

How Chinese Private Medium-Size Steel Traders Response to Political & Economical Change by Business Model Transformation: An Evidence from Zhejiang Dongchang Industrial Group Ltd

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Abstract. The recent changes in China's economic and political environment have brought challenges to the operations of small and medium-sized steel traders, prompting them to transform their business models. This article uses Dongchang as an example to analyze its business model's transformation and point out a reasonable direction. The analysis process of this paper provides insights for other small and medium-sized steel trading enterprises to transform their direction.

Keywords: China economy; steel trading enterprises; small and medium-sized enterprises; transformation of business model.

1. Introduction

China's current policy and economic environment present challenges for small and medium-sized steel traders, whether established incumbents or new entrants attracted by infrastructure development. Supply-side structural reforms cut backward production capacity, which means many small steel mills shut down, reducing the channels for steel traders to obtain low-priced goods [1]. At the same time, the development of the platform economy shortened the distance between steel mills and customers, weakening the importance of steel traders as intermediaries. More seriously, in August 2020, the implementation of real estate regulation and control policies caused the number of real estate developments to enter a downward trend, resulting in a significant contraction in actual estate-related steel demand [2]. In the case of capacity production greater than demand, product prices gradually falling from the highest point is the probable trend. These challenges weakened the development opportunities previously presented by the need for large-scale construction. Therefore, the companies' existing business models are no longer profitable and need to be transformed.

According to Zott, Amit, and Massa [6], business models emphasize a systems-level approach to explaining how companies operate businesses; business activities play an essential role in the various model concepts proposed. Business models emphasize a systems-level approach to explaining how companies operate businesses [6]. There are currently five business models that mainstream steel traders are adopting: the steel mill agency model, the sales terminal model, the speculation of market price model, the spread trading model, and the supply chain finance model [5]. This article provides suggestions for the business model alteration of steel traders, using Zhejiang Dongchang Industrial Group Co., LTD (later referred to Dongchang) as an example.

Dongchang was established 28 years ago and is one of the typical medium-sized steel traders, with the company's annual average transaction of more than 500,000 tons. By analyzing Dongchang Industrial Group, this article will inspire the business model change of more steel traders of the same scale.

2. Mainstream Business Models of Current Chinese Steel Traders

Although there is no consensus on the precise definition of a business model, scholars still have some unanimity on what a business model should be [6]. The study of business models is interdisciplinary and diversified in perspectives, including profit models, organizational structures, strategic choices, and other aspects. Therefore, this article follows Morris, Schindehutte, and Allen

[3] and defines the business model as one in which decisions are made in a defined market to create a sustainable competitive advantage. For the current Chinese steel traders, according to Wang [5], the mainstream business models are mainly the following five.

The Steel Mill Agency Mode This is the most traditional business model. The trader and the steel mill sign an annual regional agency sales agreement, specifying the sales area and annual order sales volume. This model ensures stable resources, allowing continuous supplies. However, the ordering policy is unilaterally specified by the steel mill, which means that the agents have no right of decision, putting themselves in a passive position.

The Supply Chain Finance Model Steel trading has an enormous demand for funding, so plenty of large state-owned companies would choose to apply the supply chain, finance model. Steel traders often rely on prominent agents for their financing, paying 1% to 1.2% of the monthly interest rate on the cash. This approach contains capital risks but avoids the risk of market fluctuations. Thus, the vast majority of small and medium-sized traders are easily squeezed out of the industry because this model requires companies' ability to access large amounts of capital at a low cost.

The Speculation of Market Price Model Companies holding this model will purchase steel products on a large scale when the market prices for certain products are relatively low for a company. Then, the company will hoard the purchased products to the fixed market, wait for the price to rebound, and sell at a higher price. This model brings enormous profits during periods of rising prices as long as the company grasps the market price quotation and operates on a large scale. However, during declining prices, companies find it challenging to sell the goods at a high price range, so there will be repeated losses. The crucial loss for a company may affect the mentality of the company, leading to its easy collapse. This is also the current business model Dongchang selected.

The Spread Earning Model This model is preferred by risk-averse entrepreneurs because it allows earning the difference by finding low-priced resources and selling them at market price. The model does not take the market risk and grows steadily, but the overall profit and net profit are low. Moreover, with the more perfect and transparent market mechanism, fewer channels exist to buy below market price.

The Sales Terminal Model For those looking to reduce inventory pressure, this model is more attractive. The company supplies various steel products to customers according to their requirements. This model requires considerable familiarity with the products in the market and prior preparation of certain specifications prone to the shortage. Since steel traders typically analyze the market price more accurately than customers, profits will be gained, even excess profits, through the skilled operation. This model requires companies to have the ability to manage customer product demand and be able to grant billing periods when customers are short of funds, so smaller companies that typically focus on serving a limited number of customers are more likely to choose this model.

Most small and medium-sized steel traders will switch among these five models when they encounter difficulties in their operation. However, if companies follow the trend to shift to the so-called "best model" without an accurate grasp of the company's capabilities, this conversion may not meet their expectations. For this reason, the article will explore the more suitable business model conversion for Dongchang at present and provide thoughts on other small and medium-sized steel traders' business model transformation through the analysis of the political and economic conditions faced by Dongchang enterprises as well as their competitive advantages.

3. Dongchang & Its Business Model

3.1 Basic Information of Dongchang

Dongchang is a medium-sized steel trader established in 1993 and located in Zhejiang, one of the most developed provinces in China, near Shanghai, east China. The company is famous for its brand and qualified service. Dongchang is mainly engaged in the steel agency, sales, and distribution business, with the main products of H-beam, pinion steel, steel sheet pile, medium plate, and wire

rod. Due to the sluggish market trend in the steel industry, Dongchang is under increased operational pressure [4]. Accordingly, Dongchang urgently needs to make adjustments to its business models.

3.2 Current Business Model for Dongchang

As mentioned above, Dongchang currently uses the speculation of the market price model as its primary operating strategy. The current business model is built on *fluctuating market conditions* and *sufficient customer demand*. First, the application of this model is because of a significant fluctuation in the product's market price to have room for arbitrage. As reflected by Fig. 1, Dongchang's main commodity prices for the past three years, the most significant value is big to some extent, meaning that the price fluctuation is more upward biased. This indicates that high returns were presented when selling at high prices. Also, the median is relatively close to the lowest value, showing the frequent appearance of low-price value. With high extreme values and recurrent low prices in the market, the company can efficiently operate using the speculation of the market price model.

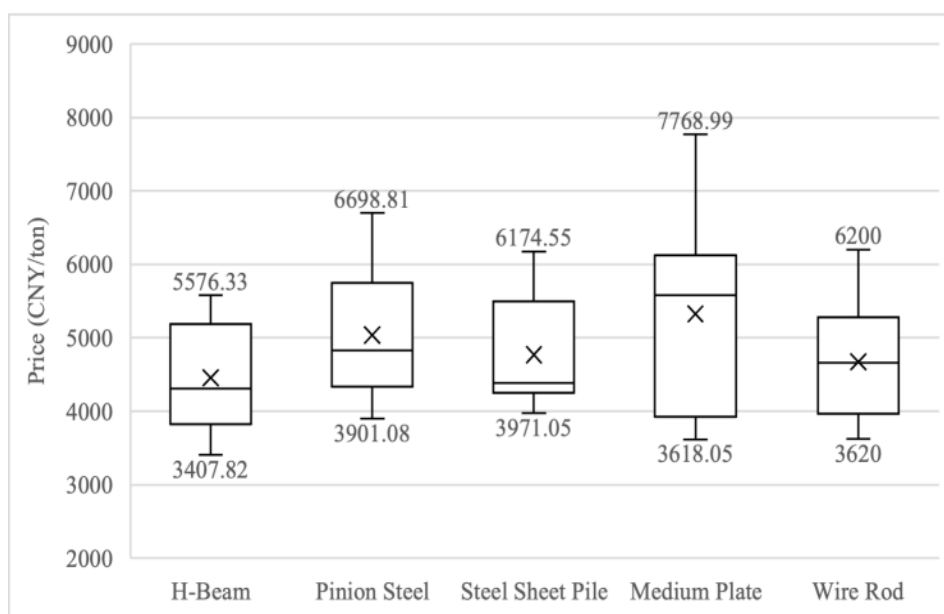


Figure 1. Product Price from July 2019 to July 2022

Second, Dongchang contains a large number of customers due to 28 years of operation, which ensures a continuous demand. On the one hand, Dongchang is famous in East China for its perfect service system, including terminal distribution, warehousing logistics, dock, and processing of steel products. The qualified service system facilitates the use of this model to gain profits, which can further improve the service system and thus attract more customers. On the other hand, in order to consolidate the service quality and the brand, Dongchang centered its scope of business in Hangzhou, Zhejiang Province, and extended to Jiangxi, Jiangsu, and part of the regions in Shanghai. Due to a large number of customers, customer demand for the product is relatively stable even if the prices are at a high point, as shown in Fig. 2. The exception of January and February can be explained by the arrival of China's most important holiday, the Chinese New Year, which prompts workers to turn back to their hometowns to reunite with their families. Work is suspended during this period, thus reducing steel demand.

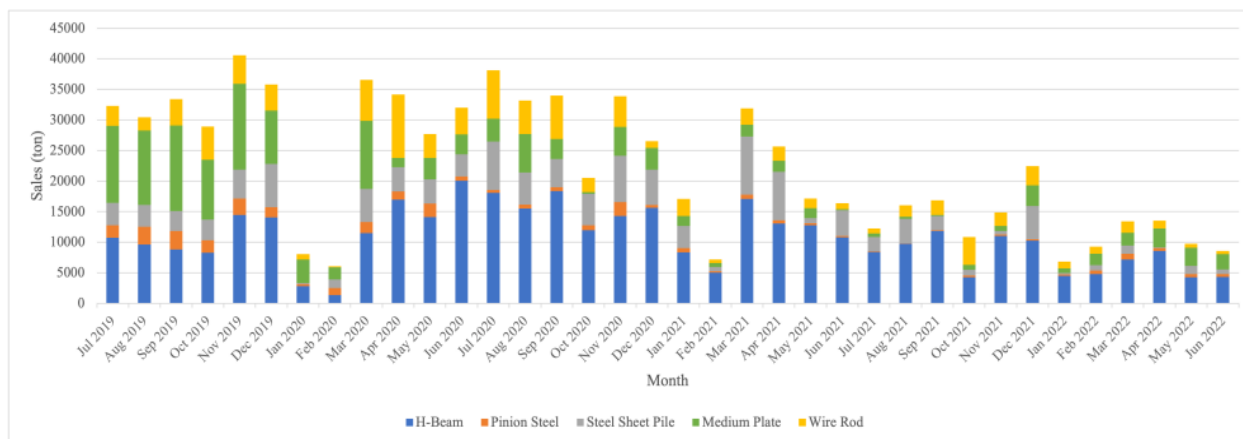


Figure 2. Total Product Sales from July 2019 to July 2022

However, due to the harsh economic environment, the current business model cannot continue to operate. Firstly, long-term real estate decline causes a backlog of inventory. The burst of large property companies resulted in a significant decline in real estate development, which caused a decrease in the amount of steel used in real estate. The declined customer demand would quickly cause an inventory buildup. According to the general manager of Dongchang, Dongchang has taken the initiative to reduce inventory to avoid the risk of inventory buildup. Fig. 3 shows the slow decline of Dongchang's inventory in the past year. This action confirms that the analysis of the article is correct.

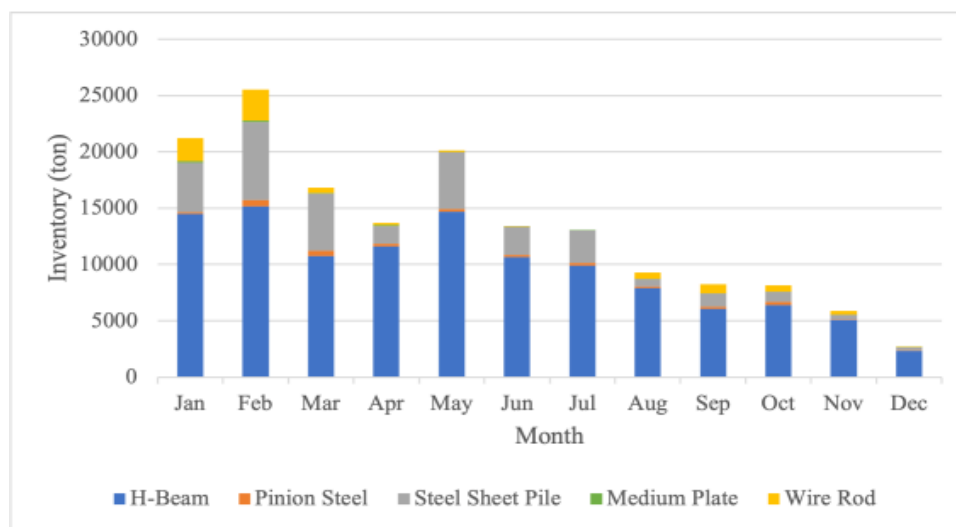


Figure 3. Dongchang's Product Inventory in 2021

Secondly, the shrinking demand narrows the profit margins of steel traders. The decreasing demand leads to a decline in steel traders' confidence in the market; therefore, steel product prices are missing expectations of an increase. It is shown in Fig. 4 that the price trend over the past year has been relatively flat, in line with the policy's expected judgment, except for medium plates. The price of medium plates increased in 2021, but medium plates accounted for a small percentage of the inventory. Although there is still the possibility of using the speculation of the market price model, the low volume of medium plates cannot determine the overall business model. At the same time, even if the price rebound, the smaller inventory stops steel traders from grasping the opportunity to obtain high profits. Thus, companies that adopt the speculation of market price models are not sustainable.



(a) Stable Relative Price

(b) Decreasing price

Figure 4. Product Price in 2021

4. Possible Business Model Transformation Directions for Dongchang

In the face of a recession and a lousy market, Dongchang should choose a customer-centric business model because of the increased importance of customers. The sales terminal model is an option worth considering. Because this business model is based on the customer's customized needs for stocking, there is less pressure on inventory. The cost savings, therefore, help to provide customers with additional services, thus expanding revenue. Small businesses usually apply this model, and medium-sized businesses may have disadvantages. Since medium-sized business customers are fragmented and difficult to focus on, they cannot provide unique services. However, Dongchang can avoid shortcomings. Dongchang can provide a high level of service because it has a small service area spotlight on regions in Zhejiang Province and parts of nearby cities, including Shanghai, and therefore a concentration of customers. For instance, the company can offer a low-cost logistics system for small customers. Because Dongchang has plenty of centralized customers, it can package and ship steel products to customers in the same region, thus reducing logistics costs and improving the customer service experience.

Dongchang, as a medium-sized enterprise, can utilize this model not only because of minor disadvantages but also due to several strengths. First, Dongchang has a group of loyal customers and has built a relationship of mutual trust during long-term business transactions. As a steel trader, Dongchang is familiar with what products regular customers need at a specific time. Dongchang can better adjust inventory according to customer demand, thus reducing inventory pressure. Moreover, since relatively adequate funding and a trusting relationship have been established, Dongchang is willing to provide billing periods without fear of default. Next, Dongchang's experience in selling diversified products can meet the requirements of this business model to provide various products to meet specific needs. Because of its experience in management and sales diversification, Dongchang can manage product inventory rationally without being disrupted by selling multiple products.

Considering that transformation takes time, the current business model, the speculation of the market price model, needs to be maintained during this period. Dongchang can avoid significant losses by seeking to buy below the average selling price during the transition period. Tab. 1 shows the analysis of the average price of the top steel products in which the company has operated for the last three years. In the follow-up, as long as the products are purchased below this Price, Dongchang will not be in deficit relatively.

Table 1. Sales of Major Product from July 2019 to July 2022

Product	Total Sales (ton)	Total Revenues (10 ⁸ CNY)	Average Selling Price (CNY/ton)
H-Beam	382,851	16.70	4,316.82
Pinion Steel	34,599	1.57	4,525.89
Steel Sheet Pile	127,130	5.78	4,548.78
Medium Plate	145,779	6.55	4,494.35
Wire Rod	111,882	4.88	4,366.04

5. Conclusion

This article contributes an analytical basis and direction for Dongchang to respond to changes in China's economic and political environment by transforming its business models. Besides, the article also provides help for the transformation within the transition period. Recent changes in the economic and political environment, including a reduction in steel demand, a decrease in steel prices, and a competitive market, have posed some challenges for Dongchang. Those challenges consist of slight fluctuation in the market, non-profitable prices, and massive hoarding, which threaten the development of Dongchang. Based on the three significant advantages of Dongchang (adequate capital, large customer base, and extensive product management experience), this passage points out that Dongchang can be transformed into the sales terminal model. Although other companies will face similar threats, this does not mean that other small and medium-sized companies should blindly follow and adopt the same business model. Other companies must define their business models based on their resources and capabilities. They also need to reserve resources or design programs for the transition period.

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