Exploring the Mechanisms of Value Chain Management's Impact on Bear Electric's Profit Model

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Abstract: In the context of the data era, small home appliance enterprises must further focus on their operational structure to stand out in the competitive landscape. They need to explore how to achieve transformation and sustainable development through innovative profit models. This paper employs the case study method, using Bear Electric, a listed company on China's A-share market, as an example. It analyzes the company's supply chain, production process, and sales channels from the perspectives of internal, vertical, and horizontal value chains. The study reveals the core elements of its profit model and their interrelationships. It also provides relevant recommendations for the company's sustainable development to help optimize Bear Electric's profit model. This research contributes to a deeper understanding of the operational and business models of small home appliance enterprises, promoting the healthy development of the small home appliance industry.

Keywords: Value Chain Management; Profit Model; Small Home Appliance Enterprises; Horizontal Value Chain; Vertical Value Chain

1. Introduction

As an important component of the national economy, the development of the home appliance manufacturing industry has a significant impact on economic growth. The rapid development of the market economy has brought revolutionary reforms and new development directions to the home appliance industry. The traditional home appliance sector faces a common dilemma of having a single revenue source, which has become a unified developmental bottleneck. Therefore, seeking adjustments in profit models is a shared aspiration within the industry. However, as competition intensifies, the question of how small home appliance enterprises can maintain their competitive advantage and achieve sustainable development becomes increasingly pertinent.

Traditional manufacturing methods are often inadequate in meeting the demands of the information age, where the Internet economy is profoundly transforming traditional manufacturing practices. For traditional enterprises to innovate and reform, merely expanding production scales and enhancing technologies is insufficient. A comprehensive transformation of their business models, leveraging data technology, is required. The value chain perspective is a widely used theoretical model in business management and strategy formulation. By analyzing a company’s operational model through the lens of the value chain, it is possible to identify the values created at each stage within the company, thereby uncovering its profit model and competitive advantages.

This paper explores the profit models of Chinese small home appliance enterprises from the perspective of value chain analysis. Using Bear Electric, a listed company on China's A-share market, as an example, the study examines the company's supply chain, production process, sales channels, and brand building through the internal, vertical, and horizontal value chains. It identifies the key elements that create value at each stage. By investigating Bear Electric’s profit model, this paper aims to provide a deeper understanding of its business model and operational methods, thereby contributing to the healthy development of the small home appliance industry.

2. Literature Review and Theoretical Analysis

Porter first proposed the concept of value

chain in his book "Competitive Advantage". In analyzing the competitive advantage of enterprises, he found that the behaviors of companies to create value are mainly divided into five main behaviors: entry logistics, manufacturing production, exit logistics, sales, and after-sales service, and four auxiliary behaviors: enterprise infrastructure, human resources support, technical support, and procurement. These value behaviors constitute the value chain, which helps enterprises improve their operating systems and enhance their development capabilities [1]. By decomposing each link in the value chain and conducting research, enterprises can find out the weak links of their own value chain based on each link and activity in the value chain, and carry out more targeted supplementary construction [2]. Technology investment and process transformation in the generation link will effectively enhance the value of enterprise products; capital investment in the R&D link will increase the enterprise's new product iteration capabilities and increase market advantages; investment in sales services and other links will also bring various added values to enterprises [3,4]. The enterprise value chain is further divided into upstream value chain and downstream value chain. It is believed that the selection of upstream and downstream value chains has a key impact on the sustainable operation of enterprises, focusing on the selection of suppliers and the maintenance of customer relationships [5]. Some scholars also conduct research from the perspective of internal value chain and external value chain, and believe that establishing internal and external value chain indicator systems respectively will effectively improve the operating efficiency of enterprises [6].

Existing scholars have conducted research on enterprise value from a variety of dimensions. It is believed that the value chain is volatile at different times in the product production cycle, and the issue of determining the value link based on the sales cycle or the production cycle is discussed [7]; the time-driven activity-based costing method and the value chain are combined to try to reconstruct the motivation of each value link within the enterprise based on time measurement to help the competitiveness of the enterprise [8]. More scholars have conducted research on enterprise value chain analysis based on cases. Taking Haidilao as an example, the catering industry was analyzed, and the cost control measures of the catering model were analyzed from the perspectives of internal value chain, vertical value chain, and horizontal value chain [9]; taking Xibei Group as an example, the internal and external value chains of the enterprise were sorted out, and the value chain model of enterprise digital transformation was explored [10]. According to the above domestic and foreign literature, it can be seen that the relevant research on enterprise value chain analysis revolves around the enterprise profit model and the integration of resources, thinking about how enterprises can create high-quality products and services through the advantages of the value chain to help enterprises maximize their benefits.

3. Research Design

This paper focuses on the study of Bear Electric Company. From its financial data over the years, it is evident that Bear Electric has shown strong performance in production, research and development, distribution channels, and after-sales service. This success has broken the triopoly of Joyoung, Supor, and Midea in the Chinese small home appliance market, making Bear Electric a representative player in the industry. The data sources primarily include internal company archives and other publicly available information, such as annual reports, policies and regulations, books related to the company, news articles, and other publications.

The research methods employed in this study are primarily literature analysis, case study analysis, and comparative research. Based on relevant domestic and international studies, the paper summarizes and analyzes the integration paths of operational models and value chains, providing detailed data and theoretical support. By conducting horizontal and vertical comparisons of Bear Electric with average data from other home appliance industries, the study aims to achieve two main goals: on one hand, to help Bear Electric quickly identify problems in its profit model and understand the underlying causes; on the other hand, to provide relevant references for formulating optimization strategies.

4. Internal Value Chain Profit Model

Analysis

4.1 Introduction to the Case Company

Bear Electric Co., Ltd. was founded in 2006 by Mr. Li Yifeng in Foshan, Guangdong, and was listed on the Shenzhen Stock Exchange on August 23, 2019. Adhering to the business philosophy of "Creativity First, Quality Supreme," Bear Electric seamlessly integrates creativity with functionality, applying innovative technology to everyday life. The company is dedicated to providing stylish, durable, high-quality, and highly creative small household appliances and services.

Bear Electric's product line is extensive, with over 60 product categories and more than 500 different models, including various types of products such as health pots, electric stew pots, humidifiers, egg cookers, choppers, and meat grinders. Although each product's sales volume is not large individually, collectively, they generate substantial total sales revenue. These products primarily target young consumers, especially young women, due to their often cute and adorable designs that attract consumers. Bear Electric primarily relies on internet sales, with most of its revenue coming from online channels, while offline channels serve as a supplement to online sales. The company is also expanding its overseas business, which is growing rapidly, particularly through deep penetration into the Southeast Asian market.

4.2 Internal Value Chain Analysis

In the procurement process, Bear Electric rigorously selects and evaluates suppliers to ensure strict control over raw material sourcing, ensuring that purchased materials meet both Chinese national standards and the company's basic quality requirements. The company establishes long-term cooperative relationships with suppliers and has implemented a comprehensive procurement process management system, achieving digital risk control from demand analysis to order generation, supplier selection, contract signing, and goods inspection. In the research and development phase, Bear Electric invests heavily in technological research and development to guarantee product quality and performance. With a dedicated R&D team, they continuously innovate and upgrade products to meet consumer demands for enhanced efficiency, intelligence, and convenience. In the production process, most of Bear Electric's products are manufactured in-house, with a small portion produced with assistance from third-party collaborators.

From Table 1, it is evident that raw material costs for Bear Electric account for 56.73% of total operating costs, representing the largest cost item. This figure increased by 0.34% year-on-year, indicating the company's expenditure on raw material procurement has remained relatively stable. Direct labor costs account for 6.37% of total operating costs, with a year-on-year increase of 5.72%. This may reflect increased spending on labor, possibly due to rising employee wages, benefits, or other human resources-related expenses. Manufacturing expenses represent 6.74% of total operating costs, showing a significant year-on-year increase of 23.23%. Outsourced processing costs constitute 1.54% of total operating costs, with a year-on-year decrease of 17.75%, suggesting a reduction in expenditures on external processing services and a change in the company's supplier selection strategy. Outsourced production costs, comprising 28.62% of total operating costs, increased by 26.30% year-on-year, highlighting the company's growing reliance on external manufacturing collaborations.

Table 1. Ratio of Each Project to Operating Cost

project	2022	Proportion to operating costs	2021	Proportion to operating costs	Change rate
raw material	1,472,744,343.42	56.73%	1,467,763,410.54	61.07%	0.34%
Labor costs	165,320,910.56	6.37%	156,378,931.98	6.51%	5.72%
Manufacturing costs	175,098,498.50	6.74%	142,089,635.50	5.91%	23.23%
Outsourced processing	40,106,195.31	1.54%	48,763,381.08	2.03%	-17.75%
Outsourced production	743,146,294.93	28.62%	588,412,660.35	24.48%	26.30%

Overall, in 2022, Bear Electric's cost structure is dominated by raw materials and outsourced production costs, while direct labor costs and manufacturing expenses represent relatively smaller proportions.

In the sales segment, Bear Electric's operating revenue has been consistently increasing from 20.41 billion yuan in 2018 to 41.177 billion

yuan in 2022. Compared to the same period in 2021, there was a growth rate of 14.18% in 2022. This revenue growth can be attributed to Bear Electric's continuous innovation in products, effective marketing campaigns, and enhanced brand recognition, which have garnered increasing consumer approval and order volumes.

Table 2. Ratio of Each Project to Operating Cost

project	2022	Proportion of operating revenue	2021	Proportion of operating revenue	Change rate
Operating income	4,117,698,932.81	100%	3,606,340,290.35	100%	14.18%
Electric(Kitchen)	602,803,689.97	14.64%	596,781,552.27	16.55%	1.01%
Electric heating type(Kitchen)	318,284,632.07	7.73%	330,029,110.66	9.15%	-3.56%
Pots and Casseroles(Kitchen)	1,004,689,600.01	24.40%	767,468,331.24	21.28%	30.91%
Kettles(Kitchen)	752,600,209.17	18.28%	627,870,582.99	17.41%	19.87%
Western-style appliances	684,670,974.86	16.63%	611,145,425.26	16.95%	12.03%
Small household appliances	395,258,073.23	9.60%	406,514,487.28	11.27%	-2.77%
Other small household appliances	325,676,971.32	7.90%	227,961,022.33	6.32%	42.87%
Others	33,714,782.18	0.82%	38,569,778.32	1.07%	-12.59%

From Table 2, it can be observed that Bear Electric's revenue composition includes Kitchen Electric Appliances, Kitchen Electric Heating Appliances, Kitchen Cookware Appliances, Kitchen Kettles, Western-style Kitchen Appliances, Household Small Appliances, Other Small Appliances, and Other Business segments. In 2022, the revenue from Kitchen Electric Appliances was approximately 603 million yuan, accounting for 14.64% of total operating revenue, with a year-on-year growth of 1.01%. Revenue from Kitchen Cookware Appliances was around 1.005 billion yuan, representing 24.40% of total operating revenue, and showing a year-on-year growth of 30.91%. Revenue from Kitchen Kettles was approximately 753 million yuan, making up 18.28% of total operating revenue, with a year-on-year growth of 19.87%. Revenue from Western-style Kitchen Appliances was about 685 million yuan, accounting for 16.63% of total operating revenue, and demonstrating a year-on-year growth of 12.03%. These figures indicate that Kitchen Cookware Appliances make the largest contribution to Bear Electric's total revenue, while Kitchen Electric Appliances contribute relatively less.

4.3 Deficiencies in the Profit Model within the Internal Value Chain

Bear Electric's internal value chain faces challenges primarily in the areas of product development and sales progress falling short of expectations. This situation may result in a slower pace of product iteration, causing the company to struggle in meeting consumer demands promptly and impacting its market competitiveness. Despite Bear Electric's strong emphasis on research and development innovation, difficulties in the development and sales of new products could lead to slow product line updates, failing to keep up with evolving consumer needs, thus affecting brand accumulation and market performance.

Regarding capacity issues, Bear Electric's production capacity has not kept pace with the growth in revenue scale. Some orders are outsourced for production, leading to bottlenecks in production capacity. Outsourcing production is a model of industrial chain cooperation and division of labor, where the value chain is distributed between upstream and downstream enterprises. This division means that the original product value is split, with both the contracting company and the commissioned production company taking a share of the value. Therefore, considering this issue from a gross profit margin perspective, the gross profit margin of products under this outsourcing model would naturally be lower than that of products produced directly by the company.

5 Vertical Value Chain Profitability Analysis

5.1 Vertical Value Chain Analysis

Bear Electric's upstream supply chain mainly includes raw material suppliers such as motors, control boards, plastic parts, metal parts, and plastic materials. These raw materials account for a significant proportion of the company's

cost structure, with commodity materials such as plastic and hardware components making up about 75%. To better manage raw material procurement and ensure product quality, Bear Electric has established an internal supplier management center and implemented comprehensive procedures such as supplier management methods. Additionally, the company manages procurement plans, order disassembly, and supplier processes through information systems. This autonomous procurement approach enables the company to purchase according to its quality standards and specific requirements, thereby ensuring the quality and stability of raw materials.

Bear Electric's downstream customers primarily consist of various retailers and consumers. From a sales channel perspective, online channels dominate Bear Electric's sales. According to statistics, in 2022, Bear Electric achieved 85.45% of its sales through e-commerce platforms such as Tmall and JD.com. This indicates that Bear Electric has successfully expanded its products into the online market and attracted numerous consumers. Among e-commerce customers, JD.com stands out as Bear Electric's largest downstream customer. In 2022, sales through JD.com amounted to 1.242 billion, accounting for 30.15% of the company's total revenue. This underscores JD.com's importance as a significant sales channel for Bear Electric and highlights the popularity of Bear Electric's products on the JD.com platform.

5.2 Deficiencies in Profitability Models within the Vertical Value Chain

Bear Electric faces significant limitations in its target profitability. As mentioned earlier, the company predominantly targets young consumers. Despite efforts to expand its product lines and customer base, Bear Electric has not achieved the desired results. The company's establishment expenses were primarily aimed at meeting the demands of young consumers and enhancing brand influence and market share, which inherently restricts its consumer base.

Profitability data indicates that Bear Electric overly relies on online sales, and recent product quality issues have adversely impacted its brand reputation. This situation could lead to customer attrition among downstream customers, thereby reducing profitability, operational capability, and debt repayment ability, consequently affecting the company's future growth prospects.

6 Horizontal Value Chain Profitability Analysis

6.1 Horizontal Value Chain Analysis

Bear Electric faces significant competition from large household appliance enterprises such as Midea Group and Haier Group. These companies possess extensive industry experience and strong brand influence, covering a wide range of products from large appliances to small appliances, thereby exerting considerable competitive pressure on Bear Electric. Additionally, companies specializing in small household appliances like Joyoung and Supor also pose challenges due to their deep technological expertise and strong customer reputation in the small appliance sector. For instance, Joyoung dominates the soy milk maker market, while Supor holds significant competitive advantage in the cookware market. Moreover, with the rise of internet consumption, small kitchen appliances like those offered by Bear Electric are well-suited for accelerated penetration through online sales channels.

Therefore, platforms such as JD.com and Tmall can also be considered indirect competitors to Bear Electric. These e-commerce platforms not only provide sales channels but also introduce a range of small household appliances under their own brands, directly competing with Bear Electric. Overall, Bear Electric faces substantial pressure in the small household appliance market and needs to enhance its competitiveness through improvements in product quality, innovative design, and optimized sales channels.

6.2 Deficiencies in Profitability Models within the Horizontal Value Chain

Bear Electric's strategy primarily focuses on innovative lifestyle appliances, enabling it to avoid the intense "price wars" prevalent in the small household appliance industry and rapidly gain market entry. However, as market competition intensifies and consumer demands evolve, Bear Electric encounters bottlenecks. Challenges include maintaining its product innovation capabilities. Despite its reputation for creative small household appliances, the

continuous pressure for innovation places higher demands on its research and development team. Failure to consistently introduce novel and practical products may lead to loss of consumer interest.

There are also challenges in enhancing brand recognition and influence. Although Bear Electric performs well in online sales, its brand recognition and influence still lag behind those of larger household appliance companies. This disparity could affect its market position in competitive scenarios. Furthermore, limitations in market scale exist despite Bear Electric's impressive performance metrics, prompting market questions about whether the company is overvalued relative to its profits. This reflects the challenges Bear Electric faces in expanding its market scale. Lastly, there is a risk associated with over-reliance on online sales. While online channels initially provided Bear Electric with survival space, excessive dependence on these channels poses risks.

7. Conclusion

This paper starts from the theory of profitability models, using Bear Electric as a case study to analyze its profitability models from three value chain perspectives. Overall, Bear Electric's profitability quality and capability are above average. The company's unique product designs with high cost-effectiveness, where over 90% of products are priced below 200 yuan, are highly favored by young consumers. This has enabled Bear Electric to capture over 30% market share in niche categories. However, there are still deficiencies in its profitability model, for which this paper proposes the following optimization recommendations.

Establishing an automated production system and considering the adoption of intelligent production lines to enhance production efficiency and reduce labor costs. By implementing lean production and quality management systems, optimizing production processes, minimizing waste, and improving product quality and production efficiency. This approach aims to mitigate the production pressures associated with outsourced manufacturing.

Diversifying product distribution channels. To reduce over-reliance on online channels, Bear Electric can consider adopting a diversified sales strategy such as opening physical stores, participating in various exhibitions, etc., to increase brand exposure and enhance consumer touchpoints.

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