

Realizing Paths: Disruptive Innovation of High-tech Listed Companies——Taking “Specialized and Special new” Enterprises as Example

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Abstract: With the concept of "specialized and special new", the innovative development of high-tech listed companies in China has stepped into a high-speed stage. However, as the growth rate of enterprises increases, there are also many realistic problems that are gradually exposed and hinder their advancement. In this context, disruptive innovation, as a form of innovation different from the traditional innovation model, has gained the attention of entrepreneurs. Through the study of the theory of disruptive innovation, this paper puts forward the realizing paths of enterprise disruptive innovation and gives the corresponding suggestions.

Keywords: "Specialized and Special New" Enterprises; Disruptive Innovation; Realizing Paths

1. Research background

At present, the innovation situation of high-tech listed companies in China is facing a series of bottlenecks that need to be solved. The emergence of innovation dilemma poses new challenges to enterprises, which means that the independent innovation capability of core technology faces higher requirements and disruptive innovation plays a more important role for enterprises at this stage of development. In recent years, our government has proposed the concept of "specialized and special new" for high-tech small and medium-sized enterprises. Nowadays, "specialized and special new" enterprises have achieved distribution within most of industries in China. As an important force leading the development of China's high-tech industry, specialized and special new enterprises, with their strong scientific and technological innovation ability, have a broad development space while having flexibility, and with the support of national policies, had become a strong engine leading China's high-tech enterprise to disruptive innovation.

2. Theoretical Review

Schumpeter, the originator of innovation theory, defined innovation as a new production function, categorized new combinations of production factors and production conditions into five cases, and was the first to introduce the concept of "creative destruction". Inspired by Schumpeter's innovation theory, Christensen first proposed the theory of disruptive innovation in his book "The Innovator's Dilemma" in 1997, which has received widespread attention in the global business market.

2.1 Connotation

The concept of disruptive innovation, first introduced by Christensen, refers to products or services that evolve in unusual ways to meet the needs of potential users in the market and continually launch disruptive innovations to mainstream market incumbents as technology continues to upgrade and iterate. Subsequent scholars have also provided further explanations of the concept and meaning of disruptive innovation from different perspectives. Guangyu Zhang and Chunyao Ou et al. (2021) point out that disruptive innovation is an innovation model that focuses on low-cost competitive strategies, exploiting new technological tracks, and building new value networks. Shusheng Zhang (2021) argues that the realization of disruptive innovation by firms in the Chinese context lies in the upgrading of value networks and the degree of modularity of the industrial environment.

In the study of the paths to disruptive innovation, from a macro perspective, Fengqin Han (2020) points out that the realization of disruptive innovation requires appropriate institutional mechanisms, and the financial research funding system needs to be reformed and improved. From a micro perspective, Sirui Chen et al. (2019) summarizes the mechanism model of disruptive innovation as product disruptive innovation, service disruptive innovation, and business expansion model disruptive innovation. As

a predecessor concept of disruptive innovation, Wang Kang and Yue Chen et al. (2022) describes disruptive technology as a key core element of the game and a strategic bargaining chip with the transformative effect of reshaping the landscape.

2.2 Comprehensive Review

Based on the above-mentioned literature on disruptive innovation, this paper summarizes disruptive innovation as a destructive innovation process that uses disruptive technology as the core driver, in which enterprises discover deeply into the market demand and build a new value network to disrupt the original market pattern. In addition, the realization of disruptive innovation requires the joint efforts of government and enterprises. Favorable policies can provide positive guarantees for disruptive innovation, while active participation and investment in technology development by enterprises are important drivers for successful disruptive innovation.

3. Realizing Paths of Disruptive Innovation for High-Tech Listed Companies

Through the previous analysis of the current situation of innovation of high-tech listed companies in China and the elaboration of related literature, the following will propose the path of disruptive innovation in combination with the cases of specialized and special new enterprises.

3.1 National optimization of policies

The government's role as a booster is indispensable for the cultivation of specialized and special new enterprises. For example, Guangdong has the highest number of specialized and special new enterprises in China, not only because of its good market environment and market operation mechanism, which can provide an operating environment for the disruptive innovation of specialized and new enterprises, but also because the local governments in Guangdong provide policy support for the growth of local specialized and special new enterprises, including financing facilities, patent services, and management consulting arrangements, which provide an important background environment for their disruptive innovation. Thus, from the perspective of the government, the future policy release can focus on implementing incentives for enterprise disruptive innovation, introducing more diversified innovation subjects, and planning innovation mechanism policies with scientific and operational characteristics for specific fields on the basis of existing policies.

3.2 Deeply discover the potential market demand

The essence of disruptive innovation is to meet the needs of consumers in non-mainstream markets, and the key to developing "non-mainstream markets" is to discover potential needs that have not yet been raised. For example, LiangMianZhen (Jiangsu) Industrial Co. applied the core technology of Chinese herbs to the development of travel toothpaste to help the hard-working and strenuous traveling people to relieve their oral problems, and by solving this demand was favored by all the hotels in the country when choosing toiletries. By tapping into the potential market demand, high-tech enterprises can integrate relevant resources in a targeted manner, create corresponding business models or conduct corresponding innovative technology research and development, thus helping enterprises achieve disruptive innovation.

3.3 Emphasis on technology R&D investment

Having disruptive technologies is the key to disruptive innovation for enterprises. The reason why the specialty enterprises can stand out among many high-tech listed companies in China lies in their mastery of core technologies. To develop a core technology, R&D investment is essential. For example, Texas Haitian Electromechanical Technology Co., Ltd. has a R&D team of more than 100 people, and its R&D investment is not less than 10% of the revenue each year, and it has launched horizontal technology joint venture with many research institutes and universities to help innovation. In addition to applying for government subsidies or appropriate financing, enterprises should allocate their resources in a reasonable manner to ensure that they are used efficiently and effectively, in the face of the aforementioned problem of insufficient R&D investment.

3.4 Constructing a new value network

The key to promoting value innovation through constructing a new value network system and thus realizing disruptive innovation lies in how to use disruptive technologies and disruptive business models to realize the benefit sharing of all parties in the value network. Only by fully mobilizing the enthusiasm of all parties in the value network can synergistic effects be generated to help enterprises realize value creation.

Building a new value network can be divided into the following three steps: First, end-to-end omnichannel marketing. Based on the excavation of the non-mainstream market, accurately grasp consumer preferences, insight into product features or service defects, and transform them through technological innovation to meet demands. Horizontally open up all ports of the industry chain

and vertically integrate the enterprise management system. Second, fully integrate internal and external resources. Through the integration of data resources inside and outside the enterprise stand in the perspective of suppliers, customers, partners, investors and other stakeholders to make operational decisions to create a replicable business model. Third, create an integrated ecological network. Based on intelligent platform, big data, blockchain technology to achieve industrial boundary expansion, grasp the development opportunities brought by information resources, create and service and manufacturing as one value network, to achieve value innovation and sharing.

3.5 Conclusions and Recommendations

This paper elaborates on the connotation of disruptive innovation in conjunction with the current situation of disruptive innovation in high-tech listed companies in China, and takes "specialized and special new" enterprises as example to draw realizing paths to help enterprises achieve disruptive innovation. The following recommendations will be made.

First, the government issued relevant policies to support disruptive innovation in high-tech listed companies. Favorable government policies can provide a favorable environment for companies to engage in disruptive innovation, helping them to clear obstacles, integrate resources and promote development.

Second, enterprises attach importance to investment in scientific and technological research and development. Disruptive technologies are a key element of disruptive innovation for enterprises. Companies should leverage their strengths and allocate resources rationally to maximize the ratio of technology R&D inputs to outputs.

Third, investors pay attention to the development of enterprise innovation and have courage to invest. The resources provided by investors are an important source of investment in R&D and innovation of enterprises, which is also a powerful guarantee for enterprises to carry out disruptive innovation.

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