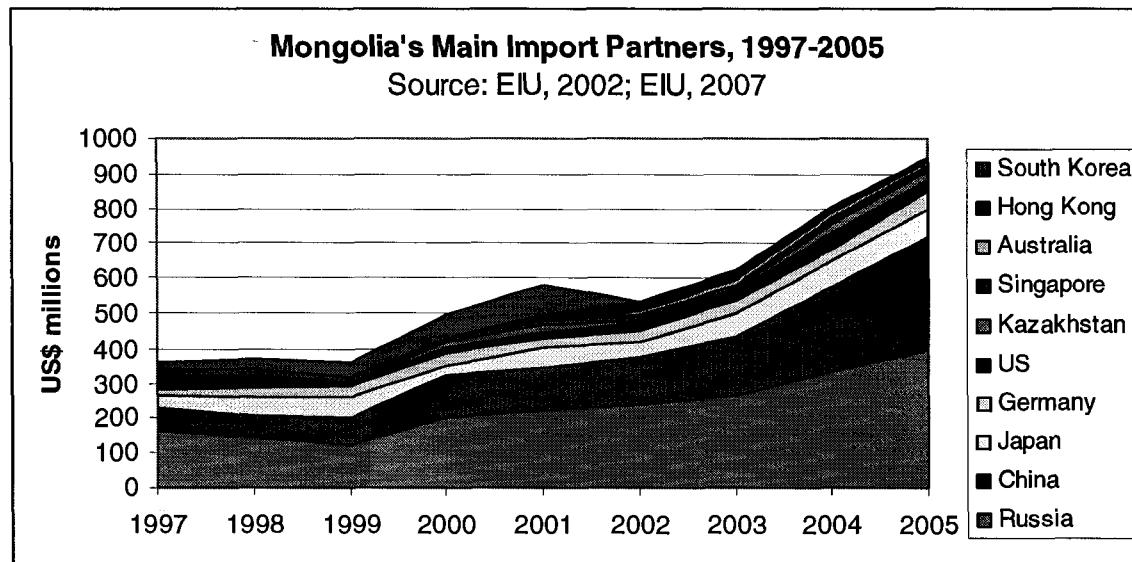
Mongolia's physical location, climate, terrain, and sparse population all add to the costs of production incurred by doing business there. This is particularly true for the mining industry which is limited to the regions close to the country's single north-south rail line for commercially viable exploration and development. Transportation is further hindered by a shortage of roads, particularly paved roads (just 1,714km out of 49,250km of roads are paved), and until recently a shortage of air travel options (EIU, 2007). Mongolia has secured a grant from the American Millennium Challenge Corporation for aid in the construction of a 2,700km east-west highway and much needed upgrades to the

rail system<sup>4</sup>. A very recent development on Mongolia's transportation network is the development of a new railway line linking China and Russia, construction on which began in late 2007. Phase 3 of the project would see a rail line linking Ulan Baatar to the Chinese port of Jinzhou, shortening transport times for Mongolia's export goods (those not destined to stay in China, at any rate). As with roads, energy generation and transmission infrastructure are in need of upgrading and expansion. The country relies on four coal powered generators for electricity, as well as occasional imports from the Chinese and Russian grids. Nearly 25 percent of the population does not have access to electricity (EIU, 2007). Mongolia also imports nearly all of its oil from Russia, an increasingly expensive necessity that increases costs of production and transportation, as well as the costs of goods imported from far away markets.

Mongolia's trading partners have changed dramatically since its transition began. Prior to the transition, almost all of Mongolia's imports and exports were from and went to Russia and other CMEA states. Following the collapse of those trading arrangements, Mongolia has found new markets with which to interact. Figures 5a and 5b illustrate the changes in trade partners for exports and imports, respectively. While Russia remains a critically important source of oil imports, it has fallen far behind China and even the US and UK as an export market.

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<sup>4</sup> US-Mongolian relations have been warm in recent years as Mongolia has sent peacekeeping troops to Iraq and Afghanistan (EIU, 2007).

**FIGURE 5a****FIGURE 5b**

Since the late 1980s, there has been a significant trend towards the adoption of liberal economic policies in many developing countries (Bridge, 2004). In many cases, this has resulted in some degree of increased flows of investment into capital-thirsty economies. However, the past few years have seen soaring international prices for primary commodities and many mineral exporting countries have taken less than neo-liberal economic measures in response. Some examples reported in the press include Bolivia and Venezuela making moves towards nationalization of mineral resources ("High metals prices", 2006) and the government in Uzbekistan expropriating a large foreign-owned gold mine ("Mining companies", 2006).

Mongolia is not immune to these pressures. The high commodity prices of the last few years spurred domestic lobby groups to pressure the government into capturing a greater share of mining profits. Placed in the difficult situation of balancing citizen pressure with remaining an attractive investment destination, the government decided revised its minerals laws in the spring of 2006. The new laws included an excess-profits tax on copper and gold during times of high global prices, a doubling of royalties from 2.5 to 5 percent, the right of the government to acquire a stake in what it deems to be strategic mineral projects, a tightening of environmental controls, and some reduced tax breaks for foreign investors (EIU, 2007). The economic result according to one report ("Mongolia may", 2007), was that foreign mining investment dropped 16 percent over the

following year and Centerra (Canadian-owned operator of the country's Boroo gold mine) temporarily ceased development on the new Gatsuurt deposit.

Under the new minerals laws, foreign investors will still be able to negotiate stability agreements with Mongolia. Canadian-owned Ivanhoe and UK-based Rio Tinto, two firms sitting on what could become the world's largest copper and gold mine at Oyu Tolgoi (Turquoise Hill), have been in negotiations with the Mongolian government for years over the terms of a stability agreement. The agreement was set to be approved (or not) by the Mongolian parliament in spring 2008, however political factors have interfered. Mongolia's political scene since 2004 has been characterized by upheaval related to the formation and dissolution of coalition governments. With an election set to be held before June of 2008, the current Prime Minister has removed the stability agreement from the parliament's agenda and returned it to a working group for review (EIU, 2008). This has been seen by some as an attempt to address criticisms that foreign mining firms have been granted overly generous terms of investment. Representatives from the Canadian government have visited Mongolia to emphasize the importance to both countries of maintaining a stable investment environment and not scaring away major investors from Canada (York, 2008).

With a better understanding of Mongolia, I will now move on to a discussion of how the case study will be operationalized.

## **6. Methodology and Methods**

This research essentially involves applying the theory and methods found in the resource curse literature to a case study of Mongolia to see what insights they can provide. Having reviewed numerous explanations for the resource curse, I have determined that those involving institutional quality are the most appropriate for this case study. The data required for this work are freely available from a variety of reliable sources, particularly the United Nations and the World Bank. I will begin this section with a discussion of appropriate measures of resource abundance or dependence as well as various measures of economic growth and development. Finally, I will present various measures of institutional quality, discuss the methodology used to collect and assemble them, and look at critiques found in the literature.

### **(6.1) Resource Abundance / Dependence**

Numerous measures of resource abundance can be found in the literature. In terms of the resource curse, it is more relevant to look at the importance of mineral resources to a country's economy than to look at the quantity and quality of known or inferred mineral deposits. In a country with very minor mineral deposits, mining may play a very important economic role if other sectors are undeveloped, whereas mining may play only a small role in a country with large, rich deposits but a large and diversified economy. The most common measure of resource dependence in empirical studies of the resource curse is that of

resource exports as a share of total exports. This measure was employed in work by Bulte *et al* (2005) and Sachs and Warner (1999), and the data are available from the World Bank's 2007 World Development Indicators (WDI).

## **(6.2) Measures of Growth and Development**

According to the resource curse literature, dependence on natural resources is a cause of slow economic growth and development in many developing countries. The vast majority of the work done on the resource curse by economists uses growth of GDP or *per capita* GDP as a measure of economic growth. Chisholm (1982) suggests that it is important to examine economic diversification (i.e. the evolution of economic structure and composition) over time as well as economic growth (i.e. the expansion of total output). To that end, I will also look at data on the composition of Mongolia's economy, particularly the composition of its exports and GDP contributions by sector. GDP growth data as well as data on economic diversification are available from World Bank's 2007 World Development Indicators. This data set was also employed by Gylfason (2001), Ross (1999), Sachs and Warner (1999), Sala-i-Martin and Subramanian (2003), and Svensson (2000). Data on sectoral contributions to GDP are available from the EIU, who compile the data from Mongolian government statistics.

In order to slightly broaden this definition of development, I will also include a measure of human development. Mainstream economics tends to perceive humans as a resource and judge any investment in human 'capital' (e.g.

health, nutrition, education) on the economic return received on said investment (Anand & Sen, 1994). The 'Human Development Report', published annually by the UN since 1990, claims to recognize humans and the lives they lead as valued ends in themselves. The index was meant to be simple to calculate and transparent in order to catch the attention of politicians, policy makers, and the public.

The Human Development Indicators (HDIs) included in the report have three components: (1) survival (life expectancy at birth), (2) knowledge (the proportion of literacy among the adult population), and (3) standard of living (the logarithm of the GNP). Since 1997, the UN has also calculated a Human Poverty Index (HPI) for a group of 120 countries, of which Mongolia is a part. This index uses the same general categories as the HDI but focuses on the proportion of people below a certain threshold level. In terms of survival, the indicator used is the probability of a person not surviving until age forty. For knowledge, the indicator used is the percentage of adults who are illiterate. Two indicators are employed for standard of living: percentage of people without access to safe water and the percentage of children who are underweight for their age. This index is meant to provide an alternative to the one dollar a day (US\$ PPP) poverty line employed by many economists (United Nations Development Program [UNDP], 2007).

These indices necessarily provide only general information and broad averages as more specific data (e.g. average life expectancy vs. life expectancy

by age, gender, etc.) are unavailable or of poor quality for many countries (Anand and Sen, 1994). Limited data availability also means that scores are only calculated at the national level, potentially masking intra-national variation (e.g. rural vs. urban) in different aspects of human development.

According to Morse (2003), there are three main critiques of these indices in the literature. First of all, the methodologies employed have varied since the HDR was first published although the core components of the calculations have remained the same. This makes comparisons of a country's scores over time problematic. Morse (2003) demonstrated that slight methodological variations could result in significant changes in a country's rankings. The second is that the addition and removal of countries each year can result in a country's ranking rising or falling regardless of actual changes in human development that have occurred. This further compromises comparisons over time. The third critique is that the scores in each of the three categories are averaged together implying a degree of substitutability that some people find questionable. For example, a decline in life expectancy will have no effect on a country's score if it is compensated for by an equal increase in literacy rates. These critiques are valid but do not necessarily prevent the HDI from achieving its goal of catching the attention of the public and policy makers and acting as a basic measure of human development.

The UNDP has emphasized that year-on-year comparisons of HDI ranks are not advisable and the above critiques support this. As Morse (2003)

suggests, looking at disaggregated data may provide a more meaningful picture of a country's progress in the human development arena. Bulte *et al* (2005) is an example from the resource curse literature of a study employing measures of human development. The study employed as human development variables countries' HDI scores, the percentage of the population that was undernourished, the percentage of people without access to safe water, and life expectancy. The second and third variables are used in the calculation of the HPI and the last is included in the calculation of the HDI which means that it has been factored in twice here. For this case study I will employ disaggregated data for each component used to calculate the HDI and HPI. This data is available from the UNDP's 2007-2008 Human Development Report and from the 2007 World Development Indicators.

### ***(6.3) Institutional Quality***

Interest in the concept of governance as a criterion for investments, loans, and aid donations arose only fairly recently. Following World War Two and throughout the Cold War period, foreign investment was very limited compared to today and was far outstripped by aid dollars. The goals of western foreign aid donors during this time were almost entirely shaped by the rivalry between the United States and the USSR. The majority of donors explicitly ignored any questionable governance characteristics of recipient nations, focusing instead on improving people's quality of life through economic and social development in the hopes that contented people would not turn to

communism. According to Arndt and Oman (2006) there are four factors principally responsible for the current explosive interest in governance indicators: increased foreign investment, the end of the Cold War, failed reform policies in the developing world in the 1980s and 90s, and the emergence of New Institutional Economics amongst mainstream economists (see North, 1991). Foreign investment (e.g. FDI, portfolio investments, and commercial loans) and foreign aid to developing and emerging markets amounted to more than 400 billion US dollars in 2004 (Arndt and Oman, 2006) and the allocation of those dollars was partially based on governance indicators like those developed by organizations such as Transparency International and the World Bank Institute. The use of these indicators as criteria for the investment of such a large sum of money demonstrates the regard in which they are held by industry and government agencies.

As well as investors, academics have increasingly been using governance indicators in their research. An early example is a 1995 paper by Knack and Keefer, who proposed using indices of risk prepared for potential foreign investors by organizations such as Political Risk Services' 'International Country Risk Guide'. The guide provides scores in the categories of contract enforceability, rule of law, and risk of expropriations. The use of the 'International Country Risk Guide' and indices from other groups such as Freedom House and Transparency International caught on. Sachs and Warner (1997b), for example, adapted the criteria suggested by Knack and Keefer

(1995) in a cross-country study of slow economic growth in Africa. Du Plessis and du Plessis (2006) and Sala-i-Martin and Subramanian (2003) also employed similar criteria.

The most widely used and best respected governance indicators today are those created by Kaufmann, Kraay, and Zoido-Lobaton (and in more recent years by Kaufmann, Kraay, and Mastruzzi) at the World Bank Institute, known as the Worldwide Governance Indicators (WGIs). They were created in response to concerns regarding the difficulties in undertaking cross-country comparisons and interpreting the results with previously available measures. The WGIs comprise three dimensions of governance, each containing six composite indicators that reflect different aspects of governance: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption (See Table 1). The indicators are put together bi-annually (until 2007 when they began to be released annually), using hundreds of existing indicators from thirty-seven different data sources produced by thirty-one different organizations and covering just over two hundred countries.

Ardnt and Oman (2006) provide an excellent critique of the methods employed by Kaufmann *et al.* Their main critique focuses on the measurement errors inherent in calculating governance indicators based on non-replicable surveys and generally perceptions-based data. Kaufmann *et al* (2006) repeatedly and explicitly explain that measurement errors exist and have provided confidence intervals for each score given. They state that comparisons

between countries and/or years can only be considered meaningful where the confidence intervals do not overlap. Along with the organization Transparency International, they are the only generators of governance indicators who highlight this limitation. Arndt and Oman (2006) also point out that the 90 percent confidence interval provided by the authors is only valid if the assumptions on which their calculations are based are accurate. Despite this critique, in an assessment of all governance indicators available, the authors found the WGIIs to be the best overall. For an explanation of how the WGIIs are calculated, see Appendix 1.

The WGIIs provide annual data on Mongolia from 1996 to 2005, a period that includes data from years both before and after major mineral development began. The development of large scale mines in Mongolia expanded after 2000 and their productivity has increased since then, particularly with the recent high prices of commodities which encourage faster paced development of mining capacity and allow for the development of lower grade ores. Although mineral resource exports have dominated Mongolia's economy since its transition began in 1990 (and even before), not enough time has passed since large-scale foreign investment has been made in Mongolia to allow for a robust statistical analysis using this data set. However, Kaufmann *et al*'s (2006) six indicators of governance can still give us an idea of any significant changes in the quality of Mongolia's governance institutions during a period of rapid growth in mineral development and windfall gains related to high world mineral prices.

**Table 1 – Three Dimensions of Governance**

Source: World Bank, 2006a, p.50-1

**Dimension 1:** Process by which governments are selected, monitored, and replaced

**Voice and Accountability**

Extent to which citizens are able to participate in selection of governments. Includes aspects of political process, civil liberties and political rights, independence of the media

**Political Stability**

Perception of likelihood that government in power will be destabilized or overthrown by possible unconstitutional and/or violent means

**Dimension 2:** Capacity of government to effectively formulate and implement sound policies

**Government Effectiveness**

Perceptions of quality of public services provision, quality of bureaucracy, competence of civil servants, independence of the civil service from political pressures, credibility of government's commitment to policies

**Regulatory Quality**

Incidence of market-unfriendly policies and perceptions of burden imposed by excessive regulation in areas such as foreign trade and business development

**Dimension 3:** respect of citizens and state for the institutions that govern economic and social interactions

**Rule of Law**

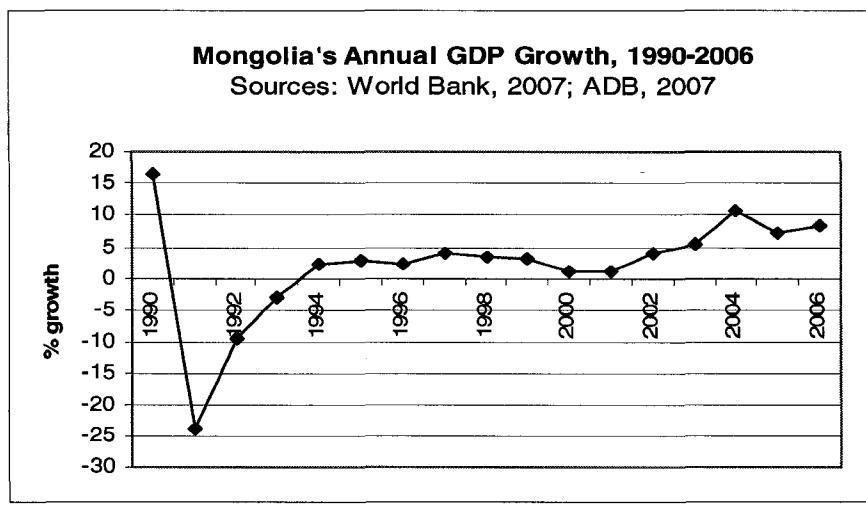
Success in developing an environment in which fair and predictable rules form the basis for economic and social interacts. Extent to which property rights are protected. Perceptions of incidence of crime, effectiveness and predictability of the judiciary, enforceability of contracts.

**Control of Corruption**

Perceptions of corruption defined as the exercise of public power for private gain.

## 7. Results

In this chapter I will present my data and provide a summary explanation thereof. I will begin by looking at economic growth data for Mongolia since 1990 and briefly discuss the events that have influenced it. Next I will examine economic development in Mongolia, namely any changes in the structure of its economy that might demonstrate an increased focus on the mineral sector or diversification and a strengthening of non-resource sectors. At the same time I will illustrate how levels of resource abundance, as measured by share of minerals in exports, have changed since 1990. Fourthly, I have included data on Mongolia's rankings in the UN's Human Development and Human Poverty Indices. Having seen data on Mongolia's economic growth and development, and a basic measure of human development, I will lay out my findings regarding institutional quality in Mongolia and any changes that are apparent over time.



**FIGURE 6**

## **(7.1) Measures of Growth and Development vs. Measures of Resource Dependence**

### **(7.1.1) Economic Growth**

Figure 6 shows Mongolia's GDP growth from the end of communist rule in 1990 until 2006. GDP growth dropped drastically immediately after the transition began, largely as a result of the trade void left by Russia and other CMEA member states. Growth improved but remained negative until 1994, after which it remained low but relatively stable. During these early years, the IMF was providing financial support to fill the budget deficit created by the loss of Russian subsidies. In order to generate more tax revenue to reduce the deficit, the IMF encouraged Mongolia to levy a 10 percent gold export tax in 1998. The following years exhibit stable but low growth, possibly related to low world prices for copper and cashmere – both important export commodities for Mongolia (Rossabi, 2005). The winters of 2000 and 2001 had a devastating impact on the size of herds, killing off a third of the animals and resulting in lower productivity in the agricultural sector as well as in manufacturing based on agricultural products. In 2001, the gold export tax was increased to 13 percent, resulting in temporary halts in the development and operation of a few gold mines. The export tax was repealed in 2002, the year that saw the beginning of construction at Centerra's Boroo gold mine, which was completed in late 2003. Growth peaked in 2004, as flocks recovered, rising mineral prices encouraged increased

exploration and development, and the Boroo mine began commercial production (ADB, 2007). Growth slowed but remained strong in 2005 with cutbacks in manufacturing after the end of global textile and clothing quotas (ADB, 2007).

Economic growth continued to be strong in 2006, attributable to a mild winter and high prices for copper and gold. Chinese demand for cashmere increased and was fed thanks to herd expansion (ADB, 2007). Revenues from copper exports doubled despite actual export volume increasing only very slightly (ADB, 2007). In response to domestic pressures, in spring 2006 the Mongolian government revised its mineral laws, creating an excess-profits tax that affected exports of copper and gold and doubled royalty charges from 2.5 to 5 percent. This despite stability agreements regarding taxation negotiated with some mine operators. Mining investment fell 16 percent in the following year and Centerra halted development of the new Gatsuur gold mine. As of spring 2008, the revised tax laws are still in effect and are unlikely to be changed in the near future, especially given the ever-increasing price of gold. Construction has begun at Ivanhoe's Oyu Tolgoi mine and commercial production is expected to commence in 2010 with expansions coming on line in 2014, dependent on the conclusion of Stability Agreement negotiations. Ignoring for the moment the potential negative effect of the resource curse as mineral revenues continue to rise, this suggests that economic growth ought to continue in the next few years. Mongolia does not publish annual GDP data, however the government estimates that growth in 2007 was 9 percent, higher than the ADB's (2007) forecast seven

percent. *The Economist* predicts GDP growth of 8 percent per year for 2008-09 (EIU, 2008).

### **(7.1.2) Economic Development and Resource Dependence**

One way that economic development can be understood is in terms of diversification. Using export diversification as a proxy for economic diversification at large, in a country where the resource curse was operating, one would expect to see mineral exports outstripping other exports by a significant and possibly increasing degree. Looking first at manufactures exports (Figure 7), we can see that between 1995 and 2005 their value increased significantly and remained stable in 2006. There is no comparison however to growth in ore and metal exports over the same period. Their value nearly tripled in the decade between 1995 and 2005 and then increased by half again in the next year. This sharp increase is likely attributable to the Boroo gold mine coming on line in 2004 and expanding production thereafter as well as exploration and construction expenditures at Oyu Tolgoi. The expansion in the value of ore and metals exports from Mongolia is deceptive because, as the ADB (2007) reports, export receipts for copper doubled in 2006 while the volume of copper exported increased by only two percent from the year before. Between 2002 and 2007, the volume of copper concentrate<sup>5</sup> produced actually declined from 376 thousand tonnes to 371 thousand tonnes (EIU, 2007).

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<sup>5</sup> Copper-bearing ore undergoes minimal processing to reduce transportation costs. The actual product exported is roughly 25 percent pure copper.

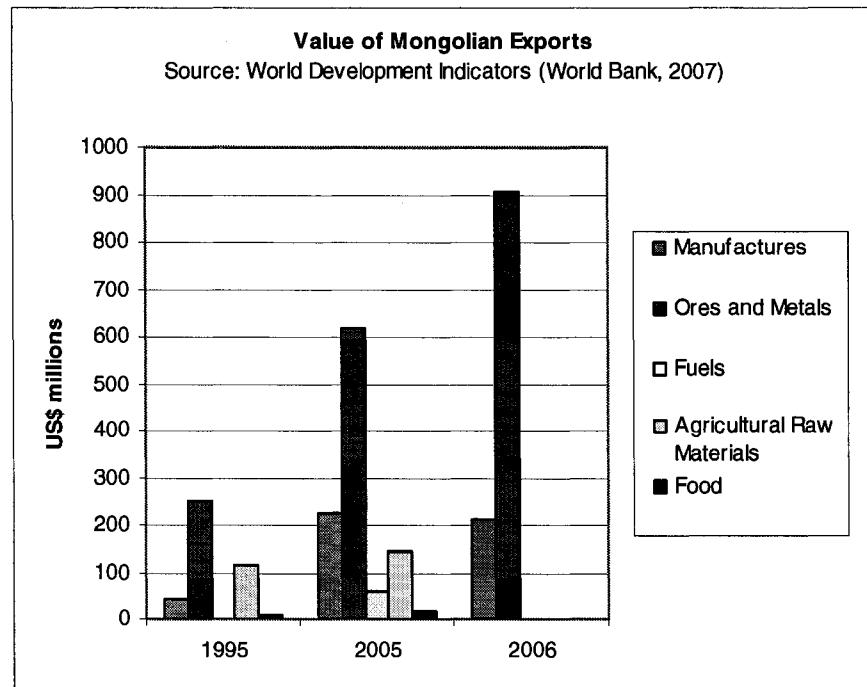
Merely examining exports does not tell the full story of a country's domestic economy. Another proxy that can be used for economic diversification is employment by sector. This data, for the years 1998-2005, can be found in Figure 3. Employment in agriculture has been nearly stable during this period. Manufacturing directly employs more people than does the mining sector; however, its employment numbers remained stable between 1998 and 2004 and declined sharply in 2005 due to cut backs in the textile industry. In comparison, employment in mining was stable until 2002 when foreign-funded exploration and mine development began in earnest. Between 2002 and 2005, employment in the sector doubled. Neither of these categories include people employed indirectly by, for example, financial institutions, cleaning and catering services, construction, utility providers, truck and railway operators, administrative services at all levels of government, training, etc. Given that the mining industry is expanding, it seems likely that their indirect employment figures would be higher.

The share of ores and metals in Mongolia's exports is being taken as a proxy for the country's level of resource dependence and is displayed in Figure 8. To gain insight into the domestic economy as well, Figures 9a and 9b illustrate GDP contributions by sector for the years 1997 to 2005<sup>6</sup>. Agriculture's share of exports and its contribution to GDP have noticeably shrunk since 2001, coinciding with the devastation of the country's herds by winter storms. Its share of both

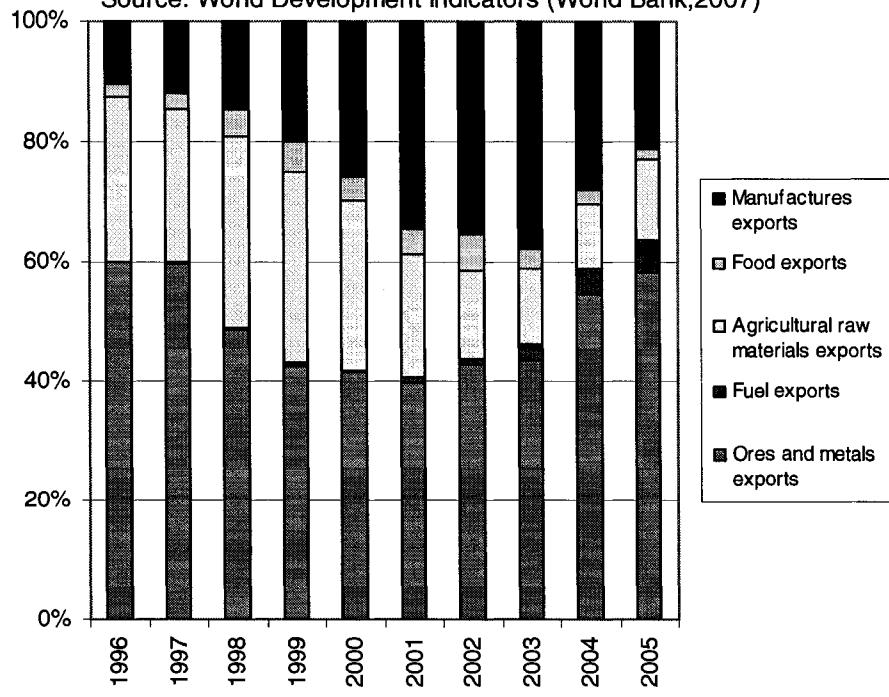
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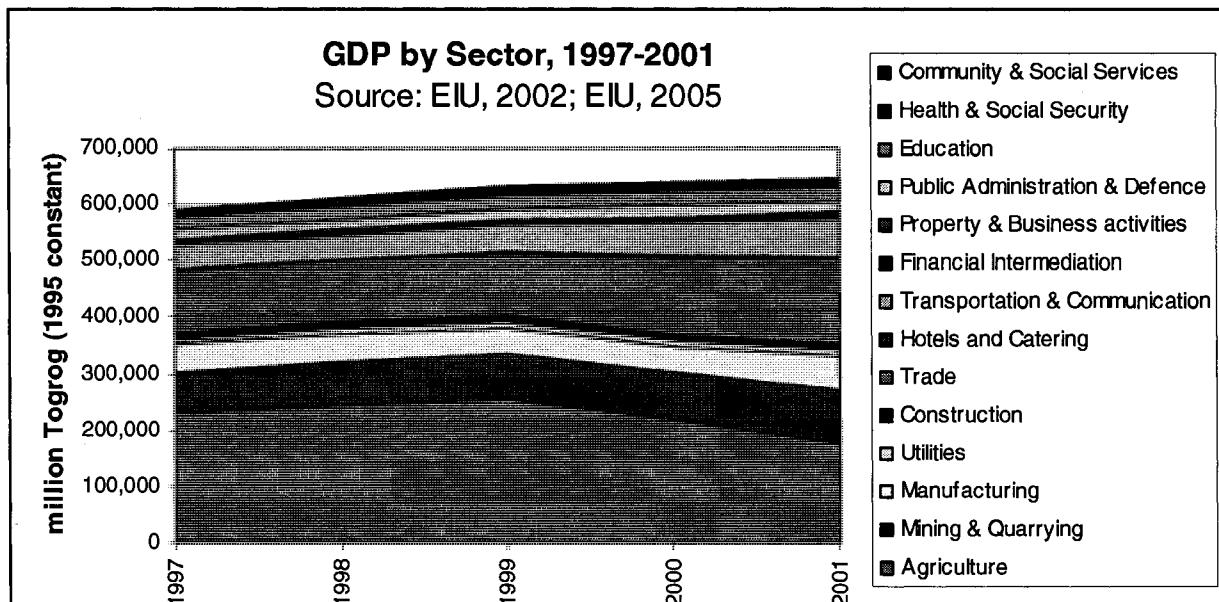
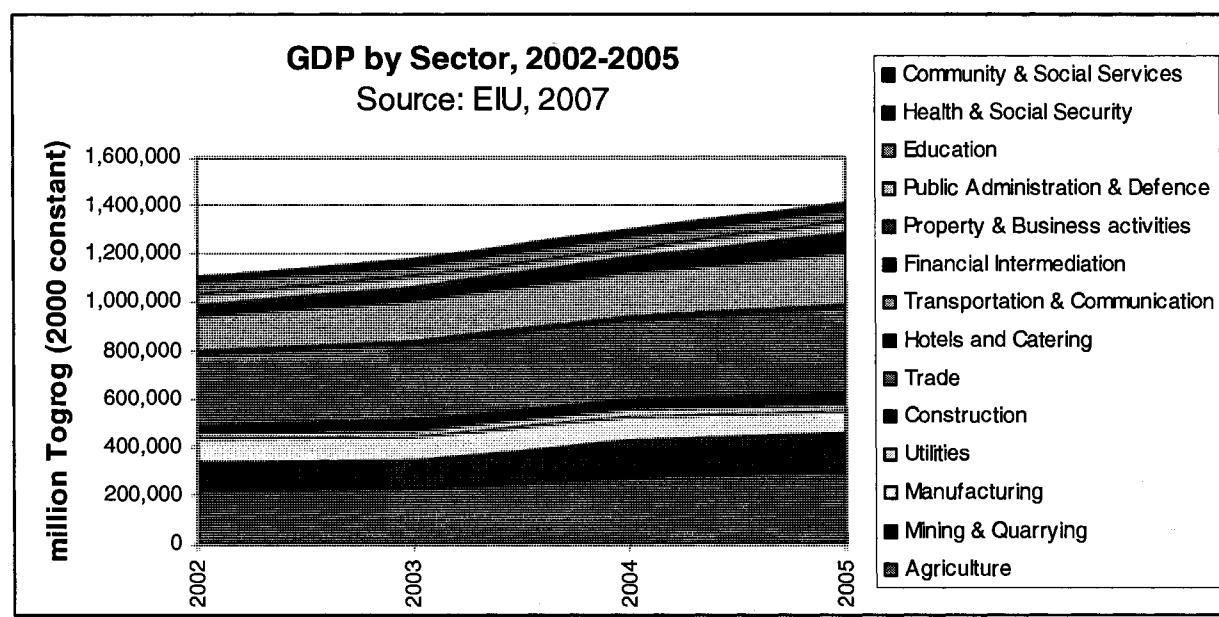
<sup>6</sup>The data are presented in two charts because of a change in calculation methods. Note that the togrog is Mongolia's currency.

has remained small despite the recovery of herd size and its importance to the subsistence economy. Manufacturing's share of exports (although not its contribution to GDP) increased between 1996 and 2003 when it was nearly at a par with ores and minerals whose share of exports declined during that period. After 2003, ores and minerals rallied in both categories with the opening of the Boroo gold mine, and manufactures began to fall off in share of exports but remain constant in GDP contribution. At the time of writing, data for the years 2006-07 were not available but it seems likely that this would continue, especially since metal prices have continued to be high.

**FIGURE 7****Composition of Mongolia's Merchandise Exports,  
1996-2005**

Source: World Development Indicators (World Bank, 2007)

**FIGURE 8**

**FIGURE 9a****FIGURE 9b**

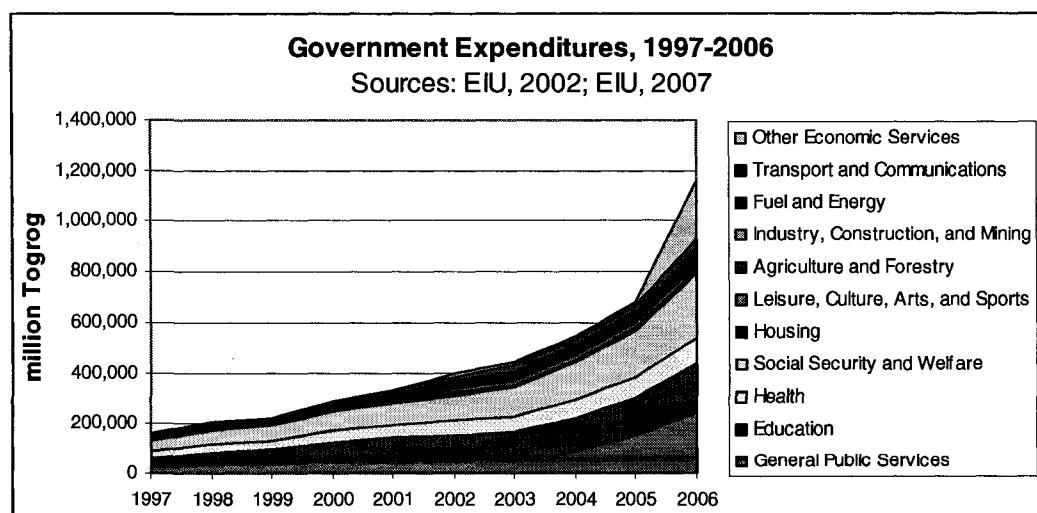
### **(7.1.3) Human Development Index / Human Poverty Index**

Table 2 displays the variations in various measures of human development in Mongolia during the period from 1990 to 2006. The data set is incomplete, illustrating one of the weaknesses of the HDI, namely that national level data are not available for all criteria for all years. Life expectancy has increased slightly over the years. A small drop occurred in 2000-2001, perhaps due to the impact of severe weather conditions on the herds that support much of the population. Adult literacy is high but not as high as it was thought to be during the communist era. From the little data available, childhood malnourishment appears to have remained relatively constant until dropping by nearly half in 2005. GDP *per capita* (PPP US\$) increased by more than a third between 1998 and 2005. Aside from literacy rates, all of the human development indicators shown here exhibit increases over time.

These increases may be linked to increased social spending on the part of the government. Figure 10 shows changes in government spending between 1997 and 2006. This data shows that Mongolia's budget increased dramatically during these two decades and that spending in the categories of education, health care, and social services increased steadily over that period as well.

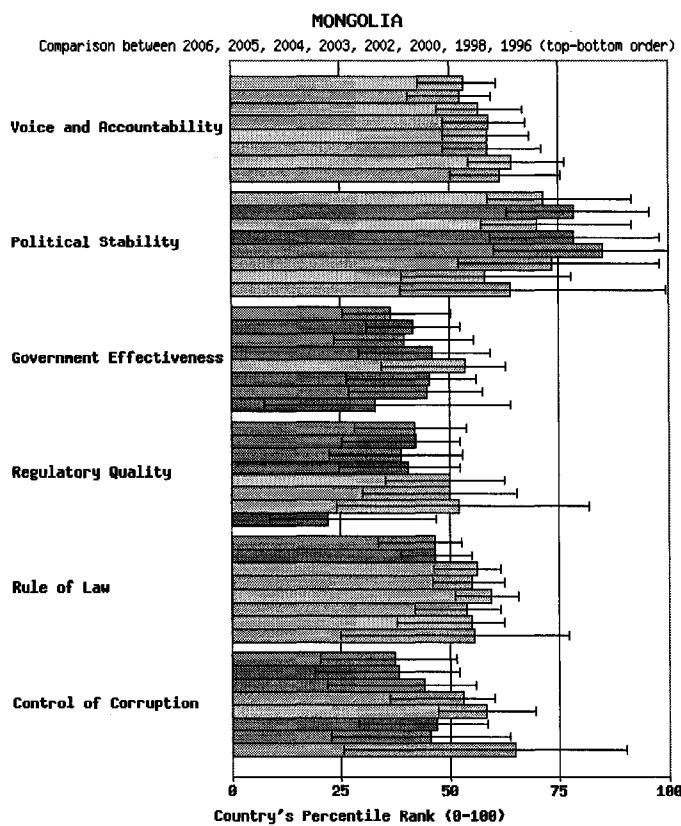
**TABLE 2 – Measures of Human Development in Mongolia, 1990-2005. Source: UNCD, 2007.**

	life expectancy at birth (years)	adult literacy (%)	access to improved water source (%)	children underweight for age (% under age 5)	GDP per capita (PPP US\$)
1990	63		62		
1991					
1992				12.3	
1993					
1994					
1995	64				
1996					
1997					
1998	66	83	68		1541
1999				12.5	
2000	63			12.7	
2001	63	98.5			1740
2002	66		62		
2003	64				
2004	65	97.8	62	13	2056
2005	66	97.8	62	7	2107

**FIGURE 10**

## **(7.2) IQ and World Governance Indicators**

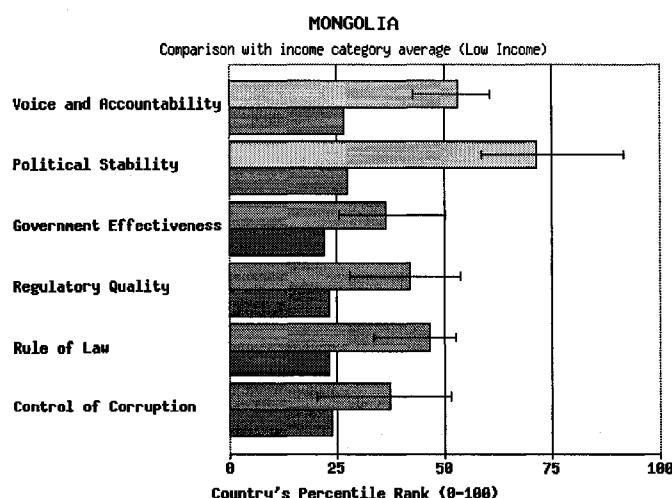
Figure 11 is taken from Kauffman *et al* (2007) and shows the changes in five categories of governance indicators for Mongolia since 1996. As discussed in the methodology section, measurement of governance indicators is fraught with difficulties, resulting in measurement error. In this case, the measurement errors at a 90 percent confidence level overlap, preventing us from making comparisons between the years. Even at a 75 percent confidence level, the measurement errors overlap in all categories for all years. Kauffman *et al* (2007) provide a comparison of Mongolia's scores to the average scores achieved by countries in its income level (low). Figure 12 shows that Mongolia performs well, exceeding or even far exceeding the average in all categories except for 'Control of Corruption', where the margin of error means the score could be anywhere from just below average to far above it. It is notable that the size of the measurement error in each category appears to have become smaller with each year so that in the future, it may be possible to draw greater conclusions from this index of development.

**Figure 11**

**Annual changes in measures of institutional quality, 1996 (bottom) - 2006 (top)**

Colours indicate a level of performance from poor (red) to excellent (green).

Source: Kaufmann *et al*, 2007

**Figure 12**

**Institutional quality scores in Mongolia vs. income category average, 2006**

Bars showing error margins are for Mongolia, the other bars represent the income category average.

Source: Kaufmann *et al*, 2007

## **8. Discussion of my findings**

Mongolia is a small, resource exporting country and fits the criteria of a mineral economy as set out by Nankani (1979) and employed by Auty (1993) and Gelb (1988). A large body of research suggests that a country such as Mongolia ought to be suffering from a resource curse – that is that its economic reliance on mineral exports should have translated into lower than expected levels of economic growth and diversification. In order to establish if there is in fact a curse at work in Mongolia, I will look for evidence of its fingerprints on the Mongolian economy by examining measures of economic growth and diversification as well as changes in human welfare in the context of its resource export situation. If the resource curse were at work in Mongolia, some scholars argue that it would manifest as a decline in institutional quality, a somewhat inconclusive quantification of which is provided by the WGIIs. A look at some of the current actions of the Mongolian government and key actors in its economy may provide insights into whether and how the resource curse might ‘cast its spell’ in coming years when high commodity prices may no longer inflate the state’s coffers.

### ***(8.1) Evidence for the Resource Curse in Mongolia***

Since undertaking the change from a communist state with a command economy to a democratic state with a market economy in 1990, Mongolia has experienced low but generally positive economic growth. Initially the state’s

economy was bolstered to a significant degree by foreign aid, receiving, according to The Economist (2002), some of the highest per capita levels of aid in the world. Gradually, FDI came to play an increasingly important role in the economy, particularly since 1999, when high commodity prices and Mongolia's developing institutional framework encouraged an expansion of mineral exploration and development (See Figure 4). Mongolia has exhibited strong growth over the last four years and this trend is expected to continue in the near future (ADB, 2007; EIU, 2008). However, much of the recent GDP growth can be attributed more to high prices for exports of copper, gold, and even raw cashmere than to any expansion of production volume in either the mining or non-mining sectors of the economy. According to the ADB (2007), export receipts for copper doubled in 2006 while the volume of copper exported increased by only two percent and the Economist Intelligence Unit (2008) describes mining output for 2006-07 as sluggish.

Economic growth is only one facet of what determines if a country's economy is healthy. Economic development, here measured in terms of economic diversification and contribution to GDP, is another important yardstick. Agriculture, in the form of nomadic herding for subsistence and export, and mining for export minerals are the two most important components of Mongolia's economy. The fact that one season's weather or operational changes at one mine can be the primary explanatory factor for noticeable changes in the country's annual economic performance illustrates the small size and lack of

diversification in Mongolia's economy. With little evidence of diversification to date, Mongolia seems to be on track to follow in the footsteps of the oil exporting economies studied by Auty (1993) and Gelb (1988) that failed to use windfall gains from a price boom to aid in diversification into sectors with more domestic linkages such as manufacturing.

Mongolia is a landlocked country with a sparse population and a small economy, sandwiched between the political and economic giants of China and Russia. Inevitably the proximity of their markets and a need to maintain friendly relations with both countries will strongly influence Mongolia's policies and development. During the Soviet era, Russia and other CMEA states were Mongolia's primary trading partners. Like other satellite states in Central Asia, Mongolia was a source of raw materials – both mineral and agricultural – for the Soviet Union's industrial core, and with subsidized manufactured imports there was little incentive for diversification out of primary production. In the present day, China plays an increasingly important role as a trade partner with Mongolia.

Figures 5a and 5b demonstrate the changing importance of the two countries as trade partners between 1997 and 2005. Table 3 summarizes more recent figures. Before Mongolia underwent its transition, more than 90 percent of its trade was with Russia. That amount dropped quickly after 1990 although Russia is still Mongolia's top source of imports, representing 36.7 percent of imports, mostly oil, in 2006 (EIU, 2008). Its share of exports has fallen to just 2.9 percent (EIU, 2008). China's share of Mongolian trade was minuscule before

the transition but has increased a great deal since then, despite historic tensions between the two peoples, accounting for 27.6 percent of imports and 67.4 percent of exports in 2005 (EIU, 2007). In the first nine months of 2007, China accounted for a massive 74.5 percent of Mongolia's exports (EIU, 2008). The size of this figure reflects the importance of metal and ore exports to Mongolia's economy and the fact that nearly all of those exports go to fill China's enormous demand for copper. Not included in these numbers is the value of informal trade (e.g. smuggling of gold from artisanal mines) across the long and relatively unguarded Chinese border (World Bank, 2006b). Smuggling is likely facilitated by the high proportion of ethnic Mongolians living in China's northern territory of Inner Mongolia.

**TABLE 3 – Main Origins of Imports and Main Destinations of Exports, 2003-2006 (% of total)**

Sources: ADB, 2006; EIU, Sept. 2005; EIU, Feb. 2007; EIU, Sept. 2007; Feb. 2008

Imports	2003	2004	2005	2006
Russia	35.7	33.5	33.4	36.7
China	20.8	22.0	26.6	27.6
Japan	4.8	7.3	6.6	6.8
South Korea	11.8	6.0	5.9	5.6
Kazakhstan	0.6	2.6	2.5	3.5
US	2.9	4.6	2.6	n/a
Germany	5.2	3.3	4.3	n/a
Exports	2003	2004	2005	2006
China	47.2	46.8	54.4	67.4
Canada	n/a	n/a	n/a	11.1
US	32.2	18.0	14.3	7.7
Russia	6.3	2.4	2.9	2.9
UK	n/a	15.8	4.7	2.5
Japan	1.2	3.8	0.6	n/a
South Korea	4.7	0.9	1.4	n/a

In contrast with Mongolia, other formerly communist, resource-dependent states in Central Asia are experiencing increased investment from Russia. Russia has large quantities of oil that it has been developing to an increasing degree. In 2006, it overtook Saudi Arabia as the world's largest oil producer (Wishnick, 2007). This high volume, coupled with nearly record high oil prices, has given Russia the economic wherewithal to increase its presence, both financially and militarily, in Central Asia again. The political impetus for Russia's reassertion of its presence is to compensate for the increased American presence in the region post-9/11 (Buszynski, 2005). Examples of this are promises to invest one billion dollars in Uzbekistan's resource sector (Kimura, 2005), to provide five billion dollars in military aid to Kyrgyzstan (Wishnick, 2006), and a growing interest in once again investing in Mongolia's mineral sector (Noerper, 2007).

Mongolia fails to capture value added on the minerals taken from its soil, shipping minimally processed metals out of the country for smelting and refining and use in foreign manufactures. Even if there were energy and capital available for the construction of refineries and smelters, with the Chinese market so close and Chinese firms able to acquire loans, state subsidies, and skilled workers, it would be difficult for value-added enterprises to gain a foothold. Existing processors of agricultural products such as leather and textile manufacturers already have difficulty competing with Chinese factories for raw materials and their facilities frequently stand idle (Rossabi, 2005).

Additionally, now that Mongolia has a policy framework in place for the mineral sector and government departments and staff to support it, the sector has gained a certain momentum and it will be become increasingly difficult to steer resources into different paths. Shafer (1994) suggests that a state takes on the characteristics of its main industry and that a great many resources and the traditions of the established bureaucratic culture are dedicated to maintaining the status quo. As Mongolia's economy continues to be dominated by mineral resource exports, the institutional and infrastructural frameworks facilitating mineral investment will encourage more mineral investment, portions of the bureaucracy that gain employment and income from the mineral sector will work to preserve the *status quo*, and, while they last, tax and royalty revenues from the sector will allow governments to continue spending in areas that assist them in getting re-elected.

After the example of Bulte *et al* (2005), I have included measures of human development in my assessment of the state of Mongolia and the possible presence of a resource curse in that country. Bulte *et al* (2005) conducted a cross-country statistical analysis to determine whether the harmful effect of natural resources on economic growth had a similar effect on measures of economic underdevelopment and welfare. What data there are available on Mongolia from the UNDP's Human Development Indicators show some improvement in each category examined, except for literacy rates. That being said, literacy was a high priority in many communist countries and was very high

to begin with (Fritz, 2002), so that even though it has slipped slightly, it continues to be high. Health care and education, particularly in rural areas, continue to be assisted by aid programs from the ADB (EIU, 2007).

Mongolia's climate and small, dispersed population may have contributed to maintaining its human development scores despite resource dependency and the state's small budget. Unlike some developing nations that have large populations of desperately poor people living in urban slums, many Mongolians have a herding tradition to fall back on when there is no social safety net to catch them. This, of course, does not preclude them from also being desperately poor. The dispersed population and decidedly non-tropical climate in Mongolia may also have a dampening effect on the spread of disease in contrast to many other mineral resource dependent countries, preventing some of the human development indicators from falling significantly when health care spending is scarce. It would be interesting and useful to have human development data for different segments of Mongolia's population (e.g. urban vs. rural, by age cohort, by gender, by level of educational attainment) in order to determine if the national averages presented here are hiding variations in well-being relevant to this study. There is some suggestion in the literature that social divisions in Mongolia are most noticeable between rural and urban populations, particularly in terms of a growing income disparity and differential access to public services such as education and health care (Fritz, 2002; Rossabi, 2005).

### **(8.2) Mechanisms by which the curse casts its spell**

From economic and human development data alone it is difficult to say if a resource curse is at work in Mongolia or not, particularly over the time period being examined here. We can however attempt to determine if the scene is being set for it to appear. While the governance indicators calculated by Kauffman *et al* (2007) for the World Bank have too large a measurement error to tell us how institutional quality has fared over time in Mongolia, they can still provide us with some insights into the state of institutional quality. When comparing Mongolia's institutional quality scores to those of countries in a comparable income bracket, we can see that Mongolia exceeds the average in every category except control of corruption, where the range of measurement error means the score could be anywhere from slightly below average to far above. Corruption has been a growing concern of the Mongolian people, becoming a major election issue in 2008 (EIU, 2008).

A regional perspective on these scores may provide further insight into the state of Mongolia's institutional quality. The countries of Kazakhstan, Kyrgyzstan, and Uzbekistan are all former Soviet republics and, like Mongolia, are resource exporters, although they are all oil exporters, which Mongolia is not. Watts (2004) states that the character of oil and its place in the public imagination are important factors to consider when studying the resource curse. Mongolia's gold and copper exports do not have the same charisma as oil, but I believe a comparison between them can still be informative. In the case of all

three countries, Mongolia tends to score in a higher percentile bracket across the categories. As with Mongolia, measurement error prevents year-on-year comparisons in the individual countries with one exception. Measures of political stability have fallen so dramatically in Uzbekistan and Kyrgyzstan that the change falls outside of the error margin. Collier and Hoeffer (2004) showed that high levels of resource dependence were strongly correlated with rebellion and civil war which may help to explain this data.

Since it is only possible to draw vague conclusions from the WGI's, it is necessary to look behind the scenes at some of the activities that might have affected those indicators. According to the resource curse literature, such activities would include rent seeking behaviours on the part of the government and government officials, failure to protect property rights or enforce contracts, civil unrest, and hindrance of reforms or diversification efforts by those benefiting from resource rents. I am hesitant to employ the over-used term 'sustainable development', however evidence that Mongolia is not falling prey to the resource curse would be the use of the revenues received by the state for the liquidation of natural capital to create or enhance other state assets. For example, human development initiatives, maintaining the integrity of natural systems, enhancing infrastructure, fostering innovation, and encouraging diversification.

Many forms of rent seeking on the part of governments and government officials have deleterious effects on institutional quality. Auty (1993) warns

against "damaging politically driven intervention" (p.21) in the mining sector with the intent of acquiring a greater share of the profits. Mongolia has in fact instituted a 68 percent windfall gains tax on prices exceeding US\$6500 per ton of copper and US\$500 per ounce of gold, market prices that, at the time of writing, have been met or exceeded ever since the tax was imposed. The tax is supported by a large segment of the Mongolian population, who feel that the tax incentives granted to some foreign mining operations have been too generous and argue that Mongolia should benefit more from the extraction and sale of its finite resources. This pressure is counter-balanced by foreign mining firms operating in Mongolia, some of whom had previously negotiated Stability Agreements with the state and are now facing higher-than-agreed taxes, for example Centerra's Boroo gold mine. The imposition of this tax for the purpose of getting a bigger share of rents as well as questionable adherence to contractual agreements both constitute a decline in overall institutional quality.

Mongolia is not alone in the imposition of higher taxes when faced with high commodity prices. High oil prices have spurred the governments of the Canadian provinces of Newfoundland and Alberta to introduce changes to their tax regimes to capture a share of oil profits leaving their provinces.

The same mineral law revisions that introduced the excess profits tax also allow the government to acquire a share of those mineral deposits deemed by the government to be of strategic importance. The share allowed is 50 percent of deposits developed with government assistance and 30 percent of privately

developed deposits (EIU, 2005). The Boroo gold mine was deemed strategically important but the government decided not to exercise its right.

Corruption has been and continues to be a popular topic in the Mongolian media. With the 2005 ratification of the UN's Anti-Corruption Convention, corruption has been much in the public eye in Mongolia. According to Tuya (2006), citizens have become increasingly vocal on the matter and numerous civic movements are active. This increased visibility may or may not have something to do with the government progressively relinquishing control of Mongolian Television and Mongolian Radio and finally reconstituting it as a public broadcasting corporation in 2007 (EIU, 2007). Despite this, politicians in Mongolia do not seem to have gone to the lengths observed in some other resource dependent nations. For example, the institutional frameworks regulating the use of public funds in some timber exporting countries in Southeast Asia were found to have weakened as a result of large resource rents (Ross, 2001). A case study of Zambia revealed similar results, with politicians using mineral revenues to ensure favourable election results through increased public spending (du Plessis and du Plessis, 2006). I have not found any mention of mineral rents specifically being used for electioneering in Mongolia although I suspect that public funds are used to this end to some degree in most electoral systems. There is an election scheduled for early to mid-2008 and perhaps with revenues bolstered by high commodity prices and compounded by increased taxes on mining profits, a greater effect may be seen.

Resource rents have also been suggested to hinder improvements in democratic reforms, and likely associated indicators of institutional quality, through a variety of avenues. Ross (2004) found that oil and non-fuel minerals impede democracy through a rentier effect (i.e. use of rents by the state both to substitute for tax revenues and for patronage purposes, decreasing pressure for accountability), a repression effect (i.e. use of rents by the state to subdue reformers through military might), and a modernization effect (i.e. a social effect where economic development does not lead to theoretically predicted social and cultural changes that in turn lead to democratization). In Mongolia's case, the impetus for and process of democratization began before the largest mineral deposits were developed and exploited, ruling out a modernization effect. Foreign capital investments in mining were attracted because of both the democratic transition underway and the liberal economic reforms being instituted.

The Mongolian government's revenues have been very low, even with high inputs of foreign aid and high resource prices. Only in the past two years has the government had a budget surplus and there has been little to spend on social services that might satisfy the people. This lack of funds and lack of politically motivated social spending suggests that no rentier effect is at play. The repression effect did not come into play either as, contrary to the predictions of Collier and Hoeffler (2004), there has been no widespread rebellion or civil unrest in Mongolia that needed to be subdued by force. Ross' (2004)

explanation for how the resource curse manifests itself does not contribute much to our understanding of Mongolia's situation.

Work by Esanov *et al* (2001) focused on the role of mineral rents in the transition process in a selection of Central Asian states. They suggested that in countries (like Mongolia) that had little industry and few developed mineral resources at the beginning of the transition process, the individuals in power would have to seek capital from elsewhere, usually foreign aid donors, to bolster their regimes. This is what Mongolia did, instituting sweeping economic and political reforms in order to meet the conditions of donor agencies. In this way, many indicators of institutional quality were likely improved upon from nearly the beginning of the transition. The effects of foreign aid receipts on a country's economy are thought to have similar characteristics to those of resource rents, meaning that without any caveats attached to aid disbursements, recipient countries are likely to experience the aid equivalent of the resource curse (Svensson, 2006).

Mongolian politics have followed a different route than other states that have transitioned to a democracy with a market economy. In most eastern European countries that undertook this transition, it was marked by a removal from power of the old guard either by a negotiated exchange between the old and new elites, or as a result of a decisive shift in a democratic election (Fritz, 2002). In Mongolia, no negotiated handing over of power occurred, and the 1990 elections resulted in a landslide victory by the incumbent communist MPRP.

Since then, the presidency and control of the parliament has shifted back and forth between the MPRP and various coalitions of reformer parties. In 2006, the MPRP won a minority government and formed a coalition government. In the intervening two years, various coalitions have been formed and dissolved. These coalitions are held together more by loyalties to political clans and strong leaders than by any shared ideologies or policy priorities (EIU, 2007). Although Fritz (2002) claims that few Mongolians are aware of their clan affiliations.

Tornell and Lane (1999) suggest that an important characteristic of countries suffering from the resource curse is the presence of several powerful groups in the society. These groups are thought to gain power for themselves through 'discretionary fiscal redistribution', diverting funds from more productive destinations. Mongolia's political scene does not conform to this model, possibly because of the high degree of ethnic homogeneity. The largest divisions seem to be between the rural and urban portions of the population. Fritz (2002) argues that countries with small populations tend to be more democratic (with the notable exception of some Middle Eastern states), possibly because elites are proportionally smaller. She also points out that Mongolia has one main political and administrative centre, Ulaan Baatar, which is home to more than a third of the country's population. In this way, it somewhat resembles a city state, the pre-twentieth century ideal setting for a democratic government (Fritz, 2002). These political characteristics suggest that Mongolia may be in a good position to

avoid some of the rent-seeking and institutional-quality-compromising effects of the resource curse.

## **9. Conclusion**

While the resource curse has garnered much academic attention, particularly in the last two decades, research has generally taken the form of cross-country statistical analyses or case studies of a narrow range of resource dependent countries. The objective of this paper was to expand the body of knowledge on the resource curse by examining the case of Mongolia in the light of the theories most commonly found in recent literature. After reviewing the various explanations on offer, I determined that in the case of Mongolia it would be best to focus on the role of institutional quality, and the political setting in which the country's institutions have been developed, in the operation of the resource curse.

Measures of Mongolia's economic health (growth and diversification) and its human development record show only some evidence of the resource curse's fingerprints. Growth has become and remained strong, bolstered by high commodity prices. Economic diversification, namely the development of value-added activities, particularly those not related to the mineral sector, has been very minimal. Whether this is due to resistance from those benefiting from the status quo or due to difficulties in competing with the Chinese economy is unclear. Human development indicators have remained roughly stable since 1990, not showing any ill effects from the curse.

The most commonly presented explanation for the way the resource curse 'casts its spell' is that of declining institutional quality. Direct measures of

institutional quality provided inconclusive evidence of any changes in Mongolia over time, however they did show that Mongolia compares favorably to other low income countries and to other transitioning, resource-dependent Central Asian countries. Again, there is not strong support for an argument that the resource curse is at work in Mongolia. An improvement of data quality and methodological refinements in the development of the WGI would make them a more useful tool for learning more about linkages between institutional quality, resource dependence, and economic and human development.

Looking at proxy evidence for a decline in institutional quality, namely an exploration of Mongolia's political scene, was a more fruitful avenue of enquiry. Mongolia's imposition of a windfall gains tax and the levying of it on firms with contractual Stability Agreements can be construed as a decline in institutional quality. On the plus side, there seems to be little evidence for use of public funds for electioneering, as has been the case in other countries. However, concerns about corruption are on the public's mind, as evidenced by the Mongolian media. The fact that democratic reforms were enacted and an institutional framework developed before resource rents became as important an economic force as they are now may have some degree of dampening effect on the effects of the resource curse in the future.

As Ross (1999) states, "the failure of states to take measures that could change resource abundance from a liability to an asset has become the most puzzling part of the resource curse" (p.307). This phenomenon, and the

resource curse at large, is interesting to consider in terms of theories of weak sustainability. Revenues from the liquidation of non-renewable mineral resources would ideally be paralleled by investments in other forms of capital. Mongolia has demonstrated some degree of ability to do this, investing a growing percent of its budget in health care, education, and social services since its revenues have begun to increase, largely thanks to mining taxes and royalties. With the assistance of aid organizations, the country's transportation, communication, and energy generation and transmission infrastructure is gradually being refurbished and expanded. Unlike some of its Central Asian counterparts, Mongolia has created and maintained a democratic system of government, controlled by a strong institutional framework.

Mongolia provides an excellent opportunity for future research on the resource curse to follow the political and economic changes it undergoes over the coming years and decades. Will Mongolia's relatively unique historical and political characteristics result in a lessening of the predicted negative impact of its heavy reliance on mineral exports? If the world prices of copper and gold fall, will the country be able to maintain the progress that it has achieved so far? Can Mongolia prove itself to be an example of a sustainable mineral economy?

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## **11. Appendix 1: Calculation of World Governance**

### **Indicators**

A very detailed description of the methods used to generate the WGIIs can be found in Kaufmann *et al* (2004). However, Arndt and Oman (2006) provide an excellent summary of the methods used by Kaufmann and his colleagues. First, relevant indicators already in existence are identified. The indicators are then aggregated by source to calculate a single score for each source. Second, a formula is applied to each source that is to be employed for a particular composite indicator to determine if it covers a large enough sample of countries to be considered representative. Thirdly, those sources determined to be representative are aggregated into a preliminary composite indicator, weighted according to their correlation with one another. Arndt and Oman (2006) comment that this assumes that the errors found in each source are unrelated to each other – an unrealistic assumption in their opinion. The fourth step is to do a statistical regression on those sources deemed earlier to be non-representative on the preliminary composite indicator to calculate estimates of their error variances. These values are again weighted by their correlation. The final step is to calculate new weights for all sources according to their individual error variances and then aggregate them by weights in order to produce the final composite indicator.