

# The Northeast Asian Economic Review

Vol. 3 No. 2 October 2015

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# *The Northeast Asian Economic Review*

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# The Special Edition on the Mongolian Economy

Tomoyoshi Nakajima

This issue is a special edition on the economy of Mongolia.

There are five papers published in this special edition. Four of them deal with topics associated with the key financing for the development of the Mongolian economy.

The first is a paper relating to external debt by Mr. Batsuuri Haltar. Regarding the issues which often become risks for developing countries, it introduces the current situation and future prospects for Mongolia.

The second is a paper relating to the development of the domestic financial sector by Associate Professor Danaasuren Vandangombo. Regarding the overall financial sector supporting Mongolia's economic development, including commercial banks, non-bank financial institutions, and securities companies, it introduces the course of the changes since the market economic transition to the present.

The third is a paper which deals with the banking sector by Mr. Masaru Honma. In contrast to the introduction of the overall financial sector in the preceding paper, it undertakes a detailed analysis of the banking sector in particular.

The fourth is a paper relating to foreign direct investment into Mongolia by Mr. Christopher MacDougall. It undertakes a detailed analysis regarding foreign direct investment which plays an essential role in the development of the key Mongolian industry of mining.

The fifth paper takes taxation as its topic. The paper, by Dr. Enkhbayar Shagdar, undertakes a simulation analysis, using the CGE model, of the changes in welfare due to taxation, and introduces the results.

These papers contain a wealth of information and offer valuable knowledge on the current situation for the Mongolian economy, for which the opportunities to be exposed to are few.

## Original Sin: Is Mongolia Facing an External Debt Crisis?

H. Batsuuri\*

### Abstract

*While many developing nations struggle under chronic debt distress, the current generation of Mongolians are considered to be fortunate people as they have no original sin, or foreign denominated debt, left to them by the previous generations. Yet they may not be as fortunate any longer as they have created excessive debt in recent years since the cancellation of large debt and the fresh start of 2005. Through the abuse of power and position, the authorities have altered the debt management laws that allowed them to contract more debt in excess of economic capacity. The debt sustainability analysis concludes that pre-crisis conditions have been formed and the crisis is imminent. Authorities will have to tackle both public and private debt in order to have realistic views on and solutions to the debt issue. Having no viable economic means in sight to overcome the debt crisis, what will the government do? We don't know yet, but certainly there are difficult times ahead for the government.*

Keywords: external debt of Mongolia, original sin, debt crisis, debt threshold, public and private debt

In Christian doctrine, a sin committed by the human ancestors, Adam and Eve, who ate the forbidden fruit in the Garden of Eden, was the first human sin. Thus, this sin is called original, and also ancestral sin and it is hereditary. As a result of original sin, we humans are sinful in nature and still bear the consequences of the transgression of our ancestors. Likewise, original sin in economics is the foreign currency denominated debt created by our forefathers and passed down the generations. Eichengreen, who coined the term “original sin” and started using the metaphor, described it as the developing world’s inability to borrow abroad in their local currencies and the accumulation of external net debt (Eichengreen et al, 2002). Recent developments of foreign debt crises in Iceland, Ireland, and Greece, etc., testify to the fact that debt denominated in foreign currencies is no longer a problem of the developing world only, but can be a problem for the developed world as well. Yet dealing with original sin is much more of a burden to emerging economies such as Mongolia than to developed countries with strong base economic structures.

Given falling GDP, an increasing budget deficit, decreasing foreign reserves and other negative macroeconomic indicators, experts agree that Mongolia is in economic recession, if not in crisis. Yet, the most depressing issue of foreign debt has not received the full attention it deserves. It may be that this is due to the authorities’ unwillingness to attract the “unnecessary” attention of the public to the amount of foreign debt the country has accumulated and the public’s unfamiliarity with the extent of the consequences the oversized external debt might bring to the country. No matter how hard politicians avoid bringing the problems of external debt to light, the debt threat is imminent and the consequences are dire, and it is just a matter of time until the debt issue is the decisive factor in the politics and socio-economic life of Mongolia.

Misuse and misunderstanding of debt by the Mongolian authorities and the anomalies in debt management laws are two fundamental issues of the debt problems the country is now facing.

## 1. Foreign Debt according to Mongolians

It is a commonly accepted view in Mongolia that unlike many other developing nations, modern Mongolians are considered to be fortunate and people blessed by their forefathers, who left them an independent state free of original sin. History reveals that there were two periods in the past that foreign debt was a threatening issue to the state: debt problems arose before and during the fall of the Qing dynasty in 1911, and; the ruble-denominated debt payment demanded after the 1990 social transition to a market economy. In both cases the debt was cancelled and no original sin was passed down to the younger generations. With the fall and disintegration of the Manchu Qing dynasty in 1911 and a national revolution in 1921, most of the much disputed foreign debt Mongolians were alleged to have owed to Manchu/Chinese merchants was cancelled. During the 70 years as a Soviet satellite state, Mongolia accumulated US\$11.4 billion worth of Soviet ruble-denominated debt. After much debate and discussion on the international stage, however, 98% of the debt was written off by Russia, and with the remaining 2% paid off in cash, Mongolia was freed of over 91% of external debt burden by the beginning of 2005 (IMF, 2005, pp. 6–7). One can see the significance of the debt-free state of mind for Mongolians as there is a proverb for it: “Being rich is being debt-free, being happy is being free of illness.” However, this fortunate and blessed status of the current generation may soon change due to the accelerated accumulation of foreign debt.

There is no doubt that the 2005 debt relief gave Mongolians a much awaited hope for catching up with other fast-moving developing nations and presented an opportunity for a fresh start in the social system of the market economy the country had adopted fifteen years earlier. Unfortunately, as current economic analysis shows, the hope for a catch-up was dashed, and Mongolians wasted an opportunity to exploit the favorable circumstances the debt relief had presented to them. Since 2005 Mongolia’s total foreign debt grew quickly to US\$20.98 billion or 175% of GDP now, with private debt making up 25% and the remaining 75% being public debt (Bank of Mongolia, 2015). The total amount of foreign debt and the public–private debt ratio is crucial to the Mongolian authorities, as public debt has a legal limit and private debt, although with no legal limit, has a significant impact on government debt management and the Mongolian economy as a whole. The government manages public debt through a combination of two laws: the “Fiscal Stability Law” (FSL) adopted in 2010 and renewed in 2015 (State Great Khural, 2010) and the “Debt Management Law” (DML) adopted in February 2015 (State Great Khural, 2015a).

Laws are made to be abided by and serve the purpose of limiting unlimited human desires and needs, and are not supposed to be tailored to the desires of the authorities. But a newly passed bill, the DML, altered the previous law, making additional room for the government to contract more debt. Thus the phrase “In Mongolia, laws don’t limit the debt size, but debt size limits the laws” became popular. This action by the authorities is viewed by many as an abuse of power and position that will bring harmful effects to the nation’s economy. Until the DML bill was passed this February, Mongolia had accepted and at least nominally followed the debt management rulings set in the FSL, which were recommended by the IMF and World Bank and designed based on the Debt Sustainability Framework (DSF) which is a standardized framework for conducting public and external debt sustainability analysis (DSA) in low-income countries (LICs). The DSF is designed to help LICs in making borrowing decisions, guides creditors to wise lending and most importantly it assesses and evaluates a country’s debt-standing which

is integral to analyzing overall economic health. However, recent amendments to the FSL and a newly implemented DML were made in violation of DSF standards and have created a legal environment for the authorities for excessive external borrowing by increasing the debt threshold from the present value (PV) of debt, 40% of GDP, to 58.3% for 2015, and by narrowing the definition of government debt which excluded the borrowing of state owned enterprises (SOEs), government guarantees secured by government securities, and the Bank of Mongolia's currency-swap line from public debt (State Great Khural, 2010, 2015).

These changes in debt management laws have served the specific purpose of artificially reducing the amount of public debt by at least US\$400 million, by immediately excluding the debts of several SOEs from the public debt account which includes but is not limited to: the outstanding payment amounts of US\$250 million which the government borrowed in the form of a tax prepayment from the controversial Oyu Tolgoi, a Rio Tinto and Mongolian government joint mining company, and the US\$350 million of another interest-bearing tax prepayment the government received from Tavan Tolgoi, a national coking-coal corporation wholly owned by the government which in turn owes the sum to China's Chalco, a coal giant. Moreover, the legislation made it possible to exclude Mongolia's currency-swap line with other countries such as China from the government's debt figures. The Chinese and Mongolian central banks have a supplementary currency-swap arrangement, signed in 2011. This bilateral 15 billion yuan (US\$2.44 billion) or approximately 4.7 trillion togrog swap agreement, which ends in 2017 (Mongolian National Broadcaster, 2014; IMF, 2014b), is said to have been a life-line for cash-strapped Mongolia.

Concurrent with the reduction of the amount of public debt by narrowing its definition, the raising of the debt ceiling to 58.3% for 2015, far above the indicative 40% threshold, was a breach of the debt management standards recommended by international financial organizations. Debt threshold changes were implemented on a decreasing scale on a yearly basis: 58.3% for the current year 2015, 55% for 2016, 50% for 2017, and back to 40% for 2018 (State Great Khural, 2015b). While this may be seen as an attempt to secure public debt at the previous, safe level of 40% of GDP eventually, pragmatism in the politics of the country and analysis of the actions of the current authorities suggest that such "generous" and patriotic actions are not realistic, and not genuine. Thus, it's hard to deny the commonly held views that the debt management laws are made to meet the needs and desires of the authorities who have more concern for their own future political careers and personal gain rather than the country's cash-strapped economy, which largely depends on external borrowing. Therefore, the logic is to borrow as much as possible to keep injecting borrowed money in the form of cash into the economy and pave the way to the next parliamentary elections in 2016. If elected, they will raise the debt ceiling again to borrow more; if not elected, then they will leave it as it is, at 55% for 2016, limiting the borrowing needs of the newly elected.

## **2. Misunderstanding and Misapplication of the Debt Threshold**

A new expression "money owed to lenders is not debt, it's just a loan, and debt is when we fail to pay the loan" was coined by economists working for the ruling political faction and was popularized on the public media to justify the ever-increasing amount of external public debt that has already exceeded the legal limit.



Before the new DML bill was passed, the initial threshold that limited government's borrowing to the PV of debt-to-GDP ratio of 40%<sup>1</sup> was legislated in the "Fiscal Stability Law." This threshold was based on the country's debt sustainability analysis (DSA) and presumably was suggested by the World Bank and IMF, organizations that had significant roles in restructuring, rebuilding and directing Mongolia's financial structure since 1990. Under the standardized DSF for analyzing the debt-related vulnerabilities for emerging economies introduced in 2005, reviewed in 2009 and based on the World Bank's Country Policy Institutional Assessment (CPIA),<sup>2</sup> a set of policy criteria, Mongolia with a CPIA average assessment rating of 3.44 in 2010–2014 by both the World Bank and Asian Development Bank (World Bank, 2014; Asian Development Bank, 2014) falls into the "medium policy" performer group. Of five baseline scenario measures for setting a country's external public debt threshold, the PV of external public debt-to-GDP ratio is most frequently used. On the one hand, as a medium performer, Mongolia's indicative external public debt threshold is the PV of debt at 40% of GDP (see Table 1). On the other hand, ranked in the medium policy group, the country's indicative public debt thresholds are 56% in the PV of debt-to-GDP and 62% in the nominal value of debt-to-GDP ratio (see Table 2).

**Table 1: Indicative Policy-Dependent Threshold for External Public Debt**

Debt Sustainability Framework: Indicative Policy-Dependent Thresholds  
(Applicable to public and publicly guaranteed external debt)

	PV of debt in percent of			Debt service in percent of	
	Export	GDP	Revenue	Export	Revenue
Weak Policy (CPIA<3.25)	100	30	200	15	18
Medium Policy (3.25<CPIA<3.75)	150	40	250	20	20
Strong Policy (CPIA>3.75)	200	50	300	25	22

Source: IMF

The present value of the debt-to-GDP ratio is the most popular and frequently used baseline scenario measurement indicator in Mongolia. Based on the five-baseline measurement assessment, one of four possible risk-of-debt-distress ratings—high, moderate, low risk, and in debt distress—is assigned to a country (IMF and World Bank, 2012, pp. 6–7).

As indicated in the DSF analysis, being a "medium performer" (IMF 2015b), Mongolia's external public debt threshold should certainly have been capped at a debt-to-GDP ratio of 40% in PV terms. However, there were no laws or policies that administered external public debt, let alone setting a threshold. The threshold set in the FSL, a present value of debt of 40% of GDP, is applicable to total public debt, instead of external public debt as indicated in the IMF debt sustainability policies (Table 1). Unlike Japan or other developed nations, Mongolia's total public debt is composed largely of external debt, domestic debt making up about 20–30%. The misuse of DSF assessment thresholds or what may have been an error in what the World Bank



set as the external public debt threshold for late-developing countries, including Mongolia, and what our authorities legislated in the FSL created confusion about and misunderstanding of debt not only among politicians but also among economists and researchers. As a result, many see the 40% threshold set in the FSL as a limit to the external public debt instead of the total public debt. Even some IMF staff (IMF 2015b) as well as the Mongolian authorities, giving no explanation or without distinguishing public debt from external public debt, would refer to the World Bank's CPIA-based external public debt rankings, where Mongolia is placed in the "medium performer" group and the threshold is set at 40% as a recommended standard against which to measure a country's total public debt threshold. Ironically, with the growing threat of an external public debt burden, this "error or misuse of the debt threshold" was viewed as not being that bad, as it would limit the government's total debt to 40% only, part of which will be external public debt. Yet, as we know, with the alteration of debt management laws in February 2015, the 40% threshold was raised to 58.3% for 2015, and it has no meaningful positive effect on the debt distress risks the government is facing now.

In the DSF debt distress rating policies (Table 1), a breach in the debt threshold signals a heightened risk of vulnerabilities and places a country into a "high risk" rank which is defined as "one or more debt burden indicators breach the thresholds on a protracted basis under the baseline scenario" (IMF and World Bank, 2012, p. 6). The debt dynamic has been worsening since the 2013 DSA, which alarmed the authorities with the public debt-to-GDP ratio hitting 67%. According to the IMF's 2014 DSA report for Mongolia (IMF, 2014a), total public debt stood at 77% of GDP and external public debt reached 56% by the end of 2014, which far exceeded the FSL's 40% limit, and other key external debt indicators, such as debt-service ratios, have breached or are projected to breach it, with Mongolia at high risk of public debt distress under the baseline scenario.

We've determined that there was confusion and an error in setting the debt threshold to the right category of debt. The World Bank-IMF indicative thresholds for external public debt were applied to limit the amount of public debt. No standards or indicative thresholds were mentioned or used for measuring the total amount of public debt or for comparing the legislated threshold against. But IMF staff (IMF and World Bank, 2012), produced indicative thresholds for public debt that could be used to measure debt distress risks (Table 2). This public debt-to-GDP threshold expressed in both PV and nominal terms made it quite simple and effective to see the current public debt standing.

**Table 2: Indicative Policy-Dependent Threshold for Public debt**

	PV of debt-to-GDP ratio for <b>Public Debt</b>	Nominal value of debt-to-GDP ratio for <b>Public Debt</b>
Weak Policy (CPIA<3.25)	38	49
Medium Policy (3.25<CPIA<3.75)	56	62
Strong Policy (CPIA>3.75)	74	75

Source: IMF

As you can see from Table 2, for a medium performer like Mongolia a debt-to-GDP ratio of 62% in nominal terms is the threshold and the 60% ratio is the “tipping point.” In present value terms, 56% and not 40% as it is legislated in FSL should have been used as the threshold for public debt (Table 2).

As the newly passed Debt Management Law allowed more room, the government was quick to contract more external debt to fill the 18.3% increase, which resulted from raising the 40% threshold for the PV of debt-to-GDP ratio to the current 58.3% for 2015.

Under the new debt management framework, for the second quarter of 2015 Mongolia’s total public debt stood at 13.2 trillion togrogs<sup>3</sup> or 55% of GDP in nominal terms, and 10.9 trillion togrogs or 46% of GDP in PV terms. External public debt was US\$5.4 billion or 45% of a US\$12 billion dollar economy, 5% over the indicative threshold (Ministry of Finance of Mongolia, 2015). However, with the large revenue shortfall reaching 18% in the first half of 2015, the togrog falling 43% against the US dollar in the past three years, and other deteriorating macroeconomic indicators, Mongolia’s authorities sought even more debt from external sources to help its faltering economy and have even been considering an IMF emergency loan under the “standby” program. Within the month of June alone the government contracted US\$325 million of debt from external sources: US\$163 million from the World Bank to supplement the budget deficit,<sup>4</sup> and US\$161.08 million from a “dim sum” bond issued in Chinese yuan (Chen, 2015). Also, a recent prime ministerial visit to Washington and London claims to have concluded in success in securing more loans and investment from private sources, such as JP Morgan Chase and Rio Tinto, which ultimately will increase the country’s total external debt, if not external public debt.

No official DSA or government debt assessment report has been released yet for the current public debt standing and due to the unavailability of complete data on external public debt and the difficulties in determining discount rates used in calculating the PV of debt, no PV of debt-to-GDP ratio has been determined and no in-depth debt analysis, based on the new debt management framework, was produced by independent analysts and economists. However, the public debt-to-GDP ratio hitting 46% for the PV, 55% in nominal terms, signals a high debt distress risk as the given ratios are not too far from the IMF’s indicative risk thresholds of 56% and 62% respectively (see Table 2).

Misunderstanding of debt as a way to satisfy its growing financial desires and needs and raising debt thresholds to an unmanageable level have only increased the debt distress risks. With more debt contracted already with the new threshold and debt administration law, a rising trend is apparent of public debt and debt-to-GDP ratios that could further deteriorate debt dynamics and bring looming debt defaults closer.

### **3. Anomalies in the Debt Management Law (DML)**

Before the country ran into a financial crisis of a cash shortage and a budget deficit in the past two years, public debt wasn’t a public issue and was quietly managed by rulings in the FSL. But with the debt threshold being breached by 2014, authorities made amendments to the FSL to raise the debt threshold and passed a new Debt Management Law. Unfortunately, these changes in the DMF have legislated rules, anomalies that served the desires and needs of the authorities and increased the risks of debt distress. Another of its limitations was that it included no rulings

or thresholds for handling growing external public debt, as seemed necessary, and authorities were free to fill the gap in the public debt threshold with more external borrowing. Raising the debt threshold to a level beyond its economic capacity, exclusion of government owned enterprises and government guaranteed debts from public debt, and the rules allowing debt creation for budget supplements and bridging the old debt payments were anomalies legislated in the new debt management law.

While amendments to the FSL resulted in raising the PV of debt-to-GDP ratio to 58.3% for 2015 and lowering it back to 55% for 2016, and 50% for 2017 before stabilizing back at 40% for 2018, a new DML, that according to authorities was implemented to better manage and control public debt, loosened borrowing limits by excluding from public debt SOE debt, secured government guarantees, and the Bank of Mongolia's currency swap line with the Bank of China. It is ironic, as analysis shows, that the DML in fact had a worsening effect on public debt. The debt management environment was worse than it had been before. A decrease in the amount of debt and the raising of the threshold resulting from the altering of the debt management strategy gave authorities a false sense of debt reduction and improvement of the debt absorption capacity. But actually, with more external debt contracted and with the exclusion of debts that will have to be paid off from the government budget in any case, the risks of debt distress are higher now than before the new DMF was implemented. As of the present, about 12% of the state budget is spent on servicing debt, but this is projected to triple, if not quadruple, in the next two years. Also, despite official reports of debt reduction and capable debt management which kept debt under the legal threshold, Mongolia's sovereign credit rating did not improve at all. International credit rating agencies, for example Moody's, in July last year downgraded Mongolia to B2, a lower grade than B1, indicating the high risk of the country's investment environment (Moody's, 2014). The outlook remains negative now and agencies attribute their downgrade largely to a continued rise in the external debt burden and other macroeconomic factors, such as a sharp loss in foreign currency reserves and the strained liquidity situation which increase the country's vulnerability to external and domestic shocks relative to their peers with the same rating.

The other anomalies implemented in the new DML were the law's articles legitimizing the purpose of debt creation. In Article 12.1.1 it is indicated that debt is to be created to finance fiscal deficits and Article 12.1.4 states that new debt is to be contracted to service debt repayment and refinancing of the old debt the government is holding (State Great Khural, 2015c). Given Mongolia's weak institutions and faltering macroeconomic position both articles legitimizing debt creation are not recommended, or should even be forbidden, as they would get the country into a spiraling circle of ever growing budget deficit and government debt. It will also give authorities a legal platform to over-expend and relieve them of the responsibilities of the oversized debt they created, and could lead the country to a sovereign default. Studies by notable researchers, including a well-known scholar specializing in development economics, W. Easterly of Columbia University, and poverty specialist Paul Collier of Oxford University, showed that paying old debt and the budget deficit by borrowing externally were a common pattern in HIPC<sup>5</sup> and viewed as a significant, if not the most major, contributing factor to oversized debt accumulation in emerging economies, especially those with natural resources (Easterly, 2002, pp. 1677–1696).

A clear description of how old debt was the reason for creating new debt in debt-burdened countries was given in Roodman (2006, p. 21): "... lending targets sent powerful incentives down the hierarchy for speed and volume in lending ... Growing debt troubles have compounded

such pressures to lend. Seeking to minimize the appearance of problems, the IMF, World Bank, and regional institutions such as the African Development Bank [Asian Development Bank in Mongolia's case] have often lent still more to countries struggling to service their old loans." Paul Collier who sees badly managed natural resources as a trap for debt-burdened African countries now warns Africa, and thus other emerging economies like Mongolia, of new debt accumulation and suggests new borrowing decisions be made upon how well the old debt is being paid and the amount of debt remaining. Easterly indicates that a pattern of poor policies by HIPCs which resulted in an overburdened debt accumulation, included, but was not limited to, new borrowings for the purpose of covering both old debt repayment and budget deficits.

A recent development of the debt case in Greece which was much opposed by the Greek people and the opposition was a clear display of how a bridging loan and its vicious circle of debt accumulation worked. The EU "agreed" to a €7 billion, three-month bridging loan for Greece. This will allow Greece to make a €3.5 billion payment due to the European Central Bank and the €1.5 billion arrears it owes to the IMF (BBC News, 2015). It said that the bridging loan paves the way for negotiations on a bailout of up to €6 billion to begin with, which is more debt accumulation in any case, unless the debt relief given to Africa is on the table for discussion with Greece.

It is clear that the current institutional set-up for debt management harbors anomalies, weaknesses that could easily be exploited further by the corrupt and politically motivated authorities and thus further increase the risk of debt distress and default. Increasing the borrowing limit to a level beyond the manageable capacity and twisting laws to the likes and needs of the authorities exacerbates the situation for an already weakened economy.

#### **4. Public Debt versus Private Debt.**

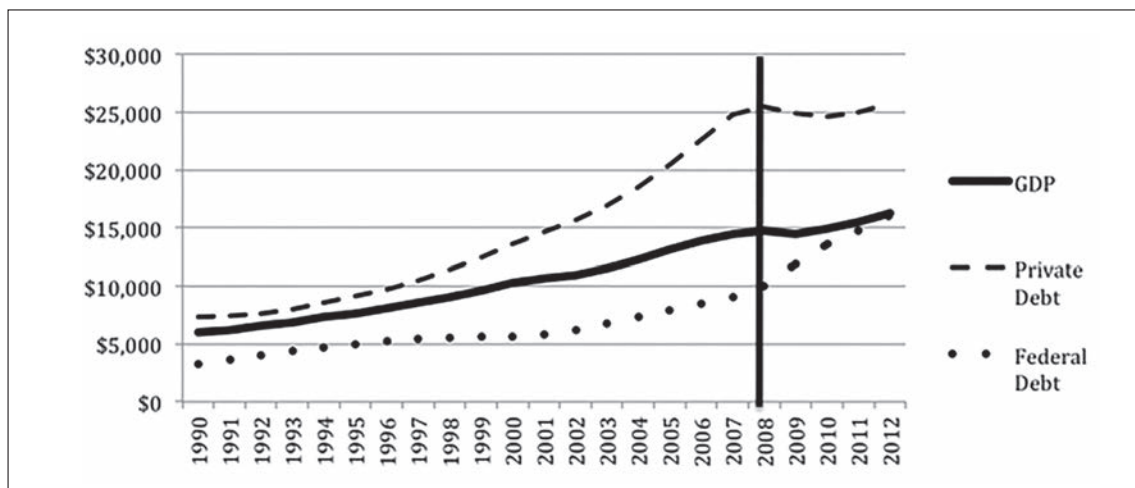
In the discussion of debt in Mongolia one vital component which usually remains outside the scope of attention is private debt. Why is it then that we cry out loud when public debt reaches 40% of GDP and don't give it a mention when private debt hits 150% of GDP? It's left out because it is considered that private debt was a private matter, not the government's problem. However, ignoring private debt issues creates another misunderstanding, or an illusion that if we can rein in public debt, then we will have really tackled the debt problem. With the claim that private hands create up to 80% of GDP (Ulaan, 2013), the country's private debt certainly has a crucial impact on the economy and requires undivided attention from the authorities.

There is not much in common between Mongolia on the one hand and Japan and the United States on the other. But one thing these countries appear to have in common are the preconditions for an economic crisis—high private debt and rapid private-debt growth—as in the 2007–2008 crisis in the United States, the 1991 crisis in Japan, and the imminent crisis Mongolia is approaching now. Vague's (2014) studies of financial crises around the world find that a major financial crisis is preceded by a running-up of private debt with public debt remaining at a lower, or manageable, parallel level to GDP. Note the features of the pre-crisis conditions in Figure 1 for the United States, Figure 2 for Japan, and Figure 3 for Mongolia. In all cases, for the years preceding the crisis, the dashed lines representing private debt shoot up to exceed the GDP line, the dotted lines representing public debt (Federal Government debt for the United States in Figure 1) roughly parallels the line representing GDP, with a rapid growth in private debt, and public

debt remaining at a lower, parallel level to GDP. There is no dramatic growth in public debt as a proportion of GDP. In Mongolia's case both public debt and private debt, as a proportion of GDP, were not very high to begin with. But in recent years, with public debt remaining at a lower level, parallel to GDP, private debt has grown rapidly, exceeding in size both GDP and public debt, making the current situation look very much like the pre-crisis conditions depicted in Figure 1 for the United States, and Figure 2 for Japan.

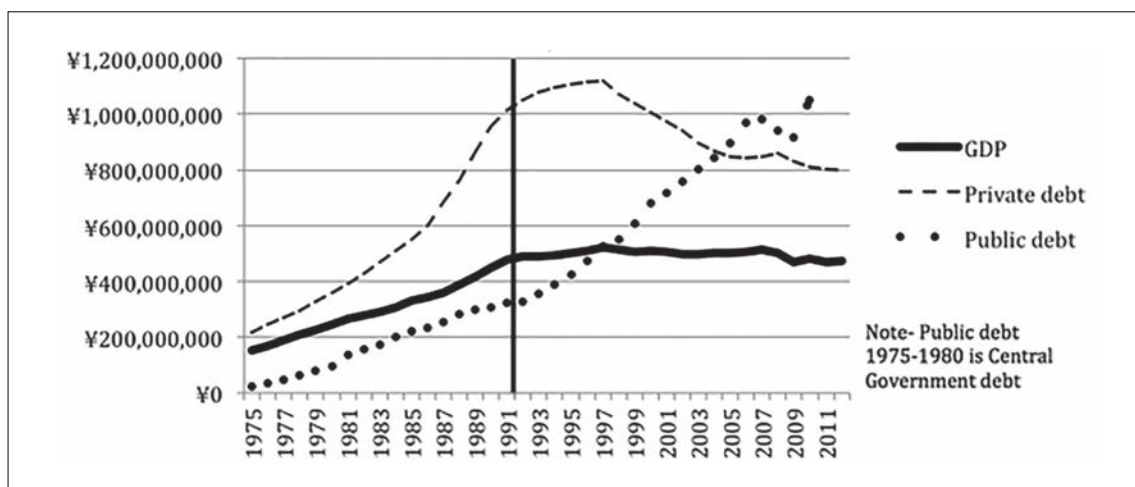
Vague (2014) concluded that almost all instances of rapid debt growth coupled with high overall levels of private debt have led to a crisis, and made this finer point in the summary: if the private debt-to-GDP ratio is at least 150% and that ratio grows by at least 18% over the course of five years, then a big crisis is likely. This pre-crisis condition of debt was observed not only in the 2007–2008 crisis for the United States, and the 1991 crisis for Japan, but also in the 1997 Asian crisis and in other crises around the world.

**Figure 1: US Crisis of 2007–2008: GDP, Public Debt, and Private Debt (in billions)**



Source: Vague, R. (2014).

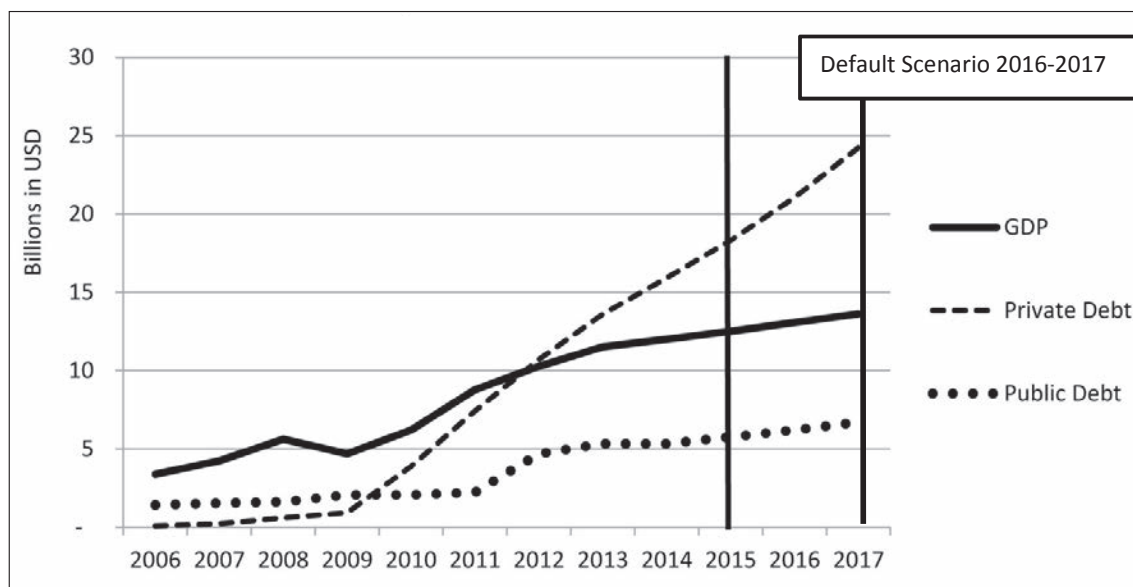
**Figure 2: Japan Crisis of 1991: GDP, Public Debt, and Private Debt (in millions of yen)**



Source: Vague, R. (2014).



**Figure 3: Mongolia's Current and Projected Position after 2015:  
GDP, Public Debt and Private Debt**



Source: Author made graphic. Data obtained from the Bank of Mongolia.

With total private debt hitting more than 170% of GDP, external private debt growing at 500% on average in the preceding five years, as opposed to the 18% indicated in the description of preconditions, and public debt remaining at a lower, parallel level to GDP, in this case a 44% ratio of GDP, Mongolia certainly meets the precondition “criteria” for a crisis.<sup>6</sup> What’s alarming in any case is that, just as shown in the pre-crisis conditions, “private debt remains high even after crisis is over,” and Mongolia’s private debt is projected to remain high here on in. Therefore, if the conditions are met, then when will the crisis occur? Given the deteriorating macroeconomic indicators, including, but not limited to, the three months-worth of foreign reserves remaining, falling export revenues, and no improvement of the situation in sight, a crisis is imminent and looming large. If no change in the course, the crisis is predicted to start with defaults on both public and private debt payments largely due in early 2017 (see Figure 3). Although no official information is available on private debt details, analysis of the Bank of Mongolia’s debt data indicate that most of the private debts, which now make up about 75% of total external debt, were incurred during the so-called “mining boom” years of 2008–2012 (see Figure 3) and have loan maturity dates falling in 2017–2021. Given no viable economic means for repaying the debt, private companies have already started lobbying the government for a “bailout” (Daily News, 22 November 2014).

On the other hand, the government also has an oversized debt repayment due in the first quarter of 2017, and is the first of a series of large debt repayments the government has to make through to 2021. A US\$580 million loan from the Development Bank of Mongolia (Ministry of Finance of Mongolia, 2014), which is due in the first quarter of 2017, is quite a large chunk of the repayment the government has to make in one go. Furthermore, with a projection of the required debt-servicing payment in 2017 increasing up to 35% from the current 12% of budget revenue, the government will be in no position to bail out private companies. Not only are there difficult times ahead, but the government itself is under debt distress already. Facing financial difficulties,

the Mongolian government back in February 2015 asked the IMF for a loan and the IMF, as a lender of last resort, offered its life-saving “standby” bailout program, but the deal fell through as the Mongolian Parliament rejected it (Kohn, 2015). If faced with defaults and a debt crisis, what are the realistic options for the government? Will the IMF come to Mongolia’s rescue? And even if it does, what will be the cost? Authorities are suspected of eyeing the possibilities of repaying the debt by incurring a new one, or selling a piece of land or mineral deposits which the country is rich in. Neither is a good solution, especially as giving up a piece of land or mineral deposits for debt repayment may not be feasible.

In any case, it is an illusion that if we can rein in public debt, then we’ll really have tackled the debt problem. That external private debt has been climbing at an increasing pace in recent years presents a lethal threat to Mongolia’s economy. Ignoring or avoiding private debt issues will only exacerbate the situation. To overcome the imminent crisis the country is approaching, Mongolia will have to tackle both public and private debt issues.

## 5. Conclusion

From one point of view the current generation of Mongolians are fortunate people as they have not inherited any original sin or foreign currency denominated debt from their predecessors, and thanks to the latter. But from another point of view they aren’t so fortunate, as they themselves have generated such large external debt that not just the current generation, but the subsequent generation may not be able to pay it off. The consequences of and the impact the external debt will have on the economy were suppressed or played down regarding the public, by disguising what debt really is. Through the abuse of power and position, the authorities have altered the debt management laws and created excessive external public debt which will bring a crisis to the economy. Ignoring the issues of private debt, which composes three quarters of total external debt, will only aggravate the situation. The country’s total external debt is insurmountable, equaling 175% of GDP. The government will have to tackle both public and private debt in order to have realistic solutions to the crisis it is facing. Analysis shows that pre-crisis conditions have been formed and a crisis is imminent. It is predicted to come with the government’s possible default at the beginning of 2017—if not earlier—on the oversized debt repayment due in the first quarter of that year.

With no viable means to handle the crisis in sight, what will the government do at the time of a crisis? Extreme measures such as selling a piece of land or mineral deposits will neither be feasible nor be supported by the people, and at the same time, no one wants or sees another loan bridging the repayment as a good solution to the crisis. Let’s just wait and see. There certainly are difficult times ahead for Mongolia.

\*Editor, “The Analyst”

<sup>1</sup> Note that this threshold indicated in the FSL is for total public debt, not just external public debt. For “medium performers”, the World Bank and the IMF indicative thresholds for total public debt are 56% for the PV and 62% in nominal terms (see Table 2), IMF and World Bank (2012): *Revisiting the Debt Sustainability Framework for Low-Income Countries*.



- <sup>2</sup> World Bank rating of countries against a set of 16 criteria grouped in four clusters: economic management, structural policies, policies for social inclusion and equity, and public sector management and institutions.
- <sup>3</sup> The togrog is Mongolia's domestic currency. In the last two years the togrog's USD exchange rate fluctuated from MNT 1850 to 1990.
- <sup>4</sup> Author's count. Sources: (MMINFO.MN, 2015; TIMES.MN, 2015).
- <sup>5</sup> HIPC = heavily indebted poor countries.
- <sup>6</sup> Author's calculation. Source: Ministry of Finance Report: First quarter 2015.

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# Capital Market Development in Mongolia

V. Danaasuren\*

## Abstract

*With its natural resource abundance, Mongolia is considered as an emerging market with potential for economic development. The growing economy needs money which is mostly generated by the financial sector, comprised of monetary and capital markets. This paper aims to introduce the capital market development in Mongolia through an analysis of its role in the financial sector, and its constituents and market performance.*

Keywords: capital market, Mongolia, development

## 1. Introduction

With its natural resource abundance, Mongolia is considered an emerging market with potential for economic development. The country is one of the fastest growing economies, as its GDP growth ranged between  $-1.3\%$  (in 2009) to  $17.5\%$  (in 2011) and averaged  $7.7\%$  over the last 15 years. Although the country has experienced volatile growth, its average growth is comparable to other fastest growing countries. The growing economy needs money which is mostly generated by the financial sector, comprised of monetary and capital markets. Although the capital market provides the majority of the long-term financing for economic development in developed countries, this is not the case in Mongolia. Therefore, the monetary market consisting of commercial banks performs the predominant role in the economy by disbursing the necessary financing for businesses. This paper aims to introduce capital market development in Mongolia through an analysis of its role in the financial sector, capital market participants, market performance and primary capital market performance in Mongolia.

## 2. Overview of Mongolia

Mongolia is home to a population of three million and is a landlocked country with diverse landscapes and vast natural resources. The economy grew at an average rate of approximately  $9\%$  and the GDP per capita increased from US\$904 to US\$4,579 between 2005 and 2013, transitioning from a low-income country to an upper middle-income country. In terms of human capital,  $47.2\%$  of the total population are young people aged 15–40 with a high literacy rate and gender equality. It is a democratic country and has a political commitment to sustainable development.

Despite its high economic growth, Mongolia has a number of challenges, such as poverty, overdependence on a natural resource-based economic structure, a decrease in foreign direct investment, inefficient use of energy, technical and technological obsolescence, and vulnerability to climate change. Therefore, the government has initiated numerous strategies, programs and policies to address these issues and diversify the economy, keeping in mind sustainable development notions.

### 3. The Financial Sector in Brief

The growing economy needs money which is mostly generated by the financial sector, comprised of monetary and capital markets. Although the capital market provides the majority of the long-term financing for economic development in developed countries, this situation is different in Mongolia. The Mongolian capital market is underdeveloped and it does not play a leading role in long-term financing. Only fewer than 0.7% of all registered entities are publicly listed on the stock exchange and corporate bond financing is almost absent. Therefore, a monetary market consisting of commercial banks performs the predominant role in the economy by disbursing the necessary financing for businesses.

**Table 1: Structure of the Mongolian Financial Sector**

	2009			2010			2011			2012			2013			2014		
	No	Assets (billion MNT)	% of total assets	No	Assets (billion MNT)	% of total assets	No	Assets (billion MNT)	% of total assets	No	Assets (billion MNT)	% of total assets	No	Assets (billion MNT)	% of total assets	No	Assets (billion MNT)	% of total assets
Banks	15	4,421.8	95.8	14	6,245.6	95.9	14	9,371.6	95.7	14	11,992.2	95.9	13	20,883.7	97.0	13	22,562.6	96.6
NBFIs	455	195.5	4.2	430	265.6	4.1	472	416.1	4.3	452	507.8	4.1	502	648.5	3.0	557	783.1	3.4
Insurance companies	18	41.1	0.9	17	55.4	0.9	17	81.2	0.8	18	108.0	0.9	17	113.2	0.5	17	136.7	0.6
SCC	212	45.0	1.0	179	49.0	0.8	162	61.9	0.6	151	67.7	0.5	143	71.2	0.3	139	76.8	0.3
Finance companies	177	96.5	2.1	182	128.6	2.0	195	205.4	2.1	212	252.1	2.0	245	344.1	1.6	326	444.0	1.9
Securities companies	48	13.0	0.3	52	32.6	0.5	98	67.6	0.7	95	96.1	0.8	97	120.0	0.6	75	125.6	0.5
Total financial system	470	4,617.3	100	444	6,511.2	100	486	9,787.7	100	466	12,500.0	100	515	21,532.2	100	570	23,345.7	100

Source: Bank of Mongolia et al (2014): "Financial Stability Report"

The banking sector has consistently held some 96% of total financial market assets. Although the number of non-banking financial companies is currently the highest, they possess only 1.9% of total assets. Both insurance and brokerage companies account for less than 1.5% of total assets, with relatively stable organization numbers (Table 1).

With the banking sector predominant in the financial sector, loans provided by 13 banks are the most important source of business financing. Although the share of loans to the private sector has decreased by 5 percentage points for total loans, the total amount of the loans has increased 3.5 times (or by 251%) since 2008.

**Table 2: Statistics for Outstanding Loans to the Private Sector**

	2008		2009		2010		2011		2012		2013		2014	
	Amount in billion MNT	(%)	Amount in billion MNT	(%)	Amount in billion MNT	(%)	Amount in billion MNT	(%)	Amount in billion MNT	(%)	Amount in billion MNT	(%)	Amount in billion MNT	(%)
Loans outstanding to private sector	1,556.0	59.0	1,699.1	64.0	1,854.6	57.5	3,072.4	54.9	3,819.2	55.0	5,968.1	55.7	6,618.8	53.2
Normal	1,336.1	50.7	1,225.6	46.2	1,472.6	45.6	2,752.8	49.2	3,494.8	50.3	5,388.8	50.3	5,867.9	47.2
up to 1 year	584.6	22.2	439.8	16.6	414.2	12.8	604.5	10.8	965.4	13.9	1,362.8	12.7	977.5	7.9
1–5 years	703.7	26.7	662.4	24.9	975.3	30.2	1,967.9	35.2	2,259.9	32.6	3,643.3	34.0	4,410.4	35.5
5 years and more	47.9	1.8	123.4	4.6	83.1	2.6	180.5	3.2	269.5	3.9	382.6	3.6	480.0	3.9
Total loans outstanding	2,635.1	100	2,655.0	100	3,228.2	100	5,597.7	100	6,941.1	100	10,715.6	100	12,440.9	100

Source: Bank of Mongolia (2014): Loans Outstanding Reports 2008–2014

The table above shows that loans to the private sector declined to 53% in 2014 compared to 64% in 2009. Less than half of outstanding loans are classified as normal, which indicates there is a danger of high non-performing loans. In terms of maturity, there are slightly decreasing trends for all terms. The mid-term loans account for one-third of normal loans. Longer term loans to the private sector still remain very low, at a level of 4%. However, these loans often have short terms and high interest rates as a result of various factors, such as the maturity mismatch of deposits and loans, the regulatory barriers of the banking sector, and a lack of long-term financing sources for banks. As the bank loans are typically of short- and mid-term maturity, the capital market is the market for raising long-term capital investment. The next section will introduce the capital market in more detail.

## 4. Capital Market Development

### 4.1 The legislative and administrative environment of the capital market

The equity and bond markets are the parts of the capital market where companies and governments raise long-term financing. These markets, or simply the capital market, account for about 28% of total domestic long-term financing in developed and developing countries. Drawing comparisons, bank loans have maturities averaging only 2.8 years in emerging economies, as against 4.2 years in developed economies, investment-grade or high-yield bond maturities in developed countries are 8.0 years and 7.7 years, respectively, and in emerging markets they are 6.0 years and 6.9 years, respectively (Group of Thirty, 2013). Unlike these countries, the share of the Mongolian capital market, however, constitutes only 3% of domestic financial markets and the bond market is dominated by government bonds. There are no high-yield bonds in Mongolia.

In terms of the legislative environment, the capital market is regulated by the Corporate Law (2011), the Securities Law (2013), the Law on Investment Funds (2013) and the Law on Asset-Backed Securities (2010), among others. Both the corporate and securities laws were revised in 2011 and 2013 to accommodate more room for security issuance as a way of financing business. The latter two laws are new legislation to promote institutional investors and the issuance of derivatives on the capital market.

The main governing body of the capital market is the Financial Regulatory Commission (FRC). It was established in 2006 as the regulatory body for supervising more than 1,000 non-bank financial institutions (NBFIs), comprising insurance companies, brokerage companies, non-bank financial companies, and savings and credit cooperatives. The objective of the FRC is to ensure national financial market stability. The FRC is in charge of improving the legal environment of the capital market, developing rules, procedures, regulations and methodologies for the capital market, insurance market and other non-banking financial services, such as savings and credit cooperatives and currency exchange units. Moreover, it acts as the key monitoring body for compliance, conducting inspections and examinations, protecting the legal rights of its constituents and solving disputes for all the related institutions.

The key institution of the Mongolian capital market is the Mongolian Stock Exchange (MSE). It was established in 1991 to implement the privatization of state-owned enterprises in the early stages of transition. With the enactment of the Securities and Exchange Law (1994) and the Corporate Law (1995), a secondary market was established and brokerage firms operated and

financed by the MSE were privatized.

In April 2011, the government signed the “Master Service Agreement” with the London Stock Exchange, aiming to launch a modern trading system in Mongolia, to improve the legal environment, financial infrastructure and technology, and to help the capacity building of trading staff. Within the scope of this agreement, the “Millennium IT” operating system was introduced to the MSE in 2012. The system is the fastest cash trading platform in the world and enables the stock exchange to provide substantially lower latency, significantly higher capacity and improved scalability to meet investors’, professional brokers’ and dealers’ needs.

Currently, 303 public companies are listed on the MSE, of which 30 companies are state-owned. The FRC provides financial supervision for the MSE and the public companies listed on the stock exchange. Both the primary and secondary securities markets are still in their infancy with the absence of institutional investors, including private equity funds, insurance companies, pension funds, and mutual funds. However, the newly revised securities law and the law on investment funds introduced some avenues for institutional investors to participate in the MSE.

## 4.2 Market participants

Participants in the capital market can be simply classified as stock market specialists, listed companies and investors.

**Stock market specialists:** Capital market organizations and specialists participate in the market once they receive a special license from the FRC. Currently, there are about 120 licensed companies and organizations with 500 market specialists working in the capital market. These are: a trading organization (MSE), a securities transaction and deposit organization, 66 brokerage and dealer companies, 11 investment companies operating in the primary and secondary markets of government bonds on behalf of the issuer, 5 commercial banks for securities transactions, 2 investment management companies, 24 companies with underwriting licenses, 15 investment consulting firms, and 2 custodian banks. The number of market specialist companies gradually increased up to 2013 (Figure 1). The highest increase (76% growth) occurred in 2011, but the number of companies declined to 75 in 2014 due to the economic downturn and market slowdown.

**Listed companies:** Being a listed company is not common for businesses in Mongolia. Out of 39,000 registered entities at the National Registration Agency, only 0.7% (or 303 companies) are listed on the MSE. Eight out of the top 100 companies are listed companies. Among listed companies, 30 companies are state-owned, 11 companies have state participation, and the remaining 262 companies are private companies.

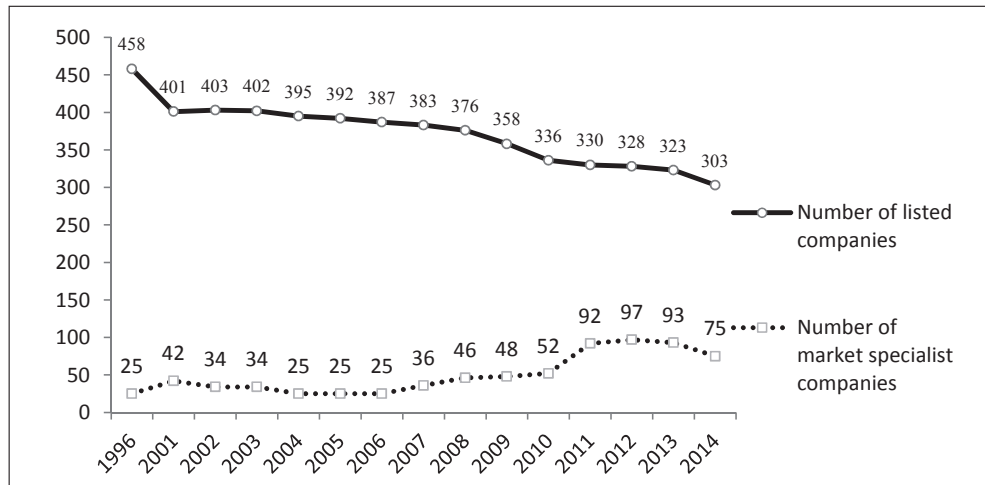
One of the main features of Mongolian listed companies is that they were established as a result of the privatization carried out in the early 1990s. During the privatization, the government distributed two types of investment vouchers to all citizens and privatized the majority of state-owned enterprises. Consequently, 470 entities were registered as listed public companies on the MSE. Unfortunately, stock concentration occurred for most companies due to a number of reasons, such as a lack of public awareness regarding the stock market, the low purchasing power of the public leading people to sell their investment vouchers at a low price, undeveloped market infrastructure, and fraudulent actions by some individuals. This was evidenced by the fact that 64% (or 193 companies) of the total listed companies had a stock concentration of more than 75% in 2014. This high stock concentration negatively affects stock trading, dividend distribution



and market growth.

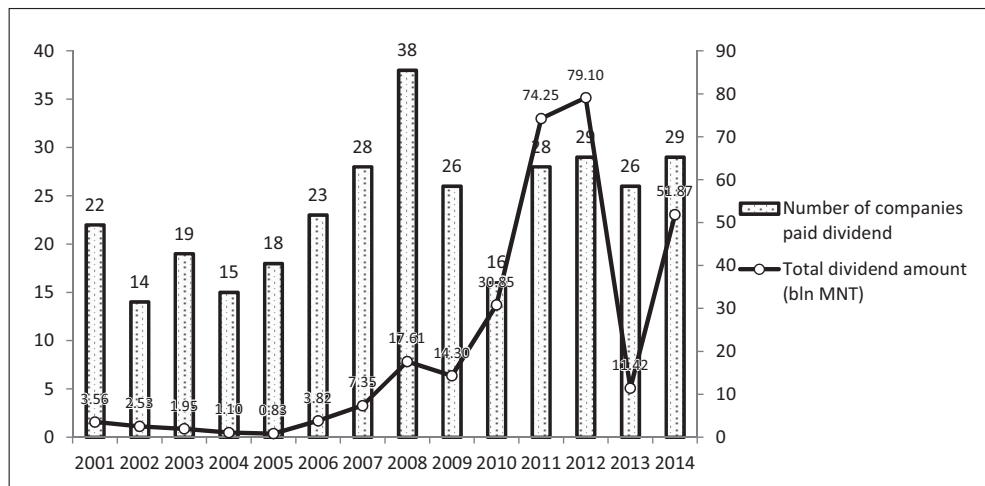
The number of listed companies has continuously decreased since the beginning of capital market development in the 1990s (Figure 1). This decrease was also partially related to the early taxation law which had a dual rate structure<sup>1</sup> with a progressive rate scale. Due to the progressive rate, many companies used entity splitting to avoid the higher tax rate and thus resulted in listed public companies becoming smaller limited liability companies.

**Figure 1: Listed companies and market specialists**



Source: FRC Annual Report, various editions.

**Figure 2: Dividend payments**



Source: FRC Annual Report, various editions.

The high stock concentration also adversely affects dividend distribution. Figure 2 shows that dividend disbursement is very low in Mongolia and less than 10% of listed companies distribute dividends. Amount-wise, dividend payment in MNT (Mongolian togrogs) has gradually increased since 2005 and the highest increase occurred in 2011 and 2012, when the economy enjoyed high economic growth. With the economic downturn the dividend payment amounts fell by 86% in 2013, but recovered again in 2014, reaching MNT 52 billion. However, dividend



payments are still very low in Mongolia compared to the total stock valuation of the market. If dividends are considered as one of the key signal indicators of the stock market in developed economies, this is not the case in Mongolia due to an underdeveloped small stock market with high stock concentration.

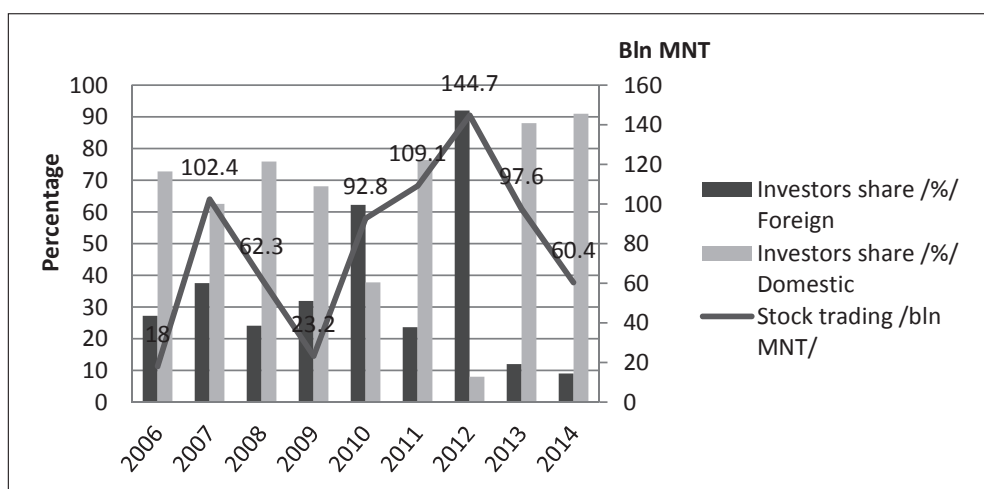
Outside the MSE, 30 Mongolian companies, mostly mining companies, have been listed on foreign exchanges because of their much greater ability to raise capital and their high liquidity. Among them, 57% are listed on the Canadian stock exchange, 40% on the Australian stock exchange, 30% on the Hong Kong Stock Exchange, 13% in the United States, and 7% on other stock exchanges.

**Investors:** These are key players on the capital market. There are 302,050 foreign and domestic investors on the MSE. State investors account for 40% of the total stock, 813 big investors hold 56%, and the remaining 4% is held by 301,237 small investors due to stock concentration.

For the reason of there being state-owned coal-mining companies, the parliament decided to distribute 1,072 of their shares to each citizen to assure equal benefit for the population. As a result, thousands of individuals opened an account at the Mongolian Securities Clearing House and Central Depository. The depository has 785,863 accounts in total, of which 99.4% are held by domestic individuals and the remaining 0.6% are held by 1,768 foreign individuals, 2,429 domestic entities, and 177 foreign entities.

In terms of investor share in market trading, the composition of domestic and foreign investors has changed dramatically due to the economic situation, the investment law, the legislative environment, and the activeness of domestic investors. Foreign investment has been quite volatile since the beginning and it significantly increased during the mining boom-led economic growth years. Like foreign direct investment into other economic sectors, foreign investment into the stock market has greatly decreased since 2012 due to the global and Mongolian economic downturns and the investment environment. The share of foreign investors in stock-market trading fell by 80 percentage points in 2013, with a further 3 percentage point decrease in 2014 (Figure 3). In contrast, the share of domestic investors has seen steady growth, reaching 91% in 2014.

**Figure 3: Investor Participation in Stock Market Trading**



Source: FRC (2014) Annual Report

The pattern of the market trading volume for the last decade followed the economic and foreign direct investment trends. In 2009, it reached its lowest point due to the Lehman shock's impact on financial markets (Figure 3). However, the trading volume significantly increased up to 2012, reaching its highest point of MNT 145 billion and declining thereafter. In Mongolia, the share of institutional investors is minimal as there are no well-developed private equity funds, mutual funds, pension funds, and insurance market. Thus, the situation negatively affects stock market performance.

#### 4.3 Market performance

With the rapid economic growth of the last decade, the capital market capitalization has dramatically increased from 1.8% of GDP in 2005 to 6.6% of GDP in 2014 (the highest percentage was 16.5% in 2011). The trading value also soared from MNT 2.5 billion in 2005 to MNT 144.7 billion in 2012, but decreased to MNT 12.9 billion by 2014 (Table 3). This 58-fold increase in trading value indicates that there is growing interest from domestic companies to raise capital, in particular common stocks from the domestic market, in order to meet their growing investment needs in business expansion. However, increases in market capitalization and trading value are volatile and still remain minimal compared to banking sector growth and the growing private sector demands for capital investment.

The main MSE index is the TOP-20 index, calculated based on the market capitalization and average daily trade of the top-20 securities listed on the MSE. In February 2015, the MSE introduced a new index called "MSE All" in order to provide more detailed and realistic price information for market participants. The following table illustrates the key market indicators of the capital market, including listed companies, market value and trading, the TOP-20 index, and bond trading. Currently there is no derivatives market.

**Table 3: Mongolian Capital Market Indicators**

	2000	2005	2010	2011	2012	2013	2014
<b>Listed companies</b>	410	392	336	332	329	326	303
o/w: actively traded	125	108	69	102	96	122	123
<b>Market capitalization</b>							
in billion MNT	40.5	55.7	1,373.9	2,168.6	1,799.9	1,670.5	1,442.7
in million USD	36.9	45.6	1,092.9	1,553.0	1,292.9	1,006.7	763.9
in percent of GDP	3.3	1.8	16.3	16.5	10.8	8.7	6.6
<b>Trading value</b>							
in billion MNT	3.0	2.5	92.9	109.1	144.7	97.6	12.9
in million USD	2.7	2.1	73.9	250.8	104.2	8.5	7.1
in percent of GDP	0.2	0.1	1.1	0.8	0.9	0.5	0.1
<b>Bond trading value (in billion MNT)</b>							
Government	11.1	6.8	30.0	236.7	0.0005	0.0	23.9
Corporate	0.0	2.7	0.0	4.4	0.3	0.0	0.0
<b>Top 20 index</b>							
High	506.3	1,053.0	14,759.8	21,687.6	17,714.5	16,736.7	15,264.6
Low	459.6	955.9	14,006.0	18,515.0	15,449.8	15,315.8	14,475.2
Average	489.0	995.3	14,331.3	19,846.7	16,839.1	15,874.0	14,883.0
Close	469.9	1,019.2	14,759.8	21,687.6	17,714.5	16,301.8	14,854.2

Source: Statistical Bulletin of the Bank of Mongolia

In terms of market valuation, listed companies account for US\$1.4 billion. The market-price-to-book-value ratio averages 3.5, implying that shares of companies are 3.5 times

overvalued compared to their book values. The average P/E ratio of listed companies is 17.5, indicating a relatively overvalued trend in the capital market. Since 2011, both the total transaction amount and the TOP-20 index have declined, which indicates inactive trade on the MSE. This is directly related to the decreasing number of listed companies and their inactiveness in trades.

Many listed companies' shares are not traded, or traded only sporadically. Of the companies that are actively traded, 80% of the shares are held by a small number of shareholders. This stock concentration is also supported by the concentration of market capitalization. According to the Financial Stability Report 2013, just 30 companies hold 86.3% of the total market capitalization (Bank of Mongolia, 2013). The main reasons for the passive trading are that: the liquidity of equity in the stock exchange is weak; the stock concentration of listed companies is high; there are no institutional investors; the capital market has a lack of highly-skilled specialists; and there is a lack of financial knowledge among the public and companies regarding the benefits of the capital market and opportunities to raise capital on the market.

Meanwhile the bond market is dominated by government bonds. The government and the Bank of Mongolia are key bond issuers and issue regular or discounted bonds and treasury bills (T-bills). Short maturity instruments (240 days or less) characterize the Mongolian bond market. As most bonds are held by commercial banks that typically keep them until maturity, there is no real secondary market. The biggest bond trading occurred in 2011 when government bonds accounted for 98% of the total trade value of bonds of MNT 241.1 billion (Table 3).

In October 2012, the Regulations on Issuing and Trading of Government Securities was issued, which stipulated that the Bank of Mongolia will manage the trading of government securities. As a result, the value of government bonds traded on the MSE declined significantly to MNT 525,000 in 2012 and zero in 2013.

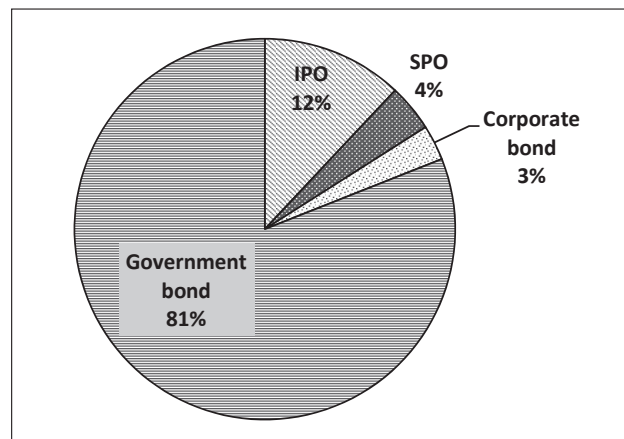
Theoretically, corporate bonds are similar to bank loans as they have a low cost in terms of capital compared with issuing equities, and have longer-term maturities than bank loans. However, corporate bonds have not been used as a financing instrument by most corporations. Until now, there are only 5 companies issuing bonds, accounting for only 3% or MNT 17 billion for financing their major projects.

Despite its rapid growth, the capital market in Mongolia is still underdeveloped in terms of its role in the total financial market and a number of listed companies.

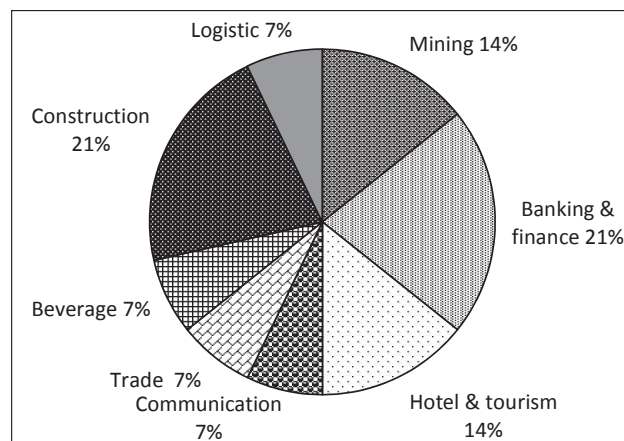
#### 4.4 Initial public offerings on the MSE

Currently, three types of securities are traded on the MSE, namely: common stocks, government bonds, and corporate bonds. There are no derivatives and other securities developed in the country. In terms of composition, common stocks accounted for 40%, while government bonds held 60% of the total trading in 2014. There were no corporate bonds.

As the primary market plays the most important role in long-term financing, the government and business entities can issue bonds and stocks on this market for project and program investment and reconstruction purposes. Figure 4 shows the structure of primary market instruments.

**Figure 4: Composition of Primary Market Trade**

Source: Mongolian Stock Exchange

**Figure 5: Company-Issued IPOs (by sector)**

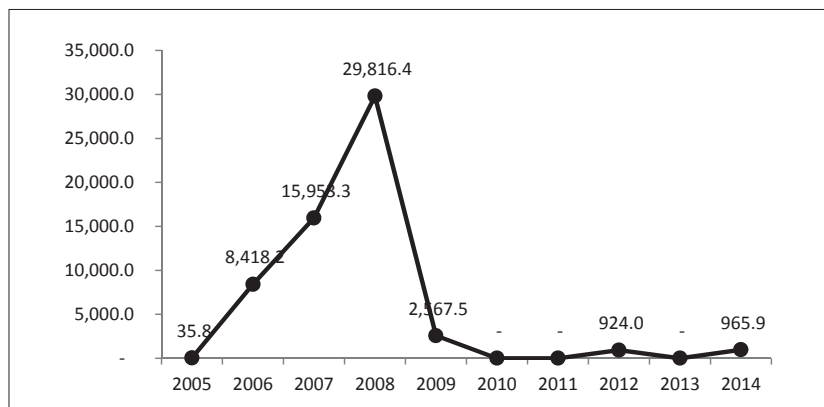
Source: Mongolian Stock Exchange

An initial public offering (IPO) was first issued in 2005 by the Mongol Shiltgeen company, which issued 1 million shares valued at MNT 800 million in total. Since 2005, there have been 14 companies which issued IPOs, with 254 million shares, and which raised MNT 58.7 billion. Second public offerings (SPOs) started to be used from 2007 and 6 companies raised additional financing amounting to MNT 27 billion between 2007 and 2014. In terms of companies by economic sector, the composition is almost equally distributed among mining, construction, banking and finance, hotels and tourism, trade and others (Figure 5). Among 14 IPO-issuing companies, there are 3 companies operating in the construction sector, 2 banks, 1 brokerage company, 2 mining companies, 2 hotel and tourism companies, 1 trading company, 1 beverage company, 1 communications company, and 1 logistics company.

For the primary bond market, the majority (81%) of financial instruments are government bonds for financing government programs (Figure 4). Theoretically, corporate bonds are similar to bank loans as they have a low cost in terms of capital compared to shares, but with longer-term maturity than bank loans. There are only 5 companies issuing bonds to finance big projects. These bonds amount to only 3%, or MNT 17 billion, indicating that companies do not use this financial instrument sufficiently well enough.

Amount-wise, the figure below shows the IPO figures in detail. For the last decade, the value of IPOs has increased by 27 times.

**Figure 6: IPO Issuance between 2005 and 2014 (in million MNT)**



Source: Financial Regulatory Commission

The biggest IPOs were issued in 2008, when 6 companies raised MNT 30 billion through IPOs, and subsequently the primary market experienced a downward trend due to the Lehman shock in 2009 and the consequent economic downturns.

Despite some development, trading on the primary market is still minimal due to a number of reasons, such as the small capital market, lack of public trust and awareness of the capital market investment opportunities, immature underwriting companies, and the absence of major professional investors. Therefore, most companies interested in raising capital from the primary market do not have much opportunity to attract large investment for their businesses. In particular, there is not much opportunity for small and medium-sized enterprises (SMEs), given the strict entry requirements of the MSE, and a lack of proper knowledge among SMEs and market participants regarding the benefits of capital market financial instruments, and the potential for SMEs to raise funding from the capital market.

## 5. Conclusion

The Mongolian economy needs long-term investment to support sustained growth of the economy. For the last 12 years, all sectors except the mining sector and other services have shown no growth or decline. To shield the economy from external shocks and mining-led “Dutch disease”,<sup>2</sup> it is important to diversify the economy, which in turn requires long-term investment into sectors other than mining. As FDI is not utilized much in non-mining sectors, the domestic financial sector provides most business financing.

The financial sector consists of monetary and capital markets. Although the capital market provides the majority of long-term financing in developed countries, the Mongolian capital market is underdeveloped and it does not play a leading role in long-term financing. Only fewer than 0.7% of all registered entities are publicly listed on the stock exchange and corporate bond financing is almost absent. Therefore, the monetary market, consisting of 13 commercial banks, performs the leading role in allocating the necessary financing for businesses.

The capital market has underperformed in terms of its role in the financial sector and a

number of listed companies. The main reasons for the immature capital market are that: the liquidity of equity on the stock exchange is weak; the stock concentration of listed companies is high; there are no institutional investors, such as mutual funds, insurance companies and pension funds; the capital market has a lack of highly-skilled specialists; and there is a lack of financial knowledge among the public and companies regarding the benefits of the capital market and the opportunities to raise capital from the stock exchange.

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<sup>1</sup> The law applied a 15% tax rate to income up to MNT 100 million and a 40% tax rate to income of MNT 100 million and above.

<sup>2</sup> “Dutch disease” relates here to mineral-rich [resource-rich] countries having a higher risk of becoming dependent on their mining sector, which is vulnerable to the global price fluctuations of minerals.

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# Banking Sector Transition in Mongolia Since 1990

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## Abstract

*Mongolia has been recognized as one of the major destinations of world mining industries. The country with 3 million of population has US\$1 to US\$3 trillion worth of copper, gold, coal, oil, and other resources, close to growing markets in China and elsewhere in Asia<sup>1</sup>. Contrary to the rich mining sector, the rest of the economy is still relatively unknown. Thus, this article deals with one of the key components of the rest of the Mongolian economy—banking sector. The Mongolian banking sector is a mirror of its economy: it represents country's economic transition, authorities' approach to economic reforms, as well as relationship with its neighbors, Russia and China. Also Mongolia's banking sector transformation provides precious lessons why banking transformation has been so difficult, time-consuming and full of mistakes even for one of the most successful cases.*

Keywords: Transition from Monobank to Two-tier Banking System in Mongolia, Bank failures and Resolutions, Globalization and Banking Transition, Mining, Economic development and Banking, Comparison of Banking reforms in Mongolia and Central Asia

## 1. Soviet Banking System in Mongolia

In 1924 the first ever sustainable banking reform was introduced in Mongolia by the USSR. The Bank was established as 50/50 joint venture with USSR and Mongolia and called “Mongolian Trade and Industrial Bank” or “Mongolbank”. Almost all the staff and managers were sent by the USSR. Initially, it was a typical NEP bank, which operated conventional banking activities based on sound banking principle. It conducted bill discount operations, provided term loans, dealt with remittances, and exchanged foreign currencies and achieved a profit in a relatively short time since the start.

In December 1925 the Mongolbank started issuing national currency, the tugrik, to supplant the various media of exchange: Chinese and Russian currencies, and commodities such as tea and cattle. The currency was backed by 25% precious metals and 75 % short-term obligations and easily saleable goods. No explicit charge was made for currency conversion, an important inducement because then prevailing Chinese moneylenders and currency changers made such charges. By April 1928, all foreign currencies had been withdrawn from circulation, as the bank did not reissue foreign currencies it had exchanged for tugriks. It was declared that the tugrik is the sole Mongolian legal tender<sup>2</sup>.

In 1929 government monopoly was introduced in foreign trade. This substantially cut the ground out from under private money-lenders (mostly Chinese), and legislation passed shortly thereafter forbidding them to operate in Mongolia. By 1929–30, foreign capital in Mongolia had all but ceased to exist—the money and credit system was entirely in the hands of the state<sup>3</sup>.

Following the trend in the USSR, since early 1930s it strengthened its function as the USSR-style Monobank. All state and cooperative enterprise were required to deposit all its currency receipts with the Mongolbank and make all its expenditures through withdrawals from the Bank. In this way all economic enterprises were forced to conduct their business transactions under the close supervision of the Bank. Eventually, all state and cooperative enterprises were



prohibited from settling any debts of 100 tugriks or more in cash. All payments were completed through offset book entries by the Mongolbank and the money economy was effectively restricted to the household sector. Thus, the Mongolbank, which was firmly under government control, was able to monitor and to supervise the business transactions of all enterprises<sup>4</sup>.

The Mongolbank grants short-term credits to state and cooperative enterprises. It also extends long-term credits to capital investments in the industrial sector of economy. Its credit policies, as well as the amount of loans granted to any borrower, are determined by the five-year plan and the annual state budget.

In April 1954, the Soviet Union handed over its shares in the Mongolbank, which was renamed the State Bank of the Mongolian People's Republic. The responsibilities and powers of the State Bank were established by Council of Ministers' decrees of 1954. The State Bank had been responsible to the People's Great Khural (Parliament), with operational review by the Council of Ministers. The Chairman of the State Bank had ministerial rank<sup>5</sup>.

Reflecting the economic difficulties in the USSR, credit suddenly slowed to only 8.6% growth during 1985–1990. At the end of 1989, credit to the state enterprises continued to account for approximately 95% of total outstanding credit; credit to state cooperatives accounted for 4% and credit to the private sector, 1%. By the end of 1989, some cooperatives, mainly agricultural, were clearly bankrupt. In April 1990, the Council of Ministers cancelled 45 million tugriks of outstanding credit (about 13% of total)<sup>6</sup>.

Interest rates on both loans and deposits in Mongolia were low and highly distorted. Key loan interest rates were even lower than deposit rates. Loans to the agricultural sector for all types of credit are made at preferential rates, with interest on short-term loans set at 0.5 to 1%. Industries engaged in producing and processing agricultural raw materials also receive a preferential rate of 1%, while all other short-term and long-term lending rates carry a 2% rate of interest.

Commercial banking operations are undertaken by the branches and by the divisions, subdivisions, and savings institutions of these branches. There are 21 regional branches, 1 in each of the 18 aimags (provinces) and 1 in each of the 3 largest cities, Ulaanbaatar, Darkhan, and Erdinet. The 19 regional divisions and 164 regional units, provide full banking services, including accepting deposits and extending credit; the 260 teller units do not undertake credit operations. The principal commercial banking functions are to provide credit, facilitate orderly payments between economic units, promote investment within the guidelines of the annual plan, and act as depository for population's savings. The Mongolia's banking activities during the USSR period resembled to budget operation rather than banking in the western standard<sup>7</sup>.

From 1924 to the late 1980s Mongolia's banking sector continued to be very small. The credit amount of the Mongolian State Bank was 0.38% of the total credit of the USSR in 1970 and 0.32% in 1985. It was far smaller than any of the Central Asian republics, for instance, it was about a sixth or a fifth of credit of Tajikistan or Kyrgyzstan in 1970 and 1985.

## **2. Banking sector Reforms in Mongolia, 1990–1992**

### **2.1 Economic reforms, 1987–1991**

In 1987, a new strategy of economic restructuring, framed on the Soviet policy of

perestroika, was implemented in Mongolia. Under this policy, the role of state planning was limited to setting overall investment policy, while the ministries and state committees were responsible for its implementation. Similarly, state enterprises were accorded increased autonomy, although production, profits, and distribution remained centrally planned<sup>8</sup>.

In 1988–89, the pace of reform quickened, although measures continued to aim principally at improving the efficiency of the command economy. A new Law on Cooperatives permitted the formation of cooperatives, with participation from the private sector. To encourage surrender of convertible currencies to the State Bank, the authorities introduced a preferential rate of tugrik 20 per U.S. dollar, compared with a commercial rate of tugrik 3 per US dollar. The new Law of Enterprises enacted in 1988 and implemented in 1989. The autonomy of enterprises was also increased with regard to production and distribution, and, for those industries making a profit, with regard to wages. Selected retail prices were raised and limited flexibility was introduced. Monopolies enjoyed by state foreign trade companies were eliminated, and trade licenses were issued directly to state enterprises. The amount of foreign exchange that could be retained by state enterprises and cooperatives was increased<sup>9</sup>.

Mongolia also expanded its international connections during this period and, by the end of 1988, maintained diplomatic relations with over one hundred countries. In 1989, the USSR began a phased withdrawal of its forces and technicians.

After popular demonstrations in March 1990 and the country's first multiparty elections in July 1990, a new coalition government was formed that pledged to "construct a market-oriented economy". Since then, the government has embarked upon a comprehensive program of reforms covering the entire spectrum of economic policies, including privatization, price liberalization, and the establishment of new institutions for macroeconomic management<sup>10</sup>. As a first step, the Government eliminated all restrictions on private ownership of herds and announced increases in farm gate prices effective January 1991. In January 1991, most retail prices were doubled; civil service wages, pensions, and other benefits were raised to compensate partly for the higher prices. The authorities actively promoted development of private sector enterprises and cooperatives and eased their access to domestic bank credit.

## 2.2 Creation of Two Tier Banking, 1990–1992

Financial sector reform is a key component of Mongolia's economic transformation toward a market-based economy. The initial step in the reform centered on shifting from a monobank system to a two-tier banking system; this was to be followed by other reform actions aimed at developing an institutional framework for indirect monetary management, fostering competition in the banking system, building a supervisory system, and establishing money and securities markets.

In August 1990, the Central and commercial banking functions of the State Bank were separated and two new specialized commercial banks were created; the Bank of Investment and Technological Innovation (ITI Bank) and State Bank International. All the large, capital intensive clients of the former State Bank, including the large copper mining company, Erdenet, the petroleum import concern, and the Central Energy System, were allocated to ITI Bank; while State Bank International was given responsibility for all international financial activities<sup>11</sup>.

In 1990 two more banks were introduced. Mongol Insurance Bank was established by the initiative of the Mongol Insurance Company with 22 enterprises, economic organizations and

individuals. The main purpose of the Bank is contributing the financial and economic operations closer to their partners. Another bank, Mongolian Cooperative Bank, is an independent commercial bank<sup>12</sup>.

In 1991 another two key banks were created by splitting branches from the State Bank: The People's Bank was formed from savings banks in Ulaanbaatar and handles most of the Government accounts. The Agricultural Cooperative Bank (later renamed as Agricultural Bank) inherited a massive structure from the State Bank, including 326 rural branches and settlement centers employing more than 2,600 people, demand deposits of 2.2 billion tugriks, and loan debts of 2.3 billion tugriks. The Bank was initially owned by state agricultural cooperatives, which were later broken apart into private agricultural enterprises.

By the end of 1992, divestiture of all commercial banking operations was complete, and 11 commercial banks were in operation: one solely owned by government, one joint-venture with a foreign partner, two privately owned, and seven operated as joint-stock companies owned by principal depositors, with majority owners being state enterprises. The banking system at the end of 1992 was dominated by five large institutions (People's, ITI, Agricultural, State Bank International and Insurance Banks), which together accounted for 90% of total deposits and 80% of total loans of the banking system (table 1)<sup>13</sup>.

**Table 1: Loan outstanding by banks, 1991–92 (1st of period, In million tugriks)**

Name	April 91	July 91	January 92	April 92	July 92
ITI Bank	1,472	2,720	4,000	4,271	4,571
Cooperative Bank	101	188	214	360	518
Insurance Bank	157	598	967	1,400	1952
Industrial Bank	112	135	83	267	533
Agricultural Bank	191	985	2,306	2794	4087
People's Bank	-	-	3,840	3,803	4136
Autoroad Bank	35	82	68	78	84
State Bank International	7,988	7,038	1,374	1,566	1,881
Central Asian Bank	-	-	-	-	127
Total loan outstanding	19,056	11,746	12,854	14,540	17,958

Source: USAID, Mongolia's Private Commercial Banking Potential

During the reform period, Mongolia faced with the unprecedented economic challenges. The Soviet Union abruptly ended its financial and technical assistance to Mongolia on 1 January 1991, except for completion of ongoing turnkey projects. Financing aid averaged 30% of GDP during the 1980s, decreasing to 25% of GDP in 1990, prior to the termination in 1991. Also in early 1991 the CMEA (Comecon) trade and finance system collapsed. As a consequence, trade with the former Soviet Union fell by 50%, supplies of essential commodities such as fertilizers, petroleum and spare parts became increasingly irregular, and the former Soviet technicians withdrew from Mongolian enterprises and factories. The economic collapse caused by these external shocks was severe. The economic as well as banking reforms became extremely challenging due to the sharp deterioration of economic environment. Mongolia concentrated to implement radical reforms<sup>14</sup>.

### 2.3 Strengthening of Central Bank's Functions

The Bank of Mongolia eventually retained 21 branches in key regional centers. The Banking Law provides the framework for the development of a fully functioning central bank capable of managing money and credit using indirect instruments, leaving the allocation of resources to markets<sup>15</sup>.

Steps were initiated to develop indirect monetary management, including the introduction of reserve requirements and the liberalisation of interest rates in August 1991. Under the latter action, commercial banks were permitted to determine their lending and deposit rates freely, thus laying a basis for the active use of interest rate policy by the central bank<sup>16</sup>.

Foreign reserve management functions were formally assumed by the Bank of Mongolia effective April 1993, and reserve assets and liabilities held by State Bank International (which was renamed as Trade and Development Bank), except for those balances related to its commercial banking operations, which have been transferred to the Central Bank. An interbank payments clearing and settlement system was introduced.

The Central Bank has also begun to exercise its supervisory and regulatory functions. Banks established prior to May 1991 Banking Law were relicensed, and those that did not meet the Law's capital adequacy requirements were combined with other banks. The Bank of Mongolia developed regulations and supplementary legislation to the Banking Law covering such matters as leasing, debt recovery and accounting standards<sup>17</sup>.

Some preliminary prudential regulations, notably on capital adequacy, were issued in 1992, and a system of on- and off-site inspection was established. Subsequently, prudential regulations were extended and strengthened. However, resource limitations, poor record keeping and internal controls at the commercial banks limited the effectiveness of supervision. When breaches of regulations were uncovered, the Bank of Mongolia was often unable or unwilling to impose sanctions or to force bank management to take corrective action.

### 2.4 Difference between USSR and Mongolian Banking Reforms

Although the Mongolian reform clearly followed after the Perestroika banking reform of the USSR during 1987–1990, there are clear differences between the two.

Firstly, the weight of Agricultural Bank was different. In the USSR banking reform the majority of loan portfolio was initially allocated to the Agricultural Bank, and in Kazakhstan it reached 78% of the total loans in 1988<sup>18</sup>. In 1990 it was still about two thirds of total loans in Kazakhstan (Table2). As Agricultural bank was the worst performing bank with full of political influences, it posed long lasting negative impact to the result of USSR's (and its successor states') banking reforms. In Mongolia, Agricultural bank's share was rather modest (18% of total in 1 Jan 1992) and the bank was not a serious hindrance of the banking reform.

**Table 2: Comparison of Banking structures, USSR, Kazakhstan and Mongolia (loans, %, USSR 1 Jan 1991, Kazakhstan 31 Dec 1990 , Mongolia 1 Jan 1992)**

Sector	USSR	Total	Kazakhstan	Mongolia	
Agriculture	Agroprombank	39.8	64.4	Agricultural Bank	17.9
Industry	Promstroibank	31.4	23.2	ITI Bank	31.1
Foreign Trade	Vneshekonombank	6.1	-	State Bank Int'l	10.7
Retail	Savings Bank	2.9	2.4	People's Bank	29.9
Other State bank	Zhilsotsbank	11.7	5.8	Insurance Bank	7.5
New Commercial Banks		8.1	4.1	Other banks	2.8
Total		100.0	100.0		100.0

Source: USAID: Mongolia's Private Commercial Banking Potential; IMF: Kazakhstan pre-accession economic report; Barkovsky: *Memuarui Bankira 1930–1990*, P106

Secondly, after the sectoral split of banking activities in 1988, republican and regional split of these sectoral banks occurred during 1990–1991 in the USSR. The continuous split of banking system in the USSR contributed to the loss of control on reform process, asset stripping by bank management, corruptions, and uncontrollable credit expansion. Mongolian banks maintained their regional unity which contributed more organised banking sector reforms.

Thirdly, after the demise of the USSR, the successor republics formed short-lived monetary arrangement called “ruble zone”. Ruble zone was a de-facto currency union with a big defect — one currency issuing center (Central Bank of Russia) with 15 credit issuing centers (republican central banks), with limited co-ordination mechanisms. In certain degree, the ruble zone arrangement worked as a shock absorber of successor countries' economic difficulties, though, it was also a source of serious moral hazard within the banking system. Some of the republican central banks issued excessive ruble credits to local banks to salvage state enterprises and agricultural cooperatives.

This sudden expansion of credit ruble had serious side-effects: high inflation in all the USSR successor states; and commercial banks' heavy dependence on Central Bank's credit. The latter was very serious in Central Asia. For instance, commercial banks' reliance on Central Bank funding late 1992 reached 63% in Kazakhstan and 60% in Uzbekistan<sup>19</sup>. This further weakened the banking situation, delayed significantly reform effort, and undermined public confidence against banking sector. As Mongolia was not a part of “ruble zone” arrangement, it was unaffected by the negative impact. Credit expansion was modest (Table 1) compared with the inflation. Also commercial banks' reliance on Central Bank credit was about 12% on 1 January 1992<sup>20</sup>.

Fourthly, the USSR's savings bank was initially designed as a pure deposit taking bank (i.e., no significant function as lending bank, thus it had to redeposit majority of savings to the Central Bank)<sup>21</sup>, while in Mongolia it was designed as a retail bank mainly dealing with Ulaanbaatar region—it had deposits in the liability side while loans in the asset side. As the USSR Savings



Bank was divided in 1991–1992, the successor banks suffered by the lack of design as sustainable banks and lack of staffing (in particular, if the banks were to aim at lending banks).

Fifthly, the majority of the USSR republics took relatively liberal licensing policies toward new banks, while Mongolia maintained a fairly cautious approach towards new banks. Mongolia had 11 banks in late 1992 when Russian had 1,747 banks and Kazakhstan –155. This policy had pros and cons: too relaxed liberal policy produced many risky banks, while too restrictive licencing policy killed opportunities for market oriented banking sector development. The rest of Central Asian republics (except Kazakhstan) took very conservative licensing policies compared with the rest of the USSR republics. For instance, Uzbekistan had only 30, Turkmenistan 18, Kyrgyzstan 15, and Tajikistan 10 in late 1992<sup>22</sup>.

These initial conditions severely affected the development of the banking sector. Although Mongolia's financial situation was one of the worst among all the transition economies, the precondition for banking sector reforms was not the worst.

### **3. Banking Crisis in the second half of 1990s**

As in other economies in transition, portfolios of most commercial banks in Mongolia suffered from a number of structural weaknesses. These include an excess of loans over deposit liabilities, a high sectoral concentration of loans, a low level of liquid assets relative to total assets, and a dominance of large state enterprises in the loan and deposit portfolios. Consequently, most commercial banks face a large amount of nonperforming loans, a substantial portion of which was associated with lending operations to state-owned enterprises under the Monobank system<sup>23</sup>.

The Bank of Mongolia began in 1993 to reclassify bank portfolios and identify nonperforming loans to improve their financial position over the medium term. Preliminary findings of loan classification showed that outstanding nonperforming loans accounted for about one fourth of total bank loans at late June 1993. Two of the smaller banks, Selenge Bank and Cooperative Bank, were merged into People's Bank and ITI Bank in 1994 respectively. The Autoroad Bank closed in 1995 due to being unable to meet the minimum capital requirement<sup>24</sup>.

#### **3.1 1996 Banking Crisis**

The share of recorded nonperforming loans rose sharply from 2.5% at late 1991 to over 50% at late 1996, equivalent to over 7% of GDP. Despite a decision in November 1993 to gradually raise commercial banks' minimum capital base from 50 million tugriks to 400 million tugriks by January 1995, the capital of most commercial banks was insufficient to cover potential losses<sup>25</sup>. Several banks started to fail to meet prudential norms, credit ceilings, and reserve requirements. On occasion depositors were unable to withdraw funds on demand.

Among the major banks, Insurance Bank nearly ceased operating, and People's Bank, Agricultural Bank, and ITI Bank experienced periods of illiquidity and admitted to significant losses. The situation of one small bank, Central Asian Bank, deteriorated to the point where in June 1996 Bank of Mongolia (BOM) decided to close it down. The value of the bank's deposits amounted to (approximately US\$2 million, owed to about 3,000 mostly small depositors. The authorities announced that depositors would be compensated for losses up to 100,000 tugriks. The assets of the Central Asian Bank were found to have been almost entirely worthless. The

failure of the bank contributed to a growing public distrust of the banks<sup>26</sup>.

The authorities developed a comprehensive bank restructuring strategy in the latter part of 1996 in close collaboration with the IMF, the World Bank and the Asian Development Bank. The strategy focuses on reducing the overhang of old nonperforming debt, strengthening market disciplines, eliminating sources of moral hazard, while averting the possibility of a run on the banking system. The Banking Law and the Central Bank Law have been extensively amended to enable the authorities to take the necessary strong corrective actions<sup>27</sup>. Among other provisions, the new law gave the BOM legal authority to appoint conservators and/or close insolvent banks, and, in such cases, established specific priorities in meeting creditor claims of depositors<sup>28</sup>.

With the legal framework in place, in December 1996, the authorities closed and began the liquidation of two insolvent banks (People's and Insurance), which together accounted for over 60% of banking system deposits. Both banks had sufficient resources to cover household deposits, which have the highest priority, and the value of the banks' remaining assets was paid to non-household depositors, who received 80% at one bank and 50% at the other. With all assets allocated to depositors, the BOM lost claims on the two banks amounting to 7 billion tugriks (14% of assets), which were written-off against BOM income in 1996.

Two new banks—Savings Bank and Reconstruction Bank were created to provide some continuity of services to depositors and good borrowers. Savings Bank allowed to accept only household deposits and is allowed to invest only in cash, government and central bank securities, and fixed assets. The written-down deposits of enterprises, along with the performing loans of the liquidated banks and 6.6 billion tugriks in restructuring bonds, were transferred to Restructuring Bank. The Mongolian Asset Recovery Agency was established under the Ministry of Finance with the nonperforming loans of the two liquidated banks.

Two other large weak banks (ITI Bank and Agricultural Bank) signed Memoranda of Understanding with the Bank of Mongolia, which contain a detailed three-year timetable beginning in early 1997 for the implementation of corrective measures, including changes in banking practices, new injections of capital, raising reserve and capital adequacy ratios, and the temporary non-payment of dividends<sup>29</sup>.

Restructuring bonds were issued to replace the nonperforming loans that had been made by all five large banks during the first half of the 1990s at the direction of the government. The cost of bank restructuring borne by the public sector—estimated at 11% of GDP—is high<sup>30</sup>.

In the initial aftermath of the closing operation the situation in the banking system remained generally calm, and there were signs of a return of confidence. The real money stock recovered in 1997, led by a rise in the real value of deposits at commercial banks<sup>31</sup>. After the resolution, three large commercial banks (the Trade and Development Bank, the Investment and Technological innovation Bank, and the Reconstruction Bank) comprised on aggregate about 55% of total system's deposits. Two specialized banks followed: the Agricultural Bank (10% of total deposits) that focuses on nationwide deposit gathering and agribusiness lending, and the Savings Bank (27% of total deposits) that collects household deposits and invest in low-risk government paper and central bank bills. The eight small banks (about 8% of total deposits) compete primarily for Ulaanbaatar-based customers<sup>32</sup>.

### 3.2 1998–99 Banking Crisis

The delicate banking sector was shaken again by the Asian financial crisis in end 1997



and the Russian Financial crisis in summer 1998. The share of non-performing loans in the banking sector rose sharply to over 30% in 1998. Mongolia took significant steps to implement a comprehensive banking sector reform strategy, which aimed to eliminate bank insolvencies, obtain a substantial reduction in government stake in banks, and strictly contain the public sector costs of restructuring, while preserving a core banking system<sup>33</sup>.

To resolve the insolvency Investment and Technological Innovation Bank, Reconstruction Bank, and Agriculture Bank were placed under conservatorship. Under conservatorship, these banks ceased lending activity and stopped accepting new deposits. The conservators undertook an aggressive program to rationalize operations and downsize the banks. The conservator's efforts notwithstanding, the extent of insolvency in the banks increased as closer examination and more accurate classification has necessitated an increase in the share of loss loan assets. In addition, further doubts arose about the quality of the 'performing' portfolio and the cash value of the pledged collateral. Recognizing the need for quick action, the BOM placed all three banks into receivership in October. The ITI Bank and Restructuring Bank were to be liquidated, and their licenses were revoked. The Agricultural Bank was downsized further and restructured along the lines of an agreed plan.

During 1999, the BOM took several important steps to strengthen banking regulation and supervision. A new chart of accounts and a revamped accounting framework were introduced in January 1999 with emphasis on public disclosure requirements. Under the new regulations on prudential ratios, a minimum requirement for paid-up capital was set at 1 billion tugriks. Banking-related legal amendments were enacted. These amendments are intended to strengthen the powers of conservators and receivers, provide explicit powers for writing down shareholders capital in insolvent banks, assure enforcement of court orders and speed up the enforcement of collateral, and improve loan recovery.

As a result, eight of 20 banks were closed between June 1998 and December 1999, while some of the others were kept in operation through frequent injections of liquidity by the central bank and recapitalization of five of the largest commercial banks in line with capital adequacy requirements. The Government also assumed responsibility for the directed and inherited loans. The non-performing loan ratio declined from a high of 54% in 1999 to a level of 7–11% during 2000–2004<sup>34</sup>.

The key players in the new banking market were two former specialized banks (Trade development Bank and Agricultural Bank) and three newly emerged private banks since mid-1990s (Golomt, Anod and Zoos Banks).

### 3.3 Comparison with Central Asian Bank Resolutions

Through the major Banking resolutions in 1996 and 1998–99, Mongolia lost three major banks, People's Bank, Bank for Industrial and Technological Innovation, and Insurance Bank as well as one of their successors, Reconstruction Bank. This is one of the harshest banking resolutions among the transition economies.

Similar harsh banking resolutions were applied in some of the CIS countries, including Kazakhstan and the Kyrgyz Republic. Both of them adopted market oriented stringent banking reforms, and during mid-1990s to early 2000s Kazakhstan lost Agricultural Bank (which was the biggest in Central Asia during end 1980s and early 1990s), merged the two big troubled banks (Turan Bank, former Industrial Construction Bank, and Alem Bank, former Foreign Economic

Bank). Housing and Social Infrastructure Bank merged with an emerging new bank. The only successfully transformed bank in Kazakhstan was the Savings Bank (Halyk Bank). In the Kyrgyz Republic, both Agricultural and Savings Banks went bust with heavy non-performing loans in mid 1990s. Other key banks, Industrial Bank and Social Infrastructure Bank experienced heavy losses and reorganised by injection of new capital by their shareholders.

#### 4. Banking in the Global Boom and Crises

Since early 2000s to 2007/08 the global financial market enjoyed very expansionary and favourable monetary conditions then suffered by very tight and unfavourable conditions since 2007/2008 global financial crisis. Most of the market oriented transition economies enjoyed in the first period and suffered in the second period, though, in different degrees (Table 3). For instance, Kazakh banks issued large amount of bonds and equity in the global markets and provided credits mainly in Almaty property and construction markets. The banking sector expanded 13 times during the period of 2002 to 2007 and stagnated in the following years (less than 30% increase in the seven years). The banking system in the Kyrgyz Republic enjoyed sudden inflow of Kazakh's banking capital in the boom years, expanded nearly 7 times in the same 5 years then stagnated (just 2 times increase) in the following 7 years mainly due to the exodus of Kazakh capital and banking instability caused by political instability. Mongolia was one of the best performers during this turbulent period: nearly 7 times growth in the first 5 years then 4 times growth in the second 7 years. The country was luckier than its peers: the banking sector was less open to the global market than Kazakhstan, and less open to foreign capitals than the Kyrgyz Republic. Also China, the biggest buyer of Mongolia's key commodities, boosted its economy to address 2008 crisis.

**Table 3: Development of the Banking sector, Mongolia and Central Asia, 2002–2012**  
(assets, billion US\$, %, times, end of year)

	banking assets			growth (times)	
	2002	2007	2014	2007/2002	2014/2007
Kazakhstan	7.4	96.9	123.1	13.1	1.3
Uzbekistan	4.4	7.1	23.2	1.6	3.3
Turkmenistan	3.0	4.5	19.4	1.5	4.3
Kyrgyz Rep.	0.2	1.2	2.3	6.8	1.9
Tajikistan	0.2	1.0	3.8	6.2	3.8
Mongolia	0.45	3.0	12.3	6.6	4.1

Note: The 2014 data of Tajikistan and the Kyrgyz Republic are those of end September 2014. The figures of Uzbekistan and Turkmenistan are calculated with official exchange rates.

Source: IMF Statistics June–December 2014; 2003 Standard & Poor's Report; Mongolia IMF Statistics Year Book 2014; UzReport, etc.

##### 4.1 Recovery and Credit Boom, 2000–2008

After the drastic banking resolution, confidence in the banking sector was regained and the banks' liquidity position improved substantially in early 2000s. Deposits as a percentage of GDP increased from 17.6% in 2002 to 31.4% in 2006. This was due to the expanding economy,

increased remittances by Mongolian workers abroad and foreign direct investment inflows. The increasing deposits enabled the banks to expand their lending considerably, mainly to the private sector. Loans outstanding as a percentage of GDP increased from 18.7% in 2002 to 38.6% in 2006. Non-performing loans were further reduced to about 5% of loans in the mid-2000s.

Two major banks — the Trade and Development Bank and the Agricultural Bank, which was renamed as Khan Bank — were sold to foreign investors in 2002 and 2003 following international tenders. This opened up the banking sector to further international investment and management. After the privatisation of the Savings Bank, all 16 banks were in private hands. In January 2007, the Trade and Development Bank issued a euro-bond for USD 150 million, the first Mongolian entity to issue bonds on the international capital markets.

During this period new initiative in the financial sector also took place, those include micro-financing, leasing, and insurance. One of the most prominent cases was Xac Bank, which started as a microfinance institution based on donors funded micro finance development project in end 1990s and was incorporated by major NGOs. The micro finance institution converted as a bank and finally took the fourth position in Mongolian banking market by the end of 2000s.

#### 4.2 Global Crisis and Banking Resolutions, 2008–2015

Mongolian banks were hit by the global financial crisis in 2007/2008 and subsequent mineral prices collapse. The reduced liquidity of banks constrained their lending, especially for longer-term commitment such as construction financing and mortgages. Over this period asset quality deteriorated rapidly and the proportion of non-performing loans rose to 13.7% by July 2009 from 2.7% in May 2008.

In December 2008, Anod Bank—the fourth largest bank— was placed under administration by the central bank<sup>35</sup>. To restore public trust, the government issued a blanket deposit guarantee in November 2008, but it left many customers in uncertainty about which deposits were included, while real interest rates on tugrik deposits were negative<sup>36</sup>. Ratio of non-performing loans peaked at 25% in November 2009, gradually declining to around 21% at the end March 2010.

Bank failures and their resolutions continued. The authorities also appointed a receiver at Zoos Bank, following a significant loss of the bank's deposits and the discovery that the bank was insolvent, in part a result of significant accounting irregularities. The resolution of these banks was finally dealt with by the establishment of new Bank called "State Bank" in 2009. This was followed by the failure of Savings Bank. Privately owned Savings Bank accounted for 8% of total banking assets (fifth-largest in the country). Reflecting its historically broad branch network, it processed over half of government financial services transactions including payments of pensions, child allowances, and subsidies. The intervention included the appointment of a receiver and transfer of most of the bank's assets and liabilities to State Bank. The BOM linked the failure to loans to related interests of the bank's only shareholder. The related-party loans in this instance exceeded capital by more than 2 times<sup>37</sup>.

After the series of bank failure resolutions, the banking sector is dominated by four big banks, which holds three fourths of the total bank assets. The sector increased its size from US\$0.73 billion in end 2003 to US\$13 billion in end 2013 mainly because of mining and construction boom. However, it faced challenges caused by downward trends of mining cycle. Due to the depreciation of tugrik, the banking sector assets reduced by 5.4% in US\$ term in from 2013 to 2014.

### 4.3 Challenges Ahead

As mentioned, Mongolia managed the banking transition relatively well since its inception in 1990. The very modest banking sector in late 1980s, which had only a fifth of Kyrgyzstan (which has twice bigger population of Mongolia), has now more than 5 times bigger than it. This has been achieved by thorough and continuous reform efforts and by addressing three major banking crises. As the Banking reforms of Mongolia and Kyrgyzstan are very similar and social and historical backgrounds were the closest, the main factor for this large discrepancy could be attributed to the difference of the nature of the mining sectors. Mongolia has several world class mines while the Kyrgyz Republic has only one big goldmine called Kumtor.

However, extraordinary potential of mining could also undermine sound development of Mongolian banking sector. Firstly development of non-mining industries would severely be undermined by strong exchange rate, by high labor costs, by lack of skilled labors, etc. This will make banks portfolio management very difficult.

Secondly, the sudden massive inflow and outflow of foreign capital in mining sector will also continue to be a challenging factor for sound development of the banking sector. The sector would repeat over-heating and stagnation based on mining business cycles and trends of neighboring economies. The size and stability of the banking sector could be significantly increased in the future if the steady inflow of mining capital is guaranteed. This heavily depends on political stability and conducive business environment.

Along with the increased size, the issue of foreign participation in the banking sector would become even more sensitive. So far Mongolian authority applied pragmatic licensing policy to foreign banks (mainly used for failed bank resolutions), but it would be also a challenging issue how foreign involvement, including two big neighbors, in the banking sector should be conducted.

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<sup>1</sup> IMF, Mongolia: 2015 Article IV Consultation—Staff Report, p.31.

<sup>2</sup> Ocherki Novoi i Noveishei istorii Mongolii, p.113.

<sup>3</sup> Mongolian People's Republic (Outer Mongolia) Vol. 2, p.907.

<sup>4</sup> Area Handbook for Mongolia, p.389.

<sup>5</sup> IMF, The Mongolian People's Republic: toward a market economy, p.39.

<sup>6</sup> *ibid*, p.22.

<sup>7</sup> *ibid*, p.39.

<sup>8</sup> *ibid*, p.9.

<sup>9</sup> *ibid*, p.11.

<sup>10</sup> The World Bank, Mongolia, Toward a Market Economy, p. ix.

<sup>11</sup> IMF, Mongolia: Recent Economic Developments, p.21.

<sup>12</sup> The Mongolia Society Newsletter, January 1991, p.69.

<sup>13</sup> IMF, Mongolia: Recent Economic Developments, pp.21–22

<sup>14</sup> Mongolia: Restructuring for a Market Economy, United Nations Industrial Development Organization, 1993, p.2.

<sup>15</sup> Country Economic Review: Mongolia, ADB 1996.

<sup>16</sup> IMF, Mongolia: Recent Economic Developments, p.21.

<sup>17</sup> IMF, Mongolia Background paper Nov 1994, p.15.

<sup>18</sup> IMF, Economic Review, Kazakhstan, 1992, p.48.

<sup>19</sup> calculated based on IMF's and World Bank's reports on Kazakhstan and Uzbekistan during 1992–1994.

- <sup>20</sup> calculated based on the table of commercial banks' balance sheet (p.77) of USAID's report on Mongolian Banking sector (November 1992) .
- <sup>21</sup> A Study of Soviet Economy Vol. 1, pp.112–113.
- <sup>22</sup> Figures are from EBRD's Transition Report 1999 and 2000 and IMF report on Turkmenistan (1992).
- <sup>23</sup> Mongolia Background paper Nov 1994, IMF, p.15.
- <sup>24</sup> Country Economic Review: Mongolia 1996, p.24.
- <sup>25</sup> IMF, Mongolia: Recent Economic Developments, p.22.
- <sup>26</sup> *ibid*, p.22.
- <sup>27</sup> *ibid*, p.17.
- <sup>28</sup> *ibid*, p.24.
- <sup>29</sup> *ibid*, p.25.
- <sup>30</sup> *ibid*, p.17.
- <sup>31</sup> *ibid*. p.24.
- <sup>32</sup> Hongjoo Hahm & Demir Yener, p.3.
- <sup>33</sup> IMF, Article IV Mission Staff report, Mongolia, Jan 2000, p.20.
- <sup>34</sup> Evaluation study, Financial Sector in Mongolia—Transition to a Market Economy Built on Successful Asian Development Bank, Financial Reforms, October 2008, p.4.
- <sup>35</sup> The World Bank, Mongolia Economic Retrospective: 2008–2010, pp.1–2.
- <sup>36</sup> *ibid*, p.5.
- <sup>37</sup> IMF, Mongolia: 2013 Article IV Consultation—Staff Report; Press Release and Statement by the Executive Director for Mongolia, March 2014, p.10.

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# Foreign Direct Investment into Mongolia

Christopher MacDougall\*

## Abstract

*Awakened by the diminishing influence of the Soviet Union, Mongolia experienced its own revolution between 1990 and 1991. The following decade brought significant political, social, and economic change. Not the least of which was the introduction of foreign capital into the domestic economy. Targeted investment aimed at expanding Mongolia's nascent mineral resources sector propelled the economy forward, making it one of the fastest growing in the world between 2009 and 2012.*

*This paper examines the impact of foreign investment on Mongolia's economy and discusses the challenges of investing and doing business in a post-soviet nation. Comparing historic and modern influences, an assessment of external factors is also presented. Special attention has been given to Mongolia's mineral resources sector, the influence of mineral resource demand in China, and the changing dynamics of domestic politics. While Mongolia's future is dependent on a number of internal and external factors, these three offer the greatest opportunities and the greatest challenges for Mongolia as it strives to reach its full potential.*

Keywords: Mongolia, foreign investment, natural resource investing, Mongolian investment Opportunities, and Northeast Asia

## Introduction

Tightly bound between the region's largest economic and political powers, Mongolia's geographic position presents a variety of challenges and opportunities. With the economic and political relationship between Russia and China becoming ever closer, Mongolia stands to benefit from increased trade and interdependence. Likewise, proximity to the largest consumer of industrial commodities in the world is, in itself, a major catalyst for the attraction of foreign investment into Mongolia.

Weakening sentiment for commodities globally, in particular copper and coal, has burdened Mongolia's growth trajectory. So to have, increasing concerns of China's economic performance. Mongolia's economy is almost entirely dependent on the export of industrial commodities to China and is therefore easily swayed by shifting sentiment towards either. However, internal factors have also played a significant role in Mongolia's ability to attract foreign direct investment to the country. In particular, poor legislative decisions in 2012 and 2013 have driven foreign investors away, fearing that new legislation would discriminate against foreigners.

Mongolia has since introduced a number of positive changes to mining and investment legislation. This has included a renewed investment law, a new mining law and policy, and new governing bodies aimed at attracting further foreign investment into the country. However, the continued slide in commodities globally and increasing concerns over China have undermined any positive developments by the Mongolian government. That said, the slightest change in investor sentiment towards either commodities and/or China's economic growth could provide a significant catalyst for the attraction of foreign direct investment into Mongolia's economy.

This article discusses Mongolia's prospects as a destination for foreign investment and the impact of both internal and external factors. In Chapter 1 an overview of Mongolia's political and

economic developments are presented. Chapter 2 focuses on the current state of foreign direct investment into Mongolia, the role that legislative and macro issues have played in attracting foreign direct investment, and the future outlook for foreign direct investment. The potential for foreign direct investment into Mongolia is then discussed in the Conclusion.

## **1 The Current State of Mongolia's Government and Economy and the Importance of Russia and China**

### **1.1 The Current State of Mongolia's Government and Economy**

#### **1.1.1 The Changing Face of Mongolian Politics**

For nearly seventy years, Mongolia's political leadership embraced the doctrine of the Soviet Union. This lasted until the final moments of 1989 when, now President, Elbegdorj Tsakhiahiin, announced the creation of the Mongolian Democratic Union during the first open political protest in Ulaanbaatar, Mongolia's capital city. This marked the beginning of Mongolia's Democratic Revolution, bringing about the first true reforms to the country. Changes to the constitution, the introduction of multi-party elections, and a reduced military presence by the USSR soon followed and contributed to a new constitution being adopted in 1992. This would lay the groundwork for Mongolia's economic reform, the expansion of industry and the attraction of foreign investment.

Between 1992 and 2009, contrary to the rest of the former Soviet Union, Mongolia enjoyed free and open democratic elections. Legislation was introduced that supported the attraction of foreign investment and development of key sectors, which led to an inflow of foreign direct investment. During this period, a number of key political figures emerged, forming multiple political parties and special interest groups to represent the varied needs of the Mongolian public and the Mongolian business community.

Modern day Mongolia enjoys open and democratic elections. There are five political parties that make up the State Great Hural, Mongolia's Parliamentary body. These include the Mongolian Peoples' Revolutionary Party, the Mongolian Peoples' Party, the Mongolian National Democratic Party, the Democratic Party of Mongolia, and the Civil Will-Green Party.

In the most recent Parliamentary elections, held in June 2012, the Democratic Party of Mongolia, under the leadership of Norovyn Altankhuyag, won 34 out of the available 76 seats in Parliament. The Democratic Party then formed a coalition government with the Mongolian Peoples' Revolutionary Party. In 2014, Prime Minister Altankhuyag Norovyn lost a no-confidence vote and was replaced by Prime Minister Saikhanbileg Chimediiin. Saikhanbileg remains the Prime Minister of Mongolia today but has faced numerous challenges to his leadership and control of Parliament. His major task as Prime Minister has been to reinvigorate foreign direct investment into Mongolia, a challenging task given the global macro environment and diminishing state of commodities prices globally. However, in his time as Prime Minister, he has secured the second phase of development for Oyu Tolgoi, the nation's largest investment project and has helped to increase sentiment among foreign investors active in the country.

Most Mongolia observers believe that Saikhanbileg has performed well in his duties of promoting Mongolia to foreign investors. However, there is a growing expectation that the

Democratic Party will not be able to maintain their position in Parliament in the upcoming 2016 Parliamentary elections. This is largely due to the worsening economic conditions the people of Mongolia have endured since the Democratic Party assumed leadership in 2012. This is concerning given the drastic change in policy experienced during the transition from the Mongolian Peoples' Revolutionary Party government and the now Democratic Party government in 2012. Investors now expect that any change in government will likely result in a prolonged period of political and legislative uncertainty.

### 1.1.2 The Changing Tides of the Mongolian Economy

The Mongolian economy has transformed drastically over the last century. As recent as the early 1900's, Mongolian economic activity was limited to a decentralized system of nomadic herders. The political, social, and economic changes introduced during the period of Soviet influence changed the foundation of economic activity in Mongolia. Across three key periods, Soviet-influenced Mongolian leaders introduced collectivization of livestock, cooperatives, and industrialization.

The first of these periods was known as the period of "General Transformation", which lasted from 1921 to 1939. The following period, known as the period of the "Construction of Socialism" last from 1940 to 1960. Lastly, the period titled the "Completion of Construction of Material and Technical Basis of Socialism" lasted from 1961 up until the transition to a market economy in 1991.

During these three periods of Soviet influence, Mongolia's economic activity transformed to include centralized production, agriculture planning and technology, the development of infrastructure and fixed abodes, and a significant expansion on mining, the processing of timber and the production of consumer goods. These changes provided the foundation from which the modern-day Mongolian economy has been built.

Today, in addition to being largely dictated by market activities Mongolia's economy is far more diversified than it was during the period of Soviet influence. Still, the largest segment of the economy and the majority of foreign direct investment that is entering the country continue to revolve around Mongolia's vast mineral resources. This is the reality for many developing nations, especially those with large endowments of mineral resources. For Mongolia, similar to other resource-rich nations, this dependence on mineral resources has made it difficult to achieve sustained growth. And, as has been demonstrated over the past two decades, has made the Mongolian economy especially vulnerable to boom-bust cycles.

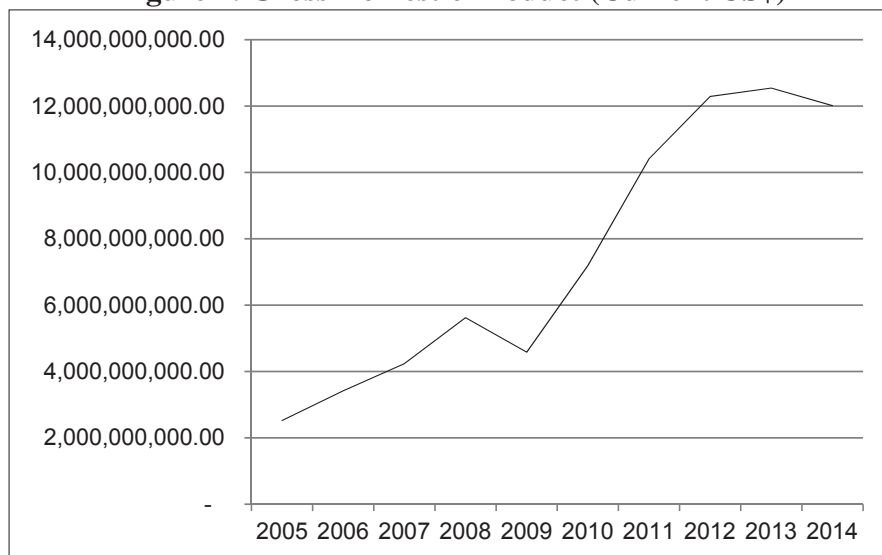
The macro-economic pressures that exist outside of Mongolia's control, such as commodities prices globally and demand factors also play a large role in the determination of the country's success and likewise the attractiveness of Mongolia as a destination for foreign direct investment. Furthermore, mineral resource extraction requires significant upfront investment in order to achieve the financial gains that mineral wealth offers. This, in itself, can be an insurmountable challenge for a burgeoning economy with limited domestic capital to finance projects that aim to compete on a global scale.

Nevertheless, the Mongolian economy has expanded steadily as a result of increasing investment into the domestic mineral resources sector. This expansion has not only been contained to mineral resources but has also resulted in an expected spill-over effect to other sectors. For example, the influx of foreign capital and the development of the domestic

mining sector has spurred the development of mining services sector, real estate and increased discretionary spending amongst the local population. This, in turn, has led to a more diversified and burgeoning consumer goods sector, increasing quality and availability of food and beverage services, and the introduction of a variety of luxury international brands.

The result of expanded service sector, combined with higher discretionary spending, is a growing consumer appetite and expanding economy. Between 2005 and 2013, the Mongolia's Gross Domestic Product grew steadily by over US\$10 billion, from US\$2,523,471,602 in 2005 to US\$12,545,217,934 in 2013. The table below shows the values that have been verified by the World Bank Group, detailing Mongolia's Gross Domestic Product during the period described above. This illustrates the immense growth that Mongolia has experienced over the past decade and, when reviewed in conjunction with foreign direct investment figures, discussed below, provides a detailed illustration on the nation's experience and challenges.

**Figure 1: Gross Domestic Product (Current US\$)**



Source: World Bank Group, Data Bank

## 2 The Current State and Future Outlook for Foreign Direct Investment into Mongolia

### 2.1 The Current State of Foreign Direct Investment into Mongolia

#### 2.1.1 Legislative and Free Market Missteps and Corrections

The current state of foreign direct investment into Mongolia has been dictated by both internal and external factors. Internally, Mongolia's political leadership has made several crucial missteps resulting in a drastic decrease in foreign direct investment in the past three years. These have included the introduction and acceptance of several new or amended pieces of legislation that directly contradicted the interest of foreign investors and foreign companies.

One of the most publicly criticised pieces of legislation was the Strategic Entities Foreign Investment Law that was passed in 2012. This piece of legislation governed investment by foreign parties into sectors of the Mongolian economy deemed to be "strategic" by the Mongolian government. More specifically, the law required government approval before any

foreign investment above 33% could be made into a domestic company that was active in a strategic sector. The sectors identified as strategic by the Mongolian government included telecommunications, banking, finance, and mining. Later in 2012, additional proposed changes to Mongolia's mining law shocked foreign investors and disrupted several mining operations that had been steadily growing and expanding around the country. At the root of the proposed change was a proposal whereby foreign companies would be required to reduce their stakes in current projects to ensure 34% of mining projects were held and controlled by domestic companies. This law was not passed and was heavily amended before being presented again. However, the proposal had already sent shockwaves through the foreign investment community, damaging investor sentiment and negatively impacting perceptions surrounding Mongolia's mining sector and investment climate

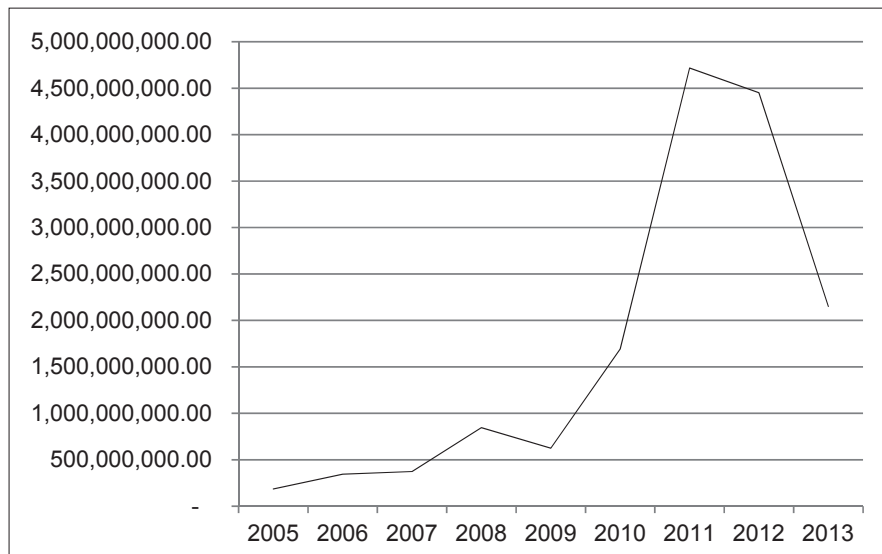
Furthermore, there have been several engagements between the Mongolian government and foreign companies that have resulted in concerns among foreign investors and foreign companies over the willingness of the Mongolian government to provide fair and equal commercial terms to foreigners doing business in Mongolia. Examples include the highly publicised blockage by the Mongolian government of an attempt by Aluminium Corporation of China Ltd., a Chinese state owned enterprise, to acquire the publically listed Canadian company, SouthGobi Resources Ltd. In addition, the Mongolian government's failure to comply with an international arbitration award to Canadian listed Khan Resources Inc. after the company had its uranium licenses revoked and handed to Russian uranium producer AtomRed MetZoloto Uranium Holding Co also gave rise to investor concerns.

The Mongolian government has also been criticised for their liberal use of travel bans on foreign citizens while failing to follow due process. The most high profile instance of such actions was the ban on three SouthGobi Resources Ltd. employees after the company was charged for tax evasion. The exit ban extended to the Chief Executive Officer of the company, a US citizen, who had not been formally charged. Following over two years of being unable to leave the country, the SouthGobi Resources Ltd.'s employees were sentenced to five years in prison. One month after their sentencing, the President of Mongolia pardoned the employees and they were allowed to leave the country. However, the damage that this and other highly publicised cases had caused on Mongolia's international image had already been caused.

The resulting pressure from such internal missteps such as those described above, led to a sharp decline in the confidence in the Mongolian government by foreign investors. Coupled with restrictions on the availability of domestic capital, the mining sector quickly saw the impact of declining foreign direct investment into the economy.

Overall, Mongolia has had varying success at attracting foreign direct investment in the past decade. Between 2005 and 2011, the amount of foreign direct investment that entered Mongolia increased steadily, from US\$184,600,000 in 2005 to US\$4,717,590,841 in 2011. Since 2011, as a result of the issues described above, the amount of foreign direct investment entering the country has been decreasing to US\$4,451,761,799 in 2012 and US\$2,150,897,062 in 2013. The table below shows the values that have been verified by the World Bank Group, detailing Mongolia's success and failure at attracting foreign investment during the period described above.



**Figure 2: Foreign Direct Investment, Net Inflows (Current US\$)**

Source: World Bank Group, Data Bank

Mongolia has since repealed and amended those pieces of negative legislation that were introduced in 2012. In its place, the Mongolian government has since introduced positive legislation that openly supports free competition between foreign and domestic companies while also allowing foreign investors to participate openly in the economy. This included abolishing the Strategic Entities Foreign Investment Law and replacing it with the new Investment Law of Mongolia. Additionally, the government introduced a new government agency, Invest Mongolia, which is responsible for promoting Mongolia as an investment destination for foreign capital. Mongolia also introduced a new Securities Market Law, which allowed for greater flexibility in capital markets activities. This included the ability for publicly listed companies from foreign nations to conduct a dual listing on the domestic stock exchange. Additionally, Mongolia introduced one other piece of legislation specifically targeting the development of the domestic capital markets and the attraction of foreign capital, the Investment Fund Law. The new Investment Fund Law provided a structure that had not yet existed whereby investment funds could be structured and governed within Mongolia. These three pieces of legislation provided the need foundation for the domestic capital markets and a more reasonable entry point for foreign direct investment to enter the country.

In addition to investment and capital markets related legislation the Mongolian government also introduced legislation that specifically targeted the mining sector. Given the importance of the sector to the overall health of the Mongolian economy, the government focused on delivering a legal foundation that would be acceptable to both foreign and domestic participants. The amended Minerals Law and the accompanying Mining Policy saw limitations of state involvement in exploration and mining activities. Simultaneously, it also reduced the royalty charged on Gold by 50%, from 5% to 2.5%, for producers who sell to the Central Bank of Mongolia. This new legislation also resulted in the moratorium on exploration licenses being lifted, which saw the first auction of exploration licenses taking place in Mongolia in early 2015.

Mongolia has also resolved most of its outstanding issues with the corporate entities that it had engaged with in legal battles. As mentioned above, the President of Mongolia pardoned SouthGobi Resources Ltd.'s employees that had been detained and later sentenced. Outstanding



disputes over 106 licenses that had been revoked by the Mongolian government in January 2013. However, questions over the future of SouthGobi Resources Ltd. and Khan Resources Inc. still persist, as due their disputes with the Mongolian government.

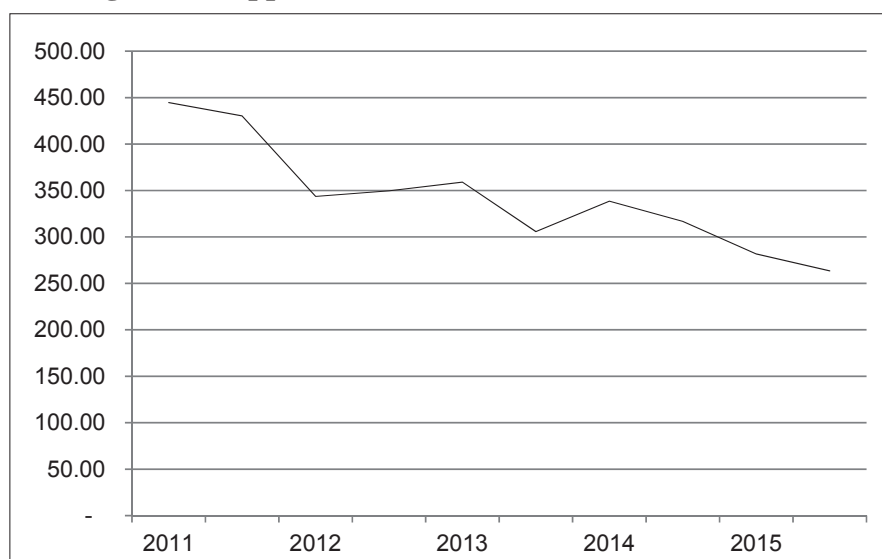
The impact of such internal missteps is not only damage to the Mongolian government's reputation among international investors but also significant drops in foreign direct investment, as the chart presented above has illustrated. While there are still several legal engagements that remain unresolved, Mongolia's change in course legislatively has proven to be an attractive step in the right direction compared to the path that appeared to be charted in 2012. Foreign investors seem content with the new legislative direction and appear to now be waiting for an indication of how impactful the 2016 Parliamentary elections could be to both the state of the economy and the direction of the country.

## 2.2 External Factors Impacting Foreign Direct Investment

Externally, Mongolia's economy and potential for foreign direct investment has been hindered by the performance of commodities prices, the Chinese economy, and the global financial markets. Two of Mongolia's main exports are coal and copper. Both commodities have suffered significant losses in their market value over the past 5 years. This has resulted in decreased revenues for coal and copper miners operating in Mongolia and as a result decreased taxes for the Mongolian government.

Copper is one of the most diversely applied metals globally. It is used across multiple disciplines, in the creation of power lines to hand held electronics. Copper futures, priced at US dollars per pound, are monitored as a key indicator of the demand for copper globally. As the chart below illustrates, demand for copper has been weakening since 2011. Unfortunately, this coincided with the damaging legislation that the Mongolia government introduced. The result of this timing was pressure being applied from both domestic and macro forces on foreign investors, both active and interested, in Mongolia's mineral resources sector.

**Figure 3: Copper Futures (US\$/lb Six Month Intervals)**

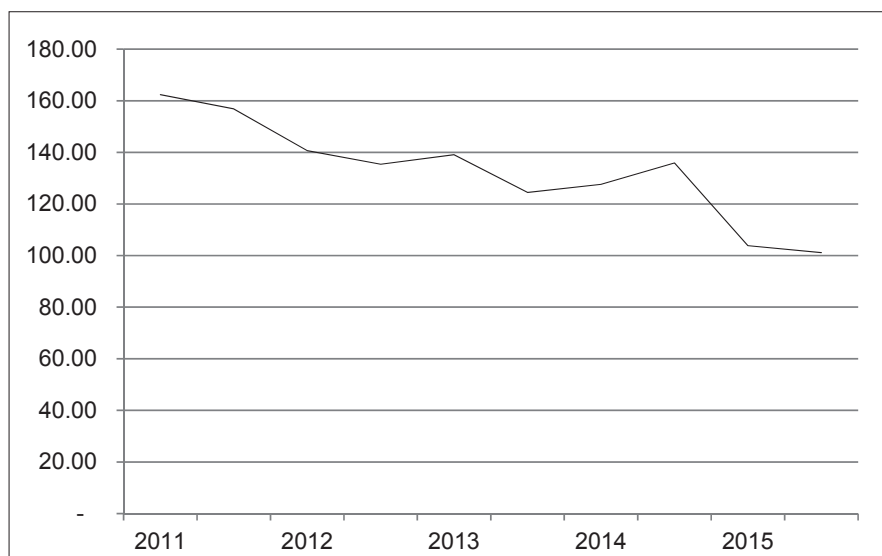


Source: Bloomberg Business, Commodities

Coal prices are also down significantly, 52% since 2011. The reason for this, similar to copper is a negative outlook for commodities consumption globally and Chinese consumption. Pressures from the global financial markets have also assisted the fall in prices, in particular a strengthening US dollar. In 2015, global supply is expected to exceed demand by 30 million tons, compared to 9 million tons in 2014. This is following estimates that China and Europe will decrease coal consumption by 9% and 1% to 195 and 211 million tons respectively in 2015.

Ongoing concern from investors regarding the performance of the commodities markets globally is expected to continue to impact their view on Mongolian investments. This includes both mining and non-mining investment opportunities. As all aspects of the Mongolian economy are dependent on foreign direct investment into the mining sector, investors will be watching performance of commodities as an indication of appetite and activity from investors and companies entering Mongolia. The below chart illustrates the performance of the Bloomberg Commodity Index. This takes into consideration both supply and demand functions of the market and assesses performance of commodities globally on a weighted basis at both the commodity, sector and group level in order to manage diversification. The chart provided illustrates the difficulties in the commodities markets globally and the ongoing negative outlook given the 63% drop in value from January 1, 2011 to June 30, 2015.

**Figure 4: Bloomberg Commodity Index Total Return (Six Month Intervals)**



Source: Bloomberg Business, Commodities

Despite the challenging environment for coal and copper, as well as the wider commodities market, Mongolia is still in an advantageous position when it comes to competing with other producing nations. The same can be argued for coal production. This advantage is the result of a favourable geographic position with China in comparison to the largest copper and coal producing nations globally. Mongolian copper and coal are not subjected to the same high transport related expenses like many, more distant, commodity suppliers. As such, Mongolia is able to maintain a more competitive position at lower pricing.

Likewise, Mongolia's production levels of both coal and copper do not rival the largest producers in either commodity. This suggests that the Mongolian economy will be able to sustain itself at lower levels of Chinese consumption and will not be as negatively impacted as other

supplier nations, should Chinese demand continue to decrease. The following two tables illustrate the top ten producers of both copper and coal. This highlights the geographic challenge that each nation will face in reaching the Chinese market. Mongolian copper and coal, in comparison, are directly transported by road or rail to the Chinese border.

**Figure 5: Top 10 Copper Producing Nations (2014)**

Rank	Country	Production ('000 tons)
1	Chile	5,800
2	China	1,620
3	Peru	1,400
4	United States	1,370
5	D. R. Congo	1,100
6	Australia	1,000
7	Russia	850
8	Zambia	730
9	Canada	680
10	Mexico	520

Source: US Geological Society, Copper

**Figure 6: Top 10 Coal Producing Nations (2013)**

Rank	Country	Production (000'000 tons)
1	China	3650
2	United States	922.1
3	India	605.8
4	Australia	431.2
5	Indonesia	386.0
6	Russia	354.8
7	South Africa	260.0
8	Germany	196.2
9	Poland	144.1
10	Kazakhstan	116.4

Source: US Energy Information Administration, International Energy Statistics

### 2.3 The Future Outlook for Foreign Direct Investment Into Mongolia

Mongolia's attitude towards foreign investment has changed drastically over the past five years. This is likely a result of the economic realities that have inhibited the country's ability to develop large-scale mining projects without the participation of foreign direct investment. As mentioned in the previous sections, the retreat of foreign investment has not solely been the fault of negative legislation but also the significant decrease in core commodities prices over the same period. These two factors, generally termed in this paper as internal and external, have together

delivered an economic shock to foreign investors and Mongolian citizens alike.

The positive news for Mongolia is that the changes that have since been introduced to mining legislation and to support the formation of efficient capital markets. These are positive developments. These changes have provided a well-structured foundation for the economy that should garner support from international investors.

In addition to the changes already mentioned in this paper, the Mongolian government has also announced other initiatives targeted at attracting further foreign direct investment into Mongolia. One such program, introduced by President Elbegdorj in mid-2014, is a privatization program that will see state assets divested by the Mongolian government. A legislative framework that will result in the full or partial sale of state-owned enterprises will further support this initiative. An example of a state-owned enterprise that could be sold in full or part includes the 49% state-owned national flag carrier Mongolian International Airways. In addition, state-owned mining assets are a natural avenue for the Mongolian government to attract interest from large international mining companies and foreign investors alike. The prospect of having a stake in Mongolia's most attractive mining assets has the potential to attract interest from international mining companies such as Glencore Xtrata, BHP Billiton, Rio Tinto, Vale, and Anglo American, all of which have previously participated in Mongolia's mining sector within the past 10 years.

Given the boom-bust cycle of the Mongolian economy, similar to that of other resource-based markets, investors should expect a return to the growth cycle in conjunction with a strengthening outlook for commodities prices, particularly copper and coal. Likewise, a strengthening outlook for the Chinese economy will provide a welcomed boost to the Mongolian growth story as this would increase underlying demand for Mongolian exports. That said, Mongolia is not as severely impacted by commodity-driven price swings to the same extent like many other resource driven nations. Furthermore, the impact that changing conditions within the Chinese economy has on Mongolia's commodity producers is far more acute than in other resource producing nations. Mongolia is therefore well positioned to benefit from positive developments in either the commodities markets or the Chinese economy. This is now especially true due to recent positive legislative developments that now govern the Mongolian economy and the participation of foreign investors.

## **Conclusion**

Mongolia's future prosperity will undoubtedly depend on the ability of the governing politicians to earn the interest and support of foreign investors. The Mongolian government has demonstrated over the past three years that this is their intent and that protecting the interest of foreign participation in Mongolia's economy is a priority. Mongolia's untapped resources, strengthening legislative and political environments, and increasing transparency are all contributing to the country's potential. With a population of approximately 3 million, future prosperity will require continued positive developments and further foreign investment into the economy.

In June 2016, Mongolia will elect the next Parliament. As has been discussed, a change in government may be on the horizon. Regardless of the outcome, the government will need to ensure stability and limit legislative and political uncertainty in order to balance both foreign and domestic interests.

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1. Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10% or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. Data are in current U.S. dollars.

2. Bloomberg Commodity Index (BCOM) is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification. Roll period typically occurs from 6<sup>th</sup>–10<sup>th</sup> business day based on the roll schedule.

# The Marginal Welfare Burden of Mongolia's Tax System

Sh. Enkhbayar\*

## Abstract

*Taxes influence the behavior of an economy's consumers and producers in important ways, and therefore the economy as a whole. The marginal cost of raising one dollar of public funds can be higher than a dollar. Therefore, policy makers need to understand the welfare cost associated with different taxes in order to be better informed when designing tax policy.*

*An analysis using the CGE model and employing the Global Trade Analysis Project (GTAP) 8 Data Base revealed that a simultaneous 1% increase in Mongolia's current tax rates or the marginal welfare burden of Mongolia's tax system would result in a direct burden of US\$37.05 million of tax revenue, while the excess burden to the economy equals US\$0.43 million. Accordingly, for every dollar of additional tax rise, the Mongolian economy would incur 1.16 cents of excess tax burden, which is the taxes' deadweight efficiency cost to the economy. Moreover, it was revealed that by increasing consumption tax, consumer welfare and production would be more adversely affected than if the revenue was raised through an increase in any other tax.*

Keywords: marginal welfare burden, tax policy, Mongolian economy, CGE analysis, GTAP Data Base

## 1. Introduction

Taxes influence the behavior of an economy's consumers and producers in important ways, and therefore the economy as a whole. Raising one dollar (or other local unit of currency) of tax could cost society more than one dollar (i.e. the marginal cost of raising a dollar of public funds can be higher than a dollar). Several rounds of tax reforms have been introduced in Mongolia since the country's economic transition from a centrally-planned economy to a market-oriented economy in the early 1990s, and currently, the government of Mongolia is working on another reform of its tax system and a revision of major tax laws.

"The marginal welfare burden of a tax is the change in national welfare due to a very small – a marginal – change in an existing tax. The change in welfare divided by the change in tax revenue describes the marginal welfare burden per dollar of additional tax revenue. This per dollar concept, developed by E. Browning (1976), has practical use as a measure for determining whether a government project is worthwhile if its funding requires raising additional tax revenue" (p. 199). This is a realistic and important analytical problem because policymakers typically consider modest tax hikes or cuts from an already-distorted tax base (Burfisher, M., 2011).

Every additional dollar of tax revenue incurs both direct and indirect tax burdens. The direct burden is a transfer of tax revenue from private expenditure to the government, while the indirect or excess tax burden occurs in the form of a deadweight efficiency cost to the economy. The direct burden of a tax does not incur a loss to the economy, because it transfers the tax payers' spending power to the government, and the government would allocate it elsewhere for the economy's welfare. However, tax distorts consumption and production as producers and consumers change the quantities they produce and consume to avoid paying tax. This change causes inefficiencies given a nation's productive resources and consumer preferences and they



are not recouped elsewhere in the economy, and thus these inefficiencies are called a deadweight loss (Burfisher, M., 2011).

Computable general equilibrium models (CGE) are useful tools for tax policy analysis as economy-wide models and capture potential interactions among all taxes in an economy. This feature is important because governments usually impose several types and levels of taxes simultaneously. In fact, in some cases a particular tax or subsidy can improve efficiencies by offsetting inefficiencies caused by other taxes. For example, introducing a subsidy to a manufacturer may offset efficiency losses caused by a sales tax on their purchase of inputs (Burfisher, M., 2011).

In this context, this paper analyses the marginal welfare effects of Mongolia's current tax system using a CGE model and puts forwards some recommendations for the ongoing tax policy reform.

## 2. The Analysis

### 2.1 The Model and Aggregation

In analyzing the marginal welfare burden of Mongolia's tax system, the Global Trade Analysis Project (GTAP) Data Base (Version 8) and the standard GTAP Model were employed. The GTAP Model is a multi-region and multi-sector Computable General Equilibrium (CGE) model<sup>1</sup> with perfect competition and constant returns to scale. A CGE model is a system of mathematical equations that describes an economy as a whole and the interactions among its agents. Bilateral trade is handled via the Armington assumption, which provides the possibility to distinguish imports by their origin and explains the intra-industry trade of similar products. The Data Base combines detailed bilateral trade, transport and protection data characterizing economic linkages among regions, together with individual country input–output databases, which account for inter-sectoral linkages.

The GTAP Data Base 8, which was released in 2012, has dual reference years (2004 and 2007) and this analysis used 2007 as the reference year. The data covers 129 regions and 57 commodities, and Mongolia was one of the newly added regions in the Data Base. The GTAP Input–Output Table (IOT) for Mongolia is based on the Mongolian IOT for 2005, which includes 55 sectors (Narayanan, B., et al, eds., 2012; Begg, Burmaa, M., et al, 2012). The standard GTAP Model has five primary factors of production: land, skilled labor, unskilled labor, natural resources, and capital, with land and natural resources being sluggish, and labor and capital being mobile factors.

As Mongolia was the only country of interest in the analysis, the regions were aggregated from the 129 into two groupings, Mongolia and the rest of the world (ROW), and the sectors into five categories (agriculture, mining, manufacturing, infrastructure and services) from the 57 in the database. Also, the skilled and unskilled labor factors of the original GTAP model were combined as labor; thus the newly aggregated model, named “Mon5x4tx” which was used in the analysis has two regions, five sectors and four factors as described in Table 1. The commodity aggregation used in the model is illustrated in Table 2.

**Table 1: Size of the “Mon5x4tx” Model**

Items	Dimension	Members
Regions ( <i>r</i> )	2	Mongolia, Rest of the World (ROW)
Sectors ( <i>j</i> )	5	Agriculture, Mining, Manufacturing, Infrastructure, Services
Factors ( <i>f</i> )	4	Land, Labor, Natural Resources, Capital

**Table 2: Commodity Aggregation used in the Model**

Mon5x4tx Model (5 Sectors)	Dimension GTAP Database 8 (57 Sectors <sup>2</sup> )
Agriculture	Paddy rice, Wheat, Cereal grains nec., Vegetables, fruit, nuts, Oil seeds, Sugar cane, sugar beet, Plant-based fibers, Crops nec., Cattle, sheep and goats, horses, Animal products nec., Raw milk, Wool, silk-worm cocoons, Forestry, Fishing
Mining	Coal, Oil, Gas, Minerals nec., Petroleum, coal products
Manufacturing	Bovine meat products, Meat products nec., Vegetable oils and fats, Dairy products, Processed rice, Sugar, Food products nec., Beverages and tobacco products, Textiles, Apparel, Leather products, Wood products, Paper products, publishing, Petroleum, coal products, Chemical, rubber, plastic products, Mineral products nec., Ferrous metals, Metals nec., Metal products, Motor vehicles and parts, Transport equipment nec., Electronic equipment, Machinery and equipment nec., Manufactured goods nec.
Infrastructure	Electricity, Gas manufacturing, distribution, Water, Construction,
Services	Trade, Transport nec, Water transport, Air transport, Communication, Financial services nec, Insurance, Business services nec, Recreation and other services, Public administration, defense, education, health, Dwellings.

Note: The original sectors in the GTAP Data Base 8 start with capital letters.  
nec. = not elsewhere cited

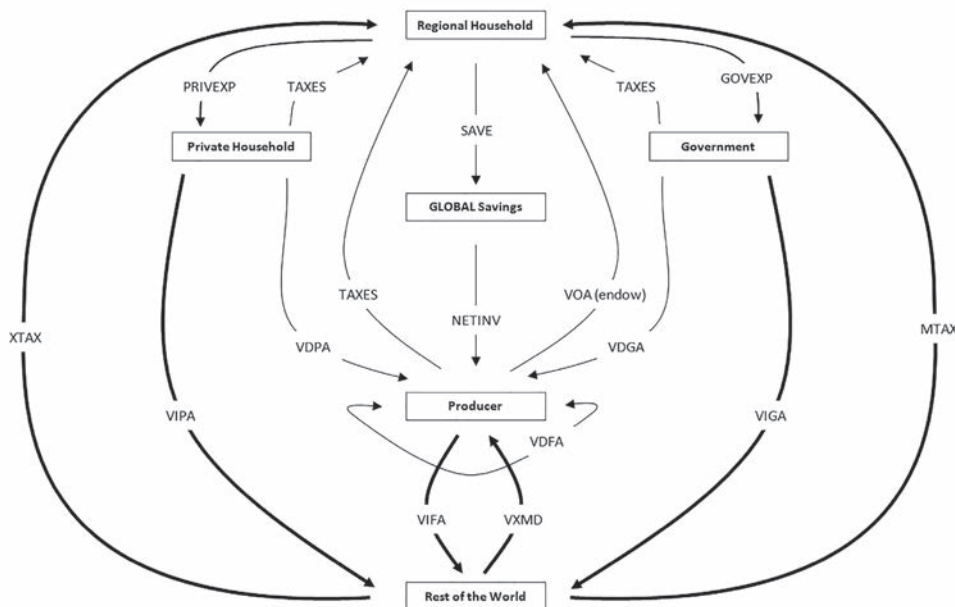
A simplified illustration of all economic agents in the model and their interactions is provided in Figure 1, which was taken from Brockmeier (1996). This is a graphical expression of a multi-region open economy with government interventions or taxes. In the GTAP data and the model all sectors produce a single output; thus there is a one-to-one relationship between producing sectors and commodities.

The GTAP model incorporates a regional household (termed an “aggregated household” in the CGE modeling framework), associated with each country (e.g. Mongolia) or composite region (e.g. ROW). The regional household collects all the income that is generated in an economy. Expenditures by this household are allocated across three broad categories: private (*PRIVEXP*), government (*GOVEXP*), and savings (*SAVE*) expenditures. These represent final

demand in an economy and each component roughly maintains a constant share of the total regional income. Modelling the components of final demand via this regional household has the advantage that it enables the control of the condition that no agent can spend more income than it receives. Besides, this concept of a regional household is best suited to compute equivalent variation as a measure of regional welfare resulting from different policy scenarios (Brockmeier, 1996).

The regional income consists of the “Value of Output at Agent’s prices (*VOA*)” paid by producers for the use of “endowment commodities” to the regional household and flows of taxes (*TAXES*) from the private household, firms and government. As an open economy, it trades with the ROW and collects import taxes (*MTAX*) and export taxes (*XTAX*). The value of *VOA* flow also represents the values of the opposite flow that correspond to the values of endowment commodities going back to the producers from the regional household, but for the sake of simplicity, this flow and other goods and service flows are not included in Figure 1.

**Figure 1: Multi-Region Open Economy with Government Intervention**



In an open economy, the private and government households spend their income on both domestically produced and imported commodities. These flows are denoted as “Values of Private and Government” consumption expenditures on domestic goods and services evaluated at “Agent’s” prices (*VDPA*, *VDGA*) and those on “Imported” goods and services (*VIPA*, *VIGA*). Also, the producers or firms receive payments for selling goods and services to private (*VDPA*) and government (*VDGA*) households, investment goods to the savings sector (*NETINV*) and get additional revenues from exporting goods and services valued at “Market” prices to the ROW (*VXMD*). At the same time, in order to produce goods and services, the firms spend their income on domestically produced intermediate inputs (“Value of Domestic Firm purchases evaluated at Agent’s prices”, *VDFA*), imported intermediate inputs (“Value of Imported Firm purchases evaluated at Agent’s prices”, *VIFA*) and primary factors of production (*VOA*). The GTAP model makes a zero-profit assumption for producers, so that all the revenues are completely used on expenditure. As savings and investment are computed on a global basis in the multi-region

version of the GTAP model, the savings in the model are denoted by “GLOBAL Savings” (Figure 1).

The composition of Mongolia's and the ROW's GDP, as reported in the GTAP Data Base 8 is shown in Table 3. According to the table, Mongolia's exports to the ROW equaled 60.9% of GDP (Gross Domestic Product), while imports stood at 62.1%. At the same time, the figures for the ROW were 27.4%. This indicates that trade plays an important role for Mongolia's economy compared to the global average. Therefore, an open economy model better describes Mongolia's economy than a closed, single economy model. From the source side, net factor income accounted for 62% of Mongolia's GDP, while net taxes and depreciation equaled 26.1% and 12%, respectively (Table 3).

**Table 3: Composition of GDP, %**

	Mongolia	Rest of the World
From the expenditure side: $GDPEXP=C+G+I+X-M$		
Private consumption (C)	50.5	59.8
Government consumption (G)	13.2	17.2
Investment (I)	37.5	23.0
Exports (X)	60.9	27.4
Imports (M)	-62.1	-27.4
Total	100.0	100.0
From the source side: $NETFACTINC+NETAXES+VDEP$		
Net factor income (NETFACTINC)	62.0	60.2
Net taxes (NETAXES)	26.1	29.1
Depreciation (VDEP)	12.0	10.6
Total	100.0	100.0

Source: GTAP 8 Data Base.

## 2.2 Elements of the GTAP Model

The GTAP database contains several sets that define parameters, variables and equations. As the aggregated model “Mon5x4tx” has five sectors, the set of traded commodities consists of agriculture, mining, manufacturing, infrastructure and services and they can be traded between regions. The set of produced commodities contains capital goods (*CGDS*) in addition to the traded commodities. Capital goods refers to the investment column of the national input-output tables and represents purchases of goods and equipment designated for investment. Thus, capital goods are produced like any other commodity, but it can be considered as a “fictitious” sector that is intermediate between the supply of goods to investment and the demand for savings. Land, labor, capital and natural resources are endowment commodities, whereas labor and capital are mobile, and land and natural resources are sluggish. The mobile endowment commodities are perfectly mobile across industries within each region, while the sluggish endowment commodities are imperfectly mobile or immobile. A detailed list of the sets defined in the model is illustrated in Table 4.

**Table 4: Description of the Model Sets**

Set Name	GTAP Notation	Members
Traded commodities	TRAD_COMM	Agriculture, Mining, Manufacturing, Infrastructure, Services
Produced commodities	PROD_COMM	Agriculture, Mining, Manufacturing, Infrastructure, Services, Capital Goods (CGDS)
Demanded commodities	DEMD_COMM	Land, Labor, Capital, Natural Resources, Agriculture, Mining, Manufacturing, Infrastructure, Services
Capital goods commodities	CGDS_COMM	Capital
Non-savings commodities	NSAV_COMM	Land, Labor, Capital, Natural Resources, Agriculture, Mining, Manufacturing, Infrastructure, Services, Capital goods
Non-margin commodities	NMRG_COMM	Agriculture, Mining, Manufacturing, Infrastructure
Margin commodities	MARG_COMM	Services
Endowment commodities	ENDW_COMM	Land, Labor, Capital, Natural Resources
Sluggish endowment commodities	ENDWS_COMM	Land, Natural Resources
Mobile endowment commodities	ENDWM_COMM	Labor, Capital
Capital endowment commodity	ENDWC_COMM	Capital

The model has more than 240 types of variables and a decision on which variables are endogenous (values are determined as solutions to the equations in the model) and which are exogenous (they have fixed values and do not change when the model is solved) is called the “model closure”. Tax and tariff rates, supply and demand elasticities, and the shift and share coefficients used in supply and demand equations are considered as exogenous parameters in the CGE models, whereas tax and tariff rates are typically calculated from the model’s base data. The base data represent an economy at an initial equilibrium (Burfisher, M., 2011).

In GTAP, the difference in the value of a transaction evaluated at agents’ and market prices equals a tax or subsidy. The base tax rates calculated from the GTAP Data Base 8 are provided in Tables 5–10. For example, in terms of output tax, Mongolia’s labor force pays more taxes on their income (26.7%) compared to the ROW’s 18.09%, while it pays slightly less tax on capital (4.78%) and natural resources (4.78%) as compared to the ROW (7.05%, and 6.58% respectively).

However, in terms of taxes on primary factors, a uniform rate of 2.26% was allocated for all the primary factors used by all the produced commodities in Mongolia, while those in the ROW vary by factor and commodity. In particular, the tax rate on labor in the ROW was relatively higher than in Mongolia, especially for the manufacturing, infrastructure and service sectors. However, land and capital used in agriculture were subsidized in the ROW (Table 6).

**Table 5: Output (or Income) Subsidies (Base Rates)**

Factors and Commodities	Mongolia	Rest of the World
1 Land	-4.78	-5.38
2 Labor	-26.70	-18.09
3 Capital	-4.78	-7.05
4 Natural resources	-4.78	-6.58
5 Agriculture	-0.18	0.30
6 Mining	-3.66	-3.10
7 Manufacturing	-1.77	-2.42
8 Infrastructure	-1.63	-1.42
9 Services	-1.04	-1.68
Total	-49.30	-45.42

Note: Negative figures indicate tax and positive figures indicate subsidies.

Source: GTAP 8 Data Base.

**Table 6: Taxes on Primary Factors (Base Rates)**

Factors	Agriculture	Mining	Manufacturing	Infrastructure	Services	Capital Goods	Total
Mongolia:							
Land	2.26	0	0	0	0	0	2.26
Labor	2.26	2.26	2.26	2.26	2.26	0	11.28
Capital	2.26	2.26	2.26	2.26	2.26	0	11.28
Natural Resources	2.26	2.26	0	0	0	0	4.51
Total	9.02	6.77	4.51	4.51	4.51	0	29.33
Rest of the World (ROW):							
Land	-8.03	0	0	0	0	0	-8.03
Labor	5.41	7.48	18.98	16.97	18.41	0	67.25
Capital	-6.70	1.54	1.63	1.89	2.1	0	0.46
Natural Resources	1.16	1.63	0	0	0	0	2.78
Total	-8.15	10.65	20.61	18.85	20.51	0	62.47

Note: Positive figures indicate tax and negative figures indicate subsidies.

Source: GTAP 8 Data Base.

In the case of consumption tax rates, they are substantially higher in Mongolia compared to those in the ROW, especially on imports. For example, the ad valorem rates on private consumption for imported agriculture commodities equaled 33.55% in Mongolia, while it equaled 1.73% in the ROW. Also, the rates for private consumption and government purchases for both the domestic and imported manufacturing commodities were higher in Mongolia than those in the ROW. In addition, firms in Mongolia pay much more tax as shares from their income, especially on their imported inputs. For example, the combined ad valorem rates of taxes on firms' import purchases for infrastructure equaled 152.93% in Mongolia, while it was 25.3% in the ROW. Overall, the above discussion may imply that Mongolia's tax policy is relatively unfavorable for businesses compared to the rest of the world (Tables 7–10).



**Table 7: Taxes on Private Consumption (Base Rates)**  
(% ad valorem rate)

Sectors/Commodities	Mongolia		Rest of the World	
	Domestic	Imports	Domestic	Imports
Agriculture	1.69	33.55	1.13	1.73
Mining	3.50	10.44	17.73	43.41
Manufacturing	17.14	25.03	15.41	16.23
Infrastructure	-0.70	173.54	12.55	33.72
Services	5.36	0.99	3.16	5.60
Total	26.99	243.56	49.99	100.7

Source: GTAP 8 Data Base.

**Table 8: Taxes on Government Purchases (Base Rates)**  
(% ad valorem rate)

Sectors/Commodities	Mongolia		Rest of the World	
	Domestic	Imports	Domestic	Imports
Agriculture	0	0	-0.82	0.89
Mining	2.53	31.21	0.42	0.18
Manufacturing	43.21	12.11	1.20	1.79
Infrastructure	0.73	2.67	0.31	5.45
Services	1.33	0.26	0.17	2.70
Total	47.8	46.24	1.28	11.02

Source: GTAP 8 Data Base.

**Table 9: Taxes on Firms' Domestic Purchases (Base Rates)**  
(% ad valorem rate)

Commodities	Agriculture	Mining	Manufacturing	Infrastructure	Services	Capital Goods	Total
Mongolia:							
Agriculture	0	0	0	0	0	1.47	1.47
Mining	0.21	0	0.36	1.56	1.37	2.47	5.96
Manufacturing	6.22	1.84	0.67	0.12	2.91	34.96	46.72
Infrastructure	-0.44	-0.25	-0.74	0.09	-0.54	0.33	-1.54
Services	0	0	0	0	0	4.29	4.29
Total	5.99	1.59	0.3	1.76	3.74	43.51	56.89
Rest of the World (ROW):							
Agriculture	-2.02	0	0	0	0	1.44	-0.58
Mining	2.52	0.33	0.46	5.54	6.59	0.03	15.47
Manufacturing	1.68	1.01	0.92	0.79	6.52	3.12	14.04
Infrastructure	-0.25	2.57	4.17	0.7	1.73	1.28	10.2
Services	-2.33	0	0	0	0	1.51	-0.82
Total	-0.42	3.91	5.55	7.04	14.85	7.39	38.31

Source: GTAP 8 Data Base.

**Table 10: Taxes on Firms' Import Purchases (Base Rates)**  
(% ad valorem rate)

Commodities	Agriculture	Mining	Manufacturing	Infrastructure	Services	Capital Goods	Total
Mongolia:							
Agriculture	0	0	0	0	0	23.84	23.84
Mining	0	0	0	0	0	0	0
Manufacturing	6.41	3.28	2.78	1.46	5.79	5.06	24.76
Infrastructure	40.4	5.54	44.53	36.85	24.59	1.02	152.93
Services	0	0	0	0	0	1.23	1.23
Total	46.8	8.81	47.31	38.3	30.38	31.15	202.77
Rest of the World (ROW):							
Agriculture	-2.47	0	0	0	0	0.23	-2.24
Mining	2.05	0.15	0.29	3.36	8.33	3.2	17.38
Manufacturing	0.74	0.33	0.62	0.49	5.51	5.41	13.09
Infrastructure	4.52	1.70	8.59	2.96	2.61	4.92	25.3
Services	-1.45	0	0	0	0	2.98	1.52
Total	3.38	2.19	9.5	6.8	16.44	16.73	55.05

Source: GTAP 8 Data Base.

### 2.3 The Simulation

The marginal welfare burden of Mongolia's tax system was evaluated by observing changes in national welfare when a very small—a marginal—change in the existing tax system is introduced. This is done by shocking the model with a 1% increase in every tax rate in the Mongolian economy simultaneously. Because taxes change the relative prices of goods and services, consumers and producers change the quantities they consume or produce. These changes also affect household savings and the accumulation of capital and investment, labor supply decisions and incomes, the relative returns from economic activity, and so on.

The list of shocks introduced in the “Mon5x4tx” Model and description of the tax variables are shown in Box 1 and Table 11, respectively. The default behavioral parameters of the standard GTAP model were not changed in the experiment; however a built-in systematic analysis of the sensitivity of welfare results to alternative elasticity parameter values for factor substitution was carried out.

#### Box 1: List of Shocks in “Mon5x4tx” Model

Shock tf(ENDW\_COMM,PROD\_COMM,"Mongolia") = rate% 1 from file tf.shk;  
 Shock tfd(TRAD\_COMM,PROD\_COMM,"Mongolia") = rate% 1 from file tfd.shk;  
 Shock tfm(TRAD\_COMM,PROD\_COMM,"Mongolia") = rate% 1 from file tfm.shk;  
 Shock tgd(TRAD\_COMM,"Mongolia") = rate% 1 from file tgd.shk;  
 Shock tgm(TRAD\_COMM,"Mongolia") = rate% 1 from file tgm.shk;  
 Shock to(NSAV\_COMM,"Mongolia") = rate% 1 from file to.shk;  
 Shock tm(TRAD\_COMM,"Mongolia") = uniform 1;  
 Shock tp("Mongolia") = 1;  
 Shock tx(TRAD\_COMM,"Mongolia") = uniform 1

**Table 11: Description of Policy Variables**

Variables	Dimensions	Description
tf	ENDW_COMM*PROD_COMM*REG	tax on primary factor $i$ used by $j$ in region $r$
tfd	TRAD_COMM*PROD_COMM*REG	tax on domestic $i$ purchased by $j$ in $r$
tfm	TRAD_COMM*PROD_COMM*REG	tax on imported $i$ purchased by $j$ in $r$
tgd	TRAD_COMM*REG	tax on domestic $i$ purchased by government household in $r$
tgm	TRAD_COMM*REG	tax on imported $i$ purchased by government household in $r$
tm	TRAD_COMM*REG	source-generated change in tax on imports of $i$ into $s$
tms	TRAD_COMM*REG*REG	source-specific change in tax on imports of $i$ from $r$ into $s$
to	NSAV_COMM*REG	output (or income) tax in region $r$
tp	REG	Commodity's source-generated shift in tax on private consumption
tx	TRAD_COMM*REG	Destination generated change in subsidy on exports of $i$ from $r$

## 2.4 The Results

The simulation results demonstrated that a 1% increase in Mongolia's taxes would result in a direct burden of US\$37.05 million of tax revenue and an efficiency loss of US\$0.95 million.

As reported in Table 12, Mongolia's initial amount of net tax revenue equaled US\$1,024.1 million, and it increased to US\$1,061.2 million after increasing all taxes by 1% simultaneously; thus, the additional net tax revenue or the direct burden equaled US\$37.05 million. However, this amount is not a loss to the economy or the total welfare of Mongolia because it just shifts the spending power of the consumers and producers to the government. This means that although the consumers' and producers' disposable incomes would be reduced by US\$37.05 million due to the additional taxes incurred, the government would have the same amount of extra tax revenues which can be spent for the nation's welfare. Overall, Mongolia's GDP would increase by US\$57.02 million mostly due to increased revenue of net taxes (Table 12).

**Table 12: Changes in Mongolia's GDP by Source**  
(US\$ Million)

GDPSRC	Net Factor Income	Net Taxes	Depreciation	Total
Base Data (A)	2,435.5	1,024.1	470.0	3,929.6
Updated Data (B)	2,450.8	1,061.2	474.6	3,986.6
Change (B-A)	15.37	37.05	4.59	57.02

However, the change to the equivalent variation (EV), which is a measure of economic welfare in the GTAP model, was negative. The regional household EV is equal to the difference between the expenditure required to obtain the new (post-simulation) level of utility at initial prices. According to the simulation results, the total welfare cost of an additional 1% increase in all taxes was estimated at US\$0.43 million (Table 13).

The EV decomposition summary for Mongolia reported an allocative efficiency of US\$-0.95 million. This represents the efficiency loss in the economy—as resources were reallocated away from their most efficient use in response to the updated taxation policy.

However, due to the positive terms of trade (ToT) effects of US\$0.52 million, the total welfare cost to the economy was reduced to US\$0.43 million. There were efficiency gains of US\$0.10 million in ToT in goods and services and US\$0.42 million in ToT in investment and savings (Table 13).

Accordingly, for every dollar of additional tax rise, the Mongolian economy would incur 1.16 cents of excess tax burden, which is the taxes' deadweight efficiency cost to the economy. This represents the marginal welfare burden of Mongolia's current tax system and was estimated as: marginal welfare burden of tax (1.16 cents) =  $100 \times \text{change in welfare or EV (US\$-0.43 million)} / \text{change in government tax revenue (US\$37.05 million)}$ . This means that given the current taxation structure in the Mongolian economy, each additional US\$1 of taxation revenue costs the economy 1.16 cents; thus the government will need a return of US\$1.0116 when using this tax revenue, or overall welfare in the economy will fall (Table 13).

**Table 13: Welfare Effects for Mongolia: EV Decomposition Summary (US\$ Million)**

Total welfare change (EV)		-0.43
	Allocative efficiency	-0.95
	Endowment	0
	Technology	0
	Population	0
	Terms of trade in goods and services	0.10
	Terms of trade in investment and savings	0.42
Change in government tax revenue ( $\Delta T$ )		37.05
Welfare cost: cents per dollar of revenue $\{100 \times (\text{EV}/\Delta T)\}$		-1.16

The decomposition results of the allocative efficiency effect by tax type indicated that consumption taxes were the most distorting, followed by import and input taxes. A consumption tax rise resulted in a US\$0.70 million loss of welfare, while hikes in import and input taxes would incur a US\$0.18 million and a US\$0.17 million welfare cost to the economy, respectively. Therefore, a 1% increase in consumption tax would result in 1.89 cents of deadweight efficiency cost to the economy, while those for import and input taxes would equal 0.49 cents and 0.46 cents. The marginal welfare burdens estimated by tax types are illustrated in Figure 2.

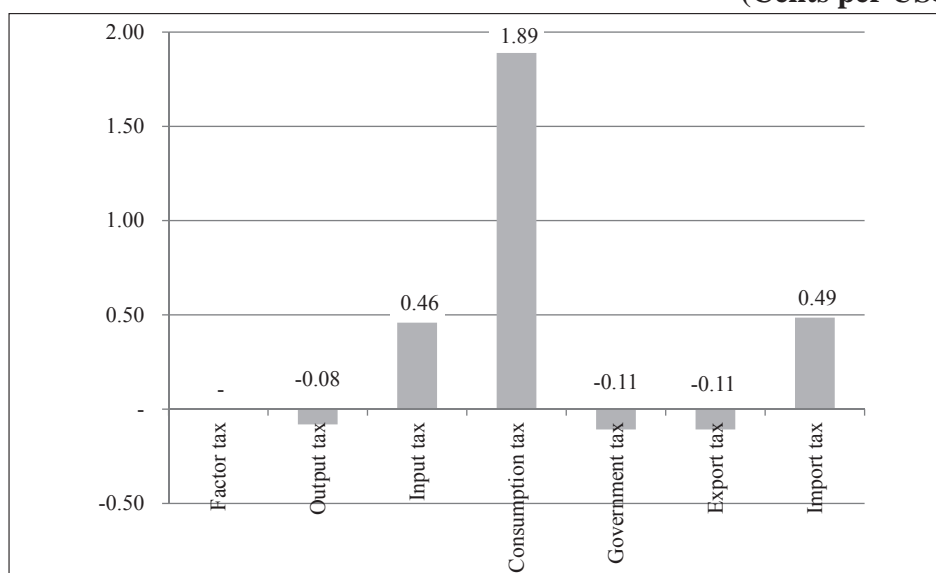
On the other hand, in terms of allocative efficiency effect by commodity or sector, the excess burden for manufacturing industry was the highest, followed by services. The deadweight efficiency cost for manufacturing equaled US\$0.66 million, and it amounted to US\$0.15 million for services. At the same time, the infrastructure sector would incur a US\$0.11 million efficiency loss due to the 1% increase in tax. Accordingly, the combined efficiency loss of these three sectors equaled 97% of the total deadweight efficiency cost (Table 15).

The results of the systematic sensitivity analysis (SSA) indicate that the negative sign of the equivalent variation (EV) welfare effect was robust with respect to factor (capital/labor/land) substitution elasticity ( $ESUBVA$ ). According to the Chebyshev theorem, the lower and upper values of the EV change ranged between US\$-0.54 million and US\$-0.34 million with a 75% confidence interval and between US\$-0.66 million and US\$-0.22 million with a 95% confidence interval. These analyses were performed by changing the  $ESUBVA$  parameter values of all produced commodities to two times the base parameter values, or by 100% (Table 16).

**Table 14: Welfare Decomposition of the Allocative Efficiency Effect by Tax Type (US\$ Million)**

Tax Type	Welfare cost
Factor tax	0.00
Output tax	0.03
Input tax	-0.17
Consumption tax	-0.70
Government tax	0.04
Export tax	0.04
Import tax	-0.18
Total	-0.95

**Figure 2: Marginal Welfare Burden of Additional Tax Revenue by Tax Type (Cents per US\$1)**



Note: Negative numbers indicate welfare gain.

**Table 15: Welfare Decomposition of the Allocative Efficiency Effect by Commodity (US\$ Million)**

Commodities	Contribution to EV of Allocative Effects
Land	0
Labor	0
Capital	0
Natural Resources	0
Agriculture	-0.08
Mining	0.05
Manufacturing	-0.66
Infrastructure	-0.11
Services	-0.15
Total	-0.95

**Table 16: Systemic Sensitivity Analysis (SSA) of the Model Results to Changes in the Elasticity of the Factor Substitution (*ESUBVA*) Parameter (Chebyshev's Theorem)**

Mean	Standard Deviation	Confidence Intervals	Standard Deviation Multiplier	Upper Limit	Lower Limit
X	sd		K	$X+sd*K$	$X-sd*K$
-0.44	0.05	75%	2	-0.34	-0.54
		95%	4.47	-0.22	-0.66

### 3. Conclusion

Taxes can have significantly different impacts on welfare. Therefore, policy makers need to understand the welfare cost associated with different taxes in order to be more informed when designing tax policy.

For example, a simultaneous 1% increase in Mongolia's current tax rates would result in a direct burden of US\$37.05 million of tax revenue, while the excess burden or the deadweight efficiency loss to the economy equals US\$0.43 million. That is, raising an additional dollar of tax revenue would cost the Mongolian economy 1.16 cents. Therefore, the government will need a return of US\$1.0116 per dollar spent on any projects that use tax revenues; otherwise the overall welfare in the economy will fall.

It was revealed that the current consumption tax would have more distorting effects, while the efficiency loss in the manufacturing sector would be the highest in the case of an additional tax hike within the country's current tax system. In this case, for example, by increasing consumption tax, consumer welfare and production would be more adversely affected than if the revenue was raised through an increase in any other tax.

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<sup>1</sup> For more details on the GTAP model and database, refer to Hertel, T. (ed.), 1997.

<sup>2</sup> Mappings between these sectors and standard classification codes such as ISIC and CPC are available online: <https://www.gtap.agecon.purdue.edu/databases/contribute/concordinfo.asp> (Terrie L. Walmsley et al., 2012)

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# Hyundai Motor Company's "Selective Focused Local Adaptation Strategy" from the Perspective of Global Marketing\*

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## Abstract

*The number of vehicles produced and sold worldwide by Hyundai Motor Company is rapidly increasing. This paper aims to comprehensively clarify the methods it uses to gather information in emerging economies to create customer value. In addition, it examines the systematic product planning and development process through which designs from within and outside the company are reflected in specific products. Furthermore, it looks at how these designs are embodied as customer value in Hyundai Motor Company's integrated process through to marketing and sales. More specifically, it analyzes (1) the status of the selective focused local adaptation strategy; (2) the product development process; and (3) systems that facilitate product development aimed at local adaptation.*

Keywords: Hyundai Motor Company, marketing, R & D, product planning, product development process, TFT

## Introduction

Hyundai Motor Group (Hyundai) has adopted a "selective focused local adaptation strategy" in which local adaptation is focused on priority areas in selected key markets, namely the BRICs (Brazil, Russia, India, China) economies and other emerging markets. By researching designs that target the main market segment and appeal to local consumers in those countries, it has succeeded in developing and launching vehicles tailored to the local market<sup>1</sup>. In addition, it has swiftly introduced cars tailored to the needs of local consumers in the main market segment.

Hyundai's recent competitive advantage in emerging economies has been attributed to its outstanding new design strategy and concept planning and development that prioritizes customer value above all else, as well as qualitative growth leveraged by partnerships with Hyundai Mobis and other global suppliers (Shioji (editor & author) 2012).

This paper examines the establishment of and changes in Hyundai's competitive advantage, comprehensively clarifying the methods it uses to gather information in emerging economies to create customer value, and the systematic concept planning and development process through which designs from within and outside the company are reflected in specific products and embodied as customer value in its integrated process through to marketing and sales. More specifically, it analyzes (1) the status of the selective focused local adaptation strategy; (2) the product development process; and (3) the systems that facilitate product development aimed at local adaptation.

## 1. Hyundai's Local Adaptation Strategy

### 1.1 The Selective Focused Local Adaptation Strategy

Hyundai is said to be more advanced than Japanese manufacturers in the area of locally adapted and “locally modified” (with minor adjustments to suit local needs) vehicles. However, it has few fully local models produced from entirely new body dies. Among its main models are the Santro in India and the Elantra Yuedong in China, which underwent thorough localization or local modification. Hyundai does not develop strategic models for emerging economies, like Honda’s Brio, Toyota’s IMV and Dacia’s Logan. Consequently, from a global perspective, Japanese manufacturers can respond more systematically with vehicles adapted to the local market.

On the other hand, Hyundai is utilizing a “selective focused production model,” focusing selectively on producing a limited product range for specific markets. In particular, it adapts many of its Korean models to meet local needs in the BRICs economies. As well as the Santro, i10, and Eon in India and the Elantra Yuedong in China, examples include the Moinca, Sonata NFC (Lingxiang), and Verna in China, the Solaris in Russia, and the HB20 in Brazil. These are all models adapted following detailed research into the characteristics of each market and local needs (Table1).

Japanese manufacturers have a strong tendency to deploy models based on the perception of emerging markets as a monolithic entity. In contrast, manufacturers in the ROK divide up the BRICs markets by country, developing dedicated models for each country, and are keen to undertake local adaptation. This is because the ROK adopts a top-down approach and unless a company implements thorough local adaptation, it will find it difficult to sell all of its products in a particular country after establishing a mass production plant there in response to orders from above.

## 1.2 Platform Integration and Consolidation

Hyundai uses its products as platforms to develop multiple diverse products for different markets with differing needs. By equipping this base with the functions sought by consumers in a particular region, it can quickly provide the optimal product for their needs.

More specifically, Hyundai has enhanced its market response through consolidation into six platforms and swift, low-cost product development. In addition, it has increased the number of local models and enhanced its product range to meet the diverse needs of each region. Through platform integration and consolidation, it has reduced development costs by 60% and the development period to two years, facilitating a faster response.

In particular, Hyundai is expanding its range of derivative vehicles developed from its core platforms. It is expanding the range of local models in each region based on its B (Accent) and C (Avante) platforms. In other words, Hyundai’s strategy is to standardize its platforms, technologies, and components, while developing products tailored to local needs.

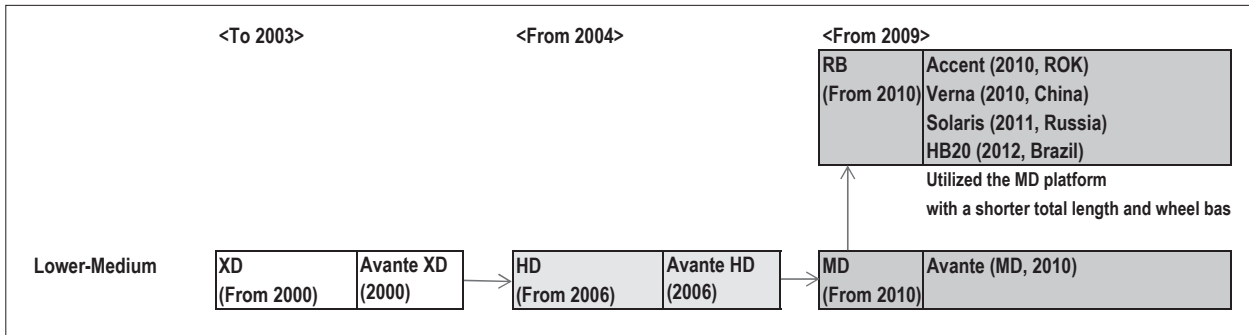
For example, Hyundai’s Accent/Verna (small sedan) revamp project used the Kia Pride as the common platform to develop a range of locally adapted vehicles, namely the Accent (the ROK), the Verna (China), the Solaris (Russia), and the HB20 (Brazil). These were developed at Hyundai’s Namyang Research and Development Center (Namyang R&D Center) over five years, at a cost of 200 billion won<sup>2</sup>. Hyundai Motors has developed models for BRICs markets concurrently as part of its new model development process. It develops shared platforms from the outset, based on the premise that it will develop models specifically for China, Russia, and Brazil. The Verna was launched in China in July 2010, the Accent in the ROK in November 2010,

the Solaris in Russia in January 2011, and the HB20 in Brazil in September 2012 (Figure 1).

**Table 1: Development of Local Strategic Models Tailored to the Attributes of Emerging Markets (Examples of the development of local strategic models tailored to the attributes of emerging markets)**

Region	Leading model(s)	Local characteristics	Reflection of local characteristics
Brazil	HB20	<ul style="list-style-type: none"> <li>Cheap bioethanol, 90% of vehicles are FFVs</li> <li>High crime rate</li> <li>Many hilly roads</li> <li>Mainly compact cars</li> <li>Preference for stylish yet fuel-efficient vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Developed and brought to market an FFV engine</li> <li>Introduction of a bulletproof glass option</li> <li>Flexible fuel vehicles (vehicles capable of running on ethanol-blended fuel as well as on gasoline)</li> <li>Equipped with advanced anti-theft functions</li> <li>Emphasis on design</li> <li>Based on Hyundai's Fluidic Sculpture design philosophy, the HB20's external details accentuate the modern and sporting lines of the hatchback. Its high waist-line and rear accentuates its stylishness and exclusivity.</li> </ul>
China	Moinca Sonata NFC Elantra Yuedong Verna Kia K2	Combination of local design preferences: Preference for dimensions that look big and an interior and exterior that look luxurious. Preference for shiny items	<ul style="list-style-type: none"> <li>Longer and wider than the Korean base car</li> <li>Chrome plating enlarged</li> <li>Headlamps and rear lamps enlarged</li> </ul>
Russia	Hyundai Solaris	<ul style="list-style-type: none"> <li>Severely cold winters with heavy snow</li> <li>Mud follows the thaw</li> <li>Poor roads</li> <li>Tendency for gravel to be thrown up</li> <li>Driving culture that frequently involves sudden acceleration and braking</li> <li>Tendency for drivers to leave their headlamps on</li> </ul>	<ul style="list-style-type: none"> <li>High-capacity 4L windscreen wash fluid tank</li> <li>Device to prevent wiper blades from icing.</li> <li>Mudguards (reduces scratching caused by dirt and stones thrown up from the road)"</li> <li>Vehicle height raised</li> <li>Battery that will start the engine even in the depths of winter</li> <li>Emergency Stop Signal (ESS) that activates to warn of sudden braking</li> <li>Windshield wiper deicing device that uses a heating coil to melt frozen-on snow</li> <li>Headlamps with a long operational life</li> </ul>
India	Santro i20 Eon	<ul style="list-style-type: none"> <li>Roads flood during the monsoon season</li> <li>Flooding</li> <li>Klaxons are loud and their sound constantly reverberates around the roads</li> </ul>	<ul style="list-style-type: none"> <li>Waterproof body</li> <li>Reduced vehicle height to prevent the car from looking like an auto-rickshaw"</li> <li>A new, cute, fresh image</li> <li>Louder klaxon</li> <li>Waterproof engine control unit (ECU) that ensures the car will start even when immersed in water</li> </ul>

Source: Compiled from studies conducted in Brazil, China, Russia, and India.

**Figure 1: Global Platform Deployment of Hyundai Motor Group's Lower-Medium Cars**

Source: Compiled on the basis of FOURIN (2010), p. 15.

### 1.3 Level of Quality Demanded Locally

The level of quality required in each country differs. Hyundai is skilled at reducing specifications in response to the level in each country. This ensures that specifications acceptable to each market can be purchased by customers at a reasonable price. Put simply, Hyundai's quality standards are determined by customers (markets), who judge vehicles by price.

Hyundai's quality standards differ in each country. Elements such as the powertrain are handled by the Namyang R&D Center, but competent local manufacturers are utilized to provide interior and exterior components. The Namyang R&D Center has the final say in such decisions.

For example, in China, the standard level is basically the same level of specifications as in the ROK, but with slightly lower interior specifications. Useful functions on the original Elantra, such as automatic door locking when driving, side-mirror-mounted turn signal indicators, and heated side mirrors, have been dropped from the Elantra Yuedong, along with interior elements such as the seat height adjuster and trunk light, thereby ensuring price competitiveness. The specifications adopted in India differ substantially from those in the ROK. Hyundai's Indian plants produce vehicles with two different sets of specifications: those for sale in India and those to be exported to Europe. To reduce the specification level, Hyundai varies the quality of the materials used. It also alters the processing, taking into account changes in customer needs in that market. Its Russian cars are about the same standard as those sold in the ROK. Hyundai can reduce its specifications precisely because of its policy of permitting lower specifications.

In this way, Hyundai is addressing needs in each country by standardizing its platforms and altering specifications according to the level of quality demanded in that country.

## 2. Hyundai's Product Development Process for Locally Adapted Vehicles

Thus, Hyundai is developing and bringing to market locally adapted vehicles tailored to the attributes of emerging markets, thereby increasing the number of vehicles sold. What is the secret of its product development process for locally adapted vehicles and how is this implemented?

### 2.1 Rapid Gathering of Detailed Information

#### Identification of Local Needs in the Native Language and Large Expatriate Staff

In the Chinese market, Hyundai has adopted a regional headquarters system, with local information reaching Hyundai head office directly. Moreover, it employs many local ethnic Korean staff, who can speak both Chinese and Korean. This not only enables the company to ensure thorough local adherence to the wishes of head office, but also ensures that its staff from the ROK (expatriate staff) can quickly identify local needs expressed in the local language.

Furthermore, to ensure that local needs in the native/local language are quickly picked up, Hyundai stations far more expatriate staff overseas than Japanese companies do. For example, in China, whereas just 4 out of the 100 staff at Tianjin FAW Toyota Motor Company's Chinese development base are Japanese nationals, 7 of the 120 staff at Beijing Hyundai's Chinese development base are citizens of the ROK. Similarly, in Russia, there are 4 Japanese nationals stationed at Toyota's Russian subsidiary, but 7–8 Korean citizens at Hyundai's Russian base.

#### Strength through Inter-Group Partnerships

Hyundai uses other affiliate companies in Hyundai chaebol<sup>3</sup> in its marketing. The biggest weakness of those working in the automotive industry is that they tend to focus only on motor vehicles. In the case of Hyundai, when an order is given for a TFT (Task Force Team) to investigate local needs, this goes to all affiliate companies, like Innocean<sup>4</sup>, not just Hyundai. This ensures that a variety of information from a range of divisions is fed back and cross-checked. It also helps to reveal needs. This strength achieved through inter-group partnerships enables the company to gather information rapidly from all directions.

## 2.2 Pre-Concept Planning and Concept planning

While the methods used for this are diverse, varying from one motor vehicle manufacturer to another, the product development process basically starts with pre-concept planning to determine whether or not to commercialize a product – in other words, whether or not to move on to the concept planning stage. If the company decides to embark upon concept planning, the next stage involves thorough customer research and consideration of product concepts suited to customer needs to put together a product plan. Finally, it will move on to product development planning, which involves considering whether the company can turn those concepts into a product and manufacture that item. After the concept planning process, a product development planning meeting is held to determine whether or not to undertake product development.

The pre-concept planning and concept planning processes take less time at Hyundai than among Japanese manufacturers, which lag behind in launching new models onto emerging markets because it takes them so long to go through the pre-concept planning and concept planning processes (before the PM is determined). On the other hand, product development planning takes about the same length of time.



**Figure 2: Concept planning and Product Development Planning Times at Hyundai and Japanese Motor Vehicle Manufacturers**

	Pre-Concept planning	Concept planning	Product Development
Hyundai	Shorter: 1–3 months	Shorter: 1 year	Same: 3 years
Japanese	Longer: 1 – 10 years	Longer: 1 – 2 years	Same: 3 years

↑  
Point when the Product Manager (PM) is determined

Source: Shioji (ed.) (2012), p. 35.

Hyundai's pre-concept planning period is short because it uses TFTs, in which around 30 people basically find solutions for the concept planning process in the space of around three months. Hyundai's short pre-concept planning period enables it to quickly launch vehicles that meet certain needs in BRICs economies and other key emerging markets.

This is because Hyundai is a follower, so all it had to do was follow the concept planning strategy of the most advanced manufacturers. In other words, it only needed a strategy of copying the companies that set the benchmark. For example, when VW launched its products in China, Hyundai was able to launch similar products positioned at a slightly cheaper price point. This is possible precisely because it adopts a selective, focused response in specific countries, rather than a systematic worldwide response.

### 2.3 Rapid Decision-Making by TFTs

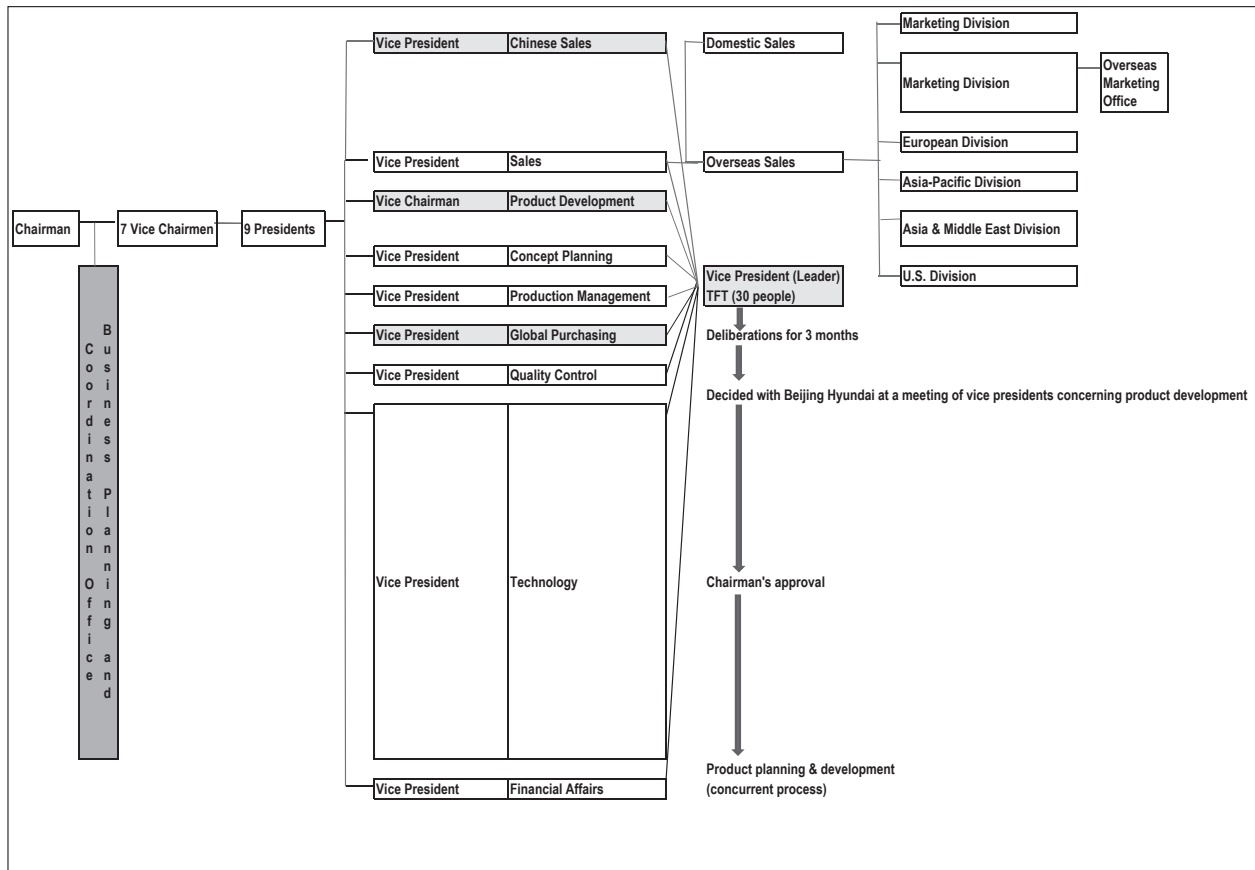
Hyundai's TFTs are cross-sectional project teams that engage in coordination to facilitate speedy decision-making across different departments. TFTs can react swiftly to requests emerging from the market. More specifically, TFTs are formed as needed, e.g. a TFT for launching a new vehicle overseas, a TFT that operates until production of the new vehicle begins, and a sales TFT. The project leader in each TFT is a vice president. This makes it easy for the head office to grant permission. These TFTs originated from the teams introduced in 1997 to identify solutions to problems. If a major problem occurs, the TFT (consisting of around 30 people) makes a decision within three months.

For example, in a concept planning TFT, 30 people from each department decide within three months whether or not to embark upon concept planning. However, not every project for which a TFT is formed progresses. Then the matter is referred to a meeting of the vice presidents. Once approval from the top (chairman) has been secured, things move at a rapid pace, come what may.

For example, a TFT was formed when the Elantra Yuedong for China was being developed. Firstly, the Elantra Yuedong concept planning TFT was established. The personnel department selected a few people from each department for this TFT, which thoroughly analyzed the target demographic among Chinese consumers and the specifications that they desired, thereby enhancing marketability. In addition, it conducted surveys to identify the functions and value demanded by the local market and immediately relayed this information to the head office. Headed by a vice president, the TFT considered the issue for about three months. A conclusion was then reached at a meeting of Beijing Hyundai and the vice president for product

development, and approval was ultimately granted by company chairman Chung Mong-koo. Concept planning and development were subsequently conducted via a concurrent process (Figure 3).

**Figure 3: Hyundai's TFTs for Development of Locally Adapted Vehicles for the Chinese Market**



Source: Compiled from interviews conducted in China in August 2012, and the ROK in October 2011 and June and August 2012.

## 2.4 Sales and Marketing Predominates Over Manufacturing

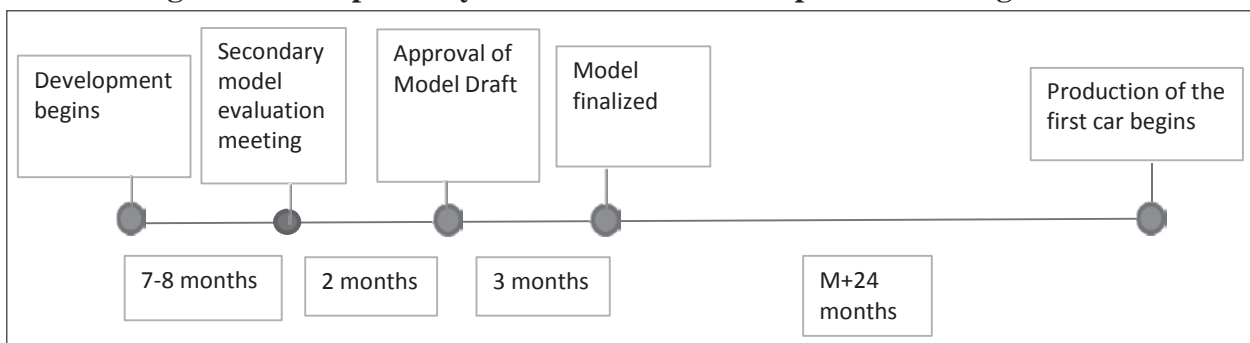
The core role in decisions as part of the concept planning process for motor vehicles requiring adaptation to the local market is played by the general manager for sales in that region; in the case of the Chinese market, this is the vice president of Beijing Hyundai Motor. Hyundai head office listens to what the general manager for sales in China says about local needs and how many vehicles could be sold if a car tailored to those needs were brought to market, and then decides on the product strategy, determining which elements are to be supported by the company's plants in the ROK and the Namyang R&D Center and which are to be entrusted to the local operation. If the general manager for regional sales specifically indicates how many vehicles could be sold locally if a locally adapted vehicle were developed and brought to market, that manager's judgment is prioritized. However, in return, the local sales department must then take responsibility for selling the number of vehicles proposed. Thus, the judgment of the overseas sales team strongly influences decision-making at Hyundai. In addition, considerable emphasis is placed on creating the value required by the local market in terms of design, quality,

and price, among other elements. This is why greater importance is attached to the opinion of the overseas sales team than to that of the quality control and technical departments. Thus, Hyundai attaches greater importance to the local sales department and the sales and marketing department than to the manufacturing department, delegating authority to them.

## 2.5 Product Development Planning

Figure 4 illustrates Hyundai's product development planning process. Seven or eight months after the decision is taken to develop a vehicle, a secondary model evaluation meeting is held, to which foreign experts are invited, and one of the several models is chosen. The model is approved two months after that, and the dimensions are determined and the model finalized another three months later. Production of the very first vehicle begins about 24 months after the model is finalized. In other words, it takes about three years from the start of product development planning until production of the first car begins (line-off) (Figure 4). This takes the same time as it does among Japanese manufacturers; what differs is the actual process.

**Figure 4: Example of Hyundai's Product Development Planning Process**

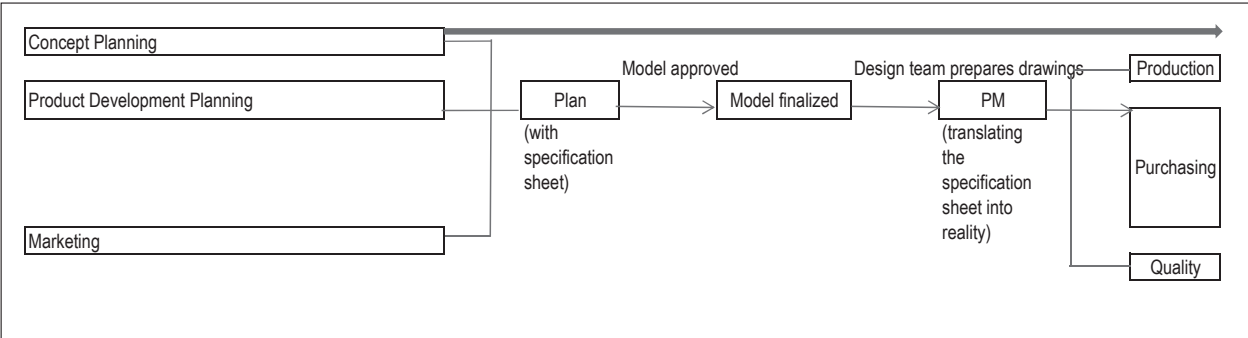


Source: As per Figure 3.

At Hyundai, once it embarks on development, a plan is drawn up by the product planning team (which strategically determines the approach to the vehicle while looking at moves by competitors), the product development planning team (which works out what the company can do and how using its own resources, while taking into account the requirements in the marketing plan), and the marketing team (which incorporates information about defects and consumer needs), working in partnership. These three teams work together, with the product planning team playing the central role in compiling the plan (Figure 5). The product planning team is affiliated to the Product Strategy Department, the product development planning team to the R&D Department, and the marketing team to the Sales Department. The product planning team is involved in (1) collating information concerning product planning, development, and marketing; and (2) drafting and circulating the plan. The plan contains the specification sheet. Approval of the plan constitutes finalization of the model and the design team then prepares the drawings. The development of components based on these then begins and equipment is ordered, with the PM (Product Manager) serving as overall coordinator. After finalization of the model, the PM's task is to coordinate overall development of the product into a car, manage the schedule, and manage the budget. The PM is in charge of product development, tasked with turning the content of the specification sheet into an actual product. The PM's development work also includes

giving the manufacturers of so-called “approved drawings” and “provided drawings” instructions concerning the development, manufacture, and delivery of components. The supervisor in the product development planning process after the product plan has been put together is the PM, but the concept planning team continues to monitor the product development planning process undertaken by the PM.

**Figure 5: Hyundai’s New Product Development Process**



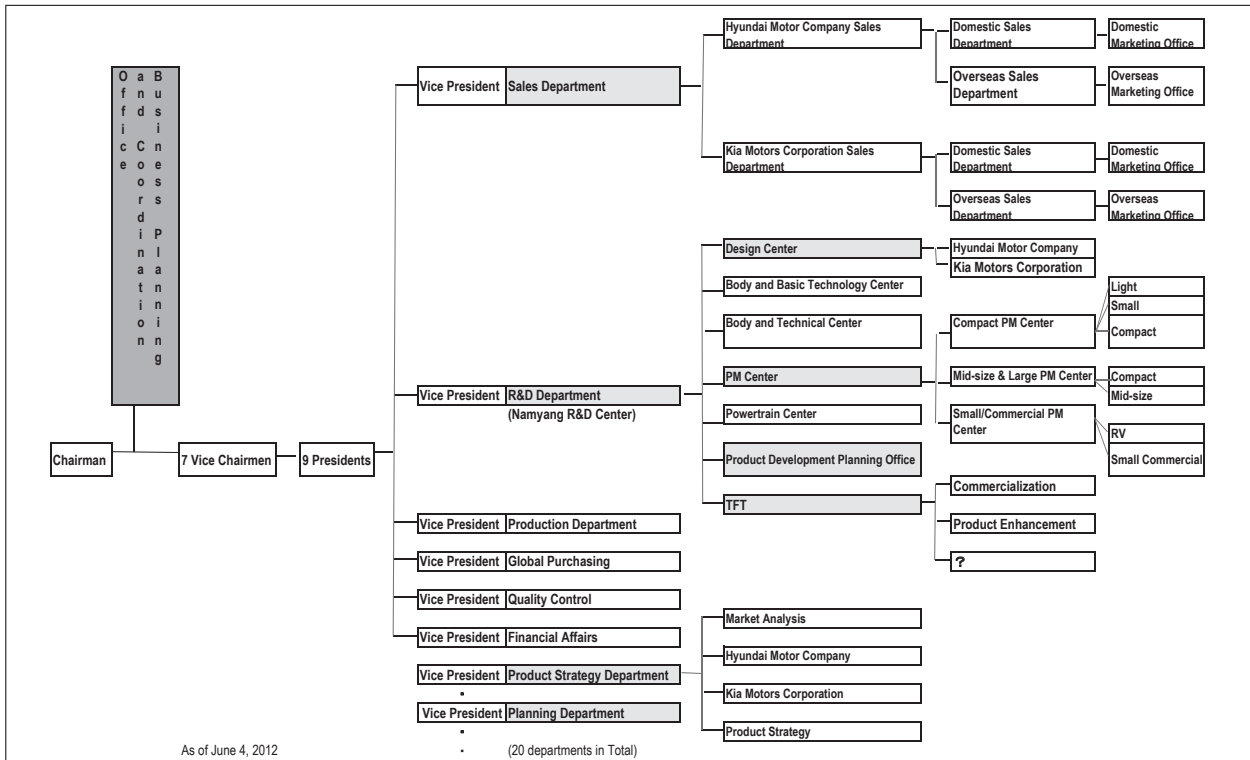
Source: As per Figure 3.

2.6 Emphasis on Concept planning

In Hyundai’s product development process, the concept planning team continues to monitor the PM-led product development planning process, to ensure that the concept settled upon at the concept planning stage is carried through into the end product. The task in concept planning is to combine marketing with technology and needs to create a commercial product. It involves surveying customers and planning a product tailored to those customers. Product development planning involves creating an end product that embodies this. In emerging economies, marketing tailored to the needs of the market is more important than a high level of technical strength. Accordingly, where technical factors dictate a change in the concept part of the way through the process, there is a risk of losing touch with market needs. Hyundai endeavors to avoid that risk by ensuring that the concept planning team continues to monitor product development through to the end.

The Product Strategy Department, which is in charge of concept planning, supervises not only the concept planning process, but also the product development process. In addition, the director of the Product Strategy Department holds ultimate responsibility in product development, through to the end of the product development planning process. The director of the Product Strategy Department supervises all models under development by Hyundai, providing guidance to the PMs for each model and coordinating all of the departments, such as the Sales Department and the R&D Department.

**Figure 6: Hyundai Motor Group Organizational Chart**



Source: As per Figure 3.

### 2.7 Characteristics of Hyundai’s New Product Development Process

To sum up, as part of the product development process, the company establishes the aforementioned cross-sectional project teams (TFTs), which engage in coordination to facilitate speedy decision-making that transcends the boundaries between different departments. For example, in the case of the Chinese market, the project leader in the TFT is a vice president from the head office in the ROK. The vice presidents at the head office make decisions as senior management, so it is easy for the head office in the ROK to approve TFT proposals. These TFTs originated from the teams introduced in 1997 to identify solutions to problems. The mechanism enables any problems that arise to be addressed without delay, e.g. by a TFT covering the process through to the introduction of a new car overseas, a TFT covering the process through to the start of production of a new car, or a sales TFT. If a major problem occurs, the TFT (consisting of around 30 people) makes a decision within three months. This is convenient from the perspective of engineering.

### 2.8 Reduction of the Development Period via Pilot Lines at the Namyang R&D Center

Furthermore, the pilot lines at the Namyang R&D Center enable quality verification testing and mass production trials to be conducted efficiently.

Before these pilot lines were introduced, front-loading was poor and problems occurred once the company shifted to mass production at the Ulsan Plant or the Asan Plant. Moreover, lines at mass production plants (domestic or overseas) had to be stopped to conduct trials, causing availability and efficiency to fall at such plants. Accordingly, Hyundai decided to follow

Mercedes-Benz in introducing dedicated pilot lines, opening assembly lines for test evaluation, quality verification testing, and mass production trials at the Namyang R&D Center in 2004.

Its objectives in doing so were (1) to evaluate design quality during the development period; (2) to reduce the development period; (3) to conduct trials to check design quality and manufacturing quality; and (4) to reduce the set-up time for overseas plants via checks by the assembly workability group. It also conducted time and motion studies to speed up assembly work.

## Conclusion

This paper has examined Hyundai's product development process aimed at achieving a selective focused local adaptation strategy, looking at why Hyundai can identify each country's needs so quickly and undertake product development based on this strategy. The analysis in this paper has revealed the following.

Firstly, cross-sectional project teams called TFTs swiftly coordinate departments and undertake cross-departmental decision-making. Moreover, the TFTs are headed by a vice president, making it easier for the head office in the ROK to give the go-ahead.

Secondly, as well as these cross-sectional project teams, the company utilizes the strength of inter-group partnerships and stations a comparatively large number of expatriate staff overseas, as well as employing local staff who speak both the local language and their mother tongue. This facilitates rapid information gathering and identification of needs from all directions.

Thirdly, Hyundai attaches greater importance to the overseas sales team than to the manufacturing department, delegating authority to them. The company is thoroughly marketing-oriented, understanding that it cannot achieve sales without developing products tailored to local needs.

Fourthly, Hyundai's product development process is customer-oriented and the Concept Planning Department, which combines marketing with technology and needs to create a commercial product, retains responsibility right through to the end of the product development process. Rather than being technology-led, the whole company attaches great importance to this focus on marketing, ensuring that the needs of the market are met through to the very end.

Finally, the establishment of pilot lines at the Namyang R&D Center has enabled the company to conduct trial manufacture and quality verification of vehicles in development on an assembly line, as well as reducing the development period and facilitating assembly workability checks. This has reduced the startup time at overseas plants and enabled development to proceed smoothly.

\* This paper is based on the following overseas surveys: Moscow and St. Petersburg, Russia (March 22–27, 2010); the ROK (March 28–April 2, 2011); the ROK (March 28–April 1, 2011); St. Petersburg, Russia (December 23–25, 2010); India (September 24 – October 2, 2011); the ROK (October 18–20, 2011); the ROK (March 28 –April 1, 2011); China (August 22–31, 2011); China (August 25–31, 2010); the ROK (November 17–20, 2009), the ROK (June 3–6, 2012); Russia (March 25 –April 6, 2013); Russia (September 7–9, 2014); and Brazil (March 23–28, 2015). The authors wish to express appreciation for the Grants-in-Aid for Scientific Research (Topic Nos. 21530446, 25380581, and 25380550) that supported the writing of this



paper. This paper is a revised version of Tomiyama (2012d)

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- <sup>1</sup> In Brazil, Hyundai won the 2013 Car of the Year award. In terms of the number of new vehicles registered in 2014, whereas Fiat, GM, VW, and Ford all experienced falls of 10% or more, Hyundai recorded a rise of 14.0% on the previous year to 179,724. [http://www.marklines.com/ja/statistics/flash\\_sales/salesfig\\_brazil\\_2014](http://www.marklines.com/ja/statistics/flash_sales/salesfig_brazil_2014)
- <sup>2</sup> Russian Car of the Year 2012: Hyundai Solaris (called the Accent in the ROK).
- <sup>3</sup> FOURIN (2010).
- <sup>3</sup> *Chaebol* is a South Korean form of business conglomerate (Heitor Almeida, Sang- Yong Park, Marti G. Subrahmanyam, Daniel Wolfenzon (2011), Sangjin Yoo, Sang M.Lee(1987), Seung-Rok Park, Ky-Hyang Yuhn, (2012).
- <sup>4</sup> Innocean is one of Hyundai *chaebol*. (Lee, Kee (2013)).

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