POSSIBILITIES OF ESTABLISHING A MINERAL COMMODITY EXCHANGE IN MONGOLIA

Update study of “Marketing and Trading in Mining Sector”

Z. Manlaibaatar
Economic Research Institute

2020-09-30

Content

1. Introduction
2. Mineral products sales in Mongolia
3. Assessment of preconditions of establishing a Mineral Commodity Exchange (MCE)
4. Alternatives to set up a MCE
5. Conclusions and suggestions

ECONOMIC RESEARCH INSTITUTE

1. Introduction

- Absence of an organized mineral commodity exchange (MCE) is cited as one of the main weaknesses in the mining sector ("Marketing and Trading", ERI, 2018)
  - a lack of transparent sales contracts and a loss of budget revenue
  - producers are less informed about their relative share of the end market price
  - intermediaries capture a disproportionate share of the profits
- Establishing a commodity exchange could be an effective solution
  - Trading warehouse receipts - makes it easier to exchange ownership rights
  - Trading spot contracts - reduces the cost of commodity trading and quality checking, makes information transparent, lowers regional producer price differences and encourages process of raw minerals
  - Trading forward, option, and futures contracts - increases the liquidity of the market and manages pricing risks
- However, it requires favorable institutions and investments in infrastructures

ECONOMIC RESEARCH INSTITUTE

1. Introduction

- The Mongolian Exporters' Association (2013) conducted a detailed study about establishing a mineral commodity exchange and suggested relevant law and regulations drafts
- The Parliament of Mongolia (2014) included a provision on the establishment of a mineral commodity exchange in the State Minerals Policy 2014-2025
- The Mongolian (Agricultural) Commodity Exchange (MACE) was established in 2013 for trading cashmere, wool, live cattle and wheat and has been successfully operating since then.
- This study is based on literature reviews and meetings with stakeholders such as the Ministry of Mining and Heavy Industry, Financial Regulatory Committee and Mongolian (Agricultural) Commodity Exchange, Erdenes Tavan Tolgoi.

ECONOMIC RESEARCH INSTITUTE

2. Mineral products sales

- Mining sector's contribution to the Mongolian economy has been steadily increasing:
  - 23.5% of GDP, 32.9% of budget revenue and 86.6% of export (NSO 2018)
  - 27.9 Mt of coal, 16.8 Mt of fluorspar, 350 Mt of iron, 53.6 Mt of copper and 1.2 Mt of zinc in reserves (EITI Mongolia, 2018).
- Each commodity has its own market where pricing and selling mechanisms are different
  - Gold is mostly sold by the Bank of Mongolia to the international market
  - Other commodities are sold through intermediaries to China
  - Information on sales contracts is not publicly available

ECONOMIC RESEARCH INSTITUTE

2. Mineral products sales: Coal

- The prices of coal exports differ greatly, and trading contracts is not transparent
- The trading patterns at Tavan Tolgoi differ significantly

Table. Sales statistics of coal mines at Tavan Tolgoi mine site, 2018 (MNT/USD=2472.67)

	Description	Volume (mln.ton)	Value	Average price, per ton
Mongolian Mining Corporation (Washed coking and thermal coal)	Exported to Chinese end-user	4.7	USD 591 mln	USD 170.1
	Exported through Gantsmod port			USD 135.6
Erdenes Tavan Tolgoi JSC	Payment for mining services	1.7	USD 803.5 mln*	-
	Exported through auction	7.9		USD 68.1-72.2
	Exported directly to Chalco	3.47		USD 59.3-61.0
Tavan Tolgoi JSC	Export	1.70	USD 91.4 mln*	USD 53.8*
	Domestic Market	0.14	USD 0.1 mln*	USD 6.1*

Source: Annual Reports of Tavan Tolgoi JSC, Erdenes Tavan Tolgoi JSC, and MMC

2. Mineral products sales: Copper concentrate

- Erdenet and OT sells its copper concentrate to China via traders
- Erdenet – contract with 13 international trading companies
  - 3-year contracts with traders and annual price adjustments
  - 5-7 days before shipping, 95% of the payment is paid in advance and placed in a Mongolian bank account
  - The lowest 3-month price on the world market is used for the contract
  - Metal deductions – 1.1%
  - TC/RC deduction = $103.5 per ton (10-35% higher costs than in Chinese markets)
- OT – contract with 2 Chinese SOEs and 3 other companies
  - 5-8 years contracts
  - TC/RC deduction is average, but smelting deductions is double Erdenet's cost

ECONOMIC RESEARCH INSTITUTE

2. Mineral products sales: Other minerals

- The main market for **iron ore** is Northern China
  - In 2018, the average border price was 46 $/ton; world price was $70 (MRPAM)
- For **crude oil**, 2 Chinese companies export to China
  - PetroChina Daqing Tamsag LLC ships directly to its subsidiary company at a price similar to products traded on the Singaporean commodity exchange
  - Dongsheng Petroleum LLC uses contract price which is 3.62 USD below the DTD Brent benchmark price used on the London commodity exchange
- **Zinc concentrate** is extracted by 2 companies and exported to China
  - Tsairt Mineral LLC has contracts with the China Nonferrous Metal Industry; prices are based on the LME prices, TC/RC is not specified.

ERI
ECONOMIC RESEARCH INSTITUTE

3. Preconditions of successful development of MCE

- Trading at MCE has a long history in advanced countries
- In Eastern Europe and in Central Asia, over 200 commodity exchanges are operational, but their level of development remains low
- According to Rashid, Winter-Nelson, & Garcia (2010), necessary conditions:
  - Domestic market size
  - Availability of well-established exchanges abroad
  - Physical and communication infrastructure
  - Information technology
  - Favorable legal and regulatory environment
  - Low likelihood of policy interventions
- A large volume of trades and lower transaction fees are necessary → Need to attract traders and compete with the regional commodity exchanges

ERI
ECONOMIC RESEARCH INSTITUTE

3. Preconditions of successful development of MCE

- Mongolia is less competitive than regional countries in business indicators

Global Competitiveness Index, Rank out of 140 countries

	Infra-structure	ICT Adoption	Skills	Business Dynamism	Macro-Economic Stability	Financial System
Mongolia	103	78	109	89	121	89
Kazakhstan	69	44	100	37	62	57
China	29	26	30	43	39	63
Russia	51	25	86	51	55	50

Source: World Economic Forum (2019)

Logistic Performance Index, 2018

	LPI Score	Customs	Infrastructure	International Shipments	Logistics Competence	Tracking & Tracing	Timeliness
Mongolia	2.40	2.25	2.12	2.45	2.23	2.21	3.07
Kazakhstan	2.77	2.57	2.59	2.73	2.60	2.81	3.31
China	3.6	3.28	3.73	3.57	3.58	3.63	3.86
Russia	2.69	2.25	2.64	2.59	2.74	2.67	3.23

Source: World Bank, 2018

ECONOMIC RESEARCH INSTITUTE

3. Preconditions of successful development of MCE

- Mongolian financial market is inefficient and has low liquidity

Finance sector indicators in 2018, %

	Lending interest rate	Interest rate spread*	Real interest rate lending	Domestic credit to private sector of GDP	Domestic credit to private sector by bank of GDP
Mongolia	17.7	5.3	7.8	56.2	54.2
Kazakhstan	12.3	4.9	4.7	27.3	23.8
China	4.4	2.9	2.1	161.1	161.1
Russia	8.9	3.5	1.3	76.0	51.3

** - lending rate minus deposit rate*   *Source: World Development Indicators; National Bank of Kazakhstan*

- In terms of enforcing contracts, Mongolia (#68) performs below Kazakhstan (#4), China (#6), Russia (#18).

Enforcing contracts

	2016	*2017*	*2018*	*2019*
Rank (countries)	80 (189)	85 (190)	88 (190)	68 (190)
Score (0-100)	59.4	58.5	58.5	60.9
Time (days)	374	374	374	374
Cost (% of claim value)	30.6	30.6	30.6	26.5
Quality of judicial processes index (0-18)	6	5.5	5.5	8

Source: World Bank

ECONOMIC RESEARCH INSTITUTE

3. Preconditions of successful development of MCE

- Policy for establishing a MCE is not consistent
  - Government Resolution #211 in 2014 following State Policy on the Mining Sector states that a MCE can be established with **private** investments
  - MCE operations are not regulated by the Securities Market Law nor the Agricultural Commodity Exchange Law
  - In 2016, the Government discussed a draft Mineral Commodity Exchange Law prepared by the Ministry of Mining, but it was not submitted to the Parliament
  - According to the Guidelines for refining Mongolian Legislation (2017), the Financial Regulatory Commission and the Ministry of Finance is developing a new draft MCE Law, but there has been no updates
  - In its medium term strategy (2018), Erdenes Mongol SOE is making investment towards establishing a MCE
  - However, it is not included in the "Vision – 2050" long term policy and the Government Action Program 2020-2024

4. Alternatives to set up a commodity exchange

- **Expanding the Mongolian Agricultural Commodity Exchange's operations**
  - The MACE, a 100% state owned exchange, trades 11 types of spot contract
  - 14 brokers (permanent member) and 58 suppliers (temporary)
  - Its operations has been stable mainly due to requirement that commodities must be traded at the MACE to be exported or to receive government subsidies
  - The MACE already has a trading platform and human resources.
  - However, new protocols and rules need to be drafted, and warehouses, laboratories and logistic centers need to be established

Trade volume at the MACE, tons

	2013	2014	2015	2016	2017	2018
Cashmere	6382	6124	6877	7216	6956	5862
Sheep wool	1005	7641	10171	16150	10888	13794
Camel wool	1048	1018	434	774	356	274
Oilseed	14912	12535	-	-	-	-
Scoured wool	-	902	2130	1639	2881	4642
Total trade value, billion MNT.	404	554	432	463	572	711

Source: www.mce.mn

ECONOMIC RESEARCH INSTITUTE

4. Alternatives to set up a commodity exchange

- **Use of well-established commodity exchanges**
  - Hedging opportunities provide lower risk, higher liquidity and better integration with world markets
    - The Shanghai Futures Exchange – copper, zinc
    - The Zhengzhou Commodity Exchange - thermal coal, ferroalloy
    - The Dalian Commodity Exchange - thermal and coking coal, iron ore.
    - ...
  - Drawbacks:
    - Commodities should be processed to fit the exchanges' standards and capacities must be increased significantly
    - Exchange rate risk is higher
    - The largest challenge is long transportation distances and weak infrastructure integration with key importing countries.

ECONOMIC RESEARCH INSTITUTE

5. Conclusions

- Need to establish a mineral commodity exchange which have positive effects:
  - Transaction costs will be reduced, return to participants will be more
  - Transparent contracts increase social trust and budget revenue
  - Producers will be interested in processing commodities to fit standard contracts
- Unfavorable preconditions should be considered:
  - Lacking business and macroeconomic environment
  - Policies on a mineral commodity exchange are not consistent
  - Need to invest heavily in logistics centers, infrastructure and trading platform
- Planning to establish a MCE with public investment (Erdenes Mongol SOE)
- Need a detailed cost-benefit analysis or a feasible study
- Alternative options:
  1. Establishing a MCE with private investments
  2. Expanding an established exchange such as MACE
  3. Using well-established foreign commodity exchanges

ECONOMIC RESEARCH INSTITUTE

Thank you for your attention

ECONOMIC RESEARCH INSTITUTE