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ECONOMIC RESEARCH INSTITUTE

CAPACITY BUILDING ON THE NATURAL RESOURCE AND MINING IN MONGOLIA

Policy Recommendations

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List of Abbreviations

ASM	Artisanal, small miners/mining
CGE	Computable general equilibrium
CPI	Corruption Perception Index
EBRD	European Bank for Reconstruction and Development
ERI	Economic Research Institute
FDI	Foreign direct investment
FHF	Future Heritage Fund
FSF	Fiscal Stability Fund
FSL	Fiscal Stability Law
GDP	Gross domestic product
GNP	Gross national product
GoM	Government of Mongolia
IAI	Investment Attractiveness Index
IFOA	Integrated form of agreement
IGF	Intergovernmental Forum
IISD	International Institute for Sustainable Development
IOT	Input-Output Table
IPD	Integrated Project Delivery
JICA	Japan International Cooperation Agency
MCE	Mongolian (Agricultral) Commodity Exchange
MMHI	Ministry of Mining and Heavy Industry
MNT	Mongolian togrog (currency)
MRPAM	Mineral Authority of Mongolia
NCDS	National Comprehensive Development Strategy
NRGI	Natural Resource Governance Institute
PoM	Parliament of Mongolia
PPP	Public private partnership
SDG	Sustainable Development Goals
SMP	State Minerals Policy
ToT	Terms of trade
UNDP	United Nations Development Program
USD	United States dollar (currency)
WCED	World Commission of Environment and Development

General Background

In many resource-rich countries, the mining sector is a large contributor to economic growth and social development. In particular, the mining sector can significantly benefit the national economy and local communities in various ways.

Among other transitioning and developing countries, Mongolia benefits greatly from the mining sector as the sector accounts for 88% of its export and 22% of the national GDP (EBRD, 2017). In comparison, other transitioning central Asian countries such as Kazakhstan and Kyrgyzstan derive only 18% and 11% of their respective GDP and 12% and 45% of their exports from mining[1]. These indicators are much lower for Russia, Armenia, Tajikistan, Ukraine and many others. As such, Mongolia's mining sector makes up a large majority of the economy, comparable to countries such as Kuwait where the mining sector accounts for 92%[2] of exports and Saudi Arabia where the mining sector makes up 15% of GDP[3].

Currently, based on 2019 data from the Mineral Resources and Petroleum Authority of Mongolia (MRPAM), there are 2796 mining licenses for exploration (1126) and production (1670), covering 7.4 million square hectares of land. In 2019, Mongolia produced 57.1 million tonnes of coal, of which 36.8 million tonnes were exported, 6.8 million barrels of oil, of which 6.5 million barrels were exported, and 11 thousand tonnes of refined copper in addition to many other types of mineral commodities.

Mongolia also supported national geological surveys, as state financing for exploration increased from MNT 11 billion in 2015 to MNT 24 billion in 2019. Meanwhile, private exploration financing reached MNT 170 billion in 2016. In 2019, the market cap valuation of listed mining companies operating in Mongolia approached USD 80 billion with Rio Tinto accounting for the majority of it (USD 75 billion). Overall, mining makes up the vast majority of investment in Mongolia with MNT 5.2 trillion (43%) of the MNT 12.5 trillion in total investment going into the mining sector in 2018. These numbers underline the considerable significance of mining in the Mongolian economy.

This transformation of Mongolia into a mining-based economy happened gradually. The mining sector's strong influence on the Mongolian economy through external and internal factors is shown by the following major milestones in national development:

- Milestone 1 is the amendment to the Minerals Laws, the creation of state-owned mining companies and the start of strategic planning based on mining revenue in 2006. This step strongly involved the government in the mining sector and underlined the growing importance of mining for the national economy.

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[1] EBRD Extractive Mining Industries Strategy, 2018-2022
[2] https://www.azomining.com/Article.aspx?ArticleID=118
[3] https://www.statista.com/statistics/996012/saudi-arabia-mining-sector-contribution-to-gdp-by-type/

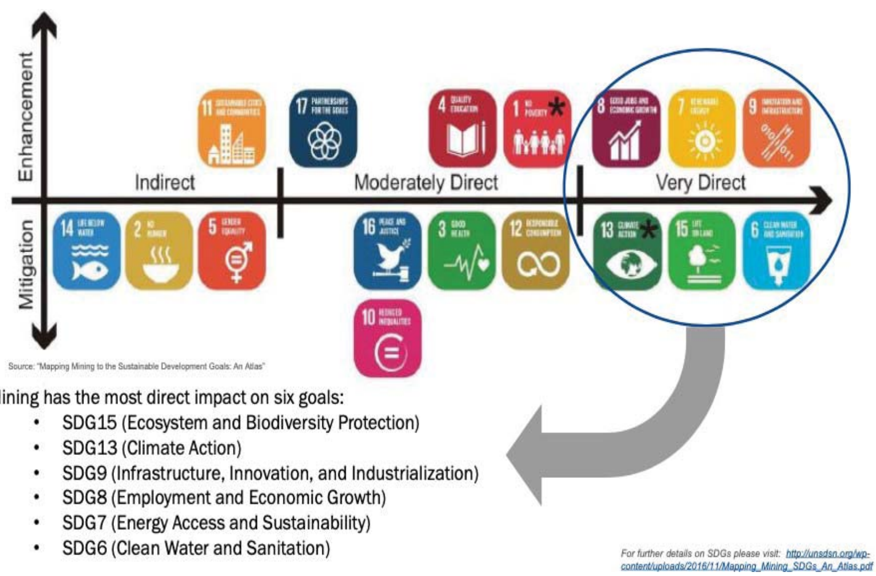
- Milestone 2 is the Oyu Tolgoi Investment Agreement, which greatly expanded Mongolia's economy and created a large number of institutional changes. The agreement also broadened Mongolia's access international financial markets, helped it connect to transnational corporations and resulted in a much more complex and fast-developing financial system. There were also improvements in the quality of human resources, training and investment systems.

- Milestone 3 is the adoption of the United Nation's Sustainable Development Goals (SDG) in the "Long-Term Sustainable Development Vision of Mongolia 2030" policy document and the explicit inclusion of long-term development planning in the Constitution of Mongolia with the goal of economic diversification. This created an incentive to align mining with sustainable development and ultimately promoted inclusiveness.

Box 1. Mining and the United Nation's Sustainable Development Goals (SDG)

As the world continues to pursue sustainable development, mining is either directly or indirectly related to all SDG goals. According to the United Nations[4], the mining sector most impacts SDG 15 (Ecosystem), 13 (Climate action), 9 (infrastructure, innovation and industrialization), 8 (Employment and economic growth), 7 (Energy access) and 6 (Clean water and sanitation).

Figure 1. Mapping of mining impact to SDG, United Nations Development Program (UNDP), 2016



As stated in a report by the UNDP,

> *"the mining industry has the opportunity and potential to positively contribute to all 17 SDGs. The mining industry can impact positively and negatively across the SDGs. Mining can foster economic development by providing opportunities for decent employment, business development, increased fiscal revenues, and infrastructure linkages. Many of the minerals produced by mining are also essential building blocks to technologies, infrastructure, energy and agriculture. Historically, however, mining has contributed to many of the challenges that*

[4] Mapping Mining to the Sustainable Development Goals: An Atlas, a report, prepared jointly by the United Nations Development Programme, the World Economic Forum, the Columbia Center on Sustainable Investments and the Sustainable Development Solutions Network, 2016.

the SDGs are trying to address – environmental degradation, displacement of populations, worsening economic and social inequality, armed conflicts, gender-based violence, tax evasion and corruption, increased risk for many health problems, and the violation of human rights. In recent decades, the industry has made significant advances in mitigating and managing such impacts and risks, by improving how companies manage their environmental and social impacts, protect the health of their workers, achieve energy efficiencies, report on financial flows, and respect and support human rights"[5].

However, the development of the mining sector is principally different from the development of other sectors such as the agriculture sector. Mining is dependent on the locations of the mines, is strongly impacted by world market commodity prices and is heavily reliant on international financial markets for financing. Moreover, the level of local infrastructure development is vital and sectoral growth rates are highly volatile. Mining is also a very competitive sector as it produces generally available raw materials that are priced based on world demand and supply.

The development of the mining sector is also associated with several negative effects. In particular, it can have strong negative environmental impacts if its usage of water and surrounding land is not properly addressed. The negative impact of the mining sector is described as follows: "past experience shows that the extraction of mineral resources may have negative economic, environmental and social consequences, as it can result in increased macroeconomic volatility, reduced incentives to invest in physical and human capital, and weaken institutions and governance (EBRD, 2012). Therefore, the potential benefits of the mining sector depend on whether mining and the associated revenues are developed and managed responsibly over time. "Poor environmental and social management of mining projects can have significant long-lasting effects on resources, biodiversity and local communities. At the same time, however, endowment with natural resources can represent major opportunities to improve economic conditions of the COOs [countries of operations] and to contribute to regional development" (EBRD, 2012).

The desired policy to promote mining development in Mongolia would be recommendations aimed at mitigating the aforementioned possible negative consequences of the mining sector. It would also amplify the positive outcomes of mining development, work towards making the mining sector a critical contributor to economic activity at the local, regional and national levels and establish important downstream value-chain linkages in the economy.

[5] Mapping Mining to the Sustainable Development Goals: An Atlas, a report, prepared jointly by the United Nations Development Programme, the World Economic Forum, the Columbia Center on Sustainable Investments and the Sustainable Development Solutions Network, 2016.

The specific features of mining create significant policy challenges for Mongolia. However, the issues could be solved through creating a mining development strategy that:

- Link the mining sector to sustainable development,
- Present solutions for better taxation and budget revenue management,
- Improve transparency and reporting,
- Improve contracting in the sector,
- Derive more national value through better trading of the export products.

These issues are crucial for increasing the benefits of the mining sector to the national government and for adapting mining as a platform for further sustainable growth. However, these benefits cannot be adapted by a single policy document; these benefits depend on the legal environment of the country and its enforcement.

When implementing any mining development policy, it is important to remember that its successful implementation is difficult to achieve in the absence of a strong legal and policy framework. According to International Institute for Sustainable Development (IISD), "such a framework must promote the economic and social development benefits of mining while upholding strong environmental and social standards. In the absence of such a framework, mining activities can threaten to pollute and degrade the environment, endanger workers, lead to non-inclusive growth and promote corruption, among other things"[6].

Within the framework of sustainable development, the 52 member countries of the United Nations decided to create a joint framework for mining policy (IGF) in 2005. The IGF is a voluntary initiative that allows national governments with an interest in mining to work collectively to advance sustainable development priorities. It is a global policy forum for the mining and metals sector with the objective of enhancing capacities for good governance. In 2012, the IGF recommended the following best practices in mining policy, divided into six key pillars:

1) The legal and policy framework;
2) Financial benefit optimization;
3) Socioeconomic benefit optimization;
4) Environmental management;
5) Mine closure and the post-mining transition;
6) Artisanal and small-scale mining (ASM).

[6] The Mining Policy Framework: Assessing the implementation readiness of member states of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, SYNTHESIS REPORT, International Institute for Sustainable Development, Canada, 2015

These policies were elaborated to address "activities [the IGF member countries] have identified as best practice for exercising good governance of the mining sector and promoting the generation and equitable sharing of benefits in a manner that will contribute to sustainable development" (IGF, 2012). Studies in developing countries, such as Madagascar, Uganda and the Dominican Republic (IGF Study), as well as in other developing countries, show that many countries have their unique circumstances, but also share some general weaknesses.

In terms of the general findings, developing countries had some shared weaknesses[7] in the areas of the legal environment, deriving mining-based benefits for society and other areas. These include:

1.1) Generation of geological data dependent on donor support,

1.2) Community consultations not required on an ongoing basis throughout the life of the mine,

1.3) Lack of coordination among government ministries on mining issues,

1.4) Lack of action addressing the impacts of mining on indigenous peoples, cultural heritage, resettlement, and community safety and security,

1.5) Use of special contracts alongside existing mining laws seen to create two parallel systems of accountability, with reduced transparency.

2.1) Need to better address the fungible nature of mining profits and transfer pricing,

2.2) Limited mechanisms to deal with commodity price volatility,

2.3) Continued lack of transparency with regards to the distribution of financial benefits,

2.4) Greater need to tie financial benefits of mining to local, regional and national development objectives,

2.5) Need to formalize activities of ASM to generate greater government revenues,

3.1) Mining operations are not obliged to support short-term and long-term health and education initiatives.

3.2) Occupational health and safety legislation rarely monitored or enforced, and non-compliance not penalized,

3.3) Companies not required to support non-mine business development opportunities, long-term economic growth,

4.1) Emergency preparedness plans not required from mine operators

[7] The Mining Policy Framework: Assessing the implementation readiness of member states of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, SYNTHESIS REPORT, International Institute for Sustainable Development, Canada, 2015

4.2) Managing the transboundary impacts of mining not addressed in legislation

5.1) Companies not required to follow internationally accepted guidelines or best practice in closure of mines;

5.2) External experts not required in the development of closure plans,

5.3) No policies or legislation on orphaned or abandoned mines,

6.1) ASM remains overwhelmingly informal, with significant environmental and social impacts and implications for government revenues,

6.2) Child labor and unsafe working conditions remain pervasive,

6.3) No efforts to increase savings and investment in the ASM sector,

6.4) Environmental awareness among ASM miners is minimal.

While these findings were based on IGF collected data from a number of mining-based developing economies including Madagascar, Uganda and the Dominican Republic, they are also applicable in varying degrees to Mongolia as large-scale mining development in Mongolia arguably only began in the last decade. As with any developing country, Mongolia has its own unique set of circumstances, which on the one hand, promote mining development, such as an abundance of mineral resources, the eagerness to use mining for economic growth, and on the other hand, create barriers for investment, trading and contracting, thus losing the expected "benefits" from mining.

Under the "Capacity Building on the Natural Resource and Mining in Mongolia" project implemented by the Japan International Cooperation Agency (JICA), the Ministry of Mining and Heavy Industry (MMHI) and the Economic Research Institute (ERI), the research team covered numerous mining related topics in order to get a better understanding of Mongolia's mining sector and its future development. In the studies, the research team tackled the following issues in the mining sector and offered unified policy recommendations:

1. Mining Development Strategy in Mongolia

Mongolia's development strategy for the mining sector is reflected on the following three major pieces of legislations, the SDG, the State Minerals Policy (SMP) 2014-2025 and the Government Action Plan 2016-2020. While these documents highlight the unified long-term goals of economic diversification, there is a lack of a detailed vision on how the government intends to implement and achieve these strategic visions and policy actions.

2. Foreign Direct Investment (FDI) inflow in Mongolia

Mineral commodity prices continue to be the main determinant of FDI inflows into Mongolia. However, as a small market player, Mongolia is unable to influence prices in a favorable direction. As such, the only other way to attract investment is by improving the investment climate through legal reforms, increased transparency and combating against corruption.

3. Taxation and Financial Reporting

Mongolia does not have many mining specific tax regulations. As such, there is room for Mongolia to implement tax incentives into its mining fiscal regime. However, as the effectiveness of these incentives are largely dependent on the business and investment environment of a country, it would be more effective for Mongolia to focus on bettering its business environment in order to incentivize investment into the mining sector.

4. Contracting in Mining Sector

Projects in the mining sector have several key impacts on the host country. First, due to the sheer size of large mining projects, the socio-economic impacts pertaining to social responsibility, management of displacement, issues of water and land usages and provisions of local employment opportunities are significant. Secondly, mining projects spill over into other sectors such as the energy, infrastructure and transportation sectors as mining projects usually require additional investments. Third, due to the complex nature of financing mining projects and its magnitude, the repercussions on the country's finances are sizable. Therefore, it is crucial for the host country to enter into a well-developed contract which considers all direct and indirect effects.

5. Marketing and Trading in the Mining Sector

How mineral commodities are traded, sold and the challenges these processes face are a key issue in Mongolia. Overall, in order to better develop marketing and trading in Mongolia, there is a need to establish a mineral commodity exchange, support traders' activities at the policy level, make sales contracts transparent, develop export financing mechanisms, organize capacity strengthening projects and increase the role of mining associations in policy making and raising awareness for the sector.

6. Budget Revenue Management

As an economy heavily dependent on the mining sector, to improve its budget revenue management, the Parliament of Mongolia passed the Fiscal Stability Law (FSL) in 2011. The implementation of the FSL could indeed curb the economic fluctuations caused by changes in mineral commodity prices. All its constraints on budget revenue and expenditure need to work in unison and be strictly enforced in order to reap the benefits. At the same time the government also established the Fiscal Stability Fund (FSF) and Future Heritage Fund (FHF). The results of the research team's simulations suggest that the government should implement these funds and legislation strictly in order to counteract the huge economic cycles generated by mineral commodity price volatility.

7. Sustainable Mining Development

There is a need to review the issues related to the contributions of the mining sector to Mongolia's sustainable development. Inherently, as natural resources are finite, they have limited impact on the country's development for a finite period of time. Therefore, the question is how a country can benefit from the mining sector for a long period of time in a sustainable way. In a detailed study, the research team tried to answer this question and formulate specific policies.

The report thus covers the most crucial bottlenecks for the development of mining in the country. In the following sections, each issue is highlighted in details and policy recommendations are summarized.

1. Mining Development Strategy

The mining development strategy of a country is determined by the mining strategic documents in place. The main purpose of the strategic documents is to ensure the possibility that all citizens of a country benefit from the mining sector. In order to achieve the greatest possible benefit to citizens, these documents should be inclusive, comprehensive, include the interests of all stakeholders and address all phases of resource management.

Mongolia's development strategy for the mining sector is reflected in following three major pieces of legislation. The main development goals of the country are reflected in the SDGs document that was adopted in 2016 by the Parliament of Mongolia (PoM), which sets out socio-economic policy targets for the country. The next major piece of legislation of the mining sector's development strategy is the SMP, which was adopted in 2014 by the PoM. This minerals policy document is a more detailed long-term view of the sector's development in the country. The next piece of legislation is the Government Action Plan for 2016-2020 in which near term goals and programs are stipulated.

According to Natural Resource Governance Institute's (NRGI) benchmarking of national mining development strategies, effective strategic documents should (i) be cognizant of reality, (ii) consider the long-term approach, (iii) be comprehensive and (iv) be inclusive. Thus, in the Mining Development Strategy report, the research team focused on evaluating the aforementioned major pieces of legislations along these indicators in addition to their implementation and oversight.

As mentioned above, strategic documents should be cognizant of reality, meaning that they should set realistic expectations about the role of the mining sector. The research team found that in Mongolia, the documents in itself do not directly reveal the country's estimations of resource reserves and assumptions on pricing. These documents reveal that the authorities are cognizant of the fact the country is endowed with rich natural resources, but does not provide specific guidance on its resource wealth. Furthermore, the research team looked at supporting documents of these policy papers for any assumptions and found that the "Annual Bulletin of Mining and Geology" is the major document that conveys information about reserves and sectoral production. The research team noted since there is a lack of supporting documents to major pieces of development strategy documents, it makes it difficult to have a clear understanding about Mongolia's resource endowment. Moreover, the research team found that there is a gap that needs to be addressed in terms of the estimation of the country's resource wealth and how to make it consistent with development strategy documents. An accurate estimation of resource wealth will benefit the population and policymakers, investors and other stakeholders in terms of forming expectations about the sector and its role in the economy and society. However, it is necessary to understand that "minable reserves" among geological reserves vary depending on the mining cost and metal price conditions. In addition, it is necessary to use an internationally recognized method for reserve calculation.

Based on a clear understanding about the resource endowment, the country should address its dependency on the sector. The research team emphasized that all strategic documents promote the diversified economic structure. The diversification policies will be maintained by promoting downstream processing of mining products as well as by promoting the development of non-mining sectors. Specifically, the GoM aims to achieve these goals by conducting a series of policies that reduce the costs of production as well as formulate and implement a heavy industry development plan. However, the research team noted that the officially ratified programs that promoted economic diversification and the development of non-mining sectors were not fully developed yet or are in the process of being developed. Moreover, specific plans, detailed feasibility studies and impact assessments are not fully developed or prioritized, making it difficult to get a clear picture of the steps to achieve the chosen goals. Furthermore, due to the lack of an analytical foundation when making policy decisions, the PoM approved the "Law on Legislation", which requires policy proposals to have professional cost and benefit assessments attached. It remains to be seen how this requirement is implemented in practice.

Overall, national development strategy documents should be devised with a long-term view. The research team found that documents such as the SDG and "State Minerals Sector Policy" are clearly designed with a long-term view. They also noted that the long-term impact of the sector on future generations is dependent not only on developing and benefiting from the current known resource deposits and projects, but also on how the country handles the pace of exploration and mining licenses, the state's fiscal terms with mining companies on projects, the management of revenue from the sector and the promotion of the private sector. Currently, the GoM is in the process of evaluating various policies on exploration and mining licensing and opening up new areas for more exploration. It should be noted that although there are various laws that limit the expansion of exploration areas, the policy is not clear what governs the opening of new areas. As for fiscal terms, Mongolia benefits from the mining sector by imposing royalties, taxes, tariffs on exports and dividends from state ownership. The research team noted that although policymakers declare that the country will benefit from the mining sector through its state-owned mining companies, there is a gap in terms of clearly determining what criteria constitutes a "strategically important deposit" that determines the government's policy towards how the country will benefit from the sector.

The research team noticed that the "Fiscal Stability Law," which was adopted in 2012 and went into full effect in 2013, is an exemplary regulation in terms of managing revenues from the mining sector. However, there is a lack of discipline in terms of maintaining and implementing the law, which can be seen from the numerous amendments made since the law was adopted. Another part of the government's mining development strategy is to promote the private sector by providing it with better infrastructure in terms of a better investment environment and exploration data while encouraging more downstream processing and the adoption of environmentally friendly equipment, technologies and innovation.

In general, throughout this assessment the research team emphasized that there is a lack of a detailed vision on how the government intends to implement and achieve these strategic visions and policy actions.

2. Foreign Direct Investment Inflow in Mongolia

In a small economy like Mongolia, FDI is a key catalyst in promoting economic growth. Although there are many views about the impact of FDI, there are two main opposing arguments. One argument is that FDI inflow encourages human capital, quality of political environment and economic growth; while on the other hand, FDI inflow in the long term supports unemployment, over-urbanization, and income inequality, which has been observed in developing countries.

There is a significant correlation between FDI inflow and a country's investment climate. Nevertheless, most research in Mongolia focuses on the relationship between FDI inflow and economic growth. Generally, FDI inflow inspires growth; however, it can also have a negative impact on some sectors. In Mongolia's case, FDI inflow is highly dependent on the mining sector – specifically, large mining projects. Unfortunately, since reaching a peak in 2011, FDI inflow in Mongolia has been consistently declining, reaching negative USD 4.2 billion in 2016. The main reasons include falling mineral commodity prices and an unfavorable regulatory and institutional environment. Therefore, the research team conducted a series of studies focused on FDI inflow in order to estimate the impact of FDI on the Mongolian economy, identify the main factors influencing FDI and how to attract more FDI.

In analyzing the impact of FDI on the Mongolian economy, the 2010 and 2015 Input-Output Tables (IOT) were used. This allowed for the analysis of disparate economic structures. In 2010, FDI trends were upwards whereas in 2015, it was downwards. The IOT was used to calculate the economic impact of additional FDI inflow invested into the mining sector. The analysis found that as more of the additional FDI was absorbed into the domestic market, the higher the investment multiplier. Historically and currently, over 70 percent of FDI inflow has been allocated to the mining sector, which is capital intensive. As the mining sector is the main recipient of FDI and its physical capital demands cannot be fully satisfied by the domestic market, Mongolia should focus on developing its manufacturing sector such that it can domestically manufacture some of the machineries and items required by the mining sector. For instance, it is possible to produce buckets, chains, gears, etc. for large mining vehicles.

As for the fluctuations observed in FDI inflows, the research team examined the exogenous and endogenous factors influencing it. The NGRI (2015) mentioned the following three factors to explain the sharp decline in FDI into Mongolia: decline in mineral commodity prices, disputes with foreign investors and ill-conceived policy decisions. Of these, changes in mineral commodity prices are exogenous while the latter two reasons can be categorized under investment climate as endogenous. In comparing historical FDI inflows into Mongolia against mineral commodity prices, there is a positive correlation, which indicates that mineral commodity prices are the main enticers of FDI inflows into Mongolia. However, as Mongolia is a small player within the mineral commodities market, it has limited control over price fluctuations. Hence, the only factor which can be controlled or improved in order to boost FDI inflow is the investment climate.

In assessing the investment climate, there are several indices available which can provide an assessment of weak areas and a comparative scale against other countries. Some of the most well-regarded indices are the Fraser Institute's Investment Attractiveness Index (IAI), the World Bank's Doing Business Index, the Corruption Perception Index (CPI) and so on. In countries without natural resources, the top-ranking countries for investment and doing business are Singapore, Switzerland and Hong Kong. These countries are able to attract large amounts of foreign investment because they tend to be transparent, politically stable, have easy access to well-established financial markets, have world-class infrastructures and a highly skilled and educated workforce. On the other hand, for resource-rich developing countries, the main determinants of future FDI inflows were mineral commodity price forecasts and the United States (US) policy rate.

Based on the research conducted during the first FDI study, the following recommendations were prepared. First, a larger percentage of FDI inflows should be absorbed into the domestic market instead of being exported back out. As more FDI is absorbed into domestic sectors, the greater the benefit for the Mongolian economy but also the greater the investment multiplier. Second, Mongolia should not rely on stable to high mineral commodity prices for FDI inflows as it has limited to no control over price fluctuations. Third, Mongolia has a considerable amount of mineral potential but its low policy perception is hindering its investment attractiveness. Mongolia can immensely improve its policy perception rank by reforming and promoting its investment climate. With more transparency and clearer legislation and regulation, Mongolia could become a very attractive destination for foreign investors.

In the follow-up study, the investment climate indices were updated and analyzed. Chile was chosen to be compared to Mongolia as the mining sector in both countries is one of the key sectors for investment opportunities (Banco Santander, S.A., 2018). Despite the increase in rankings on the various indices, it was not sufficient enough to significantly influence the inflow of FDI into Mongolia. Foreign investors are still hesitant to invest into Mongolia as the problems from 2016 persist. There have been calls for further action from the GoM to take bolder steps in creating and nurturing a business-enabling environment and to put into place a more transparent, inclusive and effective rule-making process for drafting and implementing commercial legislation.

Relative to Chile, Mongolia still has a long way to go before being categorized as one of the top investment destinations. However, Chile serves as a good case for how a resource-rich country can sustainably develop. The mineral potential levels of both Chile and Mongolia are similar; the biggest difference is the perception of government policies.

In addition to comparing rankings and scores on indices, the terms of trade (ToT) of both countries were compared. In 2017, both countries' ToT increased as mineral commodity prices increased on the world market. Although both countries' exports are mainly comprised of mineral commodities, there is a slight difference among these commodities. For instance, Chile's mineral exports tend to be processed, such as refined copper; whereas, Mongolian exports are raw, such as copper ore and coking coal.

In this second follow-up study, the investment environments of other comparative countries were analyzed to develop a set of recommendations which could be implemented in Mongolia based on the best practices of these countries. In the previous follow-up, it was concluded that the institutional and investment environment of Mongolia was significantly underdeveloped compared to Chile. The mining sector of Chile has been around for several decades while the Mongolian mining industry is still relatively new. Chile is regarded as a high-income country by the World Bank while Mongolia is categorized as lower middle income (World Bank, 2018). Chile is an example of the mining industry and economy Mongolia should strive to achieve in the long-term. In the short-term, Mongolia should analyze the mining sector and economy of similar countries such as Kazakhstan, Peru and Zambia to understand the policies and measures to adopt as well as to avoid in attracting foreign investment in the short, medium and long-term.

These three countries were chosen for this comparative study as they shared a number of common features with Mongolia. First of all, they are all considered middle income countries. Secondly, their economies are strongly dependent upon the mining and extractive industries. Third, the emergence and development of their mining sectors began within the past 2-3 decades – unlike Chile where investment into the copper industry started to boom in the 1900s (Schmitz, 1986).

Kazakhstan and Peru tend to be well regarded for investments as noted by their rankings on international indices such as Doing Business, CPI and IAI. Thus, a look at how these countries are able to overcame similar obstacles could provide valuable insight for Mongolia which can then be applied to improve the institutional and investment environment of Mongolia.

All four of countries have made significant strides towards reforming their legal and institutional frameworks to ease the process of bringing in foreign investment as observed by the improving scores on various indices. However, these improvements in scores have not translated to leveling up in ranks in some instances. When analyzing this trend further, it becomes clear that the ranks of some countries are not improving because other nations are making similar reforms and improvements to their investment environment. Thus, while the scores have improved overall, the ranks have remained stable in comparison.

As such, investors are partial to the inclusion of stabilization clauses in long-term, major investments as it protects their investment from the frequent amendment of legislations observed in developing countries. However, on the other hand, these clauses can be problematic for investors when crucial and necessary amendments are not applicable to these large projects. In some cases, the amendments are made to address loopholes in the legislation as some of these can be disadvantageous and detrimental to the country's economy.

In Mongolia, inept government effectiveness, regulatory quality and rule of law tend to lead to lack of confidence from investors, which can deter or discourage investment. Thus, reforms are necessary in these fields; however, these reforms should also be well implemented.

Some of the reforms, derived from those of Kazakhstan, Peru and Zambia, could be applied in Mongolia to improve its investment climate. The following are the recommendation the research team has developed for Mongolia to increase its inflow of FDI:

- D ersification through indirect use of mining FDI
  - Provide clear and attainable goals to promote non-mining sectors
  - Provide a list of priority sectors which are non-mining and are provided with tax or legal incentives
  - In addition to diversification of economic sectors, trade partners should extend beyond mainly China and Russia
- Revenue management
  - Tighten guidelines for the FSF and FHF
  - Ensure that reforms will not be implemented or laxed for short-term benefits
- “One stop shop” for investors
  - Should be accessible either online or in person
  - Provide assistance obtaining the appropriate applications and licenses
  - Streamline the process of starting a business for foreigners
- Stabilization clauses
  - If implemented, place term limits within agreement so as not to lose opportunities to collect upon income which may have otherwise been revenue
  - Not implementing stabilization clauses will likely deter major investments as investors prefer certain levels of certainty
- Corruption
  - Improve government effectiveness in dealing with corruption
  - Increase transparency of major investments
- Transparency and accountability
  - Make all major project investment agreements publicly available
  - Inclusion of civil groups during negotiations to ensure the public opinion is voiced
  - Regulations and legislation should not be often amended to favor the government based on the present situation as these frequent reforms cause uncertainty for investors

3. Taxation and Financial Reporting

In order for the mining sector to thrive, continued foreign investment and exploration is vital. Mining incentives therefore play an important role in boosting activity in the mining sector. One of the main avenues through which governments can support mining investment is through offering tax incentives. Tax incentives can be broadly defined as any measure that provides more favorable tax conditions for mining companies. While tax holidays have proven detrimental, most governments offer some type of corporate income tax relief, usually through reducing the amount of taxable income.

For instance, by studying international examples, the research team found that Australia offers mining companies exploration and fuel excise tax credits while also deducting the cost of investments for environmental rehabilitation. As for Tanzania, there are no import duties on prospecting and exploration equipment as well as no capital gains tax. Companies that invest over a certain amount of money within a specified period of time are also eligible to negotiate a stabilization agreement with the government. On the other hand, in Peru, mining companies that sign a stabilization agreement with the government are actually subject to more corporate income tax compared to companies operating in different sectors. However, additional costs such as good standing fees and payments made to employee funds are all tax deductible.

In Mongolia, there aren't many regulations specifically targeted towards companies operating in the mining sector. For instance, mining companies pay the same corporate income tax rates incurred by all companies operating in Mongolia. While the cost of machinery and equipment are depreciated according to its useful and deducted from taxable income, the list of eligible fixed assets are very general and not specific to mining equipment. Likewise, though mining companies that invest heavily into Mongolia are eligible to sign stabilization agreements, these agreements are offered to other investment-heavy sectors such as the infrastructure sector. Exploration costs as well as the cost of their equipment are also not deducted from taxable income nor are any tax credits offered. Likewise, the cost of the environmental rehabilitation of mines are also not tax deductible, increasing the cost of abiding to environmental regulations. As such, looking at legal documents that apply to the entire mining sector, it is difficult to say that Mongolia offers substantial incentives to mining companies looking to invest.

Instead, in practice, most of the incentives offered by the GoM seem to be related to strategically important mineral deposits that require negotiating a contract with the GoM. However, as these conditions are settled on an individual basis with only a few documents such as the Oyu Tolgoi Investment Agreement as examples, it is difficult to assess the effectiveness of mining incentives in Mongolia.

As such, there is room for Mongolia to incorporate tax incentives into its mining fiscal regime. However, the effectiveness of these incentives is largely dependent on the business and investment environment of a country. Based on the extensive literature available on the effectiveness of tax incentives and various business environment and investment perception surveys, the research team ultimately argue that although the country's tax burden is not low, and therefore tax incentives may be implemented, keeping policies stable and improving Mongolia's business environment are more effective in incentivizing investment into the mining sector.

4. Contracting in the Mining Sector

The issue of successfully contracting large projects have been well covered in recent studies. International financial institutions and other organizations have tried to help developing countries create contracts which are most beneficial for them and have published guidebooks and other materials which may be of use to negotiators. Given that developing countries often lack adequate legal and other resources to estimate and conclude such contracts, it is important that the developing countries utilize international best practices for such contracts.

The international experience of such large projects calls for a number of specific items to be included in mining contracts as a prerequisite for a successful mega project.

First is the area and size of the project. A mega project is defined as a project worth USD 0.5-1 billion, which requires substantial sectoral coordination (or spills into different sectors), requires 3-5 years of construction and involves 30-50 years of exploitation. It may also have a number of stakeholders with varying and sometimes conflicting interests. These kinds of projects used to be led by international financial institutions such as the World Bank from 1950 to 2000, which have led to the successful management and implementation of a number of big projects in developing countries. However, due to fiscal limitations, there has been a rise in public private partnerships and a shift in thinking towards Washington consensus, makes such huge public projects rare. The Oyu Tolgoi project is a good example of this new approach where the investors are private and the project itself is essentially a public-private partnership with fixed equity participation.

A mega project involves a large number of stakeholders including those from the local regional economy. It also creates with it an ecosystem of project executors and suppliers. As such, the ecosystem may benefit the local economy well, but the overall process should be well coordinated and have solid foundations. A possible approach is to have an Integrated Project Delivery (IPD) draft contract, in which all stakeholders, including local suppliers, develop an integrated form of agreement (IFOA) before the project commences to agree on major project features. The participation of stakeholders in the early planning stages of a project is welcome and stakeholders may also make non-binding promises not necessarily included in the final contract.

In Mongolia’s case, it is very clear that the country was less prepared to face the issue of contracting large strategic mines. In a 2004 study by the World Bank, “Mongolia’s Mining Sector: Managing the Future,” recommended options for government actions to improve the mining industry’s management and investment climate. However, the recommendations did not provide insight into how to conclude an investment or stability agreement with investors nor how to address the aforementioned issues related to the contracting of large projects.

Consequently, until 2006 there was little necessity to deal with the issue of equity financing of large megaprojects as there were no such megaprojects. However, the National Comprehensive Development Strategy (NCDS), ratified in 2008, called for usage of large mining deposits as engines of economic growth and it was developed in parallel with the 2007 Parliament resolution on designating 15 large mining deposits as strategic mines. Therefore, by 2008, there was an actual contract (with Rio Tinto) to sign and to lead the first contemporary national megaproject in mining development. As such, the NCDS was successful in launching Oyu Tolgoi's agreement as a first-mover in leading economic development.

Large mining projects can also drive large investments in infrastructure, including roads, energy, water usage, housing, urban development and transportation. This is the case in Mongolia as the country has designated large mining deposits as an engine of economic growth and hubs for local regional development in its development strategies starting from the NCDS. In line with this, the Oyu Tolgoi preoject and later the Tavan Tolgoi project contributed significantly to local infrastructure development.

The infrastructure projects accompanying the main mine become independent projects though they are linked to the main mining project. These investments are not mining projects and therefore, may be subject to less favorable treatment and mounting costs which ultimately can make the main project itself uncompetitive. This leads to confusion regarding the ecosystem building of big projects. In some cases, large projects which were designed to accompany the main mining project, such as the Tavan Tolgoi power plant project, are stalled because of uncertainty regarding the main mining project.

The increasing number of infrastructure projects, connected to the main Oyu Tolgoi and Tavan Tolgoi projects, led to the necessity to develop better legal infrastructure regarding big projects in general, not necessarily only mining projects. Thus, by 2010 Mongolia had to approve a new Law on Concessions (or Public Private Partnership) and by 2013 to approve the Law on Investment (mainly regarding heavy industry taxation). Furthermore, by 2011 Mongolia approved the Development Bank Law to finance the development of large projects and to raise necessary financing. By 2011, to manage the increasing revenue flow to the budget from mining, the country adopted the FSL and created its first stabilization fund. By 2015, a unified law managing national sovereign borrowing was also developed. To coordinate the various megaprojects, by 2015 Mongolia adopted the Law on Development Planning. By 2016, the financing from the mining sector and concession projects were included in the unified national budget allowing for better management of sovereign resources. Therefore, one can conclude that contracting the first megaproject spurred the related development of large infrastructure projects and led to the further development of necessary legal infrastructure and new laws on PPP and foreign borrowing.

The sheer size of legal changes and the necessity to reflect various new requirements in contracts is shown by the increasing complexity of investment agreements. As projects become more complex, they cover a larger number of issues, getting closer to international practices. As the country is planning to undertake new big projects, the complexity of investment agreements may require pursuing different methods. In order to undertake large complex projects Mongolia may need an umbrella project law, which will allow for the unified business and taxation treatment of various parts of a single megaproject. In Mongolia's case there may be a need to look at mega projects and their surrounding projects as a whole and apply favorable treatment to the whole group, rather than considering each one independently. The jurisdiction of independent projects will be under different laws such as the Law on Concessions or the Law on Investment and in each case require additional bureaucratic procedures, prolonging the main project's completion time and increasing costs.

This unified approach, however, will require substantial changes in existing laws. Meanwhile, under the current legal regime, Mongolia still has large deposits of mineral resources to develop. The 2007 Parliament resolution designated 15 large projects as being of strategic importance and prepared a list of 40 projects as reserves. So far, only the Oyu Tolgoi project has been contracted, while Tsagaan Suvarga has avoided contracting and the Tavan Tolgoi coking coal project contract draft was not reviewed by the PoM and rejected at the draft contract analysis stage. As such, the Oyu Tolgoi agreement is also the only agreement that has been successfully ratified by both the government and investors and can be used as a template for future contracts.

Mongolia's Oyu Tolgoi Invest Agreement has essentially become a template for large megaproject. The Oyu Tolgoi project despite all its shortcoming created a blooming supplier ecosystem and significantly contributed to local and macroeconomic development. Based on the Oyu Tolgoi Investment Agreement, the country can improve the design of contracts to reflect best international practices, as well as define legal obligations to develop local suppliers, create jobs and to have an integrated approach in designing infrastructure projects. Overall, a mining contract that specifies the major issues mentioned above, regulates financing issues in case of equity borrowing and manages local cooperation and suppliers well is the most beneficial for both the government and the investing mining company.

5. Marketing and Trading in Mining Sector

The mining sector has been Mongolia's main growth engine and source of international currency over the last decade. Thus, how mineral commodities are traded and sold are a key issue of the Mongolia economy and this study was aimed at identifying the burdens and problems associated with every stage of the mineral commodities trading process and define ways to addressing these problems.

Due to the specific characteristics of the products and their market situations, coal exporters along with iron ore and fluorspar exporters encountered more severe risks and burdens than other mineral exporters. For copper concentrate, gold, oil and zinc, there are only a few suppliers that have already established long-term relations with their customers, or prices are set in the global exchanges and raw materials can be shipped with a standardized quality. In contrast, the local markets of the other commodities such as coal and iron ore have different characteristics. Therefore, this study focused on the marketing and trading issues of coal and iron ore exporters.

The study found that most coal exporters directly sell to buyers at the mining site and that they prefer to sell their raw materials with payments in advance, though this practice is not favorable for end-users or steel companies. In this case, trading houses provide flexible financial services and share the risks as a professional mediator. Globally, in terms of sales volume, commodity trading businesses are considered larger than the mining sector itself.

Moreover, many coal and iron ore exporting countries have already established commodity exchanges and trading platforms. Mongolia also desperately needs to establish its own commodity exchange or, at least, an electronic price board at mining sites. Likewise, companies can sell their commodities through open auction like Erdenes Tavan Tolgoi does. The modern trading system has many advantages. First, they provide price setting mechanisms based on bidding. Second, supporting infrastructure under the exchanges (clearing, settlement, payment etc.) will lower trading related risks and financial costs. Third, because the prices are set explicitly and in a timely manner at the exchange, it would be clearer and easier to pay taxes and royalties. Fourth, as the exchange system requires a quality standard from commodity suppliers, mining companies tend to process raw materials and add value to their commodities, for example, by building commodity concentration factories. Most coal and iron ore exporters have such factories. Another advantage is that standard contracts in the commodity exchange protect suppliers and buyers from price volatility.

According to mining companies and industry experts, almost all Mongolian mining companies do not conduct in-depth market research. This is partly due to their business model. For example, coal mining companies such as Shinhua MAK and MAK at Nariin Suhait basin are controlled by Shinhua Energy, one of the largest Chinese companies while Dachin Tamsag oil company is owned by the oil refinery company at Dachin Industrial Complex, China. Tsairt Mineral, a zinc mining company, is controlled by the China Non-ferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. However, the main reason behind lagging market research is that mining companies don't have the research capacity nor understand the importance of research and intelligence activities. In particular, mining companies would benefit from conducting in depth analysis of trading and contracting practices between main buyers, such as steel makers or traders, and mining companies from Australia, Indonesia, Brazil and Russia.

The research team also found that in Mongolia, export financing services including payment and insurance are not well developed. Commercial banks and other financial service providers don't have financial products for commodity exporters. This part of the business hasn't been studied well, so there is no policy or plan currently in effect.

For coal and iron ore exporters, the issue of transport and logistics is a major bottleneck. Building new railways from mining sites to border ports is one solution among others such as improving road conditions, speeding up custom clearance, or negotiating with China's officials for lifting the import quota on Mongolian coal. However, feasibility studies of potential railway routes are not available. For example, the economic feasibility of a new railway from Sainshand city to the eastern borders was studied a decade ago at a very general level. Although its preliminary conclusion was that the route is not economically feasible due to its low utilization, it is necessary to research this in detail again as the previous study was not officially finalized and the market situation has changed greatly since. In addition, a detailed study of the railway route from Mongolia's northern border to Nakhodka, a Russian sea port, is not available.

Based on these findings, the research team offered the following comments and policy recommendations:

- Mongolia should establish a mineral commodity exchange. The commodity exchange is a core market mechanism in commodity trading as the price system directly reflects demand and supply forces. It must be independent of strict government controls because overregulation by rigid administrative measures distort the market price and lead to inefficient outcomes. Following the common practices in other countries, it should be managed through a private and public partnership. The exploratory studies and preparations were done to some extent and the preliminary concept of the law on commodity exchange was approved by the GoM. It should be optional for mining companies to participate in the exchange as the commodity standard of some companies may not be qualified or they might not want to sell their raw material at the exchange.

- Traders' activities should be supported at the policy level as they are important players in any market and provide intermediary services which reduce marketing and financial risks and alleviate some of the burdens from both producers and consumers.

- Companies in the mining sector, in particular state-owned companies, should make all contracts including sales contracts transparent.

- Export financing mechanisms should be developed. For example, establishing a Mongolian Export Import Bank or expanding the Development Bank of Mongolia's export financing services could be a potential solution. Additionally, a special insurance company is needed to protect from risks in foreign trade. Detailed policy research is needed in this direction.

- During the data collection section of the study, some respondents from mining companies seem to have little knowledge of basic economic concepts such as taxation, royalty, market price system and competition etc. Additionally, the lack of skills and knowledge on trading, contracting or negotiations seem to be common throughout the sector. Therefore, organizing capacity strengthening projects like regular training on those issues for mining companies, government agencies and sector specialists should be implemented in cooperation with international organizations.

- Mining associations should play a crucial role in policy making and raising awareness for the industry. Therefore, participation of non-government organizations such as the National Mining Association of Mongolia, the Mongolian Coal Association, and the Fluorspar Association, should be increased in the policy making process.

Following the initial Marketing and Trading report, the research team conducted a follow-up study that focused on the possibility of establishing a mineral commodity exchange in Mongolia. The study found that most of Mongolia's mineral commodity trading is done through direct sales contracts using intermediary traders. This practice, however, has numerous disadvantages that call for the establishment of a mineral commodity exchange. Some of the disadvantages include the same products being sold at different prices, the undervaluation of Mongolian mineral commodities, a low interest in processing commodities, a lack of transparency of commodity sales contracts, difficulties in taxing commodity production and lower tax revenue as a result. Not only can many of these drawbacks be mitigated with the establishment of a mineral commodity exchange, Mongolia's economy will be positively affected as well.

As with all other businesses, for a commodity exchange to be successful, the exchange must facilitate a large number of trades. This is especially true for mineral commodity exchanges which must also attract the attention of foreign buyers, intermediaries and financial institutions. In Mongolia's case, while the production volumes and quality of Mongolian coal, iron ore and copper concentrate attract significant attention from potential buyers, the country's weak transportation infrastructure poses as a challenge. For a mineral commodity exchange to be viable, Mongolia must heavily invest in warehouses, logistics centers and transportation infrastructure. Moreover, Mongolia's current level of financial services development and its macroeconomic environment is lacking when compared to neighboring countries.

In addition, Mongolia's legal environment and government policy on the development of a mineral commodity exchange is unclear and instable. As a result, while there have been numerous attempts to establish a mineral commodity exchange, they have not been successful. Moreover, while the GoM expressed an interest in established a mineral commodity exchange with 100% private sector investment in partnership with both foreign and domestic enterprises, currently Erdenes Mongol, a state-owned enterprise, is working on the project to establish a mineral commodity exchange. This should ideally be avoided as many international studies have found that state-owned mineral commodity exchanges have had limited success.

In the case of established a new mineral commodity exchange, in addition to ensuring the availability of factors such as trading programs, networks and the technical infrastructure needed to operate an exchange, numerous regulations, guidelines and legislations have to be either amended or newly ratified to oversee the operations of a mineral commodity exchange. Likewise, a new exchange would require a qualified workforce in addition to well-informed buyers and suppliers. Activities to increase the capacities of all participates must therefore be regularly conducted. As these necessities all require ample investments, detailed feasibility studies of establishing a new mineral commodity exchange and must be conducted and compared with other viable options.

One option involves expanding the current operations of the previously established Mongolian (Agricultural) Commodity Exchange (MCE) to include mineral commodity trading. With this option, totally new trading programs and technical infrastructure aren't needed. The existence of relevant laws and regulations also cut down costs significantly. The MCE has expressed an interest in beginning with coal trading, adding other mineral commodities afterwards in order to mitigate risks. However, adding mineral commodity trading requires significant logistics investments in terms of warehouses, logistics centers, laboratories and financial infrastructure. Moreover, as the MCE is a state-owned enterprise, its operations may be susceptible to political influences and risks.

Another option is making use of already established foreign mineral commodity exchanges. In light of the country's economic and geographic circumstances, Mongolia can potentially work with China's Shanghai Futures Exchange, Zhengzhou Commodity Exchange and the Dalian Commodity Exchange. By doing so, Mongolian companies can directly trade their commodities on the aforementioned exchanges or establish either a representative's office or branch in Mongolia. In such a case, Mongolia would be able to significantly cut the time and costs associated with establishing a new commodity exchange while still being able to trade its commodities at more favorable prices. However, establishing connections with and cooperating with internationally renowned commodity exchanges may prove time consuming and challenging. Moreover, Mongolia would potentially subject to the foreign mineral commodity exchange's standards.

As previously mentioned, for a mineral commodity exchange to operate successfully, a country must have the necessary economic, business and legal environments to support it. When choosing any of the three main options for establishing a mineral commodity exchange mentioned above, it is important to note that Mongolia's economic, business and legal environments are lacking in many key respects. As such, Mongolia's policies towards establishing a mineral commodity exchange must invariably be connected with policies to improve Mongolia's overall economic environment.

6. Budget Revenue Management

Following the boom in 2012, Mongolia experienced an economic slowdown as mineral commodity prices plunged on the world market. As a result, increasing budget expenditures and falling revenues caused a ballooning public foreign debt. Additionally, the overly optimistic mineral commodity price projections approved by the PoM did not helped curb this rising problem.

Fiscal and monetary policies are pro-cyclical in Mongolia, which exacerbates the fluctuations in the economy and government budget balance. Thus, to guard against excessive spending and borrowing, the PoM approved the FSL in 2010, which briefly came into effect in 2013 and again in 2017. The FSL contains four main requirements or caps related to budget revenue, expenditure, deficit and public debt. However, the caps on public debt and the budget deficit have underwent a number of amendments that undermined the effect of the law. Full implementation of the FSL has been postponed due to economic difficulties and political unwillingness.

Therefore, the first part of the Budget Revenue Management research aimed to assess the impact of the FSL on the economy and whether the implementation of the FSL reduced the negative effects of mineral commodity price fluctuations. By comparing the two scenarios – one without the FSL and one with the FSL – and highlighting the impact of the FSL on macroeconomic variables, the research team hoped to encourage stricter implementation of the law.

The simulation results indicated that the FSL could counteract and lessen the de-industrialization effect of mining development. Although the implementation of the FSL did not completely eliminate variations in select macroeconomic variables, the magnitude of some indicators was significantly reduced. It is also worth noting that the growth of the non-mining sector was elevated within the scenario with FSL. Hence, for the Mongolian economy to reap the benefits of the FSL, in other words, an economy better equipped to handle mineral commodity price fluctuations, the GoM needs to adhere to the FSL and its provisions more strictly.

In the first follow up study, Revenue Management: Fiscal Sensitivity Analysis (2018), the research team analyzed the sensitivity of economic performance to the changes in some of the key requirements in the FSL. In the three simulations, the impacts of relaxing the revenue and expenditure constraints each and then both were compared against the base simulation where all constraints of the FSL were fully implemented.

In the first simulation, growth in expenditure was supposed to follow the growth rate of nominal GNP; however, due to the budget deficit limitation of 2 percent, expenditure growth was limited a rate which maintained budget deficit at 2 percent of GDP. Compared to the base scenario, the growth in budget expenditure was considerably higher, increasing the demand for domestic products and resulting an increase in inflation. Due to the increase in inflation, real wage, terms of trade, real exports and imports fluctuated. This makes the Mongolian economy volatile, as shown in the recent years.

In the second simulation, revenue was calculated using the highest mineral commodity forecast prices. Nonetheless, the impact on the economy was muted due to the FSF, which lessened the magnitude of volatility the economy experienced due to fluctuations in mineral commodity prices. Thus, in the second simulation, during periods of high mineral commodity prices above the equilibrated level, the excess amount was saved into the fund and was withdrawn during periods of low mineral commodity prices. As a result, in the simulation, the GoM allocated as much as it could to the FSF. If the FSF has sufficient funds to cover the budget revenue shortfall, mineral commodity prices cannot influence the whole economy. As mentioned before, public debt has grown dramatically in recent years due to budget income shortfalls.

In the third simulation, the constraints of the first and second simulations were run together. In this case, expenditure was not limited by the budget deficit constraint as equilibrated revenues were high so the budget deficit stayed within the 2 percent despite following the GNP growth rate. During the simulation, most of the impact on the economy was due to an increase in government expenditure; however, the impact was slightly curtailed due to the FSF. This simulation provides a clear view of the possible impact on the Mongolian economy in coming years.

Main findings:

- The FSL contributes significantly to the reduction of economic fluctuation. However, it is not enough to just approve the law. The law must be strictly adhered to and implemented for it to have a positive impact on the economy.

- When not implementing provisions related to budget revenue, expenditure or both from the law, the greatest impact on the economy was observed when the government expenditure restriction was not in place. In other words, when budget expenditure increases significantly, the economy becomes more destabilized and susceptible to fluctuations. Another notable observation was that the FSF played a key role in limiting economic fluctuations caused by revenue.

- If budget revenue forecasts are high and expenditure rises significantly as in the previous year, economic fluctuations more amplified. The simulations run in this study do not necessarily reflect the fluctuations in real life. In the simulation, as the impacts of the revenue fluctuations on the economy are subdued by the implementation of the FSF, the real impact of a decline in budget revenue may have a greater impact on increasing the budget deficit. The simulation illustrates that although the fund has helped stabilize the impacts of revenue fluctuations during periods of high volatility, the economy is still very fragile.

In the second follow-up study, Revenue Management: Mongolia's Sovereign Wealth Funds and Their Economic Impact (2019), the research team aimed to assess the economic impacts of the FSF and FHF using an in-house dynamic computable general equilibrium (CGE) model. The GoM established the FSF in 2011, aiming to mitigate fluctuations related to mineral commodity prices and encourage economic growth. Additionally, the GoM designated the FHF to save a portion of mining revenues for the benefit of future generations.

The research team looked into good practices of sovereign wealth funds in Norway and Chile. Chile has two sovereign wealth funds, the Economic and Social Stability Fund and the Pension Reserve Fund, which are more similar to Mongolian sovereign wealth funds. The wealth funds safeguarded the Chilean economy from the 2008 – 2009 global financial crisis, contributed to lower output volatility and reduced country risk since their inception. Norway's sovereign wealth fund, the Government Pension Fund Global, is considered one of the best practice examples of revenue management among resource-rich countries. The fund has mitigated against budget deficit and ensured exchange rate stability during periods of decline in oil prices as observed in 2016.

The results of the simulations indicate that both the FSF and FHF funds have a significant impact on the Mongolian economy. In particular, the FSF could play a crucial role in counteracting and mitigating the economic fluctuations through smoothing budget expenditure. In other words, the FSF has the positive impact of restraining fluctuations in the government budget and thereby reducing uncertainty. While the FHF, by design, may decrease total demand in the economy through decreasing budget expenditure, it can help allocate the rents from the mining sector across current and future generations. These results suggest that the GoM should properly implement these funds to counteract the economic cycle generated by mineral commodity price volatility.

However, both the FSL and the Law on FHF have not been fully implemented. In particular, the most important requirements concerning the budget deficit and public debt have yet to be implemented. Additionally, there is a transparency issue as both the revenue and spending of the funds are not fully accessible to the public.

7. Sustainable Mining Development

Since natural resources are exhaustible and non-renewable, using the rents generated by the extractive sector for the long-term sustainable development of the country is a vital issue for resource-rich countries. According to the World Commission on Environment and Development[8], "sustainable development is the ability of current generations to meet their needs without compromising the ability of future generations to meet their needs". It should be noted that "the concepts of sustainable mining often focus on two key themes – resource depletion/availability and environmental/social impacts"[9].

The goal of this research was to assess the sustainability of mining sector development in conjunction with Mongolia's mining development strategy. Mining development strategies are specifically adopted to ensure that the mining sector positively contributes to the sustainable development of the country. If the mining sector is well managed then the investments in the sector will not only generate significant revenue for the country, but will also indirectly contribute to the economy and thus, should positively contribute to the livelihoods of its citizens.

To assess sustainability, the research team broke the concept down into four principles: economic, social, environmental and governance. Decisions about whether or not to mine or about the mining project's future should be based on an integrated assessment of ecological, environmental, economic and social impacts. Additionally, there are nine key challenges which stakeholders face:

- Viability of the minerals industry
- The control, use, and management of land
- Minerals and economic development
- Local communities and mines
- Mining, minerals, and the environment
- An integrated approach to using minerals
- Access to information
- ASM
- Sector governance

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[8] WCED, 1987, World Commission of Environment and Development, "Our Common Future" (the Brundtland Report) report.

[9] The Sustainability of Mining in Australia: Key Production Trends and Their Environmental Implications for the Future, Gavin M. Mudd, Monash University and Mineral Policy Institute, 2009.

In order to effectively manage mining revenues and curb economic fluctuations caused by changes in mineral commodity prices, the PoM adopted the FSL and established the FHF. The successful implementation of this law is dependent on establishing context-appropriate rules which are broadly accepted; otherwise, the inability to enforce this law could undermine confidence in the public financial management system and thereby could lead to financial mismanagement, corruption and poor development outcomes. As of now, the implementation of the law has been postponed and several amendments have been made.

The allocation of mining revenues between the central and local governments is essential in promoting local development. In the case of Mongolia, mining revenues are distributed through taxes and fees and the local development fund. In addition to obtaining a legally required license to operate from the government and other regulatory agencies, a "social license" is also becoming increasingly necessary. There have been several instances where mining developments have been delayed, interrupted or even shut down due to opposition from the public and/or local communities. Thus, in order to avoid these costly conflicts, mining companies need to obtain and maintain a "social license to operate" from local communities. Some of the most commonly cited means of maintaining a civil and respectful relationship with the public is through ongoing communication with stakeholders, transparent disclosure of information and community development agreements.

Although there are legislative requirements set in the Minerals Law and concession agreements, a mining company should strive to go above and beyond to assist in economic development. Key areas mining companies can offer assistance include healthcare and education. Mining operations can have significant adverse effects on employees and surrounding communities so companies should utilize a case specific approach to address each need and communicate and collaborate with the local health officials and authorities. Another is to contribute to the national educational system and work with local universities and schools to offer courses in specialized areas so as to help the companies meet local employee requirements and to help the country produce qualified and skilled individuals.

The environmental side of mining is the most crucial sphere of sustainable development in the mining sector. If an environmental issue is ignored, other benefits from mining are dampened. In recent years, mining activity in Mongolia has continued to grow. However, the legal framework for addressing environmental issues caused by the mining sector is lacking. Furthermore, the implementation of existing environmental regulations is not sufficient at all phases of the mining process.

Most critically, as mine closures are usually not properly conducted, many environmental and social issues such as informal artisanal mining, pasture degradation, environmental hazard legacy and community health problems arise and cause lasting damage.

Overall, at all points of the mining process from its reconnaissance and development to active mining and closure, there are legislations in place to encourage and enforce good governance in the mining sector. However, despite the existence of these policies and laws, the largest issue remains their implementation and usage in real life. For instance, the Minerals Law and the Law on Investment allow for much leeway when negotiating investment agreements with mining companies – which can be construed as an opportunity to conduct private negotiations which the public is not privy to. In addition to the general lack of transparency regarding purchasing agreements and mining activities, it is hard to say that the general public is fully integrated into the mining sector as a stakeholder.

As for revenue collection and management, while Mongolia's taxation regime does not treat the mining sector differently from other industrial sectors, overall taxation is clear and fairly administratively easy. The collected revenue is then consolidated into the FSF and FHF for future use. The existence of these funds and the laws that govern them are well thought out and greatly support better governance in the mining sector. However, their implementation and the abidance of laws related to mining in general are lacking. As such, while the policies and the legislation governing the mining sector may be deemed satisfactory, their compliance and implementation remains an issue in Mongolia.

A recurring major hinderance to FDI inflows and the promotion of sustainable development is corruption. Studies have displayed that corruption risks are high in Mongolia, especially in the mining sector. The adoption of the new Anti-Corruption Law and the establishment of an independent anti-corruption agency are not sufficient enough to combat corruption. Based on analysis of all these aspects of mining, both domestically and internationally, the following suggestions were put forth by the research team:

- The necessity to "balance" the mining with the rest of economy through more linkages, based on sustainable development – that is, to address the issues of water usage, illegal mining, management of environmental damage.

- The country needs to have a better understanding of mining resources and should pay more attention to studying price fluctuations, competition and changes in mineral market as well as have better facilities to correctly predict mineral prices as they are an important part of the economy.

- The country needs to truly support mining by developing further soft and hard infrastructure for the industry itself. Currently, there is lack of infrastructure and educated personnel.

- FDI is an important part of mining development. Further supporting and improving FDI inflow is crucial for sustainable growth of the mining and the country itself.

- As Mongolia's economy continues to transition into a mining-based economy, diversification is an increasingly important long-term goal. Studying examples of many mining economies, such as the Emirates, Saudi Arabia, Norway, Australia is a good way to learn from past experiences on how best to manage resources from mining to achieve diversification goals. This requires further studies of possible diversification projects and their sustainability.

- Economic sustainability itself is an important issue, as the country needs to create better fiscal, monetary and financial systems to cope with the mining revenue instability. Again, studying examples of sovereign funds such as the

Norway Oil Fund is essential for optimal resource of non-renewable resources.

8. Conclusion

The project addresses key policy challenges and offers recommendations based on research findings. These recommendations aim to further benefit the country in making the mining sector the main driver of national sustainable growth. Some of the policy areas addressed in the research focused on the possible negative impacts of mining such as environmental pollution as well as issues such as the efficient management of mining revenue, encouragement of FDI, negotiation of fair contracts, improvements in trade and the identification of bottlenecks in the sustainable development of the mining sector. The recommendations based on the research of these policies strive to further improve the development of the mining sector and thereby, national development. As the mining sector is expected to continue to remain an important component of the Mongolian economy for the foreseeable future, the sustainable utilization of natural resources is a crucial prerequisite of economic growth.

9. Summary of Findings and Recommendations

STUDY THEME	FINDINGS AND RECOMMENDATIONS
1. Mining Strategy **Issues:** There is a lack of a detailed vision on how the government intends to implement and achieve strategic visions and policy actions.	**[Findings]**
	• The officially ratified programs that aimed to promote economic diversification and development of non-mining sectors were not fully developed yet or are in the process of being developed. • The "Fiscal Stability Law" is an exemplary regulation in terms of managing revenues from the mining sector. However, there is a lack of discipline in terms of implementing the law, which can be seen from the numerous amendments to the law that have been made since its adoption. • Another part of the government's mining development strategy is to promote the private sector by providing it with better infrastructure, investment environment and exploration data while encouraging more downstream processing and the adoption of environmentally friendly equipment, technologies and innovation. • It is necessary to understand that the "minable reserves" among the geological reserves vary depending on the mining cost and the metal price conditions. In addition, it is necessary to use an internationally recognized method for reserve calculation.
	[Recommendations]
	• To develop detailed programs of policy actions in order to implement and achieve these strategic visions.
2. FDI inflow	**[Findings]**

Issues: The way to attract foreign direct investment is to improve the investment climate through legal reforms, increased transparency, combating corruption and so on.	• Mongolia should focus on developing the manufacturing sector by producing industrial inputs such as buckets, chains, gears, etc. for large mining vehicles as well as processing mineral commodities. • A larger percentage of FDI inflows should be absorbed into the domestic market instead of being flowed back out. As more FDI is absorbed into domestic sectors, the greater the benefit for the Mongolian economy but also the greater the investment multiplier. • Mongolia should not rely on higher mineral commodity prices to boost FDI inflows as it has no control over price fluctuations. • Mongolia has a considerable amount of mineral potential but its low policy perception is hindering its investment attractiveness. Mongolia can improve its policy perception rank by reforming and promoting its investment climate. With more transparency and clearer set of legislation and regulation, Mongolia could become an attractive destination for foreign investors. • In Mongolia, inept government effectiveness, regulatory quality and rule of law tend to lead to lack of confidence from investors, which can deter or discourage investment. Thus, reforms are needed to address these issues.
	[Recommendations]
	• Improve business environment and provide stability of policies to attract FDI by: (a) Establishing "One stop shop" for investors (b) Further improving stabilization clauses (c) Preventing and combating corruption • Promote economic diversification through indirect use of mining FDI. • Refine revenue management
3. Taxation and Financial Reporting	**[Findings]**
Issues: The Government should focus on improving the country's business environment in order to further incentivize private investment into the mining sector.	• The country's tax burden is not low and therefore tax incentives may be implemented. However, the stability of policies and improvement of Mongolia's business environment will be more effective in incentivizing investment into the mining sector.
	[Recommendations]
	• Improve the business environment of the country, ensuring political and policy stability and thereby, maintain consistent policies geared towards attracting FDI.
4. Contracting in Mining Sector	**[Findings]**

Issues: It is crucial for the host country to have a well-developed model contract that considers all direct and indirect effects.	• Mongolia's Oyu Tolgoi agreement has essentially become a template contract for large megaprojects. • The Oyu Tolgoi project, despite all of its shortcomings, created an expansive supplier ecosystem and so far significantly contributed to local and macroeconomic development. • By taking the Oyu Tolgoi Agreement as a template, the country may bring the contract closer to best international practice, further define the legal obligations to develop the local suppliers and jobs, to regulate well the financing issues in an equity borrowing case and to establish an integrated approach in designing infrastructure projects. • The spillovers from major mining projects to infrastructure, social issues and regional development are all governed by different laws and regulations. However, the country lacks the capacity to develop a unified approach to address and reflect these spillovers into the contract.
	[Recommendations]
	The following are recommendations to improve mining contracts: • To clarify the definition of large projects as compared to the legally established strategic mine issue • To design an integrated form of agreement, in which all stakeholders, including local suppliers, to have their non-binding promises and to reach a consensus • To raise the awareness of the importance of having an integrated agreement with all stakeholders to agree on major project features and having a unified management
5. Marketing and Trading in the	**[Findings]**

<table>
<tr>
<td rowspan="4">Mining Sector

Issues: How mineral commodities are traded, sold and the challenges these processes face are a key issue in Mongolia.</td>
<td>• According to mining companies and industry experts, almost all Mongolian mining companies do not conduct an in-depth market research. The main reason is that mining companies don’t have the research capacity nor the understanding of the importance of research and intelligence activities. Mining companies would benefit from conducting an in-depth analysis of trading and contracting practices between main buyers, such as steel makers or traders, and mining companies from Australia, Indonesia, Brazil and Russia.
• Transportation is a major problem for Mongolian companies, especially for the sale of bulk raw materials such as coal and iron ore.
• In Mongolia, export financing services including payment systems and insurance are not well developed. It is possible to establish an Export Import Bank. There is also an ample room for the Development Bank of Mongolia to expand its export financing services. Commercial banks and other financial providers do not have financial products for commodity exporters. This part of the business hasn’t been studied well, so there is no particular policy nor plan.
• There is an option for establishing a mineral commodity exchange by expanding the Mongolian agricultural commodities exchange (MCE) to handle mineral products.</td>
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<td>[Recommendations]</td>
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<td>• In order to develop marketing and trading further, there is a need:
(a) to establish a mineral commodity exchange
(b) to devise policies to support and promote traders’ activities
(c) to make sales contracts transparent
(d) to develop export financing mechanisms
(e) to initiate and carry out capacity strengthening projects
(f) to increase the role of mining associations in policy making and raise awareness for the sector</td>
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<td>• In order to establish a mineral commodity exchange, there is a need to:
(a) conduct detailed and comprehensive feasibility studies for assessing following options for the exchange: a new independent exchange; expansion of the Mongolian agricultural commodities exchange (MCE) to handle mineral products; use existing exchange in a foreign country.
(b) conduct studies of establishing transport and logistics centers, trading platforms, especial standard for mineral products, the possibility of participating buyers from other countries etc.,</td>
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	• There is an urgent need to build a railway from large coal deposits to the border, to increase the capacity of the existing railway, and to modernize the technology of customs clearance.
6. Budget Revenue Management **Issues:** The government should commit to the implementation of the Fiscal Stability Law (FSL), Future Heritage Fund (FHF) law and adhere strictly to these laws in order to counteract economic cycles, which can be generated by commodity price volatility.	**[Findings]**
	• The FSL is designed to reduce economic fluctuations emanating from swings in commodity prices. It is not enough to just have the law be approved, the law needs to be strictly implemented and adhered to. Only through this will the positive impact of the law on the economy be fulfilled.
	• The FSL played a key role in limiting economic fluctuations caused by volatility in the government revenue.
	• Implementation of the FSL and the Law on FHF was insufficient. Both revenue and spending of the funds are not fully transparent to the public.
	[Recommendations]
	• The Government of Mongolia needs to fully implement and strictly adhere to the Fiscal Stability Law. All provisions of the law must be in full effect with little adjustments and amendments being made.
7. Sustainable Mining Development **Issues:** How a country can be benefiting from the mining sector for the long period of time in a sustainable way?	**[Findings]**
	• If the mining sector is well managed, investments in the sector not only will generate significant revenue for the country, but will also directly and indirectly contribute to the economy and thus, positively contribute to the livelihood of citizens. • Some of the most commonly cited means of maintaining a civil and respectful relationship between the mining company and the public is through ongoing communication with stakeholders, transparent disclosure of information and community development agreements. • For Mongolia, mining activities are being accelerated lately. However, the legal framework for addressing environmental impact caused by the mining sector is weak. • While the policies and the legislation governing the mining sector may be deemed satisfactory, the lack of compliance and implementation poses major problems for Mongolia.
	[Recommendations]
	• To develop more linkages between the mining sector and the rest of the economy. This way the mining industry will positively contribute to the sustainable development of the country. For instance, the issues of water usage, illegal mining,

	management of environmental damage should be addressed.
	• To pay more attention to studying the price fluctuations, competition and developments in minerals market as well as to have better facilities to accurately predict mineral prices
	• To promote investment in mineral exploration and mine development
	• To further develop soft and hard infrastructure of the mining industry since there is a lack of infrastructure and educated personnel.
	• To use mining development to diversify the economy in order to reduce dependence on mining.
	• To increase the mining sector's contribution to the society. But there is a need to balance contributions to the nationwide and local economy.
	•To further improve fiscal and monetary policies to cope with the instability of the mining revenue. Examples of Norway fund and other sovereign funds are important examples for optimal resource management as the resources themselves are exhaustible.

10. Actions to be implemented

Item No.	Policy Recommendations	Action / Action Program		Execution Period S: < 3 years M: 3-5 years L: > 5 years			Action Point
1	To develop detailed programs of policy actions in order to implement and achieve these strategic visions.	(1)	Develop and officially ratify programs that promote economic diversification and the development of non-mining sectors		M		GoM
		(2)	Estimate the country's resource wealth and study its compatibility with the country's development strategy documents.	S			MRPA
		(3)	Complete and initiate the detailed plans, detailed feasibility studies and impact assessments. Mining projects should be prioritized based on their socio-economic significance, costs and feasibilities.	S			MMHI, NDA
2	To improve the business environment of the country, ensuring political and policy stability and thereby, maintain consistent policies geared towards attracting FDI.	(1)	"One stop shop" for investors opened in 2019. It is in operation, but needs to be further improved. Foreign investors are required to open a local bank account and are required to come in person. The government needs to ease requirements and increase the use of digital technologies in public services.	S			NDA

		(2)	In order to fight corruption and ensure transparency the following needs to be implemented: • Make all major project investment agreements publicly available • Enhance the transparency of tax information and the functioning of the EITI, and focus on the quality of information • Improve the financial calculations of strategic mine deposits and analyze and compare tax options, such as whether to own shares or rely on royalty. • Companies in the mining sector, in particular state-owned companies, should make all contracts including sales contracts transparent.	S			GoM
		(3)	Develop laws and regulations to scrutinize the sources of any investment. This way the country can avoid being included in the list of international organizations as a country that finances terrorism and money laundering	S			MoF
		(4)	It is necessary to simplify the excessively bureaucratic structure of the civil service in order to reduce hurdles and reduce transaction costs associated with doing business. Also, government should ease tax and customs requirements and reduce bottlenecks in trading across borders.		M		GoM
		(5)	It is important to maintain the stability of taxation and other macroeconomic policies. Changes in laws and regulations should be limited.	S			GoM
3	To achieve the best possible mining contract by clarifying the definition of a	(1)	Develop an integrated form of agreement before the project commences and have an Integrated Project Delivery draft contract, in which all		M		MMHI

	large project as compared to the legally established strategic mine definition, designing an integrated form of agreement.		stakeholders, including local suppliers, agree on major project features.				
		(2)	Draw up appropriate rules and regulations for designing the integrated form of agreement	S			MMHI
		(3)	Improve further the mining stabilization clauses based on other countries' best experiences.		M		MMHI
4	In order to better develop marketing and trading in Mongolia, there is a need to establish a mineral commodity exchange, support traders' activities at the policy level, make sales contracts transparent, develop export financing mechanisms, organize capacity strengthening projects and increase the role of mining associations in policy making and raising awareness for the sector.	(1)	Establish the mineral commodity exchange with appropriate legal environment and supported by government policies			L	MMHI
		(2)	Conduct detailed and comprehensive feasibility studies for assessing the possibilities of opening a new independent exchange. The GoM can expand the Mongolian agricultural commodities exchange (MCE) to handle mineral products, or use an existing exchange in a foreign country. Accordingly, conduct studies on establishing transport and logistics centers, trading platforms, standards for mineral products and the possibility of participating buyers from other countries etc.	S			MMHI
		(3)	Draft a law on trade which is designed to support traders' and intermediaries' activities	S			MMHI, AoM
		(4)	Organize capacity strengthening projects in the mining sector, increase the role of mining associations in policy making as well as raise awareness for the sector		M		MMHI, AoM
		(5)	Companies in the mining sector, in particular state-owned companies, should make all contracts including sales		M		MMHI, SPC

			contracts transparent.				
5	To develop more linkages between the mining sector and the rest of the economy. This way the mining industry will positively contribute to the sustainable development of the country. For instance, the issues of water usage, illegal mining, management of environmental damage should be addressed.	(1)	Develop regulations that provide transparency of mining operations and procurement contracts, and accommodate increased public scrutiny at all levels		M		MMHI
		(2)	Increase coordination between authorities such as the Ministry of Environment, the Ministry of Mining and Heavy Industry, professional inspection agencies, taxation office, and local authorities in all levels.		M		MMHI
		(3)	Ensure implementation of legislations that are in place to encourage and enforce good governance in the mining sector at all points of the mining process from its reconnaissance and development to active mining.		M		MMHI
		(4)	Draft a law on mine closure		M		PoM
		(5)	Develop regulations that ensures transparency in the extractive industry		M		MMHI
		(6)	Intensify environmental protection activities, and increase oversight by citizens and local organizations.		M		MET
		(7)	Accelerate the reclamation of mines that are currently closed but not rectified	S			MET
6	To pay more attention to studying the price fluctuations, competition and developments in minerals market as well as to have better facilities to accurately predict mineral prices.	(1)	Organize regular capacity strengthening projects such as training on economic and mining concepts of taxation, royalty, market price system and competition for mining companies, roles of related government agencies and sector specialists, which can be implemented in cooperation with international organizations.		M		MMHI, MACSO

		(2)	Government organizations such as Ministry of Mining and Heavy Industry, Ministry of Finance and MRPAM, should develop models that consider the global mining commodity market outlook and can provide forecasts.	S			MMHI
		(3)	Enforce transparency of information related to mining and quarrying, such as taxes, extraction, and resources, and focus on the importance of accuracy of the information.		M		MMHI
7	To further develop further mining soft infrastructure of mining industry	(1)	Implement scholarship programs and projects to train personnel in collaboration with international and professional organizations	S			MMHI, MACSO
8	To further support hard infrastructure of mining industry since there is a lack of infrastructure and educated personnel.	(1)	Recognize the necessity of soft and hard infrastructure for mining development	S			MMHI
		(2)	Carefully study mining experiences of landlocked countries, such as Zambia.	S			MMHI
		(3)	Identify necessities of soft infrastructures for mining development and prioritize infrastructure projects based on their socio-economic impact, cost and feasibility.		M		MMHI
		(4)	Conduct detailed and comprehensive feasibility studies for high-priority projects such as road, railways, and power plants		M		GoM
		(5)	Build railways from large coal deposits to the border points, to increase the capacity of the existing railway, and modernize the technology of customs clearance.		M		MRTDCS
		(6)	Ensure high standards of infrastructure evaluation and management, so that scarce funds are being allocated to high-priority and well-		M		MRTDCS, MMHI

			performing projects.				
9	To diversify the economy in order to reduce the dependency on the mining sector.	(1)	Carefully studying experiences of many mining economies such as Emirates, Saudi Arabia, Norway, Australia, Chile and Zambia is a good way to learn how to manage resources from the mining to achieve economic diversification goals.	S			NDA
		(2)	Set up liaison offices in most important markets, and establish affordable access to internationally certified laboratories			L	GoM
		(3)	Study and develop a feasibility study of raw materials, machinery and their equipments that can be produced domestically for the mining sector.	S			MMHI
		(4)	Develop and promote the value chain in the mining sector. For instance gold jewelry.		M		MMHI
		(5)	Identify the list of priority non-mining sectors which should be incentivized by tax policies and business friendly legal environment	S			NDA
		(6)	Use mining development to diversify the economy.			L	GoM
10	To further improve fiscal and monetary policies to cope with the instability of the mining revenue.	(1)	Study mining countries with better fiscal and monetary policy frameworks, such as Chile.	S			MMHI
		(2)	Independent and professional monitoring of the implementation of the Fiscal Stability Law should be required.	S			MoF
		(3)	Amendments to the Fiscal Stability Law should be limited and should include expert advices.	S			MoF
		(4)	Focus on tightening the regulation of wealth funds, and	S			MoF

			study experiences of countries such as Norway in managing their wealth funds,				
		(5)	Enhance coordination of revenue estimates among the Ministry of Finance, the Bank of Mongolia, the Ministry of Mining and Heavy Industry, the National Development Agency, the Parliament, and the Fiscal Stability Council.	S	M		GoM
		(6)	The Fiscal Stability Council should hold a public hearing before the annual budget is approved	S			FSC
		(7)	The Fiscal Stability Law sets limits on a debt threshold, budget deficits and expenditure growth. However, implementation has been inadequate and the debt limit regularly updated. Therefore, the implementation of the law should be in line with the original objectives. The law may include procedures and provisions to limit reform.	S			GoM
		(8)	The government should adhere to the Fiscal Stability Law and the Law on Future Heritage Fund consistently in order to counteract the economic cycle generated by the mineral commodities price volatility	S			MoF
11	To promote investment in mineral exploration and mine development	(1)	Study best practices of countries with well-defined rules and regulations for the mining exploration and mine development	S			GoM
		(2)	Draw up appropriate rules and regulations to promote the mining exploration and the mine development. For instance, the mining company can be eligible for the tax relief and will be able to use the tax benefits for re-exploration or the state can use the tax collected from the		M		GoM

			mining income for the exploration and the mining development.				
12	To increase the mining sector's contribution to the society. But there is a need to balance contributions to the nationwide and local economy.	(1)	Study the best way to further increase the benefit from the mining sector to the society. For instance, various analysis can be made on the improvement on efficiency and the benefit of infrastructure development, social welfare programs, and benefits from wealth funds.	S			GoM
		(2)	Identify new and best ways for the society and civil life to benefit from mining income and coordinate its implementation.		M		GoM
		(3)	Enhance transparency of mining operations and procurement contracts, and increase public scrutiny at all levels		M		MMHI
		(4)	Develop regulations to reduce the risk of corruption at all levels	S	M	L	GoM

Action Point

GoM:	Government of Mongolia, MRPA: Mineral Resources and Petroleum Authority,
MMHI:	Ministry of Mining and Heavy Industry, NDA: National Development Agency,
MoF:	Ministry of Finance, AoM: Associations of Miners, SPC: State Property Committee,
PoM:	Parliament of Mongolia, MET: Ministry of Environment and Tourism,
MACSO:	Mining Associations and Civil Society Organizations
MRTDCO:	Ministry of Road and Transport Development and Customs Office
FSC:	Fiscal Stability Council,

Execution Period

S: Short Term

M: Medium Term

L: Long term