

# Digital Transformation Background: The Development and Exploration of Innovative Technology Enterprises -- Take Xiaomi as an Example

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**Abstract.** With the rapid development of information technology, the real economy has entered a new economic form characterized by digitalization. Digital transformation is the only way for enterprises to achieve sustainable development. The digital transformation of enterprises is a high-level transformation based on the digital transformation and digital upgrading of the enterprise, which further touches the company's core business and aims to establish a new business model. Under the background of digital transformation, this paper comprehensively studies the development path of innovative enterprises represented by Xiaomi, including the influence of Xiaomi enterprises on the whole industry and the big environmental economy, and analyzes the evolution of its business model and unique product matrix. Using the SWOT analysis method, this paper summarizes its successful experience, the reasons for its past failures, its development prospects and the current threats. This paper aims to provide other innovative technology companies with reference ideas to achieve profitability and sustainable development.

**Keywords:** Digital economy; innovative technology industry; Xiaomi; future development trend prediction.

## 1. Introduction

In the 2022 Government Work Report, it is pointed out that "promote the upgrading of traditional industries, vigorously promote intelligent manufacturing, accelerate the development of advanced manufacturing clusters, and implement the national strategic emerging industry cluster project". With the advent of the post-epidemic era and a new round of digital economic revolution, the consumer electronics industry and the creation of smart home appliances have undergone drastic changes. With the development of the Internet economy, human beings have entered the era of big data, and the consumption environment is changing rapidly. Since the post-epidemic era, the overall consumption tendency of residential departments has declined, conspicuous consumption has ebbed, and residents' rational consumption awareness has improved. Many enterprises have been devastated by this. Traditional technology companies rely on business models based on the real economy and cannot meet the survival and development of the industry. Therefore, enterprises must carry out transformation and innovation. Wu Jiahao and Zheng Honghao pointed out that to promote the innovation digital transformation and upgrading of enterprises, and at the same time, the use of a large number of user data can more accurately grasp the preferences and needs of consumers, meet the personalized needs of consumers, further increase market share, and finally improve the upstream, midstream and downstream of the whole industry chain [1]. Through integration and mergers and acquisitions, this research can bridge the digital divide and the shortcomings of enterprises, give full play to industrial advantages, establish a complete ecosystem, and help enterprises carry out digital innovation, transformation and upgrading [1]. Innovative enterprises mainly refer to those well-known brands with independent intellectual property rights, with strong international competitiveness,

relying on technological innovation to obtain market competitive advantages and sustainable development of enterprises, its representative enterprise Xiaomi Technology Co., Ltd., hereinafter referred to as Xiaomi or Xiaomi Company was founded in March 2010. Xiaomi's diversified development strategy, intelligent ecological strategy, overseas market expansion, deepening of the ecosystem, and breakthroughs in the field of car manufacturing have successfully achieved many transformations and breakthroughs.

This article aims to analyze the impact of digital development on Xiaomi's innovative business model and product matrix, exploring its influence on the entire innovative technology industry, Xiaomi's developmental trends, as well as the current challenges in its development. Additionally, it will propose solutions to address these issues. The problems and methods reflected in this hope can bring some inspiration and thinking to other enterprises in the same industry.

## **2. The Development Status of the Innovative Technology Enterprise Industry**

### **2.1. Definition of Innovative Enterprises**

Scholars at home and abroad have different descriptions and understandings of how to define innovative enterprises. Joe Tidd referred to enterprises that can utilize innovation to improve business processes, and differentiate products and services as innovative enterprises, believing that these enterprises outperform their competitors in market share, profitability, growth rate, market value, and other aspects [2]. Bruce Nussbaum believes that innovative enterprises have new innovative DNA and can establish a rapidly developing corporate culture, and innovation is the main driving force for their growth [2]. Shi Bianzhen refers to enterprises that can institutionalize the spirit of innovation and cultivate an innovative habit as innovative enterprises [2]. Chen Jin believes that innovative enterprises are a new direction in the growth cycle of enterprises after efficiency-oriented enterprises, quality-oriented enterprises, and flexible enterprises [2]. More scholars equate innovative enterprises with high-tech enterprises. Overall, innovative enterprises mainly refer to those that possess independent intellectual property rights and well-known brands, have strong international competitiveness, and rely on technological innovation to gain market competitive advantages and sustainable development [3].

### **2.2. Development Status**

Scientific and technological innovation enterprises are enterprises whose growth power is mainly driven by innovation, and they are an important force in promoting industrial technology and accelerating the development of the innovative economy. Since the 11th Five-Year Plan, a large number of technological innovation enterprises in China have emerged and flourished. The number of high-tech enterprises in China has increased from 49000 more than a decade ago to 330000 in 2021. Research and development investment accounts for 70% of the country's enterprise investment, and the tax paid has increased from 0.8 trillion yuan in 2012 to 2.3 trillion yuan in 2021. High-tech enterprises account for more than 90% of the listed companies in the science and Technology Innovation Board and Beijing Stock Exchanges. On June 12th, 2022, the Central Committee of the Communist Party of China's strategy of "implementing innovation-driven development strategy and building a strong country in science and technology" gave great support to innovative enterprises in science and technology.

## **3. Introduction and Development Path of Xiaomi Company**

### **3.1. Development Status**

Beijing Xiaomi Technology Co., Ltd., officially established in April 2010, is an innovative technology enterprise focusing on high-end smartphones, Internet TV, and smart home ecological chain construction. Xiaomi started with mobile phone sales and subverted the traditional market with

"Internet mode" in the fields of Internet TV set-top boxes, Internet smart TVs, home smart routers, and smart home products. At present, Xiaomi Company has stable development and certain advantages in market share and revenue generation. Especially with the release of Xiaomi Motors in 2024, Xiaomi once more achieved a breakthrough. With industrial upgrading and technological innovation, market competition has become increasingly competitive. But Xiaomi can still achieve profitability and revenue generation. From 2019 to 2023, the overall fluctuation of operating revenue raised. The overall gross profit margin of the enterprise is showing an upward trend, rising from 13.87% in 2019 to 21.21% in 2023.

## **3.2. Development Path**

### **3.2.1. Business model analysis.**

Xiaomi's business model is mainly divided into four stages; The first stage was the community platform-based business model formed by "Internet plus+hardware+software" from April 2010 to 2011. In this period, Xiaomi used a strategy of low price and high cost-effectiveness to attract customers and generate a desire to purchase. It used mobile phones as an entry point for traffic, established brand loyalty, and attracted customer groups. The company has gained opportunities for development and expansion through this model, as well as cultivating and accumulating a vast potential consumer group. It has not only gained profits and motivations, but also laid a foundation for future development.

The second stage was the high-speed development stage of [cost-effective+effective user interaction+Internet marketing] from 2012 to 2014. The sales of its mobile phones increased from 300000 units in 2011 to 61.12 million units in 2014, almost a 203-fold increase. Xiaomi integrated the Internet into marketing. Users could directly connect to Xiaomi, eliminating the market, channels and terminal sales, which reduced the overall cost of sales to a minimum.

The third stage was a trough period between 2015 and 2017. According to Xiaomi's prospectus, mobile phone sales in 2016 were 55.419 million units, a downward trend of 16.7% from 66.546 million units in 2015. The sales of 100 million units planned by Lei Jun were far from the target. The net profits in 2015 and 2016 were -7.627 billion yuan and 492 million yuan respectively. The valuation has shrunk by nearly 90% to only \$4 billion, which was one-tenth of last year. In its rapid development phase, the company paid too much attention to online sales and ignored offline physical store channels. When the online market is saturated, it has not been aware of the changes in the market over time.

The fourth stage is the re-emergence stage of the new business model developed by the recombination of "Internet + hardware + new retail" since 2017. After experiencing the downturn, Xiaomi upgraded its business model of triathlon. The original three sectors of Internet plus+software+hardware were upgraded to Internet plus+hardware+new retail [4]. In 2017, the global mobile phone market's overall shipment volume declined by 6.3%, while Xiaomi rose against the trend, with a year-on-year growth rate of 96.9% and revenue exceeding 100 billion yuan, making it the company with the fastest global revenue exceeding 100 billion yuan. At the same time, Xiaomi's international business has skyrocketed and has now entered over 70 countries and regions.

### **3.2.2. Product matrix.**

Distribute the ecological chain around the mobile phone +ALoT strategy. With mobile phones as the center and AIoT as the support, people will build three product circles. Through the ecological chain, this paper will expand categories to cover durable and fast consumption, meet the all-round needs of Rice noodles, and improve loyalty and repurchase rates [5].

The first layer is a self-owned brand, mainly focusing on ecological entry products and mobile peripheral products.

The second layer: Xiaomi brand, AIoT product circle, mainly focuses on intelligent wearables/smart home appliances/sports equipment, which can be intelligently controlled through networking and Mijia APP.

The third layer: Ecological chain brand, enriching product categories, increasing consumption frequency, focusing on travel/children/life/luggage.

#### **4. Based on SWOT Analysis, the Current Development Status and Prospects of Xiaomi**

##### **4.1. Advantages**

Xiaomi's ecological and supply chain advantages. Xiaomi has joined Multiple Hardware Company through investment and shareholding, with the intention of involving the most intelligent hardware fields to lay the foundation for constructing its exclusive ecosystem. The second advantage of the MIUI system is its independently developed mobile phone system, which is more in line with the usage habits of Chinese people. While enhancing user stickiness, it also enhances user participation and technology experience [6]. The third advantage of user feedback is that Xiaomi's philosophy is to "make friends with users and be the coolest company in their hearts." Since its establishment, Xiaomi has always been customer-oriented and respects customer feedback. Users can express their opinions on Xiaomi Home, Xiaomi forums, or user chat groups, which is beneficial for the expansion and research of product lines [4].

##### **4.2. Disadvantages**

The first core technology is missing, and it does not have a separate processor, lacking technological innovation and easily being constrained by others [7]. In the second stage, the product was priced low and the customer base was limited. The initial "price-friendly" approach brought benefits but had an impact on shaping one's brand. Give consumers a stereotypical impression of being low-end and cheap. The problem with the third offline channel is highlighted, as Xiaomi Home has fewer physical stores and is mostly located in first-tier cities. Therefore, it should aim to attract more users. The fourth is the rigid relationship with its partners. Due to its adoption of a low-price route, it is easy to harm the interests of its ecosystem partners. Many manufacturers refer to Xiaomi as a price "disruptor". Fifth, product quality defects. Although Xiaomi phones have a high cost performance ratio, there are many quality issues. In recent years, there has been a constant stream of news about Xiaomi phones being prone to lagging, overheating, and poor battery life, which has deterred many consumers [8].

##### **4.3. Opportunities**

First of all, by making efforts in the international market, the company began to expand in the international market since 2013, and has exported to many countries, and developed well, and steadily promoted the internationalization strategy [7]. Secondly, China's market is huge, China's economic level is improving, the quality of people's life is also rising straight line, and the requirements for the quality of goods are also increasing. Due to the per capita income in China, the education level to improve the demand for electronic equipment is gradually increased, especially in smartphones, TV, smart wear in wearable equipment, smart appliances, the millet mobile phone, high-end models, also help millet product sales, to improve the millet product chain. At present, Huawei is facing technical sanctions. Although its independently developed chips have been released, the shipments of various electronic products such as mobile phones have decreased. Currently, Apple's sales are weakened to some extent due to the influence of macro-political and economic factors. Samsung has faced some resistance due to its mobile phone security issues and the political relations between China and South Korea. Therefore, Xiaomi is more likely to successfully explore the market.

#### **4.4. Threat**

The first is the challenge of technological innovation. With the continuous development of science and technology, all kinds of innovative technology enterprises emerge in an endless stream, Xiaomi needs to increase investment in research and development, maintain the leading technology position of products, and promote technological innovation. Second, the brand image is challenged. With the expansion of the company scale, how to maintain and improve the brand image has become the key. Third, the market competition is increasingly fierce. Those rivals with strong Huawei in China are fiercer in foreign countries. Xiaomi needs to face the fierce competition from big international brands such as Apple and Samsung. Fourth, the prevention of product plagiarism is not in place. The product design and research and development level of Xiaomi enterprises are relatively high, but at the same time, it is also easy to be copied by competitors, resulting in vicious competition. Sixth, the process management is not sound. In the process of rapid development of Xiaomi enterprises, due to the expansion of business and organizational changes, it is easy to have problems in process management, such as cumbersome processes, inadequate audit mechanisms, lack of information communication, and so on. It seriously affects the production and operation efficiency of enterprises and reduces the competitiveness of enterprises.

#### **5. Experience and Solutions**

First of all, smartphone sales revenue is mainly generated, supplemented by hardware services and Internet services revenue. Secondly, science and technology innovation enterprises should form an intelligent life ecosystem with their own business as the core and related life hardware and products as the extended development. Furthermore, technological and innovative enterprises should create a new layout with new retail, that is, relying on the Internet, and combine online and offline logistics through artificial intelligence and other means.

It can provide experience for other innovative technology enterprises: First, strengthen patent application and introduction of talents. For innovative enterprises, scientific and technological innovation is the first productive force. Mastering the core technology reduces the possibility of being constrained. Secondly, to choose the industry and adjust it timely, enterprises should make scientific decisions according to their own resources and capabilities, carry out moderate and accurate diversification, and avoid excessive and blind expansion and make themselves fall into other crises. Third, improve the physical stores. Take Xiaomi as an example, Xiaomi company should open more Mi Home physical stores, and achieve the sales model of online and offline development. Improve consumers' shopping experience and product experience. Fourth, strengthen strategic cooperation and improve corporate relations. Scientific and technological innovation enterprises should combine to make up for their own disadvantages with the help of the talents and resources of other high-tech enterprises to achieve win-win cooperation. The fifth is to establish a sound organizational structure and process management information system, clear process expression, and supervise the evaluation procedures. Enterprises should gradually standardize, simplify and optimize the process, and implement information management, strengthen internal communication and cooperation.

#### **6. Conclusion**

In the current situation where the development speed of technology innovation-oriented enterprises is slowing down, production factor costs and human resource costs continue to rise, and there is a lack of sustained innovation motivation and consumption shortage caused by the post-pandemic, small and medium-sized technology-based innovative enterprises should learn from Xiaomi's failure experience. They should send up investments in scientific and technological research and development, establish research and development centers, cooperate with universities and research institutions, promote technological innovation; Provide high-quality products and services, actively participate in social activities, and enhance the positive image of the enterprise; Creating intellectual property rights to prevent malicious plagiarism by peers; Improve internal management mechanisms

to achieve high-quality management; Actively attract talents and establish good interest relationships with cooperative partners. They also need to learn from Xiaomi's successful draft. For example, establishing a complete ecological supply chain and developing a system that belongs to one's brand; adopting differentiated policies to attract users by providing cost-effective products and localized services. Develop products that meet the needs of the Chinese people and prioritize consumer experience. Establish digital thinking and use digital innovation models to drive the development of enterprises.

### **Authors Contribution**

All the authors contributed equally and their names were listed in alphabetical order.

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