

# E-commerce Platform to Promote the Development of Shantou Traditional Toy Industry Research

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**Abstract.** Currently, the traditional toy industry in Shantou City is large in scale and has a complete industrial chain; however, it is facing problems such as competition, channels, and brand development. Meanwhile, e-commerce platforms are developing rapidly and have been deeply integrated into the toy industry, which brings many positive impacts. This article focuses on the promotional role of e-commerce platforms in the traditional toy industry in Shantou City and takes J Company as a typical case for research. By collecting data from J Company and doing a case study, the impact of factors such as e-commerce platform operation investment on the profits of toy enterprises is clarified. Based on this, strategies for promoting industrial development are proposed from aspects such as improving logistics, cultivating talents, strengthening brands, and promoting innovation. The strategies can provide a theoretical and practical basis for the development of the traditional toy industry in Shantou City with the help of an e-commerce platform.

**Keywords:** Shantou, E-commerce platform, Traditional toy industry.

## 1. Introduction

### 1.1. Research Background

The toy industry holds significant importance in global economic and social development. From an economic perspective, it is a large-scale industry with a global market value exceeding a hundred billion dollars. Particularly in major manufacturing countries like China, toy production and export provide crucial support to local economies, driving employment and the development of the industrial chain. Toys are not only entertainment tools for children's growth but also a key media for promoting cognitive, creative, and social skills development. Educational toys and Science, Technology, Engineering, and Mathematics (STEM) educational products have become essential components of modern early childhood education [1]. Additionally, toys serve as important carriers of cultural dissemination and influence global popular culture through IP derivatives and trendy toys. Besides, toys even promote social concept changes, such as the popularization of gender equality and environmental awareness. In recent years, the rise of the adult toy market has further expanded the industry's boundaries, with innovative trends such as intelligence and sustainable materials driving industry upgrades. Despite facing competition from digital entertainment and challenges from safety regulations, the toy industry continues to hold a significant position in the global market due to its unique economic value and social influence. In the digital age, traditional industries are under pressure to transform but also face opportunities. Shantou, as an important toy manufacturing base, the traditional toy industry has great significance to the local economy. However, with intensified market competition and changing consumer demands, enhancing industrial competitiveness and achieving sustainable development have become urgent issues. The traditional toy industry faces numerous challenges. Many enterprises rely on offline sales, with slow information transmission and a sluggish response to market changes. Poor production and sales coordination, along with rising raw material and labor costs, have compressed profits. Moreover, the toys currently produced in Chenghai are mostly low-tech products. Few high-tech talents return to Chenghai, and enterprises do not place much emphasis on educational qualifications, resulting in a relatively low educational level within the entire industry [2]. Externally, uncertainties have affected many enterprises exporting to the United States, leading to cost reduction, decreased employee income, and reduced profits for supply chain partners. Some small and medium-sized export-oriented enterprises are at risk of production

cuts or closures, causing unemployment [3]. The rise of e-commerce platforms brings new opportunities [4]. It breaks geographical barriers, helping toy enterprises expand their markets, reach global consumers, understand demand dynamics, optimize products, enhance competitiveness, and promote the digital transformation of the industry, significantly increasing enterprise profits [5].

## 1.2. Research Significance

This study aims to explore the current situations and problems of the traditional toy industry in Shantou City driven by e-commerce platforms. Through case studies, it provides improvement strategies and suggestions. On this basis, it reveals the impact of e-commerce platforms on the development of the traditional toy industry, providing theoretical support and practical guidance for traditional toy enterprises to achieve transformation and upgrading through e-commerce platforms.

## 2. Current Situation of Traditional Toy Industry Development in Shantou City

### 2.1. Industry Scale and Status

The toy industry in Shantou City has built a complete industrial chain covering design, production, and sales. Numerous toy enterprises are gathered here, offering a wide variety of products and holding significant positions in both domestic and international markets. The considerable annual toy export volume makes it one of the most important pillar industries of Shantou's economy [6].

### 2.2. Industry Characteristics

(1) Significant clustering: Toy enterprises are clustered, such as in Chenghai District, which has the reputation of "China's Toy and Gift City", with a notable cluster effect that helps reduce production costs and enhance production efficiency [7].

(2) Diverse products: The products covered multiple categories, including plastic toys, electronic toys, and plush toys, fully meeting the needs of different age groups and consumer groups.

(3) Emphasis on innovation: Some enterprises focus on research and development, investing heavily in new product development and continuously launching innovative toy products to increase product value.

### 2.3. Challenges Faced

(1) Intense competition: The domestic and international toy markets are highly competitive. Competition from toy enterprises in other regions and foreign brands has brought significant pressure to traditional toy enterprises in Shantou.

(2) Limited channels: Traditional sales models mainly rely on offline wholesale markets and distributors, and the sales channels are limited. This situation greatly restricts the market expansion capabilities of enterprises.

(3) Weak brands: Most enterprises mainly engage in contract manufacturing [8]. The construction of self-owned brands lags relatively, with low brand awareness and influence. There are not many well-known enterprises in Shantou.

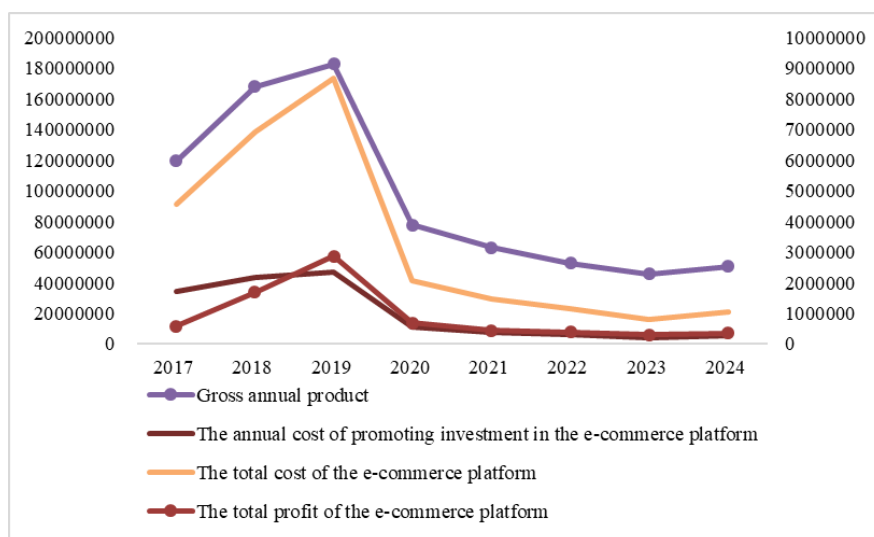
## 3. Introduction of J Company

J Company is a well-known domestic brand in Guangdong Province, which has 35 years of history. Over time, J Company's product quality and technological content have reached leading positions in domestic and international industries, and its market share has grown strongly. J Company is located in Chenghai District, Shantou City, which is known as the "China Toy and Gift City". J Company integrates professional design, research and development, production, and sales of various intelligent electric plastic toys. The company has independent import and export rights. The main products of J company include Abelu infant and toddler educational toys, Tongzile sliding children's bikes, Jisuixing remote control cars, Tonglexing electric children's bikes, etc., which have won multiple

national patents. The products are selling well in Europe, America, the Middle East, and major cities in China. The company actively participates in the Chenghai Toy Fair, Canton Fair, Hong Kong Toy Fair, and various overseas exhibitions. They expand the market and develop customers through multiple channels to optimize and maximize orders. The company has been rated as a trustworthy and honest unit and a unit advanced in spiritual civilization construction for six consecutive years, and has received multiple honors including the recognition of an enterprise technology center by Guangdong Province, a high-tech enterprise, a key high-tech enterprise under the National Torch Program, a demonstration enterprise for export quality and safety in China, a Shantou intellectual property advantage cultivation enterprise, and a major taxpayer of the year. The company actively cooperates with various activities organized by the municipal and district governments and the Chenghai Toy Association, taking the lead in playing the role and fulfilling the responsibilities of the association's president unit. The company always adheres to implementing a brand-strong enterprise strategy to promote the high-quality development of J Company [9].

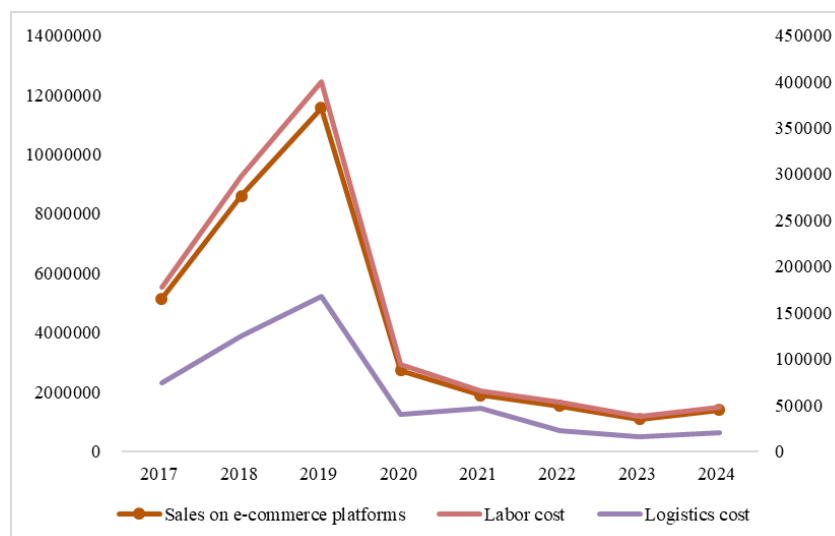
#### 4. Analysis of Problems in Toy Companies

This article collected data from J Company and plotted various indicators of the company.



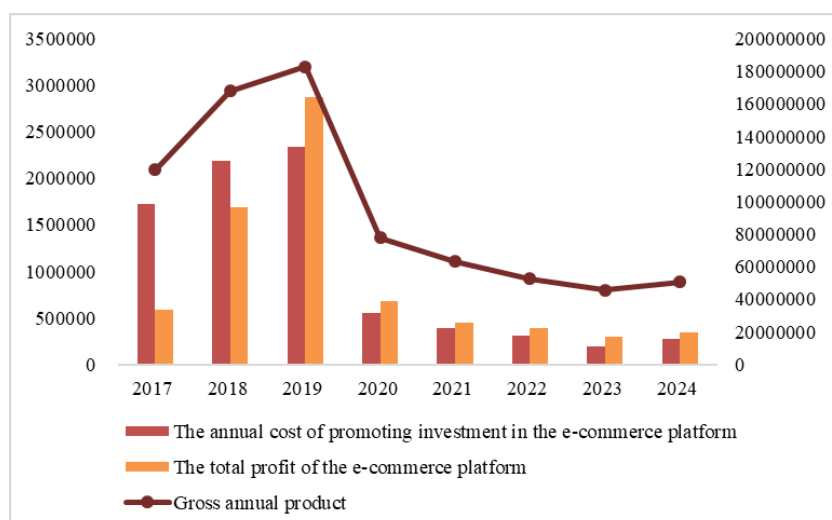
**Fig. 1** J Company profit and various costs (Photo credit: Original)

From Figure 1, it can be seen that this line chart presents four financial data of a certain e-commerce platform from 2017 to 2024. The annual gross production value rose from 2017 to 2019, peaked in 2019, and then continued to decline. This indicates good business expansion in the early period and contraction in the later period. The annual cost of promotion investment for e-commerce platforms rose gradually from 2017 to 2019, then dropped sharply and remained at a low level. This condition reflects the significant reduction in investment due to the impact of the epidemic after the initial emphasis on promotion. The trend of total costs for e-commerce platforms is similar to that of total production value, varying with the scale of business. The total profit of e-commerce platforms increased from 2017 to 2019 but then dropped sharply and remained at a low level. Overall, before 2019, most indicators showed a growth trend, but after that, all data declined, especially the profit, which was severely affected by multiple factors in the later period. The change of promotion investment cost is correlated with the increase or decrease of gross product to a certain extent, and the total cost also changes with the change of business scale. Besides, the total cost also varies with the scale of the business.



**Fig. 2** Labor cost, logistics cost, and sales on the e-commerce platform of Company J (Photo credit: Original)

Figure 2 presents the key data of e-commerce platform sales, human resource costs, and logistics costs from 2017 to 2024. From 2017 to 2019, e-commerce platform sales grew rapidly from about 5,000,000 to about 11,000,000. This not only shows a strong upward trend but also indicates that the platform achieved significant results in market expansion in the early stage and the business scale expanded rapidly. Correspondingly, human resource costs also rose sharply during this period, increasing from a relatively low level. This reflects that as business volume increased, the platform continuously increased its investment in human resources to support the rapid development of business. Logistics costs also rose during this period, gradually increasing from an initial low value, also indicating that the increase in business volume led to an increase in logistics demand, thereby increasing logistics costs. However, since 2019, the situation has reversed. E-commerce platform sales dropped sharply and continued to decline from 2020 to 2024, with business scale contracting significantly, indicating that the company faced severe challenges in market competition and that business development was in trouble. Human resource costs also dropped sharply after 2019, as the platform took cost-control measures to deal with the business decline by reducing human resource investment to lower operational burdens. Although logistics costs fluctuated slightly, they generally showed a downward trend, as the reduction in business volume led to a decrease in logistics demand, thereby reducing logistics costs. 2019 became a critical turning point for the business development of this e-commerce platform, with all data booming before that and then entering a downward channel together, reflecting the direct and synchronous impact of business scale changes on costs and sales.



**Fig. 3** Input cost on the platform and platform profit, total profit (Photo credit: Original)

Figure 3 shows that the annual cost of promotion investment for e-commerce platforms continued to grow from 2017 to 2019. The platform increased its investment in promotion, actively expanding the market, attracting traffic and merchants to join, etc. At the same time, the annual production value also rose steadily, the business scale expanded continuously, and the total value of goods and services produced continued to increase. The total profit of e-commerce platforms also rose accordingly, as business volume increased and market share expanded, and the profit situation improved continuously. This shows that the increase in promotion investment in the early stage played a positive role in promoting business scale expansion and profit improvement. However, after 2019, the situation changed significantly. The annual cost of promotion investment for e-commerce platforms was greatly reduced. Under the impact of the pandemic, the global economy fluctuated, consumer confidence was undermined, and consumption behavior became conservative, with a decrease in the desire to consume non-essential goods [10]. This made it more difficult for e-commerce platforms to expand their business, and market demand became more uncertain. To avoid risks, the platforms reduced their promotion investment costs. Correspondingly, the annual production value continued to decline, and business scale began to contract, possibly because the weakened promotion efforts led to a squeeze in market share, a decrease in new customer acquisition, and an increase in the loss of old customers. The total profit of e-commerce platforms has dropped sharply. Despite the reduction in promotion investment costs, the total profit has not improved due to the cost reduction; instead, it has shrunk significantly. This indicates that in the later stage, in addition to cost factors, there are also multiple factors such as intensified market competition, changes in the industry environment, and reduced operational efficiency, which have seriously affected the platform's profitability. This shows that the e-commerce platform in Shantou City faced huge difficulties in business development after 2019 and needs to re-examine and adjust its development strategy to cope with challenges and achieve stable and recovering business performance.

## **5. Strategies for E-commerce Platforms in Shantou City to Promote the Development of the Traditional Toy Industry**

Through the above analysis and research, this paper finds that various costs of e-commerce platforms and the sales volume of e-commerce platforms play a crucial role in the total profit of the entire company. Based on this, this paper provides the following suggestions:

(1) Improve the logistics distribution system: Strengthen the construction of logistics infrastructure, improve the efficiency of logistics distribution, and reduce logistics costs. Promote in-depth cooperation between logistics enterprises, e-commerce platforms, and toy enterprises to achieve information sharing and coordinated development, reduce costs, and increase efficiency.

(2) Strengthen talent cultivation: Enterprises and universities should strengthen cooperation to establish a multi-level e-commerce talent cultivation system. Offer relevant professional courses, conduct vocational training and practical activities, and cultivate compound talents who are proficient in e-commerce operations and familiar with the toy industry, thereby reducing the number of employees and lowering labor costs.

(3) Strengthen brand building: Toy enterprises should establish brand awareness and increase investment in brand building. Through product innovation, quality improvement, and marketing promotion, create toy brands with independent intellectual property rights and market competitiveness. E-commerce platforms should provide brand promotion support to help enterprises enhance brand awareness and increase product sales.

(4) Promote industrial innovation: Encourage toy enterprises to increase R&D investment and utilize new technologies such as the Internet and artificial intelligence to develop innovative and intelligent toy products. Promote innovation in business models and marketing methods between e-commerce platforms and toy enterprises to enhance the vitality of industrial development.

## 6. Conclusion

The development of e-commerce platforms in Shantou City has brought new development opportunities to the traditional toy industry. Taking Company J as an example, through case analysis, it can be seen that factors such as e-commerce platform promotion costs have a significant impact on the sales of toy enterprises. E-commerce platforms have effectively promoted the transformation and upgrading of the traditional toy industry in terms of expanding sales channels, reducing costs, and promoting innovation. However, in the development process, challenges such as logistics distribution and talent shortages still exist, which need to be addressed through strategies such as improving the logistics system, strengthening talent cultivation, and strengthening brand building. In the future, with the continuous development and application of e-commerce technology, the traditional toy industry in Shantou City should further deepen the integration with e-commerce platforms, continuously innovate development models and strategies, enhance industrial competitiveness, and achieve sustainable development. The government, enterprises, and all sectors of society should work together to create a favorable environment for the integrated development of e-commerce platforms and the traditional toy industry and promote the high-quality development of Shantou City's economy. This paper selects fewer variables, and it is difficult to obtain data, which has significant limitations and is unable to truly and completely analyze more effective variables that influence enterprise development. This issue needs to be further addressed.

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