Proceedings of the 8th International Conference on Economic Management and Green Development
DOI: 10.54254/2754-1169/125/2024.17792

Research on Current Mining Trade Issues in China

Tianhao Li[1,a,*]

[1]*Fairmont High Schools, Santa Ana, 92801, The USA*
a. tli777@students.fairmontschools.com
**corresponding author*

Abstract: Nowadays, although China's mining trade is expanding, some problems have emerged during the development process, preventing the mining trade from reaching its ideal level. Therefore, this paper mainly discusses several issues that have arisen in China's current mining trade, analyzes the problems existing in China's previous and current mining trade, and examines how these various issues may cause large or small damages to China's mining trade market and even the international trade market. It then specifies in detail what measures should be taken or what laws should be promulgated to improve China's issues in this aspect. China should keep up with the pace of the times, use green technology products as much as possible, so that China's mineral products can stand firm in the international market, have significant characteristics, and make competition more advantageous. The research significance of this paper is to help China's mining trade market analyze various factors unfavorable to our country's trade situation, thereby helping our country's mining market get rid of the disadvantages of international trade competition, helping the mining market introduce more international supply chains. This may help achieve good trust in international trade and the introduction of our country's minerals to foreign countries. At the same time, this paper also provides valuable value for China's mining-related personnel and researchers.

Keywords: Green mining development, expanding supply chain, improving mineral quality.

1. Introduction

The mineral industry is a major factor driving China's economy today, and its economic value is one of the main sources driving China's economic development. At the same time, China has become the world's largest producer, consumer, and trader of mineral products, playing a crucial role in global mining development. However, there are still many large and small problems in China's current mining trade, making China's mining trade still face challenges, while also involving changes in the international market and geopolitical risks. Nowadays, China's mining industry is constantly developing, and the government has also introduced many laws to protect the mining trade and solve the problems and hazards brought by this trade. For example, the "Opinions on Several Matters Concerning Deepening the Reform of Mineral Resources Management" released on July 28, 2023 [1], solved some institutional difficulties in mineral administrative management based on the "Opinions on Promoting Several Matters of Mineral Resources Management Reform (Trial)" (referred to as "Document No. 7") issued in 2019 [1], plugged institutional loopholes, and promoted the use of guarantees or deposits in mineral rights transactions to ensure the smooth development of competitive transfer of mineral rights.

DOI: 10.54254/2754-1169/125/2024.17792

In addition, there are still several problems in China's mining trade, such as international market competition, resource dependence and supply chain security, environmental protection and sustainable development, etc. These problems affect the development of China's mining trade. In 2020, China-Australia relations deteriorated due to diplomatic and trade frictions on multiple fronts. Australia's call for an independent investigation into the origin of the COVID-19 virus angered China. Subsequently, China implemented a series of trade restriction measures against Australia, including imposing tariffs or import bans on Australian coal, wine, and barley. This brought huge troubles and crises to China's resource dependence and supply chain, causing huge threats and restrictions to China's mineral economic trade. People should pay attention to such problems so that China can effectively and timely solve such problems, to ensure that China will not be affected by supply chain problems in the future, and reduce such trade problems and burdens.

This paper specifically studies the main problems faced by China's mining industry in domestic and international trade, analyzes the causes and severity of these problems, the economic losses caused to the country, and effective solutions. For example, increasing concentration, reducing tax rates, improving competitiveness, and supporting China's iron ore enterprises [2]. In response to the adverse effects of unstable iron ore prices on China's ferrous metal industry, improving competitiveness is an effective measure to solve China's iron ore industry. An effective way to improve competitiveness is to solve the problem of industrial concentration in China's steel industry. The concentration of China's steel industry is far lower than that of other major iron ore importing countries in the world, putting China's iron ore industry at a disadvantage in terms of cost competition. The state should focus on mergers and reorganizations and reducing tax rates to improve the competitiveness of iron ore enterprises.

2. Current Status of China's Mining Trade

Nowadays, China's mining trade is increasingly developed, and the trade system and related laws in this block are constantly being popularized and improved. At the same time, it is slowly entering the process of green development, making mining trade more environmentally friendly and reasonable, reducing a lot of carbon emissions, and paying more attention to the problem of sewage treatment. For example, Currently, the main bodies of global green mining standardization construction show diversified characteristics, mainly including intergovernmental international organizations, non-governmental international organizations, mixed international organizations composed of government and non-government, national governments and non-profit institutions in various countries, etc. [3]. The specificity of the compilation subject and the wide range of guidance objects jointly determine the internationalization and universality of the standard effectiveness. The compilation subjects of standards are mainly international organizations, among which, intergovernmental international organizations include the United Nations, World Bank, International Standards Organization Technical Committee, Organization for Economic Cooperation and Development, etc., non-governmental international organizations include International Mining and Metals Association (IMCC), Responsible Jewellery Council, World Gold Council, Responsible Mining Initiative (RMI), etc. Related standard documents include guidelines, principles, norms, guidelines, initiatives, manuals, frameworks, tools and other forms. On the one hand, the objects of standard regulation and guidance are mainly mining enterprises, also including governments of various countries and downstream mineral product demanders. On the other hand, the applicable industries are extensive, with both universal standards and specially formulated standards with industry characteristics for energy, gold, aluminum, copper, lead, molybdenum, nickel, zinc, diamond and other industries.

That countries use minerals to manufacture national defense systems and various national infrastructure, resulting in a large demand for minerals, ultimately leading to intensified competition

DOI: 10.54254/2754-1169/125/2024.17792

among major countries. The International Energy Agency points out that the overall demand for critical minerals in the global energy system may increase sixfold by 2040, especially the demand for critical minerals such as copper, lithium, nickel, cobalt, and rare earth elements, which will grow exponentially. These minerals are particularly competitive in the market. At the same time, this is also an important challenge that China's mineral industry needs to face. In 2013, China's overseas investment in the mining industry reached 24.81 billion US dollars, an increase of 83% year-on-year [4]. By the end of 2013, the total amount of Chinese enterprises' overseas investment in the mining industry reached 106.1 billion US dollars, accounting for 16% of China's total overseas investment stock. China's overseas investment in the mining industry grew from 4.1 billion US dollars in 2007 to 24.81 billion US dollars in 2013, an increase of 5 times. There are 1,397 Chinese enterprises investing in overseas mining, involving oil extraction and processing, non-ferrous metal mining, ferrous metal mining, etc. However, with the increase of Chinese mining companies' overseas investments, the failure rate of Chinese companies' overseas mining investments has also increased significantly. During the "11th Five-Year Plan" period, the failure rate of China's overseas mining investments exceeded 80%, and in 2014, industry statistics showed that the failure rate of Chinese companies' overseas mining mergers and acquisitions exceeded 95%. Correspondingly, after 2013, China's overseas investment in the mining industry fell rapidly, to only 8.67 billion US dollars in 2016.

Finally, there is the issue of environmental protection and sustainable development. In my opinion, the main reasons for this problem are: first, insufficient domestic mineral resource reserves; second, ecological problems caused by mineral resource development. First of all, with insufficient mineral reserves, China lags behind in this aspect of mineral storage; at the same time, minerals that are not recycled and reused make China have to import minerals from other countries, and mineral resource development has a negative impact on the ecological environment. The current ecological compensation measures need to be further improved [5]. Most mineral extraction is mainly in the form of underground mining, which causes serious surface subsidence. Subsidence mainly forms above the mined-out area, and the overall subsidence area is much larger than the mined-out area, causing a large amount of land resources to subside. In addition, waste and filtered materials formed by mining are mostly accumulated on the surface layer around the mining area. These wastes will directly change the soil structure in the accumulation area under the influence of surface water and rainwater, leading to soil structure deterioration and difficulty in growing ecological plants. Even if land resources can be restored to normal through self-purification, the recovery cycle is long. Severe damage will promote a recovery cycle of up to 300-500 years, and these land resources are severely damaged.

3. Suggestions for Solving Mining Problems

First, regarding China's mining resource dependence and supply chain security issues, China appears somewhat passive in mining trade due to the lack of backup supply chains. China can choose to broaden import channels to resolve this issue. For example, regarding the iron ore supply chain problem mentioned above, Brazil has Vale, these four mines are the world's largest iron ore mines. In terms of reserves, according to the Mineral Commodity Summaries 2021 report, Australia has the largest iron ore reserves, reaching 50 billion tons in 2020; followed by Brazil with 34 billion tons; Russia ranks third with 25 billion tons [6]. So China can import iron ore from Russia or Brazil, making these two countries our second mineral supply chain.

Secondly, the reason for the intense international market competition is that every country now has an increasing demand for minerals. So in response to this problem, China needs to enhance technology, improve the quality of mineral products to meet the international market's demand for mineral products, and allow China's high-quality mineral products to enter the market. Develop

DOI: 10.54254/2754-1169/125/2024.17792

international cooperation, establish cooperative relationships with international mining companies, jointly develop new projects and markets, leverage international resources and networks to enhance the competitiveness of enterprises in the international market; at the same time, it is necessary to train more high-level employees to improve the overall quality of the team, thereby enabling China's mining trade market to achieve a leading position in the world. For example, Australia is one of the world's largest exporters of iron ore and coal, and its mineral products are competitive in the international market. Here are some of Australia's practices in improving the quality of mineral products: Australian mining companies actively conduct technological research and innovation, adopting advanced mining and processing technologies to improve the purity and quality of mineral products. They continuously improve production processes to increase production efficiency and product quality. The Australian government implements strict environmental standards and regulations for the mining industry, requiring companies to comply with environmental regulations and reduce pollution and resource waste. These environmental measures help enhance the environmental performance of mineral products and increase their competitiveness in the international market.

At the same time, China can also appropriately expand the diversity of mineral products, making our country's mineral commodities refreshed in international competition. Other materials can be used to experiment with whether they can replace common everyday materials, making products more efficient and developing a new path in international market competition. For example, nowadays most cables are made of copper, researchers can try to use other materials to test their practicality and efficiency, and if people find new more efficient materials for cables, it would be a new business opportunity.

4. Conclusion

China's main mining trade at present, more obvious problems of international market competition, resource dependence, supply chain security, and environmental sustainability. The solution given: expand the supply chain, improve the quality of China's minerals, recruit highly skilled personnel, and adhere to the development of the green mining chain. This paper needs to be improved, should provide more programs, not stick to a few solutions, and need to be more flexible thinking to put forward more solutions. The future research direction can be how to expand more methods. At the same time, China also needs to continue to learn from the trade programs of other countries, learn how to deal with the solutions of other countries, and deal with the relationship between minerals and trade, combined with the above suggestions, so that China's mining industry has become better and better, and through green technology to transform the minerals trade is a multi-dimensional approach that can not only improve the economic performance, but also to ensure environmental sustainability and social responsibility.

While ensuring the sustainable development of minerals, China should have a good trade strategy to expand trade routes and export Chinese products to all over the world, for example, the Belt and Road Initiative not only promotes the growth of trade in and out of the region, but also promotes cultural exchanges and people-to-people exchanges between the countries concerned, which brings opportunities of common development between China and the countries along the route. opportunities for common development [7]. China also needs to learn to use digital trade to broaden the channels of mineral trade, which is also a new type of mineral trade, making trade simpler, faster and more convenient, for example, China promotes the development of international trade through digital trade, e-commerce and other innovative modes [8]. Chinese enterprises represented by e-commerce platforms such as Alibaba and Jingdong have become an important channel for global trade. These platforms have not only facilitated the global sale of Chinese goods, but also opened up new opportunities for direct connections between Chinese companies and global consumers.

DOI: 10.54254/2754-1169/125/2024.17792

References

[1] *Chinese government website. (2023) Opinions of the Ministry of Natural Resources on Several Matters Concerning Deepening the Reform of Mineral Resources Management,Ministry of Natural Resources, Ministry of Natural Resources, July 26.*

[2] *Qingxin Wang, Xiong Yan, Benjie Zhu, Minghai Tao. (2016) The Evolution of Global Iron Ore Trade Pattern and Its Enlightenment to China's Mining Development, Natural Resource Economics of China, (06): 45-51.*

[3] *Haiyang Qiang, Dongyan Guo. (2024) Research on the construction of standard system for green development of China's mining industry [J] Journal of Green Mine, (01).*

[4] *Yongwei Yang. (2017) Efficiency of Chinese enterprises' overseas mining investment [J] Resource Industry Economy.*

[5] *Runtao Zhao, Zhaifei Tian, Xiaoping Liu. (2024) Research on the application of green mining technology in mining engineering, China Metal Bulletin, pp.46-48.*

[6] *Jiayi Chen. (2021) Analysis of global iron ore reserves and resource distribution in 2021 [J] The distribution of iron ore resources and production is extremely uneven, May 30.*

[7] *Liang, H., Lu, Y. (2019). The Belt and Road Initiative and international trade: Evidence from China. China Economic Review, 56, 101284. doi:10.1016/j.chieco.2019.05.007*

[8] *Xie, Y., Li, W. (2021). E-commerce, international trade and the role of platforms: Evidence from China. Journal of Business Research, 122, 809-817. doi:10.1016/j.chieco.2019.05.007*