

Research on the Impact of Green Innovation on New Ventures Performance

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Abstract

This article discusses the impact of green innovation on New Ventures performance. The results show that the green innovation strategy is significant Positive effect on corporate economic performance.

Keywords: Green innovation; New Ventures Performance; Environmental Strategy

Research background

The intensification of industrialization, population explosion, development of new products and high-quality excessive consumption have promoted the development of the global economy, but have also led to ecosystem damage and environmental degradation (Severo et al., 2017). Therefore, environmental protection and sustainable development have become the focus of attention in the industry and academia in recent years. Our government has also issued a series of policies to promote the harmonious coexistence between man and nature and the sustainable development of economy and society. In 2015, the Fifth Plenary Session of the 18th CPC Central Committee proposed to establish a new development concept of innovation, coordination, green, openness and sharing. In 2017, the report of the Nineteenth National Congress of the Communist Party of China once again emphasized the need to unswervingly implement the new development concept of innovation, coordination, green, openness and sharing, and realize the modernization construction of harmonious coexistence between man and nature. In 2020, my country proposed at the 75th United Nations General Assembly to achieve "carbon peaking" (meaning that after the peak of carbon dioxide emissions, no growth and a decline) before 2030, and achieving "carbon

neutrality" before 2060 (referring to energy saving and reducing Offset the carbon dioxide emissions produced by enterprises, groups or individuals) mission goals. The above policy recommendations point out the future development direction and put forward specific requirements for production-oriented enterprises, especially for manufacturing enterprises. Manufacturing is the main body of the national economy, the foundation of a country, the tool of rejuvenation, and the foundation of a strong country.

In 2015, my country proposed "Made in China 2025", which is the first ten-year action plan for China to implement the strategy of manufacturing a powerful country. It mentioned that innovation should be placed at the core of the overall development of the manufacturing industry, and sustainable development should be an important focus of building a strong manufacturing country. In the 2022 government work report, Premier Li Keqiang pointed out that we must continue to implement the innovation-driven

development strategy in depth, enhance the core competitiveness of the manufacturing industry, build a green manufacturing and service system, and promote the research and development, promotion and application of green and low-carbon technologies. Therefore, manufacturing enterprises are facing a new situation of taking the road of green development and realizing innovation and upgrading. The green innovation strategy is considered to be an active environmental strategy that can take into account the economic and social benefits of the enterprise. It achieves green innovation in products and processes, weakens the adverse impact of the production and operation practices of the enterprise on the environment, and brings unique benefits to the enterprise. Competitive advantage and profitability (Chen et al., 2006; Eiadat et al., 2008; Tomomi, 2010). And start-ups are considered to be an important support for stimulating innovation vitality and achieving sustainable development. Therefore, encouraging new start-ups to implement green innovation strategies will help promote enterprises to achieve green innovation development, shape core competitiveness, and stimulate national economic vitality and development. Realize the low-carbon and environmental protection development of economy and society.

As a result, more and more start-ups choose to implement green innovation strategies to balance the relationship between production and operation activities and environmental protection in a more proactive manner. Although the academic community has noticed the importance of green innovation strategy for the future development of enterprises, the understanding of green innovation strategy is still lacking in systematic and comprehensive, which is mainly reflected in: Lack of attention to new ventures implementing green innovation strategies Through the review of existing literature, the implementation of green innovation strategies in large enterprises has attracted more attention from scholars, because it is generally

believed that the green development of enterprises requires a lot of resources investment, while large enterprises have more tangible and intangible resources to support the development of green innovation (Zhang et al., 2022). However, there are also studies that point out that start-ups, as the source of vitality of economic development, are more responsible for the sustainable development of society (Aboelmaged and Hashem, 2019). Therefore, promoting the green innovation and development of start-ups is of great significance for promoting the green transformation of the economy and society. New ventures are a new force that stimulates economic vitality, researches and develops green innovative technologies, and promotes sustainable economic and social development. However, existing research still lacks attention to new startups that implement green innovation strategies. The role of green innovation strategies in new startups Implementation is lacking in-depth exploration. These research questions are subject to further theoretical research and empirical testing.

Research question

What is impact of green Innovation ability on New venture performance

Research objective

To explore the direct impact of green Innovation on New venture performance.

Connotation of Green Innovation Strategy

With the international and domestic society's advocacy of green and sustainable development for enterprises, domestic and foreign scholars More and more attention has been paid to the green innovation strategy that brings competitive advantage and performance improvement to the industry, but the academic circle has not yet formed a broad consensus on the connotation of green innovation strategy. According to existing research, scholars also refer to green innovation strategy as environmental innovation strategy, sustainable innovation strategy and ecological innovation strategy. It can be concluded that research on green innovation strategies has only begun to flourish in recent years. Different scholars define the connotation of green innovation strategy differently, but they generally believe that green innovation strategy is based on the consideration of environmental protection and sustainable development of enterprises, and managers try to reduce the impact of enterprise production practices on the environment through green production and operation behaviors. The negative impact of strategic choices. Although scholars have defined the connotation of green innovation strategy from different perspectives, at present, green innovation strategy has not yet formed a definition widely recognized by the academic community. Through sorting out and summarizing the existing research content,

this study believes that the green innovation strategy emphasizes that enterprises can reduce the negative impact of production practices on the environment through innovative means and methods, and try to integrate new knowledge, new technology or new management. In terms of methods and other aspects, it creates new profit points and differentiated competitive advantages for enterprises. Therefore, this paper integrates the related research on environmental strategy, forward-looking environmental strategy, green innovation and green innovation strategy, and draws lessons from scholars such as Eiadat et al. (2008), Tomomi (2010), Zhang Gang and Zhang Xiaojun (2014), Chen et al. (2006). From the point of view, the green innovation strategy is defined as a kind of green innovation in products and processes to weaken the adverse impact of enterprise production and operation practices on the environment, bring unique competitive advantages and profitability to enterprises, and realize sustainable development of enterprises active environmental strategy

The connotation and measurement of green innovation strategy

The academic research on green innovation strategy originated from people's concern about environmental issues. In the 21st century, all walks of life have increasingly strong appeals for environmental protection, and corporate activities that have a negative impact on the environment are restricted. Therefore, companies have to take corresponding measures to meet increasingly stringent environmental requirements. However, scholars have found that in actual business operations, different companies have different ways of dealing with environmental issues, which has triggered further thinking, and then scholars have classified and defined the environmental strategies adopted by companies. With the continuous development of research, the concept of green innovation strategy was proposed by scholars. It is regarded as a positive environmental strategy and a strategic choice made by enterprises trying to achieve sustainable development by means of green innovation (Eiadat, 2008; Tomomi, 2010). Therefore, in order to deepen the understanding of green innovation strategy, it is necessary to first elaborate the three related concepts of environmental strategy, forward-looking environmental strategy and green innovation.

Environmental strategy

The rapid economic development has caused a variety of environmental problems, such as resource depletion, biodiversity loss, and global warming (Steffen et al., 2015). The natural environment imposes more and more restrictions on enterprises. Sustainability requirements are also getting higher and higher, so companies need to pay more attention to the environmental impact of their economic activities. Some scholars believe that if enterprises want to form a unique competitive advantage, they need to consider incorporating green

environmental protection into their strategic planning (Hart, 1995). As a result, research on corporate environmental strategies began to flourish. Environmental strategy is regarded as the degree to which an enterprise adopts environmental protection measures in the strategic planning process (Chan, 2010), such as whether it chooses to conduct product life cycle analysis, reduce waste emissions, establish a closed-loop system, and conduct employee training, etc. It reflects management There are different degrees of initiative in the orientation of the environment. Henriques and Sadorsky (1999) divided the strategies of enterprises to deal with environmental issues into four types, namely reactive strategies, defensive strategies, adaptive strategies and forward-looking strategies. Different enterprises have very different strategic attitudes towards adopting environmental practices. For example, companies adopting reactive environmental strategies only comply with environmental regulations, usually focusing on pollution control or passive use of end-of-life treatment methods, while companies adopting forward-looking environmental strategies often have comprehensive quality-based environmental management, strategic planning and organization that exceed legal requirements. Learning from proactive pollution prevention initiatives (Aragón-Correa and Sharma, 2003; Sharma and Vredenburg, 1998). Active environmental strategy is often considered to be a kind of innovative measures and activities beyond the prescribed tasks, including technological innovation to prevent pollution and the creation of environmental protection knowledge, reflecting the voluntary efforts of enterprises to manage the impact of their economic activities on the environment (Darnall et al. , 2010).

Forward-looking environmental strategy

Due to the positive impact of active environmental strategies on the natural environment and the positive effect on the shaping of corporate competitive advantages, forward-looking environmental strategies have been given more research and attention. Sharma and Vredenburg (1998) first defined the forward-looking environmental strategy as the strategy of greening the production and operation process that enterprises actively choose to implement in order to improve comprehensive benefits. With the deepening of research, more scholars have defined this concept in more detail and defined the research content it contains. Berry and Rondinelli (1998) incorporated environmental design, environmental accounting, waste discharge, and product management into the research content of forward-looking environmental strategies. Klassen and McLaughlin (1996) also included the content of product life cycle management into the scope of forward-looking environmental strategy. Anton et al. (2004) regard forward-looking environmental strategy as the sum of positive environmental practices of enterprises. Aragón-Correa and Rubio-López (2007) believe that forward-looking environmental strategy is a systematic pattern

of proactive behavior of enterprises beyond regulatory requirements, such as reducing pollution and preventing pollution from the front end. Qin Shusheng and Lv Jinfang (2015) also conducted research on the content involved in the forward-looking environmental strategy, and believed that it includes green accounting, green auditing and green accounting, and many other aspects related to enterprise management. Pan Chulin (2017) defined the forward-looking environmental strategy as an environmental protection plan that enterprises actively formulate and implement beyond the specified scope in order to reduce the negative impact of economic activities on the environment. It includes the establishment of corporate environmental strategic goals, pollution prevention and control, clean production, green supply chain management, green product service and design, green marketing, and the creation of corporate environmental protection culture.

The Connotation of New Venture Performance

In order to better define the connotation of the performance of new ventures, this section first defines new ventures. At present, the academic circle has not yet unified the way of defining new ventures, but through combing the literature, it is found that new ventures are usually considered to be enterprises in the early stages of establishment or development. Compared with mature enterprises, they have obvious lack of knowledge and information resources, organization The structure is not perfect, but its advantage lies in its strong flexibility and abundant innovation spirit. Scholars generally define new ventures from two aspects: enterprise life cycle and enterprise establishment years. Based on the research perspective of the enterprise life cycle, new ventures are still in the early stages of the growth process and have not yet reached a mature state of development (Lin et al., 2017). Some scholars also divide the development stages of enterprises into start-up stage, adolescence stage and mature stage, and enterprises established within 4 years are considered to be in the stage of start-up stage of development. However, more scholars believe that new ventures can be more clearly and intuitively defined by the age of establishment. The Global Entrepreneurship Monitor (Global Entrepreneurship Monitor) defines a company that has been established for 42 months, that is, within 3 and a half years, as a new venture. Weiss (1981) analyzed individual entrepreneurial enterprises in different industries and found that it takes about 7 years for enterprises to realize their first profit. But more scholars believe that 8 years is the best time to define new ventures. Su et al. (2015), Wang et al. (2017), Yin Miaomiao et al. (2015), Zhang Xiu'e and Xu Xuejiao (2019), Zhang Xiu'e and Zhang Kun (2021) all adopted this definition standard, taking 8 years as the division of new innovations. corporate standards. Some scholars also believe that a longer period of time is required to define new ventures. For example, Yu Hongjian (2007) extended the division criteria for defining new ventures to 10 years, and the studies of Covin and Slevin

(1989) and Luo Xingwu (2016) used 12 years as the criterion for dividing new ventures. The boundary between start-ups and established companies. Based on the classification criteria of most studies on new ventures, as well as the consideration of the research object and research purpose of this paper, this study defines new ventures as those that have been established for 8 years or less. Profit growth and performance improvement are considered to be important goals that all enterprises continue to pursue. The performance of new ventures is a specific way to reflect the operating results of new ventures, and it is also an effective evaluation of the degree of realization of the development goals of new ventures (Laskovaia et al., 2017). It is also called New Venture Performance, which can be specifically reflected In many aspects, such as the increase of corporate profits, the expansion of market share, and the favor of more customers. The research of Lin et al. (2017) regards the performance of new ventures as an explicit indicator that can reflect the survival and development status of new ventures. Yi Zhaohui (2012) believes that the performance of new ventures reflects the efficiency and effectiveness of new ventures' business activities. Chen Biao (2017) regards the performance of new ventures as the result of strategic choices of new ventures. Xu Xuejiao (2018) believes that the performance of new ventures is a collective term for the business activities and results achieved by new ventures, which can effectively reflect the company's revenue, profit and operating capabilities. Zhang Kun (2019) pointed out that the performance of new ventures can be regarded as the final result of new ventures in many aspects, and it well reflects the efficiency and ability of enterprises to use resources. To sum up, this study believes that the performance of new ventures is the response to the strategic choice of new ventures, and it is also the final result of the business activities of new ventures. It reflects the survival and operation status of new ventures and the level of resource utilization. A key indicator of the growth potential of new ventures.

The relationship model between green innovation strategy and new ventures

The traditional view is that the resource and capacity constraints of new ventures will affect the innovation and daily operation of enterprises (van Burg et al., 2012), but some studies have also found that the resource constraints faced by new ventures will actually promote. Enabling them to innovate and develop (Hoegl et al., 2008). Especially in emerging economies, where resource constraints have a more pronounced impact on firms, new ventures must strategically find a niche market to improve their chances of success (Amankwah-Amoah et al., 2018). Based on the resource-based view, heterogeneous resources and capabilities that are difficult to imitate or transfer help organizations achieve superior performance levels (Barney, 1991, 2001), while environmental strategies are considered to be able to reduce costs or provide differentiated products. It is an important means to achieve performance growth (Albertini, 2013; Dai et al.,

2017; Danso et al., 2019). Existing studies have found that the strategic actions of enterprises determine the performance of enterprises. As an active environmental strategy, the green innovation strategy can effectively promote the use of tangible and intangible resources of the enterprise itself, realize the green innovation of the enterprise in terms of products or processes, reduce the environmental burden, enhance the competitive advantage of the enterprise and improve the performance of the enterprise. purpose (Dai et al., 2017). Although the resource reserves and production scale of new enterprises are difficult to match with large enterprises, their flexibility, market responsiveness and agility are more prominent than large enterprises, and they are more conducive to the occurrence of green innovation activities (Hansen and Klewitz, 2012). Early studies believed that, unlike reactive environmental strategies, proactive environmental strategies would increase corporate operating costs and R&D investment at least in the short term, thereby weakening corporate performance gains (Palmer et al., 1995). However, some scholars believe that the green behavior of enterprises can bring "innovation compensation effect", which can create unique competitive advantages for enterprises different from competitors, and then realize the improvement of organizational performance (Port and Van der Linde, 1995). With the deepening of research, more and more scholars believe that an active green strategy is conducive to improving the quality of production and operation of enterprises, and can improve the profitability and efficiency of enterprises (Hart, 1995; King and Lenox, 2002). Enterprises can further reduce production and operating costs and improve economic efficiency through innovations related to green and environmental protection, such as reducing energy consumption, reusing production materials, and re-improving production processes, so that enterprises can obtain substantial benefits through green innovation strategies. Improved economic performance (Chiou et al., 2011; Dong et al., 2014; Eiadat et al., 2008). In addition, the green innovation strategy can help enterprises reduce the negative impact of production and operation activities on the environment, reduce the compliance and responsibility costs of enterprises, improve the brand image of enterprises and the reputation of environmental leadership of enterprises, and then enhance the market advantages of enterprises and increase the value of enterprises. cash flow and improve operating performance (Eiadat et al., 2008). Studies have found that corporate attitudes and initiatives towards environmental responsibility are seen as a source of better or more valuable opportunities (Porter, 2006), and companies with higher levels of environmental commitment tend to be able to obtain a good ecological image (Christmann, 2000), thereby gaining higher social acceptance (Bansal, 2005), which further satisfies the needs of environmentally sensitive customers for products, thus enabling enterprises to benefit from a premium price and obtain higher income (Esty and Winston, 2009; Marcus and Fremeth , 2009). This kind of social

recognition also helps companies to distinguish their products and services from other competitors in the industry, form a differentiated competitive advantage, further increase brand value and customer loyalty, and a good corporate reputation and corporate image. It also helps to enhance the green innovation performance of enterprises (Chang and Chen, 2013; Chiou et al., 2011). Some studies have also found that new start-ups that take green innovation strategy as their corporate strategy can gain better social support from their internal and external stakeholders and obtain valuable resources. Tomomi's (2010) research focused on small and medium-sized enterprises in Japan and found that environmental strategies provide better opportunities for the improvement of business activities of these enterprises and provide them with a competitive advantage. The research of Huang and Jim (2010) found that in the research background of high-tech enterprises, environmental innovation can significantly improve the financial performance of the organization. The implementation of the green innovation strategy and the ecological innovation activities of enterprises will not only have a positive impact on the competitiveness and financial performance of enterprises, it will also help enterprises to improve their environmental performance (Long et al., 2017). The green innovation behavior of enterprises can reduce environmental pollution through green product design, cleaning equipment, recycling and reusing production materials (Xie et al., 2019), promote the sustainability of enterprises in achieving environmental performance, and increase environmental value. In addition, product innovation and process improvement in the process of realizing green innovation can also achieve performance growth by meeting customers' green needs, and achieve a balance between environmental performance and financial performance (El- Kassar and Singh, 2019). Ates et al. (2012) explained the role of forward-looking environmental strategies from the perspective of strategic implementation, and pointed out that forward-looking environmental strategies improved environmental performance through environmental investment. The study by Zhang et al. (2019) examined the impact of forward-looking environmental strategies on environmental performance, and the results also showed that green operating practices fully mediated the positive impact of green human resource management on environmental performance. To sum up, this study believes that the green innovation strategy can effectively promote the performance of new ventures. Based on the above analysis, this study proposes the following hypotheses:

H1: Green innovation strategy has a positive impact on enterprise performance .

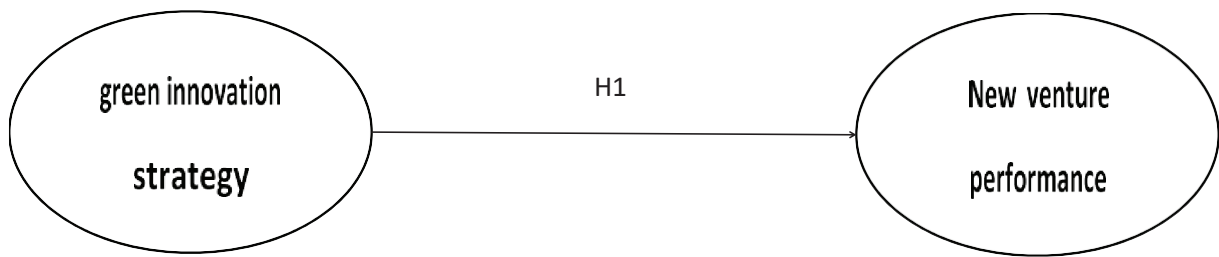


Figure 1.1 Relationship model between green innovation strategy and New venture performance. In this study, SPSS24.0 software was used to test the hypothesis by hierarchical regression method, in which the nature of enterprises is class. Specific variables need to be virtualized. In this study, "other" in the nature of the enterprise is selected as a reference and assigned a value of 0. The results show that green innovation strategy can effectively explain 27.5% of the performance variation of new startups, R^2 changes significantly, and the regression coefficient $\beta = 0.498$ ($p < 0.001$), indicating that green innovation strategy can significantly positively affect the performance of new startups, that is, H1 is established.

The mechanism of green innovation strategy on the performance of new ventures. In the study of the mechanism of green innovation strategy on the performance of new ventures, this paper draws the following conclusions: Green innovation strategy has a significant positive impact on the performance of new ventures.

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