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Preventing Resource Curse in Mongolia

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Abstract

Countries that possess rich mineral deposits, it is widely assumed, are fortunate. Such deposits are assets, part of a country's natural capital. Mining is the key that converts dormant mineral wealth into schools, homes, ports, and other forms of capital that directly contribute to economic development. Over the past two decades, however, a more negative view of mining has emerged that questions the positive relationship between mineral extraction and economic development. At the same time, Mongolia government and mineral resource companies are preparing for undertaking extraction of 6 world-class mineral deposits in Mongolia expecting that Mongolia economy experience economic development boom for next decades. However, the paper reveals that having abundant mineral resource and exporting these resources to the third country does not fulfill the expected result. Not even close. For Mongolian economy to grow at high rate and its people would enjoy better life, it has to have solid institutional infrastructure that supports sustainable long term economic growth. Unfortunately, this paper reveals that Mongolia does not possess this crucial condition.

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Chapter 1

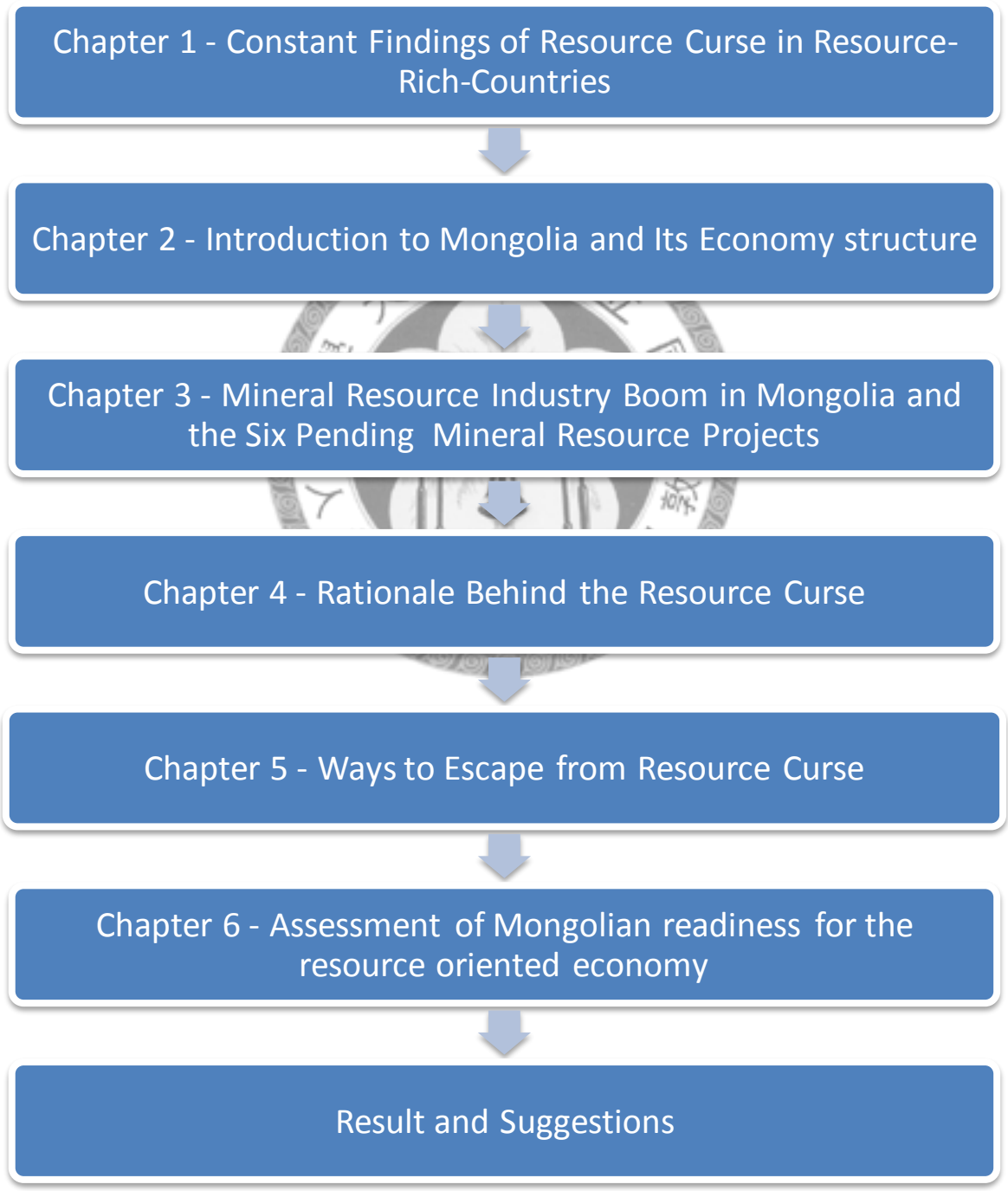
Purpose and Methodology

Mongolia economy has been experiencing unprecedented economic growth rate for the last five years mostly because of significant amount of foreign direct investments directed toward its booming mineral resource exploration sector and the current high commodity prices. In result, 6 huge world class mineral reserves are explored. Many international non-government organizations (for example, The World Growth, World Bank and International Monetary Fund), scholars (for example, Robert, J Shapiro) and Mongolian government are urging the project to start its operation. Because they predict that Mongolian economy will take off, experiencing 30% GDP growth rate and creation of significant of amount of job for the next two decades once the reserves undertakes extractions. Therefore, any delay would imply huge economic losses.

On the other hand, there have been constant empirical findings of long term slower economic growth rate in mineral resource exporting countries. Resource rich countries such Chad, Niger and Jordon had experienced much slower economic growth during their resource export boom and afterwards until now. In extreme cases, for example in Nigeria, resource abundance is causing social and political unrest, and even civil wars. This phenomenon is known as "The Resource Curse." Ironically, resource-lacking-countries such as Korea and Taiwan has been experiencing long-term high-economic growth rate and become one of the most developed countries in the world.

In this paper, I tried to address two questions. First, I tried to assess whether Mongolia is ready to proceed with these world class huge amount of mineral resource export or not.

This question is important because the history shows that mineral resource could lead one country to either prosperity or severe poverty. Second, in order to prevent the tragic stories in the other mineral economies, what steps the Mongolian government should take to avoid the resource curse. I took the following steps to reach the desired results:



Chapter 2

Constant Findings of Resource Curse in Resource Rich Countries

2.1 Literature review

Traditionally, abundant natural resources have been regarded as source of wealth and contribution to successful development and have provided an explanation for the growth of Western countries, such as Australia, the U.S. and Canada (North, 1963). However, during the past three decades, the star performers among developing countries, such as Korea and Taiwan, are resource poor, while the majority of the resource-rich countries, such as Argentina, Mexico, Peru, Saudi Arabia and Venezuela, have had lower than average annual rates of gross domestic product (GDP) growth in the 1980 – 1993 period, and negative per capita gross national product (GNP) growth.

Several econometric studies covering nearly all developing countries have provided impressive evidence of the relatively slower rate of growth of the resource-rich countries over the past several decades (Nankani, 1970; Gelb et al., 1988; Auty, 1986, 1993; Sachs and Warner, 1995). For example, Sachs and Warner (1995) found a negative relationship between per capita growth rates and the ratio of natural resource exports to GDP for eighteen developing countries over the period 1971 – 1989.

Many scholars found this result to remain significant in cross-country growth regressions, after taking account of a large number of additional variables, including initial GDP, trade

policy, investment rates, and trade volatility. While relatively poor per capita growth performance characterized resource-rich developing countries generally, poor per capita growth was especially manifest in mineral exporting countries (table 1).

Table 1 - Export of fuels, minerals and metals as a percentage of total export, per capita GNP (1992 $) and average annual GNP growth rates (1980 - 1992)

Country	Share of Exports (%)	GNP (1992 $)	Average Annual Growth (%)
Sierra Leone	34	160	-1.4
Niger	86	280	-4.3
Nigeria	96	320	-0.4
Togo	45	390	-1.8
Mauritania	84	530	-0.8
Indonesia	38	670	4.0
Bolivia	66	680	-1.5
Papua New Guinea	52	950	0.0
Peru	49	950	-2.8
Congo	92	1030	-0.8
Ecuador	45	1070	-0.3
Jordon	34	1120	-5.4
Columbia	29	1330	1.4
Algeria	97	1840	-0.5
Iran	90	2200	-1.4
Chile	47	2730	3.7
Venezuela	86	2910	-0.8
Mexico	34	3470	0.2
Trinidad/Tobago	64	3940	-2.6
Gabon	89	4450	-3.7
Oman	94	6480	4.1
Saudi Arabia	99	7510	-3.3
Botswana	na	2790	6.1
All low - and middle-income countries			0.9

Source: World Bank

Thus, over the period 1980 – 1992 the average annual per capita GNP growth rate of twenty – three mineral exporters was a negative 0.5%, and only five of these (Indonesia,

Colombia, Chile, Oman and Botswana) had positive rates of per capita GNP growth. For all low and middle income countries, the average rate of growth in per capita GNP for this period was 0.9%. In a World Bank Staff Working Paper, Nankani (1979) found that mineral economics have been less successful in economics performance: lower rates of growth, lower levels of social welfare, and more highly skewed income distributions than non-mineral LDCs. Gelb et al. (1988) found the same thing especially for mineral resource exporting countries.

2.2 Empirical Findings - Growth Experience of Mineral Exporting Countries since 1960

The growth records of mineral exporting countries over the past three decades reflect, in part, the effects of fluctuations in export revenue, but they also reflect symptoms of the Dutch Disease and various structural changes in the individual economies. The 1970 – 1980 period was one in which substantial export booms occurred in nearly all mineral – exporting countries. During this period, the average price of metals increased three-fold and the price of crude petroleum rose fifteen-fold. The price of copper approximately doubled and prices of most other metals, including aluminum, lead, tin, nickel and zinc rose two- or three-fold. However, between 1980 and 1985, metal prices declined sharply. Prices rose moderately in the late 1980s and 1990s, but never regained the earlier peak levels. Crude-petroleum prices declined drastically in the 1980s and remained quite low into the 1990s.

During the 1960 – 1970 decade, both metals and petroleum were fairly stable and were, on the average, about the same as they were in 1970 – 1971 before the export booms took place. Thus, we can say that the period 1960 – 1970 was pre-boom period, the period 1970 – 1980 was booming period and 1980 – 1990's was post booming period for mineral extraction and mineral export for mineral resource economy.

A comparison of the average annual GDP growth rates of major petroleum and nonfuel mineral exporters for the periods 1960 – 1970, 1970 – 1980, and 1980 – 1993 (Table 2) shows that for nearly all the countries listed, average annual GDP growth rates declined during the post boom period 1980 – 1993 from those of the boom period, 1970 – 1980. Only in the case of Chile, Jamaica, Papua New Guinea (PNG), and Oman were the growth rates higher during the 1980 – 1993 than in the 1970 – 1980. For nearly all these countries, average annual GDP growth rates during the pre-boom period, 1960 – 1970, were higher than the growth rates for the post-boom period of 1980 – 1993. The only exceptions were Chile and Indonesia, whose average annual GDP growth rates in the 1980 – 1993 period were significantly higher than in the pre-boom period. This record is in line with the resource – curse thesis that growth rates following resource booms do not return to pre-boom levels.

However, there are obviously other factors involved since the growth pattern for all low and middle income developing countries for the three periods was similar to that for major mineral exporting countries (see Table 2). Average annual per capita GNP growth was negative for the 1980 – 1993 period for more than half the mineral exporting countries

listed, as contrasted with respectable per capita GNP growth rates during the 1960 – 1970 period. There was also a sharp decline in per capita GNP growth rates for all low and middle income countries between the two periods, but the decline was not as large as for most of the mineral – exporting countries (Table 2).

Table 2 - GDP growth rates for major mineral-exporting countries, 1970 – 1980 and 1980 – 1993 (%)

	GDP					Average Per Capita GNP Growth Rate	
	1960 - 70	1970 - 80	1980 - 93	Increase or Decrease	Change: 1970 - 80 to 1980 - 1993	1960 - 77	1980 - 93
Major Oil Exporting LDCs:							
Algeria	4.3	4.6	2.1	-2.5	-54	2.1	-0.8
Ecuador	2.2	9.5	2.4	-7.1	-75	3.1	-
Indonesia	3.9	7.2	5.8	-1.4	-19	3.3	4.2
Mexico	7.6	6.3	1.6	-4.7	-75	2.8	-0.5
Nigeria	3.1	4.6	2.7	-1.9	-41	3.6	-0.1
Oman	21.9	6.2	7.6	1.4	23	-	3.4
Saudi Arabia	11.2	9	0.4	-8.6	-96	6.7	-3.6
Trinidad & Tobago	4	5.9	-3.6	-9.5	-161	1.6	-2.8
Venezuela	6	3.5	2.1	-1.4	-40	2.7	-0.7
Total Average Annual	7.6	6.3	2.3	-4	-63	3.2	-0.9
Major nonfuel mineral exporting LDCs:							
Bolivia	5.2	4.5	1.1	-3.4	-76	2.3	0.7
Botswana	14.8	14.5	9.6	-4.9	-34	-	6.2
Chile	4.4	1.8	5.1	3.3	183	1	3.6
Jamaica	4.4	-1.3	2.3	3.6	-	2.1	-0.3
PNG	6.7	2.2	3.1	0.9	41	3.4	0.6
Peru	4.9	3.5	-0.5	-4	-114	2.3	-2.7
Zambia	5	1.4	0.9	-1.3	-21	1.5	-3.1
Total Average Annual	6.5	3.8	3.1	-0.7	-18	2.1	0
All low and middle-income countries	5.6	5.2	2.9	-2.3	-44	3	0.9

This table excludes Iran, Iraq, Bahrain, Libya and Qatar for lack of data. Kuwait, the United Arab Emirates are excluded which are regarded as high income countries. Countries with non fuel minerals constitute 30% or more of export incomes are considered as resource exporting countries.

Chapter 3

Mongolia and Its Economy

3.1 Brief Introduction to Mongolia

Name: *Mongolia*

Language: *Mongolian Language*

Location: *Northern Asia, between China and Russia*

Population: *3,041,142*

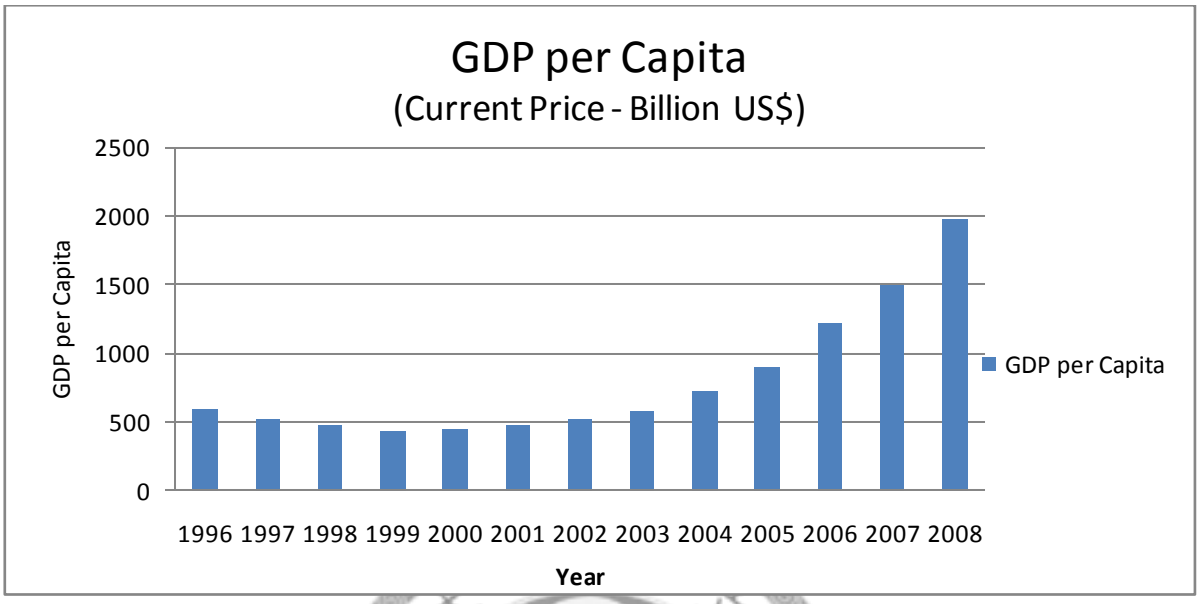
Religion: *Buddhist Lama 50%, Shamanist and Christian 6%, Muslim 4%, none 40%*

Government:	*Democratic and parliamentary*
Economy:	*Market oriented free economy*
Import Partners	*China 71.9%, Canada 10.7%, US 4.8% (2007),*
Export Partners:	*China 32%, Russia 29.4%, South Korea 7.9%, Japan 7.2% (2007)*

3.2 Mongolian Economy

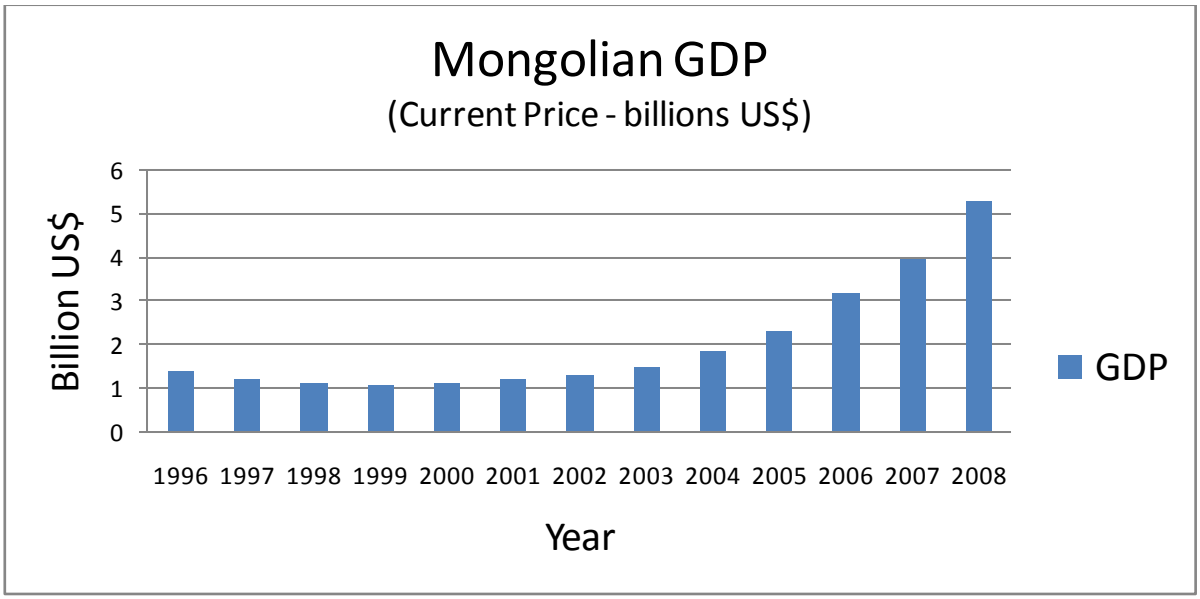
Economic activity in Mongolia has traditionally been based on herding, mineral resource extraction and agriculture. Mongolia has extensive mineral deposits. Copper, coal, gold, molybdenum, fluorspar, uranium, tin, and tungsten account for a large part of industrial production and foreign direct investment. Soviet assistance, at its height one-third of GDP, disappeared almost overnight in 1990 and 1991 at the time of the dismantlement of the USSR. The following decade saw Mongolia endure both deep recession because of political inaction and natural disasters, as well as economic growth because of reform-embracing, free-market economics and extensive privatization of the formerly state-run economy.

Figure 1 – Mongolian GDP per Capita for the period 1996 - 2008



Severe winters and summer droughts in 2000-02 resulted in massive livestock die-off and zero or negative GDP growth. This was compounded by falling prices for Mongolia's primary sector exports and widespread opposition to privatization. Growth averaged nearly 9% per year in 2004-08, largely because of high copper prices and mining (figure1 and figure 2).

Figure 2 – Mongolian GDP (billion US$)



Until late 2008 Mongolia experienced a soaring inflation rate, with year-to-year inflation reaching nearly 40% - the highest inflation rate in over a decade. In late 2008 falling commodity prices in this import-reliant country helped lower inflation, but by that time, the country had begun to feel the effects of the global financial crisis.

Falling prices for copper and other mineral exports reduced government revenues and is forcing cuts in spending. The global credit crisis has stalled growth in key sectors, especially those that had been fueled by foreign investment. Mongolia's economy continues to be heavily influenced by its neighbors. Mongolia purchases 95% of its petroleum products and a substantial amount of electric power from Russia, leaving it vulnerable to price increases.

Trade with China represents more than half of Mongolia's total external trade - China receives about 70% of Mongolia's exports. Remittances from Mongolians working abroad both legally and illegally are sizable, but have fallen due to the economic crisis; money laundering is a growing concern. Mongolia settled its $11 billion debt with Russia at the end of 2003 on favorable terms. Mongolia, which joined the World Trade Organization in 1997, seeks to expand its participation and integration into Asian regional economic and trade regimes.

Chapter 4

Mineral Resource Industry Boom in Mongolia and the Six Pending Projects

In order to understand thoroughly mineral boom perspective in Mongolia, one has to know the basic steps of mineral development. Thus, I provided the basic mine development concept below.

4.1 Steps of mine development

The process of mining from discovery of an ore body through extraction of minerals and finally to returning the land to its natural state consists of several distinct steps. The first is discovery of the ore body, which is carried out through prospecting or exploration to find and then define the extent, location and value of the ore body. This leads to a mathematical resource estimation to estimate the size and grade of the deposit. This identifies, early on, whether further investment in estimation and engineering studies is warranted and identifies key risks and areas for further work.

The next step is to conduct a feasibility study to evaluate the financial viability, technical and financial risks and robustness of the project. This is when the mining company makes the decision to develop the mine or to walk away from the project. This includes mine planning to evaluate the economically recoverable portion of the deposit, the metallurgy and ore recoverability, marketability and payability of the ore concentrates,

engineering concerns, milling and infrastructure costs, finance and equity requirements and an analysis of the proposed mine from the initial excavation all the way through to reclamation.

Once the analysis determines a given ore body is worth recovering, development begins to create access to the ore body. The mine buildings and processing plants are built and any necessary equipment is obtained. The operation of the mine to recover the ore begins and continues as long as the company operating the mine finds it economical to do so. Once all the ore that the mine can produce profitably is recovered, reclamation begins to make the land used by the mine suitable for future use. For the last decade, most of the foreign direct investment was directed toward the discovery of ore body and feasibility study. The decisions regarding to the mining development and mining operation are waiting for the world leading mining companies and the Mongolian government to reach a consensus on the related regulation, fiscal policy and long term stability agreement.

4.2 Mineral Boom Exploration Boom in Mongolia

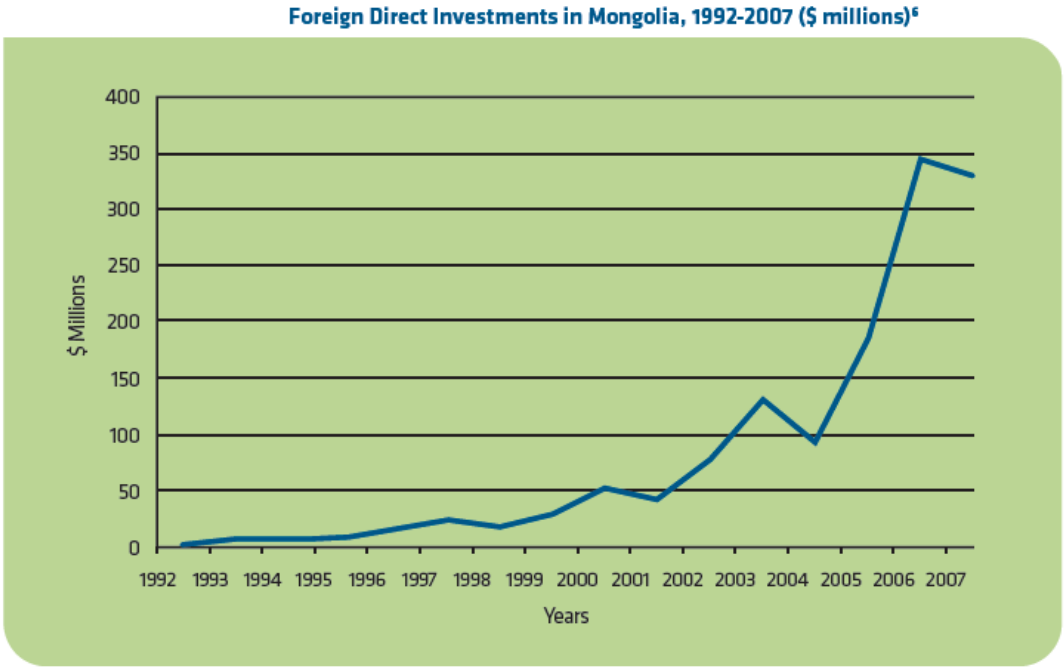
To facilitate Mongolia's transition from a centrally planned to a market economy, during the 1990s Mongolian parliament passed a series of laws to establish the regulatory and taxation regimes within which commercial mining was to be conducted by the private sector in Mongolia. With few exceptions, state-owned mining companies in Mongolia and elsewhere have been less than successful in terms of their operational efficiency, risk exposure and public financial liability.

As it turned out, the 1997 Minerals Law 2 provided a very sound basis for the conduct of commercial mining in Mongolia and has been acknowledged as one of the most attractive policy regimes world-wide. For example, the World Bank has concluded that it incorporated those fundamental policy principles that are regarded as essential by governments and mining companies right around the world.

The central achievement of the 1997 Minerals Law was the creation of a system of transparent, secure and transferable property rights in mineral exploration, mining and processing. The soundness of the 1997 Minerals Law was reflected in the boom in mineral exploration and mining development. Since 2001, there has been a five-fold increase in both the number of exploration licenses and the area under exploration. The Government has issued nearly 2,600 exploration licenses covering a total of 40 million hectares — or 26 percent of Mongolia's land area. During this period, foreign direct investment in Mongolia

increased significantly and most of it was directed toward mineral resource mining (figure 3 and figure 4).

Figure 3



3 Fitch Report, December 2008

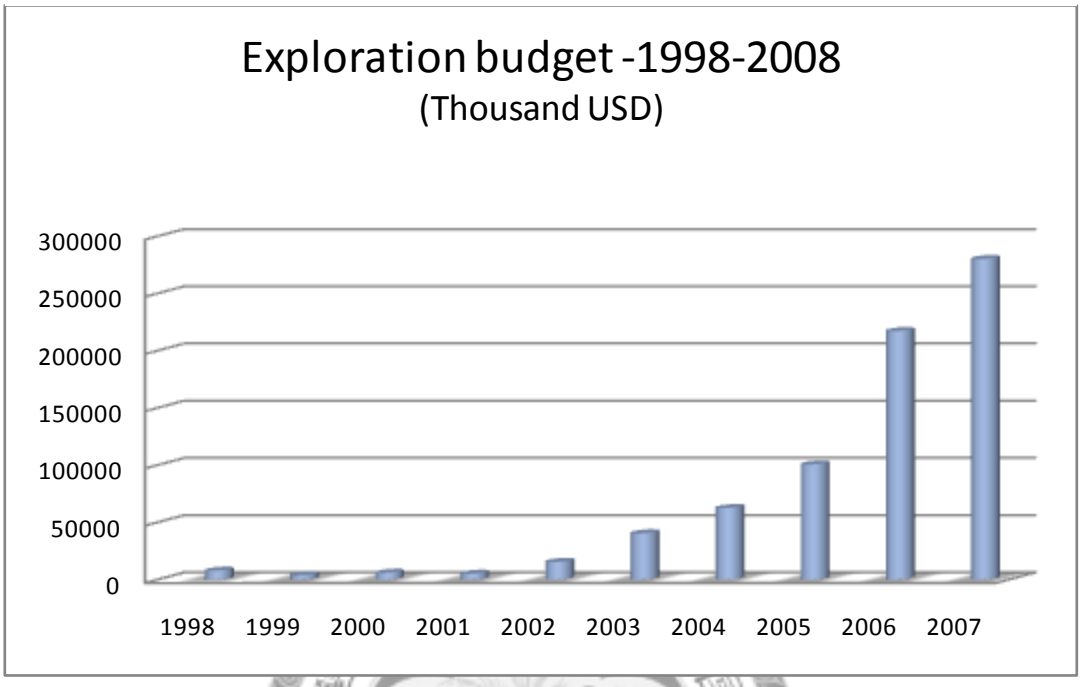
4 Wu, John C. "The Mineral Industry of Mongolia." U.S. Geological Survey Minerals Yearbook, 1997, 1998, http://minerals.usgs.gov/minerals/pubs/myb.html.

5 Tse, Pui-Kwan. "The Mineral Industry of Mongolia." U.S. Geological Survey Minerals Yearbook, 2005, http://minerals.usgs.gov/minerals/pubs/country/2005/mgmyb05.pdf.

6 World Bank. "World Development Indicators," 2008.

According to Mongolia's Foreign Investment and Foreign Trade Agency, the Mongolian mining sector received nearly $200 million in foreign direct investment (FDI) in 2006, compared to just $40 million in 2002; thereby accounting for nearly half of all FDI in Mongolia in 2006. Despite this investment, the sector contributed only 4 percentage points to the country's economic growth in 2007 and its contribution was largely due to increases in world-wide minerals prices.

Figure 4



The exploration boom has lead to the development of a number of world-class mining projects (table 3).

Table 3

Characteristics of Six Major, Proposed Mining Projects

Project	Mineral	Total Production	Life of Mine
Tavan Tolgoi	Coal	6,009 Mt	30 years
Oyu Tolgoi	Copper, gold, silver	32.214 Mt CU, 900.1 t Au	40 years
Tumertei	Iron ore	229.29 Mt	26 years
Asgat	Silver	7.370 Mt	10 years
Dornot	Uranium	28.868 Mt	17 years
Gurvanbulag-Mardai	Uranium	17.177 Mt	11 years

10 Mongolia Ministry of Mining and Energy.

Oyu Tolgoi, for example, has the potential to become the world's largest copper-gold mines producing 500,000 tons of copper and 330,000 ounces of gold a year for more than 35 years.

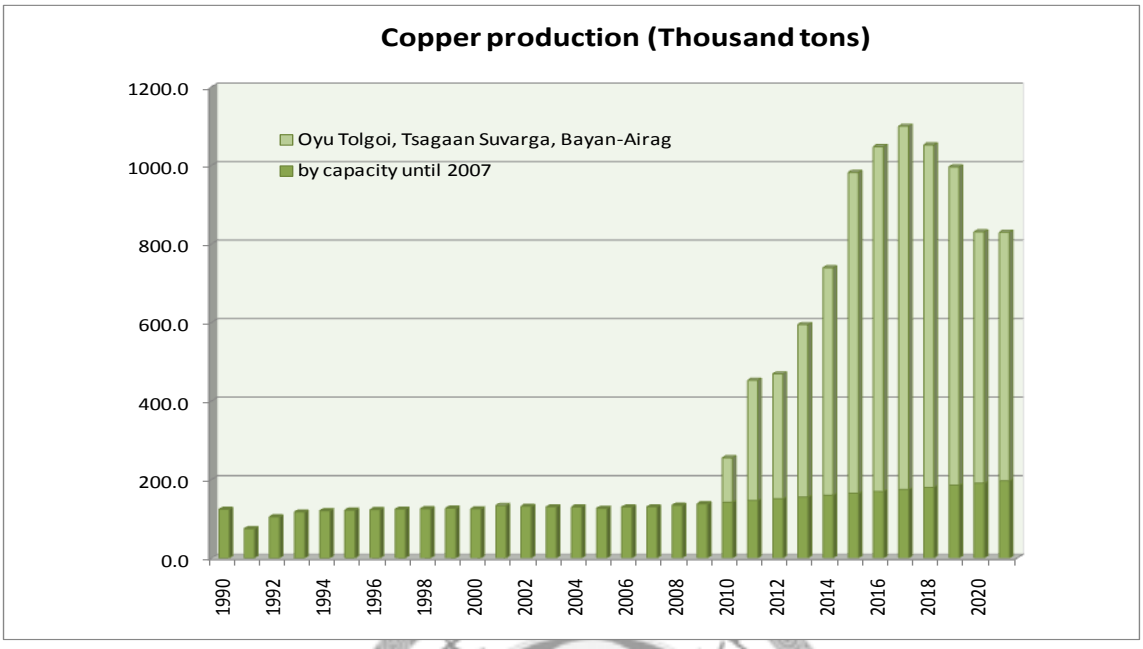
As a consequence, the mining sector has expanded rapidly and is now Mongolia's largest industry sector. By 2005 the mining sector was directly contributing some 18 percent of Mongolian gross domestic product (GDP), 66 percent of its industrial output, almost 76 percent of its export earnings, and 20 percent of its public revenue. By 2007 the mining sector was generating nearly half of all revenue collected by the Mongolian Government. Most of the major deposits are located near either Chinese or Russian borders which are the one of the fastest growing economies in the world. These strategic positions of the major deposits make them commercially viable (Picture 1).

Picture 1 Major Mineral Reserve Locations

4.3 Projected overall economic effects of the major mineral deposits

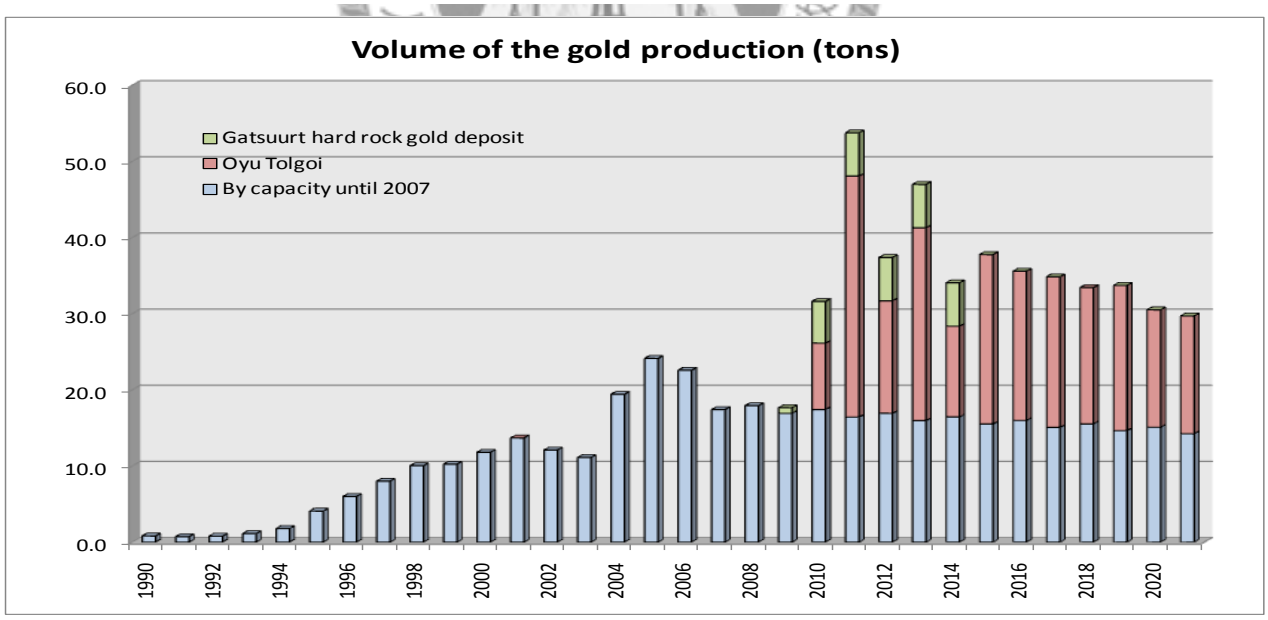
Once the six major mineral deposits are started its operation, Mongolian mining production and export are expected to be increased significantly, especially in gold, copper, and coal (figure 5, figure 4, and figure 5).

Figure 5



Explanation: The three major copper deposits is estimated to start its active production activity from 2010 and in the years 2013-2017 the production volume will be relatively high because of the parallel exploitation.

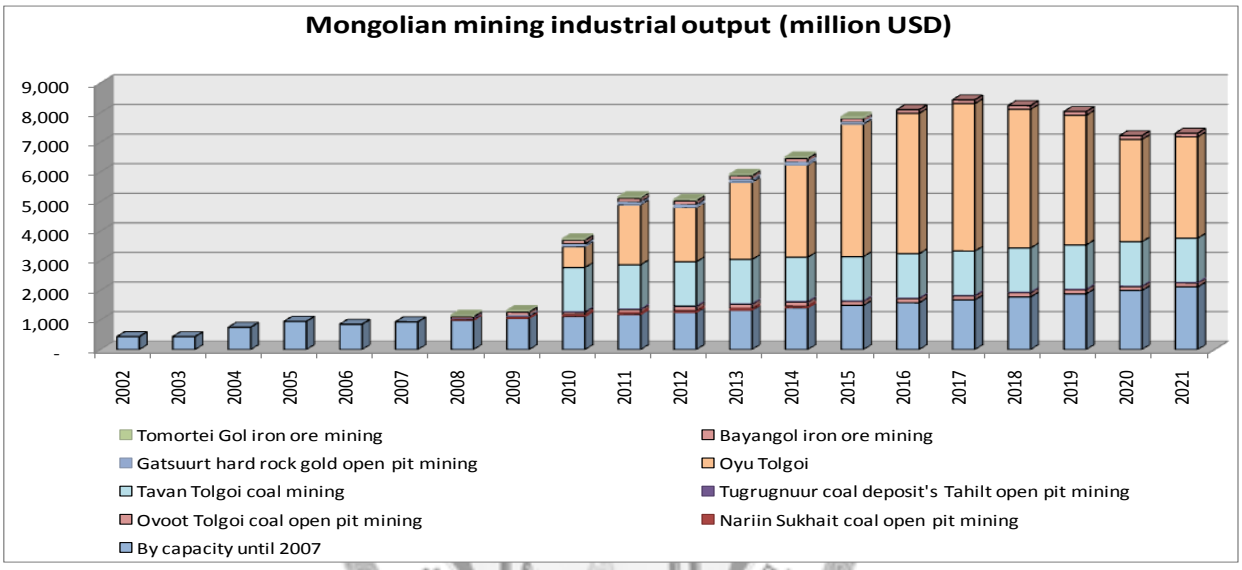
Figure 6



Explanation: The three major gold deposits are estimated to start its active production activity since 2010 and in the years 2013-2017 the production volume will be relatively high because of the parallel exploitation.

According to the projections by major investment banks such Morgan Stanley, JP Morgan and Goldman Sachs, the revenue estimated to be generated from these mineral resource productions is substantial and has huge impact on Mongolian economy in the future (figure 7).

Figure 7



Thus, Mongolia faces crucial decisions regarding its mining sector, which ultimately will affect its long-term development and progress. It has the opportunity to jumpstart a series of major new mining projects which could substantially expand employment, incomes, government revenues and national wealth (table 4 and table 5).

Table 4

The Financial Projections and Government Revenues of Six, Major Proposed Mining Projects, $ millions[31]

Project	Lifetime Net Present Value	Required Investment	Projected Royalties	Projected Tax Revenues
Tavan Tolgoi	$1,578.2	$886.0	$1,069.9	$2,055.7
Oyu Tolgoi	$1,295.8	$4,247.0	$1,707.1	$3,525.2
Tumertei	$251.9	$291.0	$217.8	$436.9
Asgat	$98.0	$47.4	$28.8	$62.8
Dornot	$382.9	$150.4	$118.4	$332.2
Gurvanbulag-Mardai	$275.7	$47.3	$55.9	$176.0
Total	**$3,882.5**	**$5,669.1**	**$3,197.90**	**$6,588.8**

Table 5

Internal Rates of Return for Six Major Proposed Mining Projects[32]

	Simple IRR	IRR Weighted for Net Present Value	IRR Weighted for Investment Needs
Average for All Six Projects	**36.7%**	**30.6%**	**21.8%**
Tavan Tolgoi	33.0%	13.4%	5.2%
Oyu Tolgoi	18.5%	6.2%	13.9%
Tumertei	15.7%	1.0%	0.8%
Asgat	40.0%	1.0%	0.3%
Dornot	36.4%	3.6%	1.0%
Gurvanbulag-Mardai	76.5%	5.4%	0.6%

If the six major projects examined in this report go forward as planned, they will boost the country's GDP by an average of $1.5 billion per-year for the next generation, equal to a 38 percent increase in Mongolia's 2007 GDP. The Mongolian workforce will gain an estimated 45,000 person-years of employment, and exports will increase by an average of $2.5 billion per-year, or the equivalent of 125 percent of the country's 2007 exports. Moreover, the Mongolian government will gain substantial new revenues to finance other

aspects of modernization, including education, health care, transportation and water resources. Mongolia government is going to receive substantial amount of revenue by corporate income tax, 34% of equity share in the projects, mining royalty fee and interest income, and tax windfall income and profit. Please refer to the table 6 for more detailed information.

Table 6

Policy Measure	International Best Practice Setting (a)	Provision in Draft 2009 OT Investment Agreement (b)
Share of equity in the mining development held by the public sector	None	34% with option for an additional 16%
Corporate income tax rate (maximum marginal rate)	25% to 30%	25%
Corporate income tax rate on dividend, royalty & interest income	25% to 30%	10%
Withholding tax rate on dividend payments to non-residents	15%	Nil
Withholding tax rate on interest payments to non-residents	15%	20% (c)
Mining royalty rate (ad valorem basis)	2% to 4%	5%
Additional taxes on 'windfall' income or profits	None	30% of the real net cash return > 29.9% per year (d)
Import duty on mining plant & equipment	None	None for first 7 years
Export duty on mineral commodities	None	None
Value-added tax	Refundable	Refundable
Tax depreciation of mining plant & equipment	Accelerated & pooled depreciation	Straight-line over 3 years (computers), 10 years (plant & equipment) or 40 years (other)
Depletion allowances	None	None
'Ring fencing' of tax liability of nominated activities from the rest	None	Yes
Treatment of exploration expenses	Amortized over 5 years	Amortized over 10 years
Treatment of environmental expenses	Expensed	Expensed
Treatment of mine closure & rehabilitation expenses	Tax deductible contributions to sinking fund	Tax deductible contributions to sinking fund for last 7 years of mine
Tax holidays	None	None
Carry-forward of tax losses	Unlimited forever or for up to 7 years	Unlimited for up to 8 years

Source: (a) World Bank 2008 & (b) Draft Investment Agreement as at 18 February 2009

Notes: (c) Subject to the taxpayers' rights under relevant double taxation treaties with Mongolia. (d) This tax only applies to net cash income, i.e. after recovery of all capital and operating expenses to that point. In any tax year the total taxes payable by the private investors are limited to 68 per cent of their taxable income from the project, excluding any dividends payable to the Mongolian Government.

Chapter 5

Rationale behind the Resource Curse

Traditionally, Countries that possess rich mineral deposits, it is widely assumed, are fortunate. Such deposits are assets, part of a country's natural capital. Mining is the key that converts dormant mineral wealth into schools, homes, ports, and other forms of capital that directly contribute to economic development. Over the past two decades, however, a more negative view of mining has emerged that questions the positive relationship between mineral extraction and economic development.

The impetus for the alternative view came from empirical studies suggesting that countries where mining is important have not grown as rapidly as other countries. More recent studies have explored the possible reasons behind the disappointing performance of many mineral producing countries.

5.1 Declining Terms of Trade

According to the alternative view, over time the prices of primary commodities tend to fall relative to those for manufactured goods. This is in part because primary commodity markets are competitive and so reductions in costs are passed on immediately to consumers in the form of lower prices. On the other hand, the producers of many manufactured products, it is argued, enjoy some market power, which allows them to divert the benefits

of falling costs to workers in the form of better salaries and to shareholders in the form of greater dividends.

As a result, countries that produce and export mineral commodities over time have to export more and more for a given basket of manufacturing imports. The effect, similar to having the purchasing power of one's salary decline, can cause growth in welfare to slow or even to turn negative.

5.2 Volatile Commodity Markets

The markets for primary products, including mineral commodities, are known for their instability. Price variations of 30% or more within a year or two are very common. In the case of mineral commodities, this volatility arises because demand fluctuates greatly over the business cycle. When the economy is booming, the end-use sectors that consume most mineral commodities — construction, capital equipment, transportation, and consumer durables are expanding even faster than the economy as a whole. Conversely, when the economy is in a recession, these sectors are usually even more depressed.

Since instability in the metal markets arises primarily because of shifts in demand (rather than in supply, as is typically the case for agricultural products), when output is depressed, so are prices. Similarly, when output is up, so are prices. This means that profits, and the taxes governments collect on profits, are particularly volatile. Market instability makes it difficult for developing countries to count on revenues from the mineral sector, and

hampers the effective planning needed for economic development. It also means that government revenues and foreign exchange earnings are curtailed exactly when an expansionary monetary policy is needed to help the domestic economy weather a recession in a vital economic sector.

5.3 The Dutch Disease

A mineral boom, such as the expansion of the natural gas sector of the Dutch economy during the 1960s in response to the discovery of the Groningen fields, requires adjustments within the economy. Typically, domestic wage rates rise as the booming mineral sector is forced to offer workers higher salaries to attract the labor it needs. In addition, rising mineral exports cause the domestic currency to appreciate. Both of these developments harm those domestic industries, such as agriculture and manufacturing that have to compete in home or foreign markets with overseas competitors.

This impedes economic diversification and increases dependence on the volatile mineral markets. Protectionist responses may move the country towards autarky, while taxing away mineral rents to such an extent that there is inadequate investment in the sector. Moreover, according to the alternative view, after the mineral boom is over, the country's traditional sources of exports will be devastated and beyond resuscitation, or there will be significant adjustment costs in moving back to agriculture and manufacturing.

5.4 Nature of Mining

The alternative view also points to several characteristics of mining itself. First, local communities tend to bear most of the environmental and other social costs associated with mining, while the benefits flow largely to the central government and elsewhere. In addition, it is argued, mining is often an enclave activity. Needed supplies are imported, and little value added is carried out domestically, as ores and concentrates are exported for processing abroad. On top of this, mining is capital intensive and requires few workers, and many of those it does employ (particularly the more skilled workers) come from abroad. As a result, the host country gets little from mining besides the monetary benefits flowing from corporate taxation and royalties.

5.5 Use of Rents

The mining rents captured by the State end up in government coffers, which according to the alternative view often cater to the ruling elite. For this and other reasons, mining accentuates the income disparity found between urban and rural areas. In addition, the poor are largely excluded from any benefits.

Political control of the rents, moreover, makes it worthwhile for individuals and organizations to devote considerable effort and resources to appropriating a larger share of the rents. Such rent-seeking activities are unproductive; they are devoted to increasing the share of the existing economic pie that a particular group enjoys, rather than to increasing

the size of the pie itself. Even worse, the presence of mining rents may lead to a decline in institutional quality (Ross, 2001b; Sala-i-Martin and Subramanian, 2003) and in some instances to civil insurrection and war (Collier and Hoeffler, 1998; Gylfason, 2001; Sachs and Warner, 1997a). Even when the rents are not squandered, but used by the government to promote economic development, the results are often disappointing due to incompetence and poor planning.

For one or more of the above reasons, many who subscribe to the alternative view of mining believe that the negative association between mining and economic development does in fact reflect a causal relationship.

Chapter 6

Ways to Escape from Resource Curse

Because these scholarly accounts share the assumption that the revenue from mineral exports necessarily accrues directly to the state, the solutions they propose focus on ways to make the state a better "manager" of these proceeds. According to this view, the likelihood for the newest group of energy producers in the developing world (for example, Azerbaijan, Kazakhstan, Chad, Sudan, and East Timor) to avoid the above-mentioned negative economic and political outcomes associated with mineral wealth depends on whether their respective governments can utilize anticipated windfalls more effectively.

Thus, the most common solutions proposed to help these states achieve this include (1) sound fiscal and monetary policies; (2) economic diversification; (3) natural resource funds; (4) transparency, accountability and pubic involvement; and (5) direct distribution to the population. These solutions, however, are inherently limited by their emphasis on the state. In sum, they amount to either asking a weakly institutionalized state to employ capacities that it has not yet developed or relying on non-state actors (who often have little willingness or ability to do so) to monitor and constrain the state's behavior.

States that are unable to prevent their own bureaucrats from rent-seeking, for example, are expected to implement policies that limit discretionary government spending. Moreover, many of the proposed revenue management policies depend on the ability of international financial institutions (IFIs) and nongovernmental organizations (NGOs) to exert sufficient

pressure on state leaders. This is particularly ironic given the broad consensus that weak institutions are perhaps the greatest impediment to escaping the resource curse. Despite this consensus, none of the aforementioned solutions are intended to rectify institutional weakness, but rather, to either simply ignore or circumvent it.

6.1 Fiscal and Monetary Policy

From the moment that the windfalls begin, the negative economic effects associated with Dutch Disease are imminent. As a first step to counter the appreciation of the real exchange rate, resource-rich states are urged to accumulate income-producing foreign assets in order to sterilize the local economy from the inflow generated by the mineral sector. The accumulation of budget surpluses and avoidance of large-scale foreign debt enables mineral rich countries to smooth out expenditures during boom periods and prevent borrowing during cycles of busts.

Combined, these policies help to insulate the domestic economy from the volatility of commodity revenues and generate budget stability. Botswana is a prominent example of just how successfully countries that implement sound macroeconomic policies and spend their windfalls wisely can combat the Dutch Disease. It has managed its exchange rate policy through the accumulation of foreign reserves and has run budget surpluses that were set aside for stability spending during periods of busts. Owing to its commitment to fiscal discipline, Botswana has shunned wasteful spending during boom periods and borrowing during busts. These policies have contributed to Botswana's rapidly growing GDP, which

has enabled it to move from the 25th poorest country in 1966 to an upper-middle income country within 30 years.

So, why have so few countries followed Botswana's example? The predominant explanation is that an insulated and autonomous technocracy committed to long-term developmental goals is necessary for pushing through macroeconomic policies that may be socially and politically unpopular. Yet, this overlooks the institutional capacity that carrying out and sustaining such polices requires—in particular, institutionalized mechanisms for accountability and transparency that can curb rent-seeking and corruption.

More importantly, the sole reliance upon an autonomous technocracy overlooks the need for strong budgetary institutions and procedures that can constrain legislatures and ministries from expanding the budget and promoting "pet projects."Botswana was able to maintain a firm budget and prevent overspending because of a legislative procedure requiring parliamentary approval for any new public project after its National Development Plan was passed, thus preventing the executive branch from altering the budget.

6.2 Economic Diversification

To prevent the booming export sector and the non-traded goods sector (that is, retail trade, services, and construction) from crowding out the non-booming export sectors, mineral-rich countries have long been advised to invest windfalls in economic diversification. Thus, they will be able to shield their economies from shocks caused by

market volatility. Economic diversification is also directly linked to sound fiscal and monetary policies—that is, when the local currency is not allowed to appreciate, the chance of decline in the non-booming sectors is reduced. This is one of the rare areas in which policy prescriptions have been widely followed.

With the endorsement of developmental economists and international organizations, such as the United Nations Conference on Trade and Development, the United Nations Economic Commission, and the World Bank, from the 1960s until the early 1980s most mineral-rich states made considerable investments in promoting other economic sectors. Efforts to mitigate the effects of Dutch Disease by transferring rents from the mineral sector to the non-booming export sectors, however, have actually had a decisively adverse economic effect. State-led investment in that historical context has led not only to inefficient investment but also to the perpetuation of import substitution industrialization and protectionism—both of which have independently contributed to stagnant growth rates. Moreover, few countries have actually managed to diversify their economies.

Tunisia is the only mineral economy in 1970 that was no longer ranked as a mineral economy in 1991. Thus, ironically, "the growth collapses of the late 1970s and the early 1980s resulted in the backfiring of the resource abundant countries' efforts to reduce their commodity dependence."

These policies have failed to decrease dependence on natural resource exports for the same reason that the majority of mineral-rich states have not implemented sound fiscal and

monetary policies. Because these countries lack strong state institutions and a transparent decision making process, they are prone to making poor investment decisions—that is, decisions that are based on either shaky economic ground or political priorities, and hence, do not offer high domestic rates of return. Thus, even for an outlier such as Indonesia, which has been widely touted for its ability to sustain a viable agricultural sector since the 1970s, the lack of institutionalized mechanisms for accountability, transparency, and oversight has allowed rent seeking and corruption to flourish.

6.3 Natural resource funds

Natural Resource Funds (NRFs) consist of stabilization or savings funds and often combine both. Stabilization funds aim to reduce the impact of commodity price volatility on the economy and, in turn, improve budget predictability by stabilizing spending patterns. They reduce overspending when prices are high and borrowing when prices fall because when commodity prices are high, excess revenue is placed in the stabilization fund, but when prices are low, revenue is transferred out to make up for budgetary shortfalls.

Savings funds, in contrast, are intended to ensure that a share of the wealth will exist for future generations, even after the natural resources are depleted. NRFs are found in both developed and developing countries. Examples include Venezuela's Stabilization Investment Fund, the State Petroleum Fund in Norway, Iran's Foreign Currency Reserve Account, and the Oman General Reserve Fund. However, their institutional structures and success rates vary dramatically. The Alaska Permanent Fund is characterized by high levels

of public involvement in the decision-making process concerning the establishment and evolution of the fund. Public debate has influenced how the windfalls are spent and led to the creation of a dividend program in which each citizen of Alaska is entitled to a share of the wealth generated from oil sales. In contrast, the Kuwait Reserve Fund for Future Generations is considered extremely nontransparent since information about its holdings and expenditures is neither available to the public nor to the legislature. The popularity of NRFs continues to grow. Several new energy producers—Azerbaijan, Kazakhstan, and Chad— have also adopted NRFs. Most recently, the World Bank and the International Monetary Fund (IMF) have proposed a Petroleum Fund model to East Timor to assist it with managing its anticipated petroleum revenues from its newly discovered offshore reserves. Yet, their applicability to developing countries is limited precisely because many lack the institutions to support NRFs. In order for NRFs to work as designed, states must already possess strong state institutions—that is, institutions that emphasize oversight, transparency, and accountability such as a professional bureaucracy that abides by clear fiscal accounting standards and an independent judiciary that can prevent the executive from arbitrarily changing the rules. It is no coincidence that the most enduring NRFs are located in countries such as Norway, the United States, and Canada—all of which have well-developed fiscal, regulatory, and supervisory institutions and also happen to be mature democracies.

The empirical evidence to date also indicates that NRFs have been largely ineffective in stamping out corruption and improving transparency in countries with strong chief executives that possess sole authority over petroleum contracts and complete discretion

over the operation of the NRF. Venezuela's fund exemplifies the risks involved in proposing an NRF for a country—even if it is a democracy—in the absence of stringent checks on and balances against executive authority. As a result, the Venezuelan government has periodically raided the fund when strapped for cash, and frequently altered the fund's operating rules to expand presidential discretion.

The weakness of Venezuela's fund does not bode well for the newly created NRFs in Azerbaijan and Kazakhstan—countries that both have strong presidencies. Already in its short history, former President Haider Aliev was personally able to channel resources from the NRF to finance refugee resettlement programs and the state oil company's (SOCAR) participation in the Baku-Ceyhan oil pipeline. Thus, where the institutional capacities necessary to support and restrict access to NRFs are absent, they can actually be counterproductive; rather than sterilizing the budget and preventing corruption, these funds can inadvertently reinforce the concentration of power and authoritarian tendencies in mineral-rich countries.

6.4 Transparency, accountability, and public involvement

Over the last few years, international nongovernmental organizations (INGOs) and IFIs have combined forces to promote transparency, accountability, and public involvement in the management of petroleum revenues in order to address the political consequences of reliance on external rents. The targets of INGO activity include foreign extractive firms, IFIs, Western governments, and domestic governments. First, they have pressed IFIs such

as the World Bank and IMF to use their leverage to encourage countries to provide the public with accurate information about revenues received and spent. Second, they have pushed for foreign extractive firms (for example, multinational oil companies) to publish what they pay to host governments. Third, NGOs have urged governments in mineral rich states to disclose all their transactions with foreign extractive firms and their expenditures. Finally, they have sought to increase opportunities for public involvement in deciding how revenues will be spent through advocating improved human rights protection and encouraging a free press.

Campaigns such as "Publish What You Pay" are a primary example of such INGO-inspired efforts. Here, a coalition of over 200 INGOs and local nongovernmental organizations (LNGOs) are working to persuade foreign extractive firms to disclose all taxes, fees, royalties, and other payments made to the host governments in the countries where they operate. In order to monitor how these revenues are used, they are also pushing for full disclosure of compensation payments and community development funding. Their efforts have been at least partially successful. British Petroleum (BP), for example, agreed to post its production-sharing agreement with Azerbaijan on a website and make its social and environmental impact assessments available to the general public. Pressure from both INGOs and LNGOs has also persuaded the World Bank to create "the Extractive Industry Review" to carry out an evaluation between 2001–2003 of its role in supporting projects in the mineral sector and their impact on poverty alleviation.

The biggest success to date, however, may be the Chad Revenue Management Plan. In order to encourage transparency and public oversight over the use of Chad's anticipated windfalls, the World Bank has made funding to construct a pipeline to export oil from land-locked Chad to Cameroon contingent on the government meeting certain conditions, such as adopting a revenue management plan and social and environmental safeguards. One of the unique aspects of the World Bank's program in Chad is the large role for external monitoring by both societal actors (LNGOs) and foreign actors (INGOs, the World Bank, and foreign oil companies) to ensure that Chad's oil windfalls are directed towards poverty reduction programs and not wasted on non-income earning projects.

Built into Chad's Revenue Management Plan are different oversight mechanisms such as the Revenue Oversight Committee, which is composed of representatives from both the government and civil society and is charged with verifying government compliance with the revenue management law. Because of international and local NGO pressure, the foreign oil companies operating in Chad have also agreed to independent scrutiny of their activities and are paying for an External Compliance Monitoring Group composed of members of civil society to monitor their adherence to an environmental management plan.89 However, there are limitations to relying primarily on external actors to build transparency, accountability, and public oversight.

Pressure from IFIs, foreign companies, and INGOs is insufficient unless first, societal actors— particularly local NGOs—are empowered by institutional safeguards, such as freedom of assembly and free speech; second, both foreign and societal actors can hold

government officials accountable for their actions; and third, all of the actors involved—most importantly government officials have a mutual interest in promoting transparency and stamping out corruption. The presence of these three conditions has fostered transparency, accountability, and public oversight in Norway, for example, where well-developed political parties, independent oversight councils, and a long-standing national parliament have monitored both government spending and oil extraction contacts. Similarly, since the late 1980s an informed public in Alaska has utilized preexisting representative institutions to demand formal oversight (that is, citizen advisory councils) of the petroleum's industry's activities.

Conversely, the absence of these three conditions appears to be undermining Chad's Revenue Management Plan. Thus far, there is good reason to be skeptical of both the government's commitment to this plan and the ability of IFIs to enforce it. Although Chad's president initially committed to using the first signing bonus "in the spirit of the Revenue Management Law," the World Bank was unable to prevent him from spending a large portion of this bonus ($4.5 million, or approximately 20 percent) to purchase weapons. There is also good reason to doubt the foreign oil companies' commitment to the World Bank program. For example, INGOs are already highly critical of the oil companies' decision to put pipeline construction ahead of the social and environmental programs that are intended for poverty alleviation and increasing public involvement.

Finally, in the absence of institutionalized mechanisms of responsiveness in Chad, LNGOs may find themselves solely targeting the foreign oil companies and the IFIs rather than

engaging in a fruitful dialogue with the government over management of the petroleum industry's activities and windfall rents.

6.5 Direct distribution

Despite the tacit acknowledgement that the state is a large part of the problem, none of the most popular solutions attempt to take the mineral rents out of direct state control. The only exception is direct distribution of windfall revenues to the population, which has very recently been proposed as another way to avoid Dutch Disease effects, combat corruption, foster democratic governance, and even address the problem of weak institutions. The premise underlying this solution is that if the population receives the benefits of its natural resource wealth directly rather than through public works projects or state subsidies, it will make better investment choices and have a greater incentive to save these windfall rents than government officials.

Some argue that direct distribution will also force the public to engage politically and demand oversight and accountability institutions to monitor the flow of petroleum revenue. Two forms of direct distribution have been put forth: the first is based upon the Alaska model in which the interest from the oil fund is directly distributed to the population whereas the second eliminates the use of a savings and stabilization fund. For countries like Nigeria and Iraq where government officials have siphoned off oil rents for personal profit and suppressed all forms of political resistance for decades, the idea of spreading the wealth among the population is especially attractive.

Yet, direct distribution schemes are not without their problems. For example, if direct access to "easy money" encourages myopic behavior on the part of government officials, there is no reason to believe that it will not induce the same spending effects on an individual—particularly one living below the poverty line. There is also the danger that transferring windfalls to individuals will reduce incentives for citizens to engage in entrepreneurship, which will further stifle the growth of small and medium private enterprises in developing countries.

The case of Alaska, in which the population receives an annual dividend from oil and gas proceeds via mandatory state investments in the Alaska Permanent Fund, provides a striking illustration. The transfer of rents to households has fostered an environment in which the population is focused primarily on consumption, rather than investment. It has also had such a negative impact on the development of the private sector that several state-sponsored organizations have emerged to encourage entrepreneurialism among young Alaskans.

Even where we might expect individuals to distribute rents most efficiently, such as rents generated from peasant cash crops, the empirical evidence to date suggests otherwise. For example, although small landholders in Kenya were able to save much of the windfalls generated from the coffee boom between 1976–79 (approximately 60 percent), government controls that favored the urban sector over the rural one prevented them from investing their savings efficiently.

In contrast to the aforementioned solutions, direct distribution is viewed as a way to encourage institution building in mineral-rich states, particularly fiscal institutions, because the state would no longer be either the sole or the largest recipient of natural resource rents. It would also lack the fiscal autonomy from its population that rentier states enjoy. As a result, it would be compelled to develop a workable taxation system in order to collect revenue from its citizens. In reality, however, under existing and proposed models of direct distribution the government continues to be the largest direct beneficiary of the revenue from natural resource exports, and thus, suffers from the same disincentives for fiscal discipline.

The failure of direct distribution models to specify who will be responsible for the dispersal of the proceeds to the population, and hence, how to ensure that the government does not either mismanage or appropriate the revenue, moreover, limits their efficacy—especially if the state continues to own and control the production and sale of petroleum reserves.

Alaska's experience again serves to illustrate. In Alaska, the state budget is the largest beneficiary of the proceeds from natural resources. The state is required to deposit only 25 percent of the royalties it collects from the oil sector into the Permanent Fund and the interest is divided evenly among the population. Much like petroleum rich countries in the developing world, therefore, the Alaskan government has had little incentive to develop a broad based tax system; for example, it has neither introduced a personal income tax nor broad based sales tax.

As a result, the relationship between the government and its citizens is defined solely by the "government [distributing] checks to citizens instead of citizens sending checks to government." The state government also has a chronic budget deficit because it must maintain high spending levels to satisfy constituents, who prefer to maintain the dividend program rather than use the Permanent Fund to balance the budget. In the 1980s, for example, Alaska's per capita state spending was far above the national norm and included public work projects that cost millions of dollars, yet never came to fruition. Direct distribution, then, seems to inadvertently reinforce a rentier mentality whereby the population views the government as a source of wealth distribution and the government is unable to demand fiscal compliance.

In addition, direct distribution shares the central problem of the aforementioned solutions because it requires a degree of institutional capacity that most resource-rich countries simply do not possess. At a bare minimum, it requires a viable banking system to distribute the revenues. This is not sufficient, however, to prevent government officials from engaging in rent-seeking or to curb corruption. Thus, in order to promote its perceived benefits, direct distribution also requires the same types of strong institutions as NRFs—that is, institutions that emphasize oversight, transparency, and accountability. Perhaps this is why, thus far, it has only been tried in a developed democracy with an effective bureaucracy like the United States. Yet, its success is questionable even there.

Chapter 7

Assessment of Mongolian readiness for the resource oriented economy

The international experiences shows that large-scale mining sector could lead countries into economic prosperity or it can damage countries' economic development and even can lead to social and political unrest in the worst cases that would not prevail without the large scale mining projects. The chapter 4 and chapter 5 reveals that the critical condition for developing world-class mining into economic development is its solid fiscal policy, institutional and regulatory framework that enforces transparency and sustainable economic growth. Solid fiscal policy, institutional and regulatory framework, in turn, has profound influence on optimizing the mining sector's contribution to Mongolian economic development. This chapter canvasses whether the Mongolia is ready to proceed with these large-scale mining projects in terms in institutional and regulatory policy.

7.1 Transparency, accountability, and public involvement

A. Open Budget Index Score

Mongolia's score on the Open Budget Index shows that the government provides the public with minimal information on the central government's budget and financial activities during the course of the budget year. This makes it quite difficult for citizens to hold government accountable for its management of the public's money.

The Open Budget Index 2008 evaluates the quantity and type of information that governments make available to their publics in the seven key budget documents that should be issued during the budget year. One of the most important documents is the executive's budget proposal. It should contain the executive's plans for the upcoming year along with the cost of the proposed activities. The proposal should be available to the public and to the legislature prior to being finalized, at least three months before the start of the budget year to allow for sufficient review and public debate. In Mongolia, the proposal provides incomplete information to the public. For example, it does not include multi-year estimates of aggregate revenues, expenditures or debt. This means citizens do not have a comprehensive picture of the government's plans for taxing and spending for the upcoming year.

Moreover, it is difficult to track spending, revenue collection and borrowing during the year. Mongolia publishes its in-year reports but does not publish the mid-year review. Publishing the mid-year review would greatly strengthen public accountability, since it provides updates on how the budget is being implemented during the year. It is also difficult to assess budget performance in Mongolia once the budget year is over. A year-end report is not published, preventing comparisons between what was budgeted and what was actually spent and collected. Also, Mongolia does not make its audit report public and does not provide any information on whether the audit report's recommendations are successfully implemented.

Access to the highly detailed budget information needed to understand the government's progress in undertaking a specific project or activity remains limited. Mongolia has not codified the right to access government information into law.

B. Corruption Perception Index

Mongolia ranked 102 (highly corrupted) out of 180 countries. Since 1995, Transparency International has published an annual Corruption Perceptions Index ordering the countries of the world according to "the degree to which corruption is perceived to exist among public officials and politicians". The organization defines corruption as "the abuse of entrusted power for private gain". The 2008 poll covered 180. A higher score means less (perceived) corruption. The results show seven out of every ten countries (and nine out of every ten developing countries) with an index of less than 5 points out of 10.

C. Democracy Index – Flawed Democracy

The democracy index provides a snapshot of the current state of democracy worldwide for 165 independent states and two territories (this covers almost the entire population of the world and the vast majority of the world's independent states (27 micro states are excluded). The Economist Intelligence Unit's democracy index is based on five categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. Countries are placed within one of four types of regimes: full democracies; flawed democracies; hybrid regimes; and authoritarian regimes.

Table 7

Democracy index 2008 by regime type

	Countries	% of countries	% of world population
Full democracies	30	18.0	14.4
Flawed democracies	50	29.9	35.5
Hybrid regimes	36	21.6	15.2
Authoritarian regimes	51	30.5	34.9

"World" population refers to total population of the 167 countries that are covered. Since this excludes only micro states this is nearly equal to the entire actual estimated world population in 2008.

Source: Economist Intelligence Unit; CIA World Factbook

D. Human Development Index

Each year since 1990 the Human Development Report has published the human development index (HDI) which looks beyond GDP to a broader definition of well-being. The HDI provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at the primary, secondary and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income). The index is not in any sense a comprehensive measure of human development. It does not, for example, include important indicators such as gender or income inequality and more difficult to measure indicators like respect for human rights and political freedoms. What it does provide is a broadened prism for viewing human progress and the complex relationship between income and well-being. The HDI for Mongolia is 0.700, which gives the country a rank of 114th out of 177 countries with data (Table 1).

Table 8

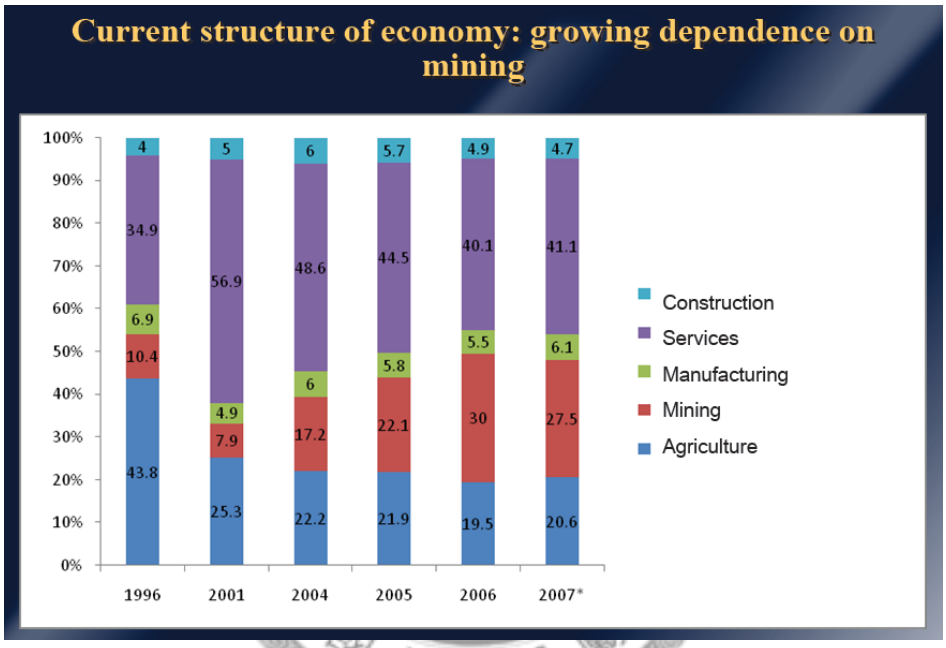
Table 1: Mongolia's human development index 2005				
HDI value	**Life expectancy at birth (years)**	**Adult literacy rate (% ages 15 and older)**	**Combined primary, secondary and tertiary gross enrolment ratio (%)**	**GDP per capita (PPP US$)**
1. Iceland (0.968)	1. Japan (82.3)	1. Georgia (100.0)	1. Australia (113.0)	1. Luxembourg (60,228)
112. Egypt (0.708)	114. Tajikistan (66.3)	23. Croatia (98.1)	64. Qatar (77.7)	132. Sao Tome and Principe (2,178)
113. Uzbekistan (0.702)	115. Kazakhstan (65.9)	24. Saint Kitts and Nevis (97.8)	65. Cyprus (77.6)	133. Djibouti (2,178)
114. Mongolia (0.700)	**116. Mongolia (65.9)**	**25. Mongolia (97.8)**	**66. Mongolia (77.4)**	**134. Mongolia (2,107)**
115. Honduras (0.700)	117. Kyrgyzstan (65.6)	26. Romania (97.3)	67. Suriname (77.1)	135. Moldova (2,100)
116. Kyrgyzstan (0.696)	118. Guyana (65.2)	27. Argentina (97.2)	68. South Africa (77.0)	136. Sudan (2,083)
177. Sierra Leone (0.336)	177. Zambia (40.5)	139. Burkina Faso (23.6)	172. Niger (22.7)	174. Malawi (667)

Transparency, accountability, and public involvement in Mongolia are considered as not mature enough to proceed with the revenue generated by mining sector.

7.2 Economic diversification

The evaluation of the Composite Vulnerability Index (CVI) of Mongolia is based on "Small States: A Composite Vulnerability Index Vulnerability Index" (Joint Commonwealth Secretariat/World (Bank Task Force on Small States). Composite Vulnerability Index of Mongolia is estimated to be equal 7.446. With this CVI, Mongolia ranks 20th place among 112 developing countries in terms of economic vulnerability (2005). Among the developing countries, Mongolia's rank by export dependence is 11 and rank by vulnerability to natural disasters is 34. With the UNCTAD's ''diversification index Mongolia is on the 40th place.

Therefore, Mongolia is highly vulnerable because of its export dependence variable. If we count for the fact that the major export good is copper (average share in export is 27 percent) and its price fluctuates very much, then vulnerability of Mongolia will increase further and is projected to worsen unless diversification proceeds.



Mongolian economy is going to be depending much more significantly on mining after the projects start its operations.

7.3 Direct Distribution

Government already passed a law to distribute windfall revenue of 1 million 5 hundred thousand Mongolian Tugrik (equal to 1100 US$) to every Mongolia citizens. However, as mentioned earlier, direct distribution already have its own problem in

Mongolia. While passing the right distribution law by parliament, the inflation rate soared because of the huge amount of money supply in the economy.

7.4 Mineral Resource Fund

Mongolian government so far does not have any mineral resource fund or any institution that established to manage its revenue from mineral resource export. The government controls its stake in strategic mining or explorations through state own company called Erdenes MGL or Treasure of Mongolia in English. The main purposes of this company are as follows:

- Process special permissions to explore and develop mineral resources deposits that were designated by the Parliament to be of strategic significance or were explored and evaluated by state budget funding.
- Represent government interest in mine development projects wherein the deposit were designated by the Parliament to be of strategic significance or were explored and evaluated by state budget funding.
- Provide advisory and consultancy services on attracting strategic investors to and privatization of state owned enterprises and enterprises with state participation in the area of mineral resources, public offering and listing of enterprises that possess permissions to explore and develop mineral resources in deposits that were designated by the Parliaments to be of strategic importance, financing of mine development projects, development of mine related infrastructure among others.

None of these responsibilities of Erdenes MGL above mentioned about the resource fund or policy aimed at avoiding resource curse. This exposes significant amount of risk to resource curse happening in Mongolia.

Chapter 8

Result and Suggestion

The research reveals that Mongolia is not ready to become the mineral resource exporting country. Before becoming mineral resource based economy, there are conditions that countries possess. However, Mongolia possesses almost none of them. Table 9 summarizes the result. Under this circumstance, undertaking the huge mineral resource project and becoming resource based economy could severally destroy its economy.

The pending large scale mineral resource projects are going to have huge influence on Mongolia economy. However, the economic influence can be positive or negative. The positive economic development requires several conditions that must be established before undertaking these projects. Thus, Mongolia needs to build up solid soft-infrastructure that supports transparency, accountability, public Involvement, natural resource and economic policy for economic diversification and direct distribution system.

Otherwise, many experiences in other mineral resource exporting countries tell us that Mongolia could severely damage its current economic development. Unfortunately, as far as this paper reveals, Mongolia rarely possesses none of these important conditions. Thus, I suggest that Mongolian government needs to establish or improve the following issues:

1. Promote transparency, accountability, and public involvement, so that people could monitor whether the revenue from the mineral resource export are being allocated to the right things.
2. Immediately establish a natural resource fund to avoid Dutch disease, reduce the commodity price volatility and improve the budget predictability.
3. Establish economic diversification policy that could reduce the side effect of mineral resource curse such as factor movement.

Table 9

Condition	Name	Rank	Description
Transparency, Accountability, and Public Involvement	Open Budget Index	36% out of 100%	Mongolian government provide minimal information to the public in its budget documents during the year
	Corruption Perception Index	102 out of 180 countries	Mongolian government is perceived as highly corrupted
	Democracy Index	Flawed Democracy	Democracy in Mongolia is considered as immature compare to many other countries.
	Human Development Index	112th place out of 179 countries	Many people in Mongolia do not enjoy proper living standard.
Natural Resource Fund	No Natural Resource Fund or similar government organization established		There is no organization or specific policy to manage and allocate the revenue from mineral resource to avoid resource curse effectively
Economic diversification	40th place		Mongolian economy is highly vulnerable because of too much dependence on mineral resource export

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