

# Analysis of operations management at Ansteel and Baosteel

Yuke Zhong

Western-Liverpool University, Suzhou 215123, China.

---

**Abstract:** This paper analyses the operations management of Chinese steel companies Anshan Steel and Baosteel. It reveals their strengths and challenges in operations management by comparing the two companies' inventory management and supply chain management, development strategies, efficiency assessment, and the impact of e-commerce and the Internet. The study found that Baosteel has competitive advantages in terms of market share, research level and logistics efficiency. However, Anshan Iron & Steel has achieved better results in reducing storage pressure by implementing refined inventory management and supply chain optimisation. In addition, both companies actively responded to the development trend of e-commerce and the Internet, but Baosteel was more forward-looking and action-oriented in this regard. Finally, the paper points out the limitations of the study and the direction of future research.

**Keywords:** operations management; inventory management; supply chain management; development strategy; efficiency assessment

---

## Introduction

Both Anshan Iron & Steel and Baosteel are important steel companies in China and an important part of the international steel market. In addition, both companies have the same target customers and are facing transformation issues. Therefore, I think they are valuable for comparative study in terms of operation management. My report will be embodied in six parts: introduction of the two companies, inventory management and supply chain management of the two companies, development strategies of the two companies, who is better and who is worse in terms of efficiency of the two companies, the impact of e-commerce and the Internet on the two companies, reflection and conclusion.

## 1. Comparison of inventory management and supply chain management

### 1.1. Strategies and advantages of inventory management

Inventory is an important part of business. Many companies try to increase profits by reducing costs, and Anshan Steel and Baosteel are no exception. For steel companies, the costs that can be reduced are roughly raw material costs, transport costs, labour costs and storage costs. The other three costs have stabilised as the business has grown, so reducing storage costs has become a better option. Both steel groups determine their production volumes through order quantities in order to avoid large inventory backlogs. In the past, both iron and steel groups had a traditional inventory management model, with each node enterprise managing its own inventory, each department of the logistics channel working separately, and each department's inventory control strategy relatively closed. In recent years, Anshan Iron and Steel using purchase and sales inventory refined inventory management, through the customer order demand to determine the production, effectively reducing the pressure of storage. Baosteel, on the other hand, once again categorises its products and adopts an A-B-C approach to control product inventory. In addition, both companies have adopted inventory counting technology and carried out extensive digital management.

### 1.2. Supply chain management and risk analysis

The supply chain management of the two steel companies is based on the turnover-based rule, and the companies follow the FIFO principle to determine reasonable purchases and inventories based on general auxiliary materials and fuels, auxiliary materials and spare parts, the unit price of purchases and the total amount of purchases as well as the total amount of inventories. The difference is that Angang owns its own mines, which can effectively reduce the cost of raw materials and the cost of transporting raw materials. Therefore, Angang has an advantage in optimising its supply chain. Baosteel relies on imports for its raw materials. This leads to a large amount of reserves in its ware-

houses, which cannot meet the production needs. Therefore, Baosteel's supply chain has more nodes and is more complex.

Considering the problems associated with the supply chain, we need to focus on supply chain risks. One example of this is the COVID-19 outbreak. For the steel industry, the COVID-19 epidemic has made them rethink how to ensure the stability of the industrial supply chain in the face of sudden crises. Firstly, enterprises should continuously improve their core competitiveness through scientific and technological innovation. Anshan Iron & Steel proposes to increase R&D efforts closely related to high-quality projects. Baosteel also proposed the need for strategic investment and steel products in the restructuring of China's top steel products. Secondly, strengthen cooperation with high-end suppliers. Optimise supply chain management and improve supply chain stability by strengthening internal and external coordination and linkage. Finally, it is necessary to be customer-oriented, to study market demand and customer needs in depth, and to accurately locate the direction of customers.

### **3. Comparative analysis of development strategies**

Proper strategy is very important for the growth of the company. Strategy is a plan to achieve organisational goals. It is clear that both Ansteel and Baosteel have adopted a combination of strategies.

Anshan Iron & Steel has four overall development strategies: strengthening the main body of iron and steel, implementing diversified operations, expanding international operations, and achieving sustainable development. Strengthening the main body of iron and steel refers to building core strengths through the implementation of capital operations. The three main industries of mining, ferrous metal smelting and iron and steel trading, and metallurgical engineering and technical services are bigger and stronger. The key to implementing diversified operations is to develop related industries such as equipment manufacturing, building construction and refractory production, so as to make them into growth points of economic benefits with considerable scale of operation and strong competitiveness. Expanding international operation should be centred on optimizing and extending the industrial chain. To improve the international business system, make full use of the international and domestic markets, two kinds of resources, and expand the development space. To implement sustainable development, it is necessary to develop circular economy. It is necessary to combine the expansion of scale, adjustment of structure and digging up potential to increase efficiency, so as to realise the unity of economic benefits, ecological benefits and social benefits.<sup>[3]</sup>

Unlike the development strategy of Anshan Iron and Steel, Baosteel's strategic goal is to become a world-class international public company with independent intellectual property rights, strong comprehensive competitiveness and respect from the society. It aims to become one of the world's top 500 outstanding enterprises, and the comprehensive competitiveness of its main steel industry to enter the top three in the world. <sup>[4]</sup>This strategic goal determines the development strategy of Baosteel. Baosteel will develop a service-oriented manufacturing industry based on improving cost competitiveness and adhering to the principle of technological leadership. The strategy calls for the creation of a digital Baosteel, which will make Baosteel a driver of the green industrial chain and cultivate Baosteel's future core strengths. Baosteel will also shift from a development model of investment and new construction to one of investment and new construction, mergers and acquisitions. Baosteel will build its development on the basis of system capacity building and soft power enhancement by taking cross-regional strategic control as the leader and sharing and synergistic services as the platform.

### **4. Comparative analysis of efficiency assessments and discussion of results**

Comparing Ansteel and Baosteel, Baosteel is better in terms of efficiency, effectiveness and economy. There are three reasons why Baosteel has an advantage: first, Baosteel's leading products have a high market share and a significant influence in the domestic steel market. In 2019, plate production accounted for 82.3 per cent of the total; and revenue from the plate business accounted for 80.3 per cent of the revenue from the steel business. Such a high market share means that Baosteel has stable demand for its products, making its production stable without a large inventory backlog. In contrast, Anshan Iron and Steel has a higher market risk and relatively unstable production. Secondly, Baosteel has a high level of scientific research. The higher level of scientific research not only makes some of Baosteel's products (e.g., some automotive structural steel) irreplaceable, but also effectively improves Baosteel's steel production efficiency and raw material utilisation. <sup>[5]</sup> Finally, it has to be said that Baosteel's steel logistics is more efficient compared with all domestic steel enterprises. Baosteel has a railway

warehouse and a dock warehouse. These two warehouses are the closest and largest distribution centres of Baosteel to the production site, with a very advantageous geographical location. In addition, the two warehouses have auxiliary processing and transport capabilities.

## 5. Impact of e-commerce and the Internet

E-commerce and Internet technologies have had a significant impact on traditional industries. After decades of standardised and large-scale production, there is a relative surplus of steel production worldwide and competition in the steel product market is becoming increasingly fierce. In the face of this problem, the electronic steel market is an effective means to improve the competition of steel products, which has become the unified consensus of major manufacturers in the industry. However, there are still very few e-commerce related products that can be applied to steel companies.<sup>[6]</sup>

Baosteel is one of the few companies that have established a Bsteel e-commerce trading platform. Although Ansteel has access to the Internet, it mainly remains in the primary stage of enterprise introduction and product samples. The implementation of supply chain management starts with the realisation of information and sharing between suppliers and retailers, and between various departments within the enterprise, so that each link in the supply chain can respond quickly to the changing needs of customers. Therefore, in order to meet the changing needs of customers and better increase profits, paying attention to Internet technology and establishing an e-commerce platform is the way to go for the future development of the two companies.

## Conclusion

In summary, inventory management and supply chain management in the two steel companies are unique. Despite their different development strategies, they both attach great importance to industrial transformation. Both Anshan Iron and Steel and Baosteel are facing problems brought about by the development of e-commerce and Internet technology, but comparatively speaking, Baosteel has a faster response time and a better level of production capacity and economic development. At the same time, my report inevitably suffers from poor data currency and incomplete data, and I will further improve the rigour of the article in the future!

## References

- [1] Aidong Xin. Angang: highly integrated realization strategy and operation “double layer” drive [J]. China’s manufacturing industry informatization,2011(16):23-25. DOI:10.3969/j.issn.1672-1616.2011.16.005.
- [2] Weijun Liao. — Take Baosteel Industrial Technology Service Co., Ltd. to cultivate core competitiveness as an example [J]. economic engineer,2021(4):268-269. DOI:10.3969/j.issn.1004-4914.2021.04.137.
- [3] Lan Xiao. The developing Shanghai Baosteel Group [J]. Chinese metallurgy,2001(6):1-4. DOI:10.3969/j.issn.1006-9356.2001.06.001.
- [4] Liang-yu zhang.(2001) Application of e-commerce in iron and steel joint enterprises.