

THE EFFECT OF GREEN ENTREPRENEURIAL ORIENTATION ON NEW VENTURE PERFORMANCE: EVIDENCE FROM NEW VENTURES IN FIVE CITIES IN CHINA

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Abstract

With the growing emphasis on sustainable development, there are inconsistent conclusions regarding the impact of green entrepreneurial orientation (GEO) on new venture performance. Therefore, this study aims to examine how GEO affects new venture innovation performance. Using survey data collected from high-tech new ventures in China and analyzed by structural equation modeling, it is found that GEO positively impacts new ventures' environmental and financial performance, with a greater effect on environmental performance. New ventures with stronger GEO orientation tend to conduct more green innovations and develop green products, achieving dual goals of environmental protection and profit growth. These results enrich the GEO theory and provide practical implications for new ventures adopting GEO. However, limitations exist such as lack of mediating variable analysis. Future research could incorporate larger cross-regional samples and mediating variables to further explore the mechanisms. This study contributes empirical evidence on how GEO enables new venture sustainability within the Chinese context.

Key words: Green Entrepreneurial Orientation / New Venture Performance / Environmental Performance / Financial Performance

1. Introduction

With the acceleration of industrialization, population growth, the creation of new products, and the over-consumption of high-quality items, in addition to promoting global economic development, the ecosystems have also been damaged and the environment has deteriorated [11]. Since the signing of the Paris Agreement, countries around the world have shown increasing attention to environmental protection and sustainable development. Some scholars believe that environmental issues can be addressed through entrepreneurial activities [16]. Among them, green entrepreneurship aims to achieve a win-win situation in both economic and environmental benefits [3]. Green entrepreneurship is considered an important option for enterprises to participate in environmental practices [1], and can increase the competitiveness of enterprises [3]. Motivating

startups to adopt green innovation is seen as a critical way to achieve green and sustainable development.

Although academia has recognized the importance of green entrepreneurial orientation for the future growth of firms, there is still a lack of systematic and thorough understanding of this concept, which is mostly reflected in: First, existing research focuses more on the green innovation practices of large companies, while the understanding of startups adopting green innovation technologies is still insufficient [2][18]. Second, research conclusions on the impact of green entrepreneurial orientation on firm performance are inconsistent[17][12], and specific influence mechanisms need to be further explored. Third, the relationship between green entrepreneurial orientation and firm performance remains a "black box", requiring an in-depth investigation of potential mediating paths[4][5]. Therefore, this study plans to clarify the connotation of green entrepreneurial orientation and explore its impact mechanism on the innovation performance of startups, in order to provide references for enterprises to choose green entrepreneurial orientation and improve performance.

2. RESEARCH QUESTION AND RESEARCH OBJECTIVE

Under the framework of sustainable development, green entrepreneurial orientation has gained extensive attention as an important option for enterprises to achieve win-win outcomes in both economic and environmental benefits[8]. Existing literature has different descriptions of green entrepreneurial orientation, but most expound it from the two dimensions of corporate environmental strategy and innovation strategy. Green entrepreneurial orientation reflects enterprises' high degree of attention and proactive participation in environmental issues, and is a strategic orientation guiding enterprises to carry out green practices[11]. Enterprises with strong green entrepreneurial orientation will actively seize environmental opportunities and utilize various resources to develop green products and technologies.

Although scholars have fully affirmed the positive significance of green entrepreneurial orientation for enterprise growth, the conclusions in existing literature on its impact on the performance of startups are inconsistent[14][16]. With their flexible innovation approach and high emphasis on sustainable development, startups are considered an important force for realizing green and sustainable growth. Therefore, clarifying the impact of green entrepreneurial orientation on the performance of startups is of great significance for guiding the business practices of startups.

Based on the above research background, the research question of this study is:

How does green entrepreneurial orientation affect the New Venture Performance

Research Objectives is :

- (1) To clarify the connotation of green entrepreneurial orientation.
- (2) To explore the impact mechanism of green entrepreneurial orientation on the New Venture Performance.

3. RESEARCH HYPOTHESIS

1.New venture performance

Although there is no consensus in academia, new ventures are usually understood to be enterprises in the founding or early development stages. Their advantages lie in high flexibility and abundant

innovative spirit. Compared with mature enterprises, their disadvantages in knowledge and information resources, imperfect organizational structure are obvious. The time since establishment and enterprise life cycle are two key criteria for scholars to distinguish new ventures. According to enterprise life cycle theory, new ventures are still in the early stage of development and have not reached maturity[18]. Some scholars believe that enterprise development can be divided into three stages: start-up, growth and maturity. Enterprises established within 4 years belong to the start-up development stage of new ventures. However, more scholars believe that distinguishing new ventures based on years since establishment can be clearer and more intuitive. According to the Global Entrepreneurship Monitor's criteria, enterprises established within 42 months (3.5 years) are considered new ventures. Weiss (1981) found that it usually takes a firm about 7 years to make a profit, through analyzing individual entrepreneurial enterprises across multiple industries. However, most scholars agree that the ideal time limit to judge new ventures is 8 years. This standard of using 8 years as the criterion to categorize new ventures has been adopted by studies of Su et al. (2015), Wang et al. (2017), Yin Miaomiao (2015), Zhang Xiumei and Xu Xuejiao (2019), Zhang Xiumei and Zhang Kun (2021). Studies by Covin and Slevin (1989) and Luo Xingwu (2016) set the boundary between new ventures and mature enterprises at 12 years. Other scholars like Yu Hongjian (2007) believe that longer periods are needed to define new ventures. Based on the definitions of most studies and considering the research subjects and objectives of this study, this research defines entrepreneurial enterprises established within 8 years as new ventures.

New venture performance is regarded as an important goal of enterprise development, embodied in profit growth and performance improvement. According to Laskovaia et al. (2017), new venture performance is the concrete manifestation of new venture operation results, and a useful tool to assess the realization degree of new venture development goals. It can be reflected in multiple ways such as increased corporate profits, expanded market share, and improved consumer favor [8]. New venture performance can clearly display the enterprise's current development status and survival[20]. New venture performance reflects the efficiency and effectiveness of new venture operations[16], is the result of new venture strategic decisions [17], and can accurately reflect the enterprise's profitability, cash flow and operational capabilities. It is the result of various business operations and outputs of new ventures [21].

2. Green entrepreneurial orientation

The study of entrepreneurial orientation and green entrepreneurship is where the idea of "green entrepreneurial orientation" first emerged. In particular, businesses with a strong green entrepreneurial orientation must adhere to both environmental regulations and the entrepreneurial orientation of enterprise development, which calls for taking on novel and even risky projects in order to address environmental issues raised by external stakeholders[9]. As stated by Miller (2011), the person who first introduced the idea of entrepreneurial orientation, businesses that are really oriented toward entrepreneurship exhibit traits like innovation, risk-taking, and proactiveness. According to Covin and Slevin (1989), green entrepreneurial orientation is

congruent with entrepreneurial orientation, which is the proactive strategic propensity at the enterprise level to recognize and take advantage of environmentally friendly economic prospects. From the perspective of enterprise age, some scholars have explored the green entrepreneurial orientation of innate green enterprises and green transformation enterprises (Roxas et al., 2017; Mrkajic et al., 2019); from the perspective of a particular industry type, research has examined the causes and effects of green entrepreneurial orientation in a variety of industries, including clean technologies, agriculture, and services [7][5]. According to enterprise attributes, some research has further separated the influence of state-owned and non-state-owned enterprises on their capacity for innovation following an increase in focus on environmental strategies [15]. Although research on green entrepreneurial orientation started relatively late, scholars have defined green entrepreneurial orientation with subtle differences from different perspectives.

The review and analysis of existing research reveals that although the definitions of green entrepreneurial orientation by scholars are not completely consistent, green entrepreneurial orientation generally has the following characteristics: First, green entrepreneurial orientation is a strategic tendency, which is consistent with entrepreneurial orientation and includes features such as innovation, risk-taking, and proactiveness; Second, green entrepreneurial orientation cannot be separated from the core connotation of entrepreneurship, which emphasizes the pursuit of eco-friendly business opportunities; Third, achieving win-win economic and environmental benefits is the goal of enterprises adopting a green entrepreneurial mindset. Based on the research of Dean and McMullen (2007) and Jiang et al. (2018), this study defines green entrepreneurial orientation from a strategic perspective as a holistic concept, encompassing three dimensions of green innovation, green reactivity, and green risk-taking. Specifically, green entrepreneurial orientation refers to identifying and seizing eco-friendly business opportunities by providing environmentally friendly products and services to meet current and future environmental demands as well as enterprise economic objectives.

3. Green innovation and new venture performance

Green innovativeness reflects an enterprise's willingness to explore new business concepts, products and services. Businesses with a green entrepreneurial attitude typically combine resources to launch new goods and processes in an effort to seek product and process innovation [16]. Product innovation involves using recyclable and decomposable materials in production processes [3]. These practices can result in lower energy consumption levels, solving resource cost problems [8], avoiding environmental taxes and other government penalties (Amankwah-Amoah et al., 2018). Additionally, process innovation helps enterprises find new methods of converting waste into profitable products, providing enterprise income. Thus, via creative thinking, green entrepreneurial mindset may assist businesses in increasing production efficiency, cutting waste, and lowering expenses.

4. Green reactivity and new venture performance

An organization's green proactiveness indicates its aim to outperform rivals by grabbing eco-friendly possibilities faster [18]. Businesses can benefit from first-mover advantages by aggressively seeking green environmental prospects [19]. Customers are pressuring businesses to

meet their green demands [20]. Green entrepreneurial orientation embodies an enterprise's environmental orientation, which can not only help improve its environmental reputation but also distinguish its products from competitors in ecological functionality through attentiveness to technological and market changes [21], thus responding to customer demands more quickly than competitors, gaining market share and improving financial performance [13].

5.Green risk-taking and new venture performance

Third, risk-taking propensity reflects an enterprise's preference for high-risk opportunities rather than acting cautiously within set objectives [20]. Enterprises implementing green entrepreneurial orientation are willing to take risks in highly uncertain environments by investing ample resources into projects with uncertain returns [15]. Green entrepreneurial processes are always accompanied by complex and uncertain possibilities while also having the potential to generate previously non-existent growth points [8]. Businesses that embrace a green entrepreneurial approach will be better equipped to respond to changing market needs and manage external risks with agility thanks to improved customer response.

The analysis presented above leads this study to propose the following hypothesis:

H1: Green entrepreneurial orientation has a positive impact on enterprise performance.

H2: Green entrepreneurial orientation has a positive impact on environmental performance.

H3: Green entrepreneurial orientation has a positive impact on financial performance.

4. MEASUREMENTS OF VARIABLES

In order to ensure the reliability and validity of the measurement, some scales used in this paper are from mature scales that have been widely used in domestic and foreign researches, while some scales are modified according to relevant classical literature and specific conditions in China, and the modified results are tested step by step according to the overall design method.

(1) Green innovativeness, green activeness, and green risk-taking are the three elements that make up green entrepreneurial orientation, according to studies by Jiang et al. (2018) and Dean and McMullen (2007). Jiang et al. (2018) measured green entrepreneurial orientation using a five-item scale.

(2) Performance of new ventures: According to research by Yu et al. (2017) and Jiang et al. (2018), in order to quantify the performance of new enterprises, it is separated into two categories: financial performance and environmental performance.

5. METHODOLOGY

In this study, quantitative research methods were used to collect data by questionnaire survey, and then data analysis was carried out to verify the hypothesis.

5.1 Sample selection and data collection

We used questionnaire data to test the proposed hypotheses. Using a random sampling method, we selected new ventures located in five cities in China with relatively high levels of economic development – Beijing, Shanghai, Guangzhou, Shenzhen and Chongqing. These regions have a large number of new ventures, a strong atmosphere of innovation and entrepreneurship, and pay greater attention to green innovation.

The questionnaire survey was conducted in two rounds. In the first round, 100 questionnaires were distributed to test the reliability and validity of the questionnaire. Based on analysis of the collected data, we revised the questionnaire by deleting or adjusting some items. In the second formal survey, 500 questionnaires were distributed and 405 were returned, yielding a response rate of 81%. After removing 69 unqualified questionnaires with missing data and wrong questionnaires, the final valid response rate was 67.2%. The respondents were managers of the selected new ventures.

5.2 Data processing methods

This study needs to test the linear relationship, and structural equation model (SEM) is relatively mature in this aspect. In view of this, this study adopts the linear regression method to test the hypotheses proposed. This method is widely used and can better ensure the accuracy and stability of the study.

6. EMPIRICAL ANALYSIS

6.1 Reliability and validity

First of all, this paper conducts a reliability test to examine whether consistent results can be obtained by different subjects at different times and places, that is, the stability of the scale. Cronbach's α value was used in this paper to test the reliability of the scale. Generally, a Cronbach's α value between 0.65 and 0.70 is acceptable, a Cronbach's α value between 0.7 and 0.8 is good, and a Cronbach's α value greater than 0.8 is excellent. In this paper, analysis software was utilized to test the reliability of the collected data. The results revealed that the Cronbach's α coefficient of each measurement item of new venture Performance and green Entrepreneurial Orientation was greater than 0.8 (see Table 6.1 for details), indicating the relatively stable reliability of the scale in this paper.

Secondly, we performed a validity test to consider whether the data analysis results could truly reflect the characteristics of latent variables. The common values of the five main factors were all significantly higher than 0.5, demonstrating that the information of the study can be effectively extracted. At the same time, the factor loadings of each sub-item of the factor matrix were greater than 0.7, and the KMO value was above 0.6, indicating that the scale of this study has high validity (see Table 6.1 for details).

In addition, when we did the reliability analysis, we found that the reliability coefficients of FP5 and GT1 were 0.919 and 0.870 respectively, which were greater than 0.8, indicating that the reliability quality of the research data was high. Referring to " α coefficient of deleted items" (FP5 is 0.920, GT1 is 0.924), if FP5 and GT1 are deleted, the reliability coefficient will increase significantly. Therefore, these two items are deleted to obtain the final scale.

Table 6 1 Reliability and validity

Variable	Dimension	Items	Cronbach α	Factor load coefficient	Common factor variance	KMO
New venture performance	Financial performance	FP1.Our company's sales have been increasing in the past few years	0.919	0.865	0.748	0.841

Variable	Dimension	Items	Cronbach α	Factor load coefficient	Common factor variance	KMO
Green Entrepreneurial Orientation	Environmental performance	FP2.In the past few years, our company's market share has been increasing	0.923	0.899	0.808	0.848
		FP3.In the past few years, our company has opened up new regional markets		0.907	0.822	
		FP4.In the past few years, our company has increased its product portfolio		0.874	0.764	
		FP5.In the past few years, our company has launched some new products		0.743	0.552	
		FP6.In the past few years, the overall operational efficiency of our company has been improving		0.770	0.594	
		EP1. In the past few years, the pollution caused by our company's production and operation activities has gradually decreased		0.890	0.792	
	Green innovation green reactiveness	EP2.In the past few years, our company has frequently achieved goals of energy conservation, recycling, or waste reduction	0.915	0.917	0.841	0.761
		EP3.In the past few years, our company has saved a lot of money due to its environmentally friendly practices (Excluding achievements in energy conservation, recycling, and waste reduction)		0.940	0.884	
		EP4. In the past few years, the overall environmental performance of our company has improved		0.862	0.743	
		GI1.Our company places great emphasis on green practice activities, such as green research and development, green technology leadership, and innovation		0.928	0.861	
		GI2. The company takes measures to save energy and resources		0.929	0.863	
		GI3. Is the company actively pushing customers to use environmentally friendly products or services?		0.923	0.852	
		GR1.When facing uncertainty, our company usually takes a bold and proactive stance to seize potential green opportunities		0.884	0.781	
		GR2.Compared to competitors, we usually initiate green environmental actions before our competitors		0.932	0.868	
		GR3.Our company tends to be a market leader, often launching green products,		0.898	0.806	

Variable	Dimension	Items	Cronbach α	Factor load coefficient	Common factor variance	KMO
		services, or technologies ahead of our peers				
		GT1. Our company tends to focus on high-risk green product development projects, which have high opportunities for returns		0.818	0.668	
	green risk-taking	GT2. The company carefully evaluates and manages environmental risks	0.870	0.924	0.853	0.680
		GT3. The company collaborates with external experts and adopts advanced technologies and methods to manage environmental risks.		0.937	0.877	

6.2 Confirmatory factor analysis

We used analysis software to test the measurement relationship of each measurement item. Based on the principle of extracting eigenvalues greater than 1, 5 main factors are extracted, the results showed that all observed variables of the scale were on the latent variables corresponding to the theoretical hypothesis, and the load coefficients of each sub-item were greater than 0.6 (see Table 6.2 for details), indicating that the measurement items of the factors had a good measurement relationship.

Table 6.2 Factor load coefficient table

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Factor (Latent variable)	Measure item (explicit variable)	Non-standard load factor (Coef.)	Standard error (Std. Error)	z (CR value)	p	Standard load factor (Std. Estimate)
Financial performance	FP1	1.000	-	-	-	0.868
	FP2	0.989	0.041	24.064	0.000	0.915
	FP3	1.027	0.044	23.496	0.000	0.904
	FP4	0.959	0.046	20.768	0.000	0.848
	FP6	0.697	0.056	12.460	0.000	0.609
Environmental performance	EP7	1.000	-	-	-	0.855
	EP8	1.076	0.050	21.574	0.000	0.878
	EP9	1.052	0.046	23.060	0.000	0.910
	EP10	0.952	0.053	18.103	0.000	0.794
Green innovation	GI1	1.000	-	-	-	0.896

Table 6.2 Factor load coefficient table

Factor (Latent variable)	Measure item (explicit variable)	Non-standard load factor (Coef.)	Standard error (Std.Error)	<i>z</i> (CR value)	<i>p</i>	Standard load factor (Std.Estimate)
Green reactivity	GI2	0.949	0.039	24.397	0.000	0.881
	GI3	1.091	0.044	24.773	0.000	0.887
	GR1	1.000	-	-	-	0.850
	GR2	1.139	0.052	22.040	0.000	0.897
	GR3	0.993	0.051	19.596	0.000	0.839
Green risk-taking	GT2	1.000	-	-	-	0.890
	GT3	1.057	0.037	28.911	0.000	0.961

Note: The bar '-' indicates that the item is a reference item.

Then, we use the obtained results to calculate, and the average variance extracted AVE value of all constructs is higher than 0.5. And the combined reliability CR value is much higher than the threshold of 0.7 (Fornell & Larcker, 1981). It can be seen from Table 6.3 that the AVE value and CR value of each factor are greater than 0.7 and 0.8 respectively, which indicates that this scale has good aggregation validity.

Table 6.3 Model AVE and CR index results

Factor	AVE value	CR value
Financial performance	0.700	0.920
Environmental performance	0.740	0.919
Green innovation	0.789	0.918
Green reactivity	0.744	0.897
Green risk-taking	0.858	0.923

Source: Data reduction

6.3 Hypothesis Testing

This study mainly examines the impact of Green Entrepreneurial Orientation on new venture performance, that is, the impact of two dimensions of knowledge acquisition on radical innovation. On the basis of structural equation, confirmatory factor analysis is carried out for the relationship between variables. The specific results are shown in table 6.4.

Summary table of model regression coefficients

X	-	Y	Non-standardized path coefficients	SE	z (CR value)	p	Standardized path coefficient
Green Entrepreneurial Orientation	-	Environmental performance	0.806	0.058	13.928	0.000	0.806
Green Entrepreneurial Orientation	-	Financial results	0.259	0.082	3.167	0.002	0.258

It can be seen in the table 6.4:

When green entrepreneurship orientation has an impact on environmental performance, the standardized path coefficient value is $0.806 > 0$, and this path presents a significance level of 0.01 ($z=13.928$, $p=0.000 < 0.01$), which indicates that green entrepreneurship orientation will have a significant positive impact on environmental performance.

When green entrepreneurship orientation has an impact on financial performance, the standardized path coefficient value is $0.258 > 0$, and this path presents a 0.01 level of significance ($z=3.167$, $p=0.002 < 0.01$), thus indicating that green entrepreneurship orientation will have a significant positive impact on financial performance.

According to the results of regression analysis, green entrepreneurship orientation has a significant positive impact on both financial performance and environmental performance of new start-ups, so H1, H2, H3 are assumed. All were supported.

7. CONCLUSIONS AND ENLIGHTENMENT

7.1 Conclusions

Against the backdrop of surging attention to sustainable development, green entrepreneurial orientation has become an important option for new ventures to achieve both economic and environmental gains [16]. However, existing literature shows inconsistent conclusions on its impact mechanism, with a focus on mature firms rather than new ventures [18][17]. Therefore, this study aims to investigate how green entrepreneurial orientation affects the innovation performance of new ventures, in order to fill the research gap in this field. Grounded in strategic management theory and entrepreneurship theory, this study develops a model and hypothesizes that green entrepreneurial orientation can promote the environmental performance (H2) and financial performance (H3) of new ventures, with a greater impact on environmental performance (H1). The empirical results support these hypotheses, demonstrating that green entrepreneurial orientation significantly enhances the innovation performance of new ventures. New ventures with strong green entrepreneurial orientation are more inclined to conduct green innovation and develop green products and technologies, thus achieving dual harvests in environmental protection and profit growth (Jiang et al., 2018). In addition, the results also show that the impact of green entrepreneurial orientation on environmental performance (path coefficient= 0.806) is greater than on financial performance (path coefficient= 0.258), which is associated with new ventures' emphasis on corporate social responsibility and sustainability.

Therefore, green entrepreneurial orientation is an important driver influencing the innovation performance of new ventures.

7.2 Enlightenment

This study enriches the theory of green entrepreneurial orientation and expands the research perspective on its impact mechanism, namely how green entrepreneurial orientation affects the innovation performance of new ventures. The research framework and conclusions can provide references for future related research. Follow-up studies can explore other potential mediating and moderating variables on this basis to further expand the influence path of green entrepreneurial orientation.

The results demonstrate that green entrepreneurial orientation can improve the innovation performance of new ventures. This has important guiding significance for the sustainable development of new ventures, and can prompt them to adopt more green innovation practices and choose green operation models. The research conclusions can also provide a reference basis for governments to formulate policies to promote green entrepreneurship development.

8 INNOVATE AND LOOK FORWARD

8.1 Innovate

1.This study examines how green entrepreneurial orientation affects the innovation performance of new ventures from the perspective of green entrepreneurial orientation. Compared with previous studies that focus more on mature enterprises, this study focuses on new ventures and expands the research boundary of the impact mechanism of green entrepreneurial orientation.

2.The research objects of this study are high-tech enterprises, representing a certain type of new ventures. Different from the mixed examination of various new ventures in existing studies, this study can better demonstrate the characteristics of high-tech start-ups.

3.This study finds that green entrepreneurial orientation has a greater impact on the environmental performance than on the financial performance of new ventures. This finding enriches the impact mechanism of green entrepreneurial orientation and also helps explain the motivations for new ventures to adopt green entrepreneurial orientation.

8.2 Look forward

This study only examined the direct impacts of green entrepreneurial orientation on new venture innovation performance. Future research could incorporate mediating and moderating variables to explore the specific mechanisms of how green entrepreneurial orientation affects innovation performance.

Qualitative methods like case studies could also be adopted to enrich investigation and discussion of the research questions from different angles.

REFERENCES:

- [1] AMANKWAH AMOAH J, DANSO A, ADOMAKO S. Entrepreneurial orientation, environmental sustainability and new venture performance: Does stakeholder integration matter?[J]. Business Strategy and the Environment, 2018,28: 1-9.

- [2] Aminu, M. I., Mahmood, R., Mohammed, U. D., & Sharif, S. M. (2022). Green transformational leadership, green entrepreneurial orientation and performance of SMEs: The mediating role of green product innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(4), 191.
- [3] Chimucheka, T., & Mandipaka, F. (2019). Green entrepreneurial orientation and firm performance in South Africa. *Entrepreneurship and Sustainability Issues*, 247-262.
- [4] GUO Y, WANG L, CHEN Y. Green entrepreneurial orientation and green innovation: The mediating effect of supply chain learning[J]. *Sage Open*, 2020,10(1): 1-13.
- [5] JIANG W, CHAI H, SHAO J, et al. Green entrepreneurial orientation for enhancing firm performance: A dynamic capability perspective[J]. *Journal of Cleaner Production*, 2018, 198: 1311-1323.
- [6] LI H, ZHANG Y. The role of managers' political networking and functional experience in new venture performance: Evidence from China's transition economy[J]. *Strategic Management Journal*, 2007, 28(8): 791-804.
- [7] LUU T T. Green creative behavior in the tourism industry: the role of green entrepreneurial orientation and a dual-mediation mechanism[J]. *Journal of Sustainable Tourism*, 2021, 29(8): 1290-1318.
- [8] Lui, T. W., & Wong, Y. Y. (2022). Enabling green supply chain integration via green entrepreneurial orientation: Does environmental leadership matter?. *Corporate Social Responsibility and Environmental Management*, (2), 518-530.
- [9] Lv, W., & Jin, L. (2021). Research on the influencing factors of new venture performance. *Investment and Entrepreneurship*, (02), 119-121.
- [10] Mishra, P. K., Singh, V., Jain, R., Tiwari, M. K., & Shankar, R. (2022). Designing a new mathematical model for optimising a multi-product RFID-based closed-loop food supply chain with a green entrepreneurial orientation. *British Food Journal*, (7), 2114-2148.
- [11] Safa, N. S., Amir, E. A., & Von Friedrichs, Y. (2023). Do green entrepreneurial orientation and green knowledge management matter in the pursuit of ambidextrous green innovation: A moderated mediation model. *Journal of Cleaner Production*.
- [12] Shi, W., Sun, S. L., Yan, D., & Zhu, Z. (2022). The relationship between institutional pressure, green entrepreneurial orientation, and entrepreneurial performance—The moderating effect of network centrality. *Sustainability*, 14(19), 12055.
- [13] Urban, B., & Wood, E. (2023). Corporate sustainability entrepreneurship: The role of green entrepreneurial orientation and organizational resilience capacity for green innovation. *Journal of Business Research*.
- [14] Vazquez-Brust, D. A., Liston-Heyes, C., Plaza-Úbeda, J. A., & Burgos-Jiménez, J. (2022). The role of green process innovation translating green entrepreneurial orientation and proactive sustainability strategy into environmental performance. *Journal of Small Business and Enterprise Development*, (5), 789-806.

- [15] Wang, X., Hu, B., & Li, S. (2020). Green entrepreneurial orientation and green innovation: The mediating effect of supply chain learning. *SAGE Open*, 10(1), 2158244019898798. <https://doi.org/10.1177/2158244019898798>
- [16] Wang, X. F., Li, H. J., & Li, Y. H. (2015). Research on the relationship between green entrepreneurial orientation and corporate performance: Based on the analysis of high-tech enterprises in Zhongguancun. *Soft Science*, (06), 42-45. doi:10.13956/j.ss.1001-8409.2015.06.10
- [17] Xia, H. (2019). The relationship among green entrepreneurial orientation, proactive market orientation and technological innovation performance in new technology-based firms. *Science and Technology Management Research*, (16), 264-274.
- [18] Zhang, X. E., Huang, H. S., Xu, X. J., & Xue, M. (2021). Research on the impact of green entrepreneurial orientation on green competitive advantage. *Scientific Research*, (12), 2241-2252. doi: 10.16192/j.cnki.1003-2053.20210312.001
- [19] Zhang, X. E., & Li, Q. (2021). Can green entrepreneurial orientation form green competitive advantage? *Foreign Economics & Management*, (05), 20-33. doi:10.16538/j.cnki.fem.20200805.401
- [20] Zhang, X. E., & Li, Q. (2021). The impact of green proactive orientation on corporate performance: A chain-mediation model. *Innovation and Entrepreneurship Management*, (02), 57-71.
- [21] Zhang, X. E., Liu, Y., & Li, S. (2021). The impact of green entrepreneurial orientation on sustainable competitive advantage: The chain mediating role of green organizational identification and green innovation. *Science and Technology Progress and Policy*, (01), 26-33.
- [22] ACHROL R S, STERN L W. Environmental determinants of decision-making uncertainty in marketing channels[J]. *Journal of Marketing Research*, 1988, 25(1):36-50.
- [23] ADAMS R, JEANRENAUD S, BESSANT J, et al. Sustainability-oriented innovation: A systematic review[J]. *International Journal of Management Reviews*, 2016, 18(2): 180-205.
- [24] BHATIA M S. Green process innovation and operational performance: The role of proactive environment strategy, technological capabilities, and organizational learning[J]. *Business Strategy and the Environment*, 2021, 30(7): 1-13.
- [25] BHATTI S H, ZAKARIYA R, VRONTIS D, et al. High-performance work systems, innovation and knowledge sharing: An empirical analysis in the context of project-based organizations[J]. *Employee Relations*, 2020, 43(2): 438-458.
- [26] BI K, HUANG P, WANG X. Innovation performance and influencing factors of low-carbon technological innovation under the global value chain: A case of the Chinese manufacturing industry[J]. *Technological Forecasting and Social Change*, 2016, 111, 275-284.
- [27] CAI W G, ZHOU X L. On the drivers of eco-innovation: empirical evidence from China[J]. *Journal of Cleaner Production*, 2014, 79: 239-248.
- [28] CHIKWECHE T, BRESSAN A. A systematic review of future research challenges and prospects of organizational learning research in small medium size enterprises[J]. *Journal of Small Business & Entrepreneurship*, 2018, 30: 175-191.

- [29] CHRISTENSEN J L, HAIN D S, NOGUEIRA L A. Joining forces: collaboration patterns and performance of renewable energy innovators[J]. *Small Business Economics*, 2019, 52(4):793-814.
- [30] ESTRIN S, MICKIEWICZ T, STEPHAN U. Entrepreneurship, social capital, and institutions: Social and commercial entrepreneurship across nations[J]. *Entrepreneurship Theory and Practice*, 2013, 37(3): 479-504.
- [31] FERNANDO Y, JABBOUR C J C, WAH W X. Pursuing green growth in technology firms through the connections between environmental innovation and sustainable business performance: Does service capability matter? [J]. *Resources Conservation and Recycling*, 2019, 141: 8-20.
- [32] GOPALAKRISHNAN S, ZHANG H. Client dependence and vendor innovation:the moderating role of organizational culture[J]. *Industrial Marketing Management*, 2017, 66: 80-89.
- [33] HÁJEK P, STEJSKAL J. R&D cooperation and knowledge spillover effects for sustainable business innovation in the chemical industry[J]. *Sustainability*, 2018,10(4): 1064.
- [34] HAKALA H. Strategic orientations in management literature: Three approaches to understanding the interaction between market, technology, entrepreneurial and learning orientations[J]. *International Journal of Management Reviews*, 2011,13(2): 199-217.
- [35] HALDAR S. Towards a conceptual understanding of sustainability-driven entrepreneurship[J]. *Corporate Social Responsibility and Environmental Management*, 2019, 26(6): 1157-1170.