AN ANALYSIS ON THE INFLUENCE OF ENTERPRISE INTERNATIONALIZATION ON PERFORMANCE: A CASE OF CHINA'S LISTED MANUFACTURING ENTERPRISES

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A dissertation submitted in partial fulfillment of the requirements for the degree of

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Declaration

I, Cheng Mingshuang, hereby certify that the work embodied in this dissertation entitled " An Analysis on the Influence of Enterprise Internationalization on Performance: A Case of China's Listed Manufacturing Enterprises " is result of original research and has not been submitted for a higher degree to any other university or institution.

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Abstract

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This study investigates the impact of internationalization on the performance of Chinese-listed manufacturing enterprises. It focuses on how institutional distance, the overseas experience of the top management team (TMT), and R&D intensity moderate this relationship. The analysis was based on panel data from 1,089 Chinese manufacturing firms listed between 2005 and 2021, using a fixed effect model to examine the data empirically. The degree of internationalization (DOI) was subdivided into the degree of breadth (DOB) and the degree of commitment (DOC), represented by the number of countries with overseas subsidiaries (NCOS) and foreign sales to total sales (FSTS), respectively, as independent variables, with return on assets (ROA) as the dependent variable.

The findings revealed that internationalization wields a U-shaped influence on enterprise performance, suggesting that firms may encounter challenges during the initial stages of internationalization, which could lead to a temporary decline in performance. However, as internationalization progresses, companies gradually adapt

to foreign markets and optimize resource allocation, which results in improved performance. Furthermore, the study found that formal institutional distance negatively moderates the U-shaped influence, while informal institutional distance does not have a moderating effect. Additionally, the overseas experience of the TMT and R&D intensity positively moderates the U-shaped relationship. These findings provide valuable insights for governments in formulating effective policies and for enterprises adjusting strategies to enhance their internationalization performance.

Keywords: internationalization, enterprise performance, institutional distance, overseas experience of TMT, R&D intensity

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Chapter 1

Introduction

1.1 Research Background

Since Chinese president Xi Jinping put forward the cooperation initiative of building the 21st Century Maritime Silk Road and the New Silk Road Economic Belt in 2013, trade cooperation among countries and regions along the Belt and Road has been deeply integrated, promoting the internationalization of Chinese enterprises. China has gradually become a new engine driving the world economy(Wei & Chen, 2022).

In recent years, the internationalization of Chinese enterprises has been accelerating. According to 2021 Statistical Bulletin of China's Outward Foreign Direct Investment, China's outward foreign direct investment in 2021 reached US $178.82 billion, with a year-on-year growth of 16.3%, ranking among the top three in the world for ten consecutive years. By the end of 2021, China's stock of outbound direct investment had reached $2.79 trillion, ranking among the top three in the world for five consecutive years. Two-way investment in 2021 was almost the same. By the end of 2021, 28,000 Chinese domestic investors had set up 45,000 enterprises with foreign direct investment in 189 countries and regions, and more than 80 percent of the world's countries and regions had Chinese enterprises' investment, with the total assets of overseas enterprises totaling 7.9 trillion US dollars by the end of the year(Ministry of Commerce of the People’s Republic of China et al., 2022). In 2022, non-financial direct investment by Chinese enterprises in countries along the Belt and Road reached US $20.97 billion, up 3.3 percent year on year, accounting for 17.9 percent of the total in the same period and 0.6 percentage points higher than that in the same period last year. The turnover of contracted projects in these countries

reached US $84.94 billion, and the value of newly signed contracts reached US $129.62 billion, accounted for 54.8% and 51.2% of the total, respectively. The capital is mainly invested in Singapore, Indonesia, Malaysia, Vietnam, United Arab Emirates, Thailand, Pakistan, Cambodia, Serbia and Kazakhstan(Department of Foreign Cooperation and Economic Cooperation of China, 2023). However, according to statistics, in 2017 and 2018, China's outbound direct investment flow experienced negative growth for the first time, with outbound investment reaching 158.29 billion US dollars and 143.04 billion US dollars, respectively, down 19.3% and 27.1% compared with 2016. In 2019, China's outbound direct investment in the whole industry was US $117.12 billion, down 9.8% year on year(Ministry of Commerce of the People's Republic of China et al., 2022). In terms of overseas contract projects, Chinese enterprises signed 4,632 new contracts in countries along the Belt and Road, with the value of the new contracts reaching 657.91 billion yuan, down 0.7% (98.19 billion US dollars, down 4.3%) year-on-year, accounting for 50.2% of the total value of China's overseas contract projects in the same period. The turnover was 482.09 billion yuan, down 2.6% year-on-year (equivalent to 71.95 billion US dollars, down 6.1% year-on-year), accounting for 54% of the total turnover in the same period(Department of Foreign Cooperation and Economic Cooperation of China, 2023). For a country, the significance of "going global" strategy is as follows: First, in a more market-oriented and interdependent world, foreign investment of strategic significance can improve national economic security and status in the world economy, strive for a more favorable situation in the international division of labor and resource distribution, and improve relations with relevant countries and regions through investment. Second, Chinese enterprises can make use of two markets and two kinds of resources to integrate industries and resources in a broader space. Last but not least, "Going global" can foster a group of leading enterprises with global awareness, which is the goal that China must achieve in industrialization and an important symbol of

China's opening up to a new level(Research group of Enterprise Research Institute, Development Research Center of The State Council, 2006).

At the same time, over the past 74 years since the founding of the People's Republic of China, China's industrial added value has risen rapidly and made remarkable achievements. In 1990, China's manufacturing industry accounted for 2.7 percent of the global total, ranking ninth in the world. In 2000, it rose to 6.0%, ranking fourth in the world. In 2007, it reached 13.2 percent, ranking second in the world. In 2010, it accounted for 19.8 percent, ranking first in the world. In 2021, it accounted for nearly 30% of the global manufacturing industry, ranking first in the world's largest manufacturing country for 12 consecutive years(Li, 2022). The contribution of the manufacturing sector to economic growth has been basically kept at around 40 percent, and the export of manufactured goods accounts for over 90 percent of China's total export of goods, becoming an important sector to boost investment and consumption. No matter in terms of the proportion of the manufacturing industry in GDP and fiscal revenue, or in terms of expanding employment and maintaining social stability, we can certainly name that without a strong manufacturing industry, there would be no strong support for the industry, and there would be no economic basis for comprehensively improving the level and performance of agriculture, construction and service industries(Zhou, 2003). Moreover, manufacturing industry is also the basis and source of national competitiveness. According to the statistics of the Ministry of Commerce of China, from the industrial distribution of domestic investment subjects, manufacturing industry accounts for 31.6% of the total number of investment subjects. From the industrial distribution of overseas enterprises, manufacturing enterprises accounted for 18.9% of the total number of overseas enterprises(Ministry of Commerce of the People’s Republic of China et al., 2022). In 2015, the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Science and Technology, the Ministry of Finance, the General

Administration of Quality Supervision, Inspection and Quarantine, the Chinese Academy of Engineering and other departments and units jointly formulated “Made in China 2025”, which is a national industrial manufacturing and production guiding strategy corresponding to the Industrial Internet strategy proposed by the United States and the Industry 4.0 strategy proposed by Germany. The policy targets ten strategic priorities, including new-generation information technology, high-end CNC machine tools and robots, aerospace equipment, ocean engineering equipment and high-tech ships, advanced rail transit equipment, energy-saving and new-energy vehicles, electric power equipment, agricultural machinery equipment, new materials, biomedicine and high-performance medical devices. It is committed to guiding the gathering of various social resources and promoting the advantages and strategic development of manufacturing industry(China State Council, 2015). “Made in China 2025” is a major strategic plan made by the Chinese government to take overall control of international and domestic development trends and to enhance China's comprehensive national strength, enhance international competitiveness and ensure national security. The core of “Make in China 2025” is to accelerate the innovation and development of the manufacturing industry, improve the quality and efficiency, and transform China from a big manufacturer to a strong manufacturera (Planning Division of Chinese National Development and Reform Commission, 2015). Whether from the data level, or from the national policy level, the international development of China’s manufacturing enterprises has become the focus. Therefore, this study focuses on China’s manufacturing enterprises.

The complexity brought by the change of management and competition environment has led to difficulties for enterprises implementing internationalization strategy(Kim & Mauborgne, 1996). As mentioned above, the international market is faced with development opportunities and hidden challenges, which prompts manufacturing enterprises to have a broader vision of economic strategy. In order to strengthen the high-quality development of Chinese manufacturing enterprises and

improve their competitiveness in the world market, internationalization has become an indispensable choice. How manufacturing enterprises improve the effectiveness of internationalization, lead the value chain of international cooperation, and finally achieve sustainable development is a question that every business operator and decision maker needs to ponder. In the process of a new round of globalization, how to improve the business performance of Chinese manufacturing enterprises and enhance the new driving force for the sustainable development of manufacturing enterprises overseas while promoting internationalization is a topic worthy of in-depth study.

Existing studies show that enterprises in different industries have different characteristics in the process of internationalization. Take service enterprises and manufacturing enterprises as examples: It is widely believed in the field of marketing that service products are different from tangible products in many ways. First, compared with manufacturing enterprises, service enterprises have a lower proportion of capital, service products are intangible, non-storable, the identity of production and consumption, and consumers' subjective evaluation of service product quality. The characteristics determine that there is a great difference between the service enterprises in the international business model and manufacturing enterprises. Therefore, the research results about internationalization of manufacturing enterprises may not be suitable for that about service enterprises(Erramilli & Rao, 1993). Second, for service enterprises, non-asset mode is a popular way to enter foreign markets. Non-asset models are mainly contractual models, such as leasing, licensing, franchising and managed services. Therefore, for service enterprises wishing to explore the international market, the important problem is not how to choose between different asset models and non-asset models, but how to choose the most appropriate way to enter the foreign market among different non-asset models(Erramilli et al., 2002). However, the modes for manufacturing enterprises to enter foreign markets

include not only export and contract mode, but also FDI mode, which is more widely used.

Finally, this paper chooses listed companies as data sources mainly considering the following two aspects:

1. Data to be investigated in the research should be obtained from irreplaceable, systematic and open databases, concerning which listed companies have their convenience.

2. Compared with other companies, listed companies have more advantages in transnational operation, and the analysis of internationalization data of listed manufacturing companies is more referential than that of enterprises with weak development.

1.2 Research Significance

1.2.1 Theoretical Significance

This study emphasizes how it builds upon, challenges, and extends existing theories in the context of enterprise internationalization and performance. Below are some ways this study could provide theoretical significance with specific innovative points: (1) Integration of Multiple Theories in a New Context: This study could integrate Monopoly Advantage Theory, Product Life Cycle Theory, The Eclectic Theory of International Production, Location Advantage Theory, Internalization Theory, and Marginal Industry Expansion Theory to create a comprehensive framework for understanding the influence of internationalization on enterprise performance. This would be particularly innovative in the context of China's manufacturing sector, which is undergoing significant transformation due to globalization and technological advances. By combining these theories, this study could reveal how their interplay affects internationalization outcomes, offering a more holistic understanding than any single theory could provide. (2) Exploration of the U-Shaped influence of Internationalization: By empirically testing the U-shaped

influence of internationalization on enterprise performance, this study could challenge and refine the assumptions of the Product Life Cycle Theory and Internalization Theory, particularly in the context of different degrees of international commitment and breadth. This analysis could lead to the development of new theoretical insights or modifications to existing theories, contributing to a more nuanced understanding of how internationalization impacts performance over time. (3) Examination of Moderating Factors: This study could explore how factors such as institutional distance, overseas experience of TMT, and R&D intensity moderate the influence of internationalization on performance. This could involve extending the Eclectic Theory of International Production and Internalization Theory to account for these moderating variables. Identifying and explaining the role of these moderating factors could offer a theoretical advancement by providing a more detailed understanding of the conditions under which internationalization strategies are most effective. (4) Addressing Gaps in Existing Theories: This study could identify and address gaps in existing theories, such as the underexplored impact of global supply chain dynamics on internationalization strategies, or how digitalization and technological advances influence the relevance of Location Advantage Theory in the modern era. Filling these gaps would extend the theoretical landscape, making the existing theories more relevant and applicable to contemporary global business practices.

1.2.2 Practical Significance

As mentioned above, China's internationalization process continues to advance, and its manufacturing industry is also developing in full swing at home. However, the process of internationalization of Chinese manufacturing enterprises is faced with two problems nowadays: the gaming of global countries and the limited management level of enterprises. At the national level, take India as an example. In the past five years, India has launched a series of policies such as "Make in India" and "Skills in India" to promote India as a global manufacturing center. India has further attracted international investment by cutting the basic tax rate from 25 per cent to 15 per cent

for manufacturing companies newly established and operating between October 1, 2019 and March 31, 2023. At the same time, it has raised import duties on mobile phones and components, forcing mobile phone and component manufacturers to set up factories in India. Driven by a series of policies, some multinational companies have shifted their supply chains from China to India, facilitating the rapid rise of India's manufacturing industry. In the automotive sector, eight of India's top 10 automobile manufacturers in FY2021-2022 are foreign, with Japan's Suzuki (43.65 per cent) and South Korea's Hyundai (15.78 per cent) accounting for nearly 60 per cent together. In the mobile phone industry, the top five vendors in India in 2021 are all foreign companies, with 67% of the market share coming from Chinese companies(Zhang Wei and Lin Meng 2022). At the enterprise level, although some enterprises have successfully improved their performance and international competitiveness and achieved sustainable development through internationalization strategy, such as Huawei, Geely Automobile, Wanxiang Group, etc., there are also many enterprises that have suffered heavy losses due to the failure of international business strategy. Take SAIC as an example. Its acquisition of Ssangyong Motor did not bring expected performance to SAIC. On the contrary, SAIC's lack of understanding of the cultural distance between China and South Korea made it difficult to integrate after the merger and acquisition. As a result, SAIC finally gave up its management right and accepted huge losses. To sum up, competition at the national level requires the government to launch relevant policies such as "Made in China 2025" initiative. Enterprises' understanding and adjustment of the influence of internationalization degree on business performance also plays a crucial role in whether enterprises can timely stop losses or improve performance. To realize enterprise upgrading under open conditions through international operation can effectively integrate international resources, help Chinese manufacturing enterprises to improve their R&D, innovation and management ability, and help enterprises to

improve their performance and enhance their international competitiveness.(Chen et al., 2013)

Studies have shown that internationalization brings not only international market and related business opportunities, but also challenges from international and local competitors. In order to protect local enterprises or industries, overseas destination countries or regions restrict and "unequally treat" foreign enterprises from both market and policy aspects. The huge differences in laws and regulations, social culture, consumption patterns and other aspects between them and local enterprises, the influence of political factors, as well as the negative impact of "origin country disadvantages" on international enterprises in emerging markets and other factors have greatly increased the complexity of enterprise business environment(Yang et al., 2020). The enterprises' own internal control system may be "unable to cope with these changes", or even more serious control loopholes and defects will appear(Wang & Wang, 2018). Therefore, internationalization not only enables enterprises to win projects and opportunities that may achieve higher returns but have to undertake higher risks, which increase the uncertainty of the business environment, thus pushing up the level of risk taking for enterprises.

This research studies the influence of enterprise internationalization on performance based on the above ideas, focusing on China's listed manufacturing enterprises, and further studies the moderating effects of institutional distance, overseas experience of Top Management Team (TMT) and R&D intensity. Consequently, the research provides a series of suggestions on internationalization with reference value for Chinese manufacturing enterprises to improve their systematic cognition of internationalization, and is committed to improving the performance of their multinational enterprises and successfully actualizing their internationalization management strategy. The research can also provide theoretical basis and reference for the government departments to formulate relevant policies, and has important practical application value for improving the corporate governance

of multinational enterprises, improving their performance and enhancing their international competitiveness. The key issue of this research is to study the influence of enterprise internationalization on performance, and further studies the moderating effect of three factors on the influence of internationalization on business performance. On this basis, it puts forward the measures to improve the corporate governance of international enterprises, in order to improve the performance of international enterprises.

1.3 Research Question

1.3.1 Primary Research Question

What is the influence of enterprise internationalization on performance of Chinese listed manufacturing enterprises?

1.3.2 Sub-questions

- How does institutional distance moderate the influence of internationalization on enterprise performance?

- How does the overseas experience of the top management team moderate the influence of internationalization on enterprise performance?

- How does R&D intensity moderate the influence of internationalization on enterprise performance?

1.4 Scope of the Study

This research is committed to investigating the influence of internationalization on business performance of the listed Chinese manufacturing enterprises, so that enterprises have conducted international business during 2005-2021 are selected as the research subject. Relevant data comes from China Stock Market & Accounting Research Database (CSMAR) and corporate annual reports are mainly analyzed. Meanwhile, the moderating effects of institutional distance, overseas experience of TMT(Top Management Team), and R&D intensity on the influence of internationalization on business performance are investigated. Based on the empirical

study on the influence of and moderating effect on the internationalization of Chinese manufacturing enterprises on business performance, this research puts forward relevant policy suggestions.

1.5 Research Objectives

1. To examine the influence of internationalization on performance of China's listed manufacturing enterprises
2. To investigate how the main factors affecting international operation moderate the influence of internationalization on performance of China's listed manufacturing enterprises
3. To provide policy recommendations for governments and strategic recommendations for manufacturing enterprises for improving internationalization performance

1.6 Research Method

This research adopts quantitative research method. On the basis of theoretical research and literature review, the research hypotheses are proposed in this study, and the sample data is empirically analyzed and tested through statistical data, variable selection and model building. By establishing data models, this research empirically studies the influence of internationalization degree on business performance of China's listed manufacturing enterprises and the selected moderating variables.

1.7 Expected Benefits of the Study

1. Building on earlier research on internationalization, this study further examines and explores the concept and theory of internationalization of manufacturing enterprises, analyzes the mechanism of influence of internationalization of manufacturing enterprises on performance, which supplements and improves the existing academic literature on internationalization theories.

2. This study selects three moderating variables, institutional distance, overseas experience of TMT, and R&D intensity, to analyze their moderating mechanism on the influence of enterprise internationalization on performance. Analyzing the interaction between enterprise internationalization and performance from a more comprehensive perspective will provide a more comprehensive analysis method for related research.
3. Based on the empirical study, this research provides recommendations for the internationalization development of manufacturing enterprises, which can also serve as a guide for the government concerning formulating policies.

1.8 Limitations of the Study

On the one hand, the selection of listed company as subject will lead to conclusions that may not be representative of all manufacturing enterprises in China. This study is more focused on using more authoritative data for objective analysis. Considering the difficulty and reliability of data available for manufacturing companies other than listed companies, not all companies in this field are used. On the other hand, manufacturing is a large sector that includes many downside areas, and the overall data might not be applicable to some particular companies. However, one of the purposes of this study is to provide certain basis and suggestions for the policy maker to formulate relevant policies, and this study is also a response to the policy “made in China 2025” to improve international competitiveness. At the national level, policies are often formulated in terms of the manufacturing industry as a whole.

Chapter 2

Literature Review

This chapter conducts a theoretical exploration and literature review to establish the foundation for studying the influence of enterprise internationalization on performance. It reviews key research on internationalization and performance, examines the factors affecting international operations, and introduces a conceptual framework that integrates these elements. The chapter also presents the mechanisms and moderating effects of various factors on the relationship between internationalization and performance, along with corresponding hypotheses. By synthesizing these insights, the chapter prepares the ground for the empirical analysis in the following sections.

Content:

2.1 Literature Review on Enterprise Internationalization

2.1.1 Concept of Enterprise Internationalization

For the concept of enterprise internationalization, the academic circle has not formed a unified definition. Representative views are as follows:

Based on the view of economics, internationalization equals foreign direct investment, which is some stage of economic contact between enterprises and the outside world, excluding export of products(Zhao Min, 1996). The subject of foreign direct investment must set up factories or institutions in foreign countries to directly engage in production and management. It is not only the transfer of assets, but also the international flow of capital containing the control of business(Vernon, 1992). Vernon (1966) also pointed out that internationalization should be a concept of continuity. Enterprises will change from product output to technology or capital output with the evolution of product life cycle. Scholars represented by Carlson (1975), Forsgern (1975), Wiedersheim (1975), Johanson and Vahlne (1977) also believe that enterprise internationalization is the gradual evolution process of enterprise expansion from domestic market to international market, as well as the behavior of a variety of business activities across the national boundaries. Based on the comprehensive internalization theory and location theory, Dunning (1981) proposed that enterprises' foreign direct investment is the result of the comprehensive effect of three factors: ownership advantage, internalization advantage and location advantage(Dunning, 2012).

The behavioral school-based view holds that internationalization is the gradual process of an enterprise's development from the domestic market to the international market(Johanson & Vahlne, 1977). Professor Richard D. Robinson (1989) of Massachusetts Institute of Technology proposed that the process of internationalization is the conscious pursuit of the international market by enterprises in the process of increasing the liquidity of products and production factors. He believes that internationalization is an enterprise's response to the internationalization of the market rather than the market of a specific country(Robinson, 1984), which includes all the activities and forms of enterprise expansion, such as product export, direct investment, technology licensing, management contracts, turnkey projects, international subcontract production, franchising, etc.(Hamill, 1994), which is the

process of enterprises' active participation in international division of labor and development from domestic enterprise to multinational enterprise. Enterprise internationalization has two kinds of geographical orientation, namely inward internationalization and outward internationalization, among which inward internationalization is the premise and foundation of outward internationalization(Welch & Luostarinen, 1993). Chinese scholar Lu Tong (2001) believes that in the process of the internationalization of Chinese enterprises, inward internationalization is the necessary basis and condition for the development of outward internationalization(Lu, 2000).

Since the immergence of strategic management in 1980s, a group of scholars began to understand enterprise internationalization from the perspective of strategic management. The most representative viewpoint is to understand enterprise internationalization from the perspective of enterprise diversification. Hitt, Hoskisson and Kim (1997), Delios and Beamish (1999), Kotabe, Srinivasan and Aulakh (2002) and other scholars believe that internationalization is the result of the diversification of the geographical market(Huang & Lan, 2006). Hitt, Hoskisson and Kim (1997) believe that internationalization is an enterprise's use of internal resources and capabilities to obtain the market incompleteness of countries or regions in the world, and it is the behavior of enterprise expansion activities to enter different markets or regions across borders. The expansion of sales, manufacturing or research and development activities into different geographical areas or overseas markets can all be called internationalization(Hitt et al., 1997). Annavarjula and Beldona(2000) believe that internationalization of enterprises should be defined from three aspects: overseas operation, ownership of overseas assets, and whether or not enterprises have international management style, strategy, and organizational structure(Annavarjula & Beldona, 2000). Furthermore, the enterprise internationalization also has various expressions by words, such as Internationalization, International Diversity,

Geographic Diversification, Area Diversity, Multinationality, etc., which basically share the same meaning.

During the past 45 years since China’s reform and opening up policy, Chinese enterprises have made great achievements in their internally-oriented international development, which focuses on attracting and utilizing foreign investment. In the process of joint venture and cooperation with foreign enterprises, Chinese enterprises have also learned advanced management experience, improved their own technical level, or got the huge sales channels in overseas markets. However, with the change of economic environment at home and abroad, the profitability and development potential of this kind of internalized internationalization mode which simply relies on low-cost manufacturing advantage or location advantage to participate in international competition has been more and more limited. Chinese enterprises need to actively "go out", acquire and allocate resources in the broader international market, enhance their competitiveness, and move towards the high-end of international industrial division of labor(Huang & Lan, 2006). Therefore, although internal-oriented internationalization is the basis and condition for the development of Chinese enterprises' outward oriented internationalization, this study mainly discusses the influence of outward oriented internationalization of Chinese listed manufacturing enterprises on enterprise performance.

At present, the internationalization of Chinese manufacturing enterprises is still in the stage of commodity export on the whole. Most of them learn about overseas markets mainly through export trade and establishing overseas sales networks, and accumulate experience in international operation and management, so as to prepare for the development of internationalization at a higher level. Export trade also has certain requirements for resources and capabilities of enterprises, therefore commodity output reflects the ability of enterprises to get involved in overseas markets to some extent. (Thomas & Eden, 2004). Therefore, the connotation of internationalization of manufacturing enterprises in this study includes export trade,

which is the most basic form of outward internationalization. At the same time, although the internationalization of Chinese manufacturing enterprises started late, they developed rapidly. In recent years, some large manufacturing enterprises have consolidated their advantages and enhanced their competitiveness through cross-border mergers and acquisitions, accelerated the internationalization of enterprises and brands, and achieved a leapfrog development of internationalization. For example, Dalian Machine Tool Group acquired Ingersoll Production System, a well-known company in the American machine tool manufacturing industry. DMT Ingersoll Production Systems was founded. China's Shenzhen Container North America has acquired a US container trailer manufacturer. The definition of enterprise internationalization of this study should also include this type of internationalization behavior.

In the meanwhile, capital is one of the pivotal factors when internationalization is discussed, typically referring to the financial or resource investments made by enterprises in international markets. Throughout the process of internationalization, enterprises necessitate capital infusion to support various activities including market penetration and expansion, resource acquisition, product development and customization, market promotion and brand building, business expansion and acquisitions, as well as risk management.

Simultaneously, as capital flows internationally, the vast overseas resources bring more opportunities for enterprises to enhance their strength and access wider financing channels. Existing research has found that enterprise financing opportunities are closely related to their market image. A strong performance in capital management contributes to establishing long-term and stable cooperative relationships with stakeholders(Hu et al., 2023; Wang & Yang, 2022). Moreover, enterprises actively engage in the internationalization process by proactively improving to cater to the preferences of existing overseas investors and maintaining their interests.

To sum up, this study refers to the viewpoints of behavioral school and strategic management school, and defines enterprise internationalization as the behavior of enterprise capital as well as business activities crossing borders into different markets or regions, including product export, franchising, licensing trade, foreign direct investment and transnational operation. At the same time, this kind of behavior is dynamic and has different forms in different periods, evolving from low level to high level with the development of enterprise internationalization.

2.1.2 Enterprise Internationalization Theory

Since 1960, many scholars have studied the influence on the formation and development of enterprise internationalization by analyzing the organizational structure of industry, the transaction costs of market, the management and innovation capabilities of enterprises, as well as the political and social factors of host countries. Weisfelder(2001), by comparing the theories of internationalization within recent 30 years, proposed that "internationalization strategy is a choice for enterprises to flow their products (services) in the international market and flow their production factors around the world in order to pursue greater and better development"(Weisfelder, 2001). Song Yafei (2001) defined internationalization as "an enterprise engaged in a series of activities such as R&D, production and sales on a global scale, while investing (operating) its own business outside the home". Mattsson (2003) interpreted internationalization as "the process in which enterprises establish, form and expand the relationship in the market network in the structure of the global market"(Mattsson, 2003). Wang Guoshun (2008) believes that "the choice of internationalization strategy of enterprises will change with the change of global economic environment, and different internationalization strategy theories will have different impacts on the business behavior of enterprises in different economic environments". Throughout the previous theories, they roughly followed the logic of "external environment-enterprise-entrepreneur"(Wang & Zheng, 2008), as shown in Figure 2.1 Chen Jiyong

(2020) believes that "enterprise internationalization strategy" refers to the process by which an enterprise sells its products to the global market(Chen et al., 2020).

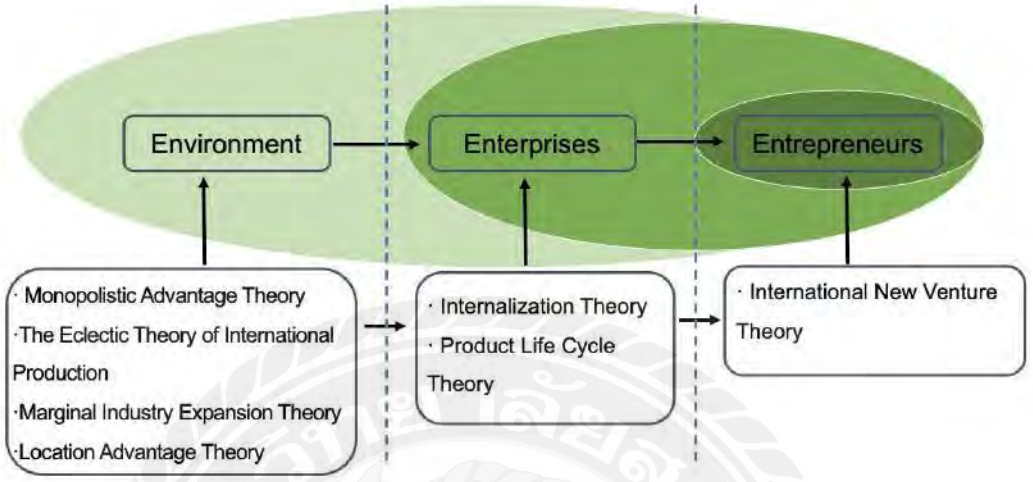


Figure 2.1 The Logical Evolution of Enterprise Internationalization Motivation (Source: Wang Guoshun & Zheng Zhun, 2008)

Scholars' research on enterprise internationalization mainly focuses on seven theories, namely, Monopoly Advantage Theory, Product Life Cycle Theory, The Eclectic Theory of International Production, Location Advantage Theory, Internalization Theory, Marginal Industry Expansion Theory and International New Venture Theory.

(1) Monopoly Advantage Theory

Stephen Hymer and Kind Leberger first proposed Monopoly Advantage Theory in the 1960s, believing that the incomplete market encourages enterprises to make overseas investment and gain profits (Generally speaking, imperfect market includes: imperfect production factor market, imperfect market brought by the competitiveness of enterprises economies of scale, imperfect market caused by government policies and regulations, and imperfect market caused by the fiscal and tax system of the host country). Through analyzing the data of foreign investment of typical American enterprises from 1920s to 1960s, it is concluded that the main reasons for enterprises

to invest in the international market are: compared with similar enterprises in the host country, the enterprise has a strong monopoly advantage and can obtain more profits. Under the assumption that the market information is not completely symmetric, the monopoly advantages of the internationalized enterprises mainly include the imperfect advantages of the products (product quality difference, popularity difference, product cost control difference, marketing strategy difference, etc.) in the market. At the same time, international enterprises can have the advantages of global internal economies of scale and corresponding external procurement and marketing integration. Hymer's mentor Kindleberger further supplemented and developed the theory(Kindleberger, 1974). Generally speaking, only when the home country enterprise has one or more monopolistic advantages, including technological advantages, management advantages, capital advantages and scale advantages, which the host country enterprise does not have, and such advantages can resist the possible risks of transnational operation and finally obtain satisfactory returns, the home country enterprise should and may engage in transnational operation (Fan, 2005).

(2) Product Life Cycle Theory

Product Life Cycle Theory was developed by Harvard University professor Vernon R. It was first proposed in the book International Investment and International Trade in the Product Cycle published in 1966. According to this theory, a product in the market goes through a complete cycle of product innovation period, developing period, maturity period, standardization period and finally decline period. In different countries and regions, the cycle of the same product is also different due to the different technical level, market demand and residents' income level. In other words, if A product is in its maturity period in country A, it may be in developing period in country B. It is the inconsistency of product life cycle in different countries that leads to the different competitive positions of the same product in different national markets, thus generating the demand for international trade and international investment. So Vernon believes that where products are made depends on where they are in the life

cycle. When the product enters the mature and standardized production period in Country A, the manufacturer in Country A can increase the quantity of the product and export the product to country B by taking advantage of the low cost advantage of mature production. In this way, A manufacturer can gain competitive advantages in international product competition.

(3) The Eclectic Theory of International Production

The Eclectic Theory of International Production is written by British scholar Dunning in his book Trade Location of Economic Activities and the MNE: A search for an Eclectic Approach has been proposed(Dunning, 1977). In 1981, he further elaborated the Eclectic Theory of International Production in his book International Production and the Multinational Enterprise. The Eclectic Theory of International Production holds that the core of determining the behavior of international enterprises and international direct investment is Ownership, Location and Internalization. The ownership advantage of an enterprise refers to the specific advantages that an international enterprise has over other enterprises in the international market, including technological advantages, scale advantages, and operation and management advantages. Internalization advantage refers to the advantage formed when an enterprise's internal transaction replaces the market exchange, such as reducing market transaction costs and using the enterprise's internal organization to obtain trading profits. Location advantage refers to the unique conditions conducive to internationalization of an investment country, such as those generated by factor endowment based on natural resources, geographical location and market size, and those generated by social factors such as legal system and economic policy(Dunning, 2012). Dunning believes that when an enterprise has the ownership advantage and the internalization advantage, as well as the location advantage in a certain host country, it has the conditions for internationalization, and internationalization is the best choice for this enterprise.

(4) Location Advantage Theory

Location Advantage Theory is a theory used to explain the spatial distribution of human economic activities and the optimal combination of their mutual relations(Louveaux et al., 1982). Location Advantage Theory originated in the early 19th century and developed rapidly in the early 20th century. The development of Location Advantage Theory can be divided into the following stages: First, The Classical Location Advantage Theory is composed of Thunen's Agricultural Location Theory and Weber's Industrial Location Theory. The core point of The Classical Location Advantage Theory is to optimize the spatial layout of the industry by analyzing the spatial layout of agricultural and industrial production, product types and the operation mode of the enterprise itself, and to optimize the location selection and obtain comparative advantages by integrating the three core factors of raw material supply, product manufacturing and product and service operation and sales. Second, the Modern Location Advantage Theory. Christaller and Losch combined the traditional geospatial view with the cost-value view in economics to analyze the influence of local market, traffic and politics on the industry. It is concluded that the best location choice for enterprises should be the combination of industrial location and market to create price advantage. Third, the Contemporary Location Advantage Theory. Based on the Classical Location Advantage theory, Isard (1990) used the equilibrium model in modern mathematical basis to conduct dynamic and comprehensive analysis on the enterprise region as a variable. Scott (1992) introduced the classic transaction costs in the economy into Location Advantage Theory, and explored the location advantage and evolution rule of modern enterprises by analyzing the spatial dispersion and aggregation of transaction costs of products produced by enterprises in the market.

In general, Location Advantage Theory believes that market incompleteness exists widely in domestic and international markets. The incompleteness of the world market is mainly reflected in the value of production raw materials, resource supply

capacity and market size, etc. When an enterprise can profit from the market incompleteness, that is, when it has geographical advantages including production capacity, market position and operation, it will make foreign direct investment.

(5) Internalization Theory

Internalization Theory is proposed by British scholars Peter J. Buckley and Mark Casson in The Future of Multinational Enterprise based on the concept of transaction cost(Buckley & Casson, 2016) to explain the reasons for the multinational operation of enterprises, which pioneered the analysis of internationalization from within enterprises. According to Internalization Theory, in addition to the incomplete competition of the final product market, there are also incomplete competition markets of intermediate products. The refinement of the division of labor makes the intermediate products increasingly important, while the asymmetric information makes the cost of the intermediate products through the market higher. Therefore, enterprises will choose to internalize the transaction to reduce the transaction cost and realize the maximum profit. When intermediate products involve the global market, transnational corporations are the best way to internalize the transaction and reduce the transaction cost. This is the same as the Vertical Integration Theory proposed by Williamson at that time, which is explained from the perspective of how to reduce transaction costs(Williamson, 2000).

(6) Marginal Industry Expansion Theory

Professor Kiyoshi from the University of Tokyo in Japan first proposed Marginal Industry Expansion Theory in 1978. According to the theory, the industry at the international level has a cycle similar to that at the product level. The industry in the declining period in Country A (also known as "marginal industry") is more difficult to obtain profits in its own country, but the industry in other countries, such as Country B, is in the developing period. Enterprises in these industries can directly invest overseas, which will help the host country to carry out industrial transformation and upgrading, promote the optimization of the country's industrial structure, and improve

the country's overall profit space. Marginal Industry Expansion Theory can comprehensively explain the reasons for the overseas investment of enterprises from developed countries, provide enterprises with a higher possibility of internationalization, and point out the direction for the foreign direct investment for developing countries. What is worth mentioning is that Marginal Industry Expansion Theory supported Japan's industrial transfer in Asia in the 1980s and 1990s, so that Japan formed a echelon of industrial classification and obtained comparative advantages for related industries.

The above traditional internationalization theories all believe that the development of enterprise internationalization is a gradual process. Uncertainties about the characteristics of a particular country's market, business environment, cultural patterns, market architecture and, most importantly, the characteristics of individual customers all lead firms to follow a gradual internationalization process: Enterprises first serve foreign markets through exports and then decide whether to invest there(Johanson & Vahlne, 1977). However, in recent years, there have been many enterprises that began to develop internationally at the very beginning of their establishment, and there have been "Born Global" enterprises, which cannot be explained by the traditional internationalization theory.

(7) International New Venture Theory

Oviatt and McDougall(1996) pioneered International New Venture Theory(McDougall & Oviatt, 1996), which opened the way for the establishment of a comprehensive analytical theory of the internationalization of start-ups(Sapienza et al., 2006a). Oviatt and McDougall define international new venture as the enterprise organizations that sell products to multiple countries through the resources of multiple countries and actively seek clear competitive advantages from starting up. Knight and Cavusgil called them "Born Global" enterprises and pointed out that such enterprises are "small, usually technology-oriented, and internationally operated from the very beginning"(Knight & Cavusgil, 1996). In addition, Knight further defines “Born

Global” as "a business that from its inception (within three years) seeks a significant portion of its revenue from international sales (at least 25% of its total revenue from overseas sales)." Autio(2005) believes that international new ventures actively seek opportunities and rapidly internationalize to achieve the enterprise goal of value growth, and their competitive advantages are based on cross-boundary resource portfolio.

Due to the lack of explanatory power of traditional internationalization theories for "Born Global" enterprises, scholars try to explain this phenomenon with International New Venture Theory. International New Venture Theory and traditional Internationalization Theory complement each other, and the expansion of international new venture is more like evolutionary thinking, organizational ability, knowledge and learning view and network theory.

The above theories explain the internationalization behavior of enterprises from the perspective of international motivation, which is the theoretical basis for understanding the internationalization of Chinese manufacturing enterprises at the present stage.

2.1.3 Measurement of Degree of Internationalization

The measurement of enterprise internationalization degree in existing literatures reflects one or more aspects of enterprise internationalization operation, ownership and internationalization orientation(Annavarjula & Beldona, 2000). At present, scholars have not formed strict and consistent standards for measuring indicators of internationalization degree, and the results can be summarized into three categories: Single Dimension Single Index, Multi-dimensional Composite Index, and Multi-dimensional Multiple Index(Annavarjula & Beldona, 2000; Yang & Zhao, 2009).

(1) Single Dimension Single Index

At present, most scholars mainly select Foreign Sales to Total Sales (FSTS), Export Sales Rate (ESR), Foreign Revenue to Total Revenue (FRTR), Foreign Assets to Total Assets (FATA), Foreign employees to Total Employees (FETE), and

Overseas Subsidiaries to Total Subsidiaries (OSTS), Number of Overseas Subsidiaries (NOS), Number of Countries with Overseas Subsidiaries(NCOS) or Number of Exporting Countries(NEC), or a single index such as Herfindahl Index or Entropy Index based on sales or number of subsidiaries in each region to measure the degree of internationalization of an enterprise from the perspective of operation performance or operation structure(Gomes & Ramaswamy, 1999) (Annavarjula & Beldona, 2000)(Hitt et al., 2006) (Bowen, 2007)(Yang & Zhao, 2009). Generally speaking, FSTS, ESR, FRTR, FATA, FETE, OSTS and other indicators measure internationalization scale, while NOS and NCOS measure internationalization scope(Bowen, 2007).

(2) Multi-dimensional Composite Index

Sullivan (1994) believed that a single index could not reflect the multidimensional characteristics of internationalization, and proposed five indicators to measure the degree of internationalization from the three dimensions of performance, structure and attitude, including FSTS, FATA, OSTS, Top Manager International Experience(TMIE) and Psychological Dispersion of International Operation (PDIO). The sum of the five index values is used to calculate the internationalization degree of the enterprise. The World Investment Report 2000 issued by the United Nations Conference on Trade and Development (UNCTAD) uses the average of three indicators, FATA, FSTS and FETE, as a measure of the degree of internationalization(Sullivan, 1994). Lu and Beamish (2004) use the average NOS and NCOS as an indicator to measure the degree of internationalization of a firm(Lu & Beamish, 2004). Gomes, Ramaswamy (1999), Contractor et al. (2003) use the principal component analysis method to integrate several indicators in FSTS, FATA, NCOS, and FETE into a single indicator to measure the degree of internationalization(Gomes & Ramaswamy, 1999)(Contractor et al., 2003).

(3) Multi-dimensional and Multiple Index

Georzen and Beamish (2003) for the first time classify the internationalization degree of enterprises into two dimensions: the dispersion degree of international assets of enterprises and the diversity of countries involved. Each dimension is composed of several indicators(Goerzen & Beamish, 2003).

According to literature research, most scholars only use single or multiple indicators of a single dimension when measuring the degree of internationalization. Each index reflects the degree of an enterprise's involvement in overseas markets from a certain level, but each index cannot fully cover the full connotation of the degree of internationalization of an enterprise, for example, many previous studies have used FSTS to measure the degree of internationalization. But if FSTS is the only indicator that is used to measure the degree of internationalization, there will be a significant deviation in the research conclusions（Qiao et al. , 2002）. Pangarkar (2008) pointed out that the most fatal defect of FSTS was that it could not reflect the degree of market dispersion of overseas sales(Pangarkar, 2008), and the degree or breadth of such market dispersion played a more important role in enterprise performance compared with the traditional depth of operation(Thomas & Eden, 2004).

It is very important for this study to construct a multi-dimensional index system to measure DOI. This study draws on the views of Hitt et al. (1997) and defines DOI as "the degree to which an enterprise's expansion activities cross borders into different markets or regions". This degree should reflect the dispersion and depth of the enterprise's international operation(Hitt et al., 1997). This study names an enterprise's depth of internationalization Degree of Commitment (DOC), while the dispersion the Degree of Breadth (DOB).

2.2 Literature Review on Enterprise Performance

2.2.1 Definitions of Enterprise Performance

The term "performance" is difficult to generalize and measure because of the different nature and operation of all walks of life. Lepak et al. believe that performance is an overall concept used to show the final results of an organization's operational activities, and it is the final performance of enterprise operations(Lepak & Snell, 1999). There are many kinds of performance, including business performance, financial performance, non-financial performance, professional performance and new product performance, and so on. Kumar et al. defined business performance according to different levels and objectives. They believed that business performance is the output performance generated by the operation of enterprises for survival in a competitive environment, and its basic performance is the basic financial performance of enterprises(Kumar et al., 2006). Kreiser et al. also classified business performance. In his opinion, business performance mainly includes business objectives (such as the enterprise's operation plan, annual budget, joint venture, capital expansion, etc.), productivity (such as the use of plant and equipment), and profit (i.e. the proper use of enterprise funds, etc.). In the return on investment) and long-term advantage resources (that is, the foundation on which the enterprise can sustain its growth)(Kreiser et al., 2002). Venkatraman et al. believe that organizational performance is the final performance of organizational operation, which mainly includes: (1) Financial performance, that is, business objectives of the enterprise, such as after-tax earnings and operating income, which are the performance most concerned by the board of directors and shareholders; (2) Business performance, that is, the comprehensive performance synthesized by financial performance and organizational operational performance. Operational performance includes product quality, marketing effectiveness, etc. (3) Organizational effectiveness, namely the most extensive performance, includes financial performance and career performance, as well as the

allocation of organizational resources and the satisfaction of shareholders in the process of achieving goals(Venkatraman & Ramanujam, 1987). Davidson et al. defined performance as the output efficiency of input, which actually measured performance to a certain extent. Chinese scholars generally believe that enterprise performance is the final result of an enterprise's operation and the reward it gets for investing resources, and its general evaluation indicators mainly include return on assets and growth rate of sales.

With the deepening and development of enterprise internationalization, scholars continue to strengthen the study of enterprise internationalization performance. Some scholars believe that the definition of internationalization performance is closely related to the degree and stage of internationalization. For example, in the export stage, internationalization performance is the export performance of enterprises. Since the 1990s, the foreign direct investment of enterprises has been continuously strengthened, and the connotation of internationalization performance of enterprises has changed again. So far, the definition of internationalization performance is not uniform. Moreover, most of the definitions of internationalization performance are based on measurement indicators, ignoring the meaning of the definition itself. Radulovich defined internationalization performance in detail. He believed that internationalization performance is the output brought by enterprises in the process of internationalization operation, which includes three parts: First is internationalization productivity and production efficiency, which is mainly reflected in the improvement of internationalization ability. Second is internationalization output performance, namely financial performance, such as international sales growth rate, international profit, etc. Third is non-financial indicators, mainly foreign customers' satisfaction and recognition and international employees' satisfaction(Radulovich, 2008). Madhavaram and Hunt believe that internationalization performance is the final result of resource input in the process of internationalization, which is the result of transnational resource allocation(Madhavaram & Hunt, 2008). Manolova et al.

evaluated internationalization performance from the perspective of entrepreneurship and institutional environment. They believed that internationalization performance was the final output of enterprises constantly developing new products or creating new enterprises to meet environmental changes and foreign customer demands, and it reflected the basic path for enterprises to achieve their strategic goals and goals of internationalization(Manolova et al., 2002).

To sum up, this study believes that enterprise performance refers to the output brought by resource input in the process of internationalization operation of an enterprise, which is basically reflected in the financial performance of an enterprise and is a basic indicator of the success of internationalization.

2.2.2 Evaluation System of Enterprise Performance

The quantitative indicators of enterprise performance can be divided into three types: Financial Indicators, Operational Indicators and Subjective Evaluation Indicators.

Among these three indicators, Financial Indicators are the most commonly used. Since the 1890s, scholars have evaluated the performance of enterprises' international performance mainly by measuring Financial Indicators, such as Return on Sales (ROS), Return on Assets (ROA), Return on Equity (ROE), Return on Investment (ROI), Sales Growth Rate, etc., so as to reflect the performance of enterprises' participation in international operations. For example, Vernon and Daniel (1971) evaluates enterprise performance based on ROS and Return on Net Worth(Vernon & Graham, 1971), Horst (1971) based on Sales Growth Rate(Horst, 1971), Hughes et al (1975), Michel & Shaked (1986) based on the Return on Shareholders(Hughes et al., 1975) (Michel & Shaked, 1986), Siddharthan &Lall (1982) and Buckley et al. (1984), based on ROS(Siddharthan & Lall, 1982; Buckley et al., 1984). Kumar(1982) and Contractor (2003) based on ROA and ROS(Kumar, 1982; Contractor et al., 2003). Dunning (1985) based on ROS, Grant (1987) based on Sales Growth Rate and

Profitability(Grant, 1987). Delios (1999) based on ROA, ROE and ROS(Delios & Beamish, 1999).

There are also many scholars who have conducted research on enterprise international performance in terms of operational efficiency. For example, Shaked's (1986) study was based on operational risk and the probability of enterprise bankruptcy(Shaked, 1986). They believe that enterprise internationalization not only has a direct impact on financial indicators, but also has an effect on the operation efficiency of enterprises. Management evaluations of performance are preferred when non-financial performance is involved or when objective financial measures are not available(Dess & Robinson Jr., 1984; Geringer & Hebert, 1991).

In recent years, when studying related issues, Chinese scholars often adopt the sampling survey method to measure enterprise international performance with the subjective evaluation of respondents on enterprise performance(Ban & Ren, 2008; Ding, 2011; Yang & Zhang, 2009).

Another group of scholars believe that a multi-type indicator system should be adopted instead of a single type of indicator to evaluate the performance of enterprises' international operations(Hult et al., 2008). Brouthers (2002) adopted three financial measures -sales level, profitability, and sales growth-and four non-financial measures-market share, marketing, reputation, and market access， as well as a questionnaire(Brouthers, 2002).

Considering that financial performance is the most used enterprise performance evaluation index by scholars so far, it has universal and significant rationality. At the same time, financial indicators are more available and reliable than other indicators, so this study adopts financial indicators for the evaluation of enterprise performance.

2.3 The Influence of Enterprise Internationalization on Performance

Many theories of enterprise internationalization clearly point out that the improvement of enterprise internationalization will lead to a higher level of

performance, and the reasons are analyzed from different perspectives. Hymer's Monopoly Advantage Theory (1976) analyzes this problem from the Firm-Specific Advantages perspective. Hymer believes that overseas market is not a complete competitive market. The incomplete market caused by tariff barriers, economies of scale, products and factors enables multinational corporations to make use of their specific advantages to invest in overseas market and obtain higher monopoly profits from it so as to offset the advantages of host country manufacturers and the increased costs of operating in unfamiliar environment. The Internalization Theory proposed by Buckley and Casson (1976) explained the positive impact of internationalization degree on enterprise performance from the perspective of transaction cost. They believed that knowledge, management know-how and technology patents were intermediate goods in the production process. Due to the imperfection of the intermediate goods market, the transaction cost is too high, forcing transnational corporations to use the internal market to replace the external market, so as to solve the problem of the failure of the external market. Therefore, transnational corporations can establish the internal market through direct foreign investment, transfer the intermediate goods through the internal market, use transfer pricing and other strategies to increase the overall earnings of the company. Based on the Monopoly Advantage Theory and Internalization Theory, Dunning's Eclectic theory (1988) further pointed out that specific host country markets have specific locational advantages, such as labor cost advantage, availability advantage of scarce raw materials, tax advantage, market potential, etc. These specific geographical advantages enable multinational corporations to better play and utilize their resources and ability to create profits in these markets, so as to obtain higher investment returns. Therefore, the specific advantages, internalization advantages and location advantages of enterprises together lead to the direct investment of multinational corporations in a specific market, which is reflected in the improvement of internationalization degree and ultimately leads to the improvement of enterprise performance.

Although many scholars have discussed and explained the influence of the degree of enterprise internationalization on performance from the theoretical level and reached the same conclusion, the empirical research has reached different results.

2.3.1 Internationalization has positive influence on enterprise performance

As mentioned above, both the Monopoly Advantage Theory and the Internalization Theory support the positive correlation between the degree of internationalization and the performance of an enterprise. If the internal organization is more favorable than the external market transaction in the case of market incompleteness, transnational corporations will expand externally and gain transaction cost advantage(Williamson, 1975) or production cost advantage, thus achieving economies of scale or scope in the international market(Grant, 1987; Kim et al., 1993). Therefore, internationalization has a positive impact on enterprise performance, that is, internationalization degree is positively correlated with enterprise performance. For example, Vernon (1971) selected Fortune 500 enterprises in 1964 as research samples and found that, compared with non-multinational enterprises, large multinational enterprises achieved higher ROS and higher Return on Net Worth(R. Vernon, 1971). Hughes et al. (1975) conducted a comparative study on international operation activities, investigated 46 American multinational enterprises and 50 non-multinational enterprises, and found that the Shareholder Return Rate of multinational enterprises and non-multinational enterprises was almost the same(Hughes et al., 1975). However, the beta value of multinational enterprises cultivated land, which means that after risk adjustment, Overall Returns are higher for multinationals. Buckley et al. (1978) investigated some of the world's largest multinational enterprises from 1962 to 1972 and found that, although from 1962 to 1972, the influence of international operation on enterprise growth was not significant. However, if the research span is changed to 1967 to 1972, it is found that international operation has a significant positive effect on the growth of enterprises(Buckley et al., 1978). Dunning (1985) studied the data of 188 large multinational enterprises in the

UK in 1979 and concluded that there was a positive but insignificant influence of Overseas Output on ROS. Yoshihara (1985) studied 118 of the largest companies in Japan and found that multinational companies had higher ROE than non-multinational companies, but slower sales growth. However, both findings were not statistically significant (Yoshihara, 1985).

Robert M. Grant(1987) selected 304 manufacturing enterprises among the top 500 British enterprises of Time magazine. Based on the data from 1968 to 1984, he adopted the most international quantitative index FRTR, Sales Growth Rate and Profitability, as the quantitative index of performance. Profitability was quantified using EBIT growth, ROE, ROS, and average annual profitability over 4-13 years to eliminate the effects of short-term factors. OLS regression analysis method was used for empirical test. After a series of adjustments, the dynamic regression results show that international management has a significant positive impact on ROE and Growth Rate of Sales, but has no significant impact on ROS(Grant, 1987). Errunza and Senbet (1981) used a set of indicators-FATA, FETE, FRTR to represent the degree of internationalization, and found that internationalization can bring excess profits to enterprises(Errunza & Senbet, 1981). Tallman and Li (1996), Delios and Beamish (1999), Bausch and Krist(2007), Tsao and Chen (2012) also believe that the degree of internationalization is positively correlated with enterprise performance(Tallman & Li, 1996; Delios & Beamish, 1999; Bausch & Krist, 2007; Tsao & Chen, 2012). Some scholars in China share the same view. Zhang Qianzi (2008) took the Total Exports to Total Sales (TETS) as the standard to measure the degree of internationalization of an enterprise, and the results showed that the higher the degree of internationalization of an enterprise, its ROA was significantly higher than that of similar enterprises with smaller exports(Zhang, 2008). Etgar and Rachman Moore(2010) analyzed cross-sectional data on 246 retailers, using number of target regions for internationalization as independent variable, sales as dependent variable and specialization as moderator variable, and finally drew the conclusion that internationalization is positively, and

specialization is negatively associated with sales with the former effect being negatively moderated by specialization(Etgar & Rachman-Moore, 2010). By analyzing the internationalization process of China's listed service enterprises, Yang Weiwei (2020) found that when enterprises adopt transnational mergers and acquisitions for internationalization, there is a positive correlation between business performance and internationalization degree(Yang, 2020). Yu et al. (2023) investigated the relationship between environmental standard soft linkage and firms' outward foreign direct investment from the perspective of internal tensions within firms. They found that international environmental standard certification promotes firms' outward foreign direct investment by improving environmental performance and alleviating financing constraints(Yu et al., 2023).

Figure 2.3.1 Mean of the Log of Sales Volume for Large-Scale International Retailers (Source: Etgar and Rachman Moore, 2010)

2.3.2 Internationalization has negative influence on enterprise performance

Since the 1980s, more and more empirical studies have shown that the costs generated by internationalization can offset or even partially offset the benefits brought by internationalization, which has a negative impact on enterprise performance. These costs include liabilities of foreignness, liabilities of newness, financial and political risks faced by international operation, and coordination and incentive difficulties caused by geographically dispersed operation and cultural

diversity. Brewer (1981) used FETE to measure the degree of internationalization, and used the Return Rate of Shareholders to represent the enterprise performance, and drew a conclusion of the negative influence of the two(Brewer, 1981). Kohers (1975) also believed that the influence of overseas operations on corporate performance was negative(Kohers, 1975). Siddharthan and Lall (1982) took 74 of the largest multinational corporations in the United States from 1976 to 1979 as research samples and found that the degree of internationalization had a negative influence on the growth of enterprises when considering such factors as enterprise scale, marketing intensity, R&D intensity, profitability and economies of scale(Siddharthan & Lall, 1982). Kumar (1984) studied 672 British enterprises from 1972 to 1976 and found that multinational enterprises had higher ROA and ROS than non-multinational enterprises. However, regression analysis also showed that there was a negative and significant correlation between the degree of internationalization and enterprise profitability and growth(Kumar, 1984). Michel and Shaked (1986) took the risk-adjusted rate of return-Sharpe, Jensen and Treynor index-as the evaluation index of enterprise performance, and took 20% FSTS as the standard to distinguish international enterprises from domestic enterprises. Using the data from 1973 to 1982, 58 international enterprises and 43 domestic enterprises in the United States are compared. The results show that the performance of international enterprises is significantly lower than that of domestic enterprises(Michel & Shaked, 1986). Bühner (1987) used FRTR to represent the degree of internationalization, and concluded that it had a negative linear influence influence on market returns(Bühner, 1987). Geyikdagi (1989) used FATA to represent the degree of internationalization, and concluded that overseas operations have a higher Beta value(Geyikdagi & Geyikdagi, 1989). Haar (1989) argued that there was a negative influence of overseas operations (FRTR) on performance (ROA, ROS)(Haar, 1989). Collins (1990) drew the following conclusions by comparing and analyzing the performance and internationalization degree of 133 American Fortune 500 companies from 1976 to 1985: There is no

significant difference between the performance of international enterprises in developed countries and domestic enterprises, but the rate of return of international enterprises in less developed countries is significantly lower than that of domestic enterprises(Collins, 1990). Katrishen and Scordis (1998) made an empirical analysis of 93 insurance companies in 15 countries with 1984-1992 data, and found that the operating costs in total revenue increased rapidly with the expansion of the geographical scope of business(Katrishen & Scordis, 1998). Denis et al. (2002) conducted a study on 7520 American companies using data from 1984 to 1997. They took stock premium and volatility as the evaluation indicators of enterprise performance, and FSTS as the measurement indicator of internationalization degree. Through comparative analysis and regression analysis, both confirmed that: With the development of international diversification, the market value of international enterprises is expected to drop(Denis et al., 2002). Dess et al. (1995) also pointed out through their research that various benefits related to internationalization may only be fictitious, and enterprise performance is actually related to R&D or advertising marketing intensity rather than internationalization itself(Dess et al., 1995). Wang Guoshun and Hu Sha (2006) selected 329 export enterprises from listed manufacturing companies in Shenzhen and Shanghai based on the data of 2004. The empirical research results showed that internationalization of manufacturing enterprises had a negative impact on performance, and the degree of internationalization was significantly negatively correlated with the net interest rate of sales and net interest rate of total assets of enterprises(Wang & Hu, 2006). Yin Zhihui's (2013) study shows that after the internationalization of listed companies in China's electronic information technology industry, their operating performance, management, coordination and expansion of operating costs would far exceed their earnings, and there was a negative correlation between international operation and enterprise performance(Yin, 2013). Dimitrova, Rosenbloom and Andras(2014) found out that the relationship between DRII(measured as the number of geographic regions)

and performance is negative, but this negative relationship is weakened with cultural distance(Dimitrova et al., 2014). Focusing on format diversification, Shi, Lim, Weitz and France(2018) launched research and reached the conclusion that format diversification is negatively related to performance and the two have a negative interaction(Shi et al., 2018).

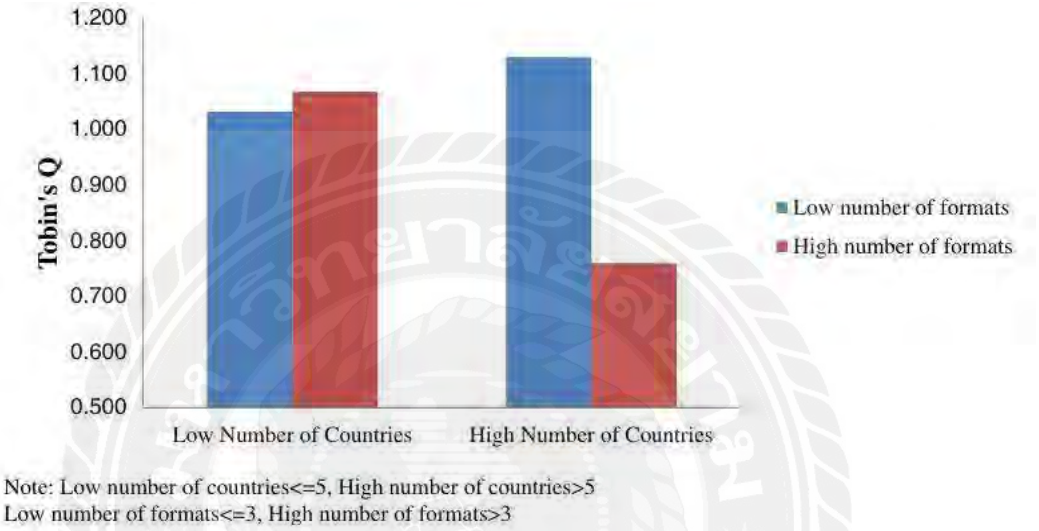


Figure 2.3.2 The Interaction of Dual Diversification Strategies
(Source: Shi et al., 2018)

2.3.3 Internationalization has an inverted U-shaped influence on enterprise performance

Many scholars believe that the influence of internationalization degree on enterprise performance cannot be simply classified as linear. In the early stage of international expansion, enterprises usually enter the market environment similar to the culture and system of their home country, so that they can quickly obtain the benefits brought by economies of scale, economies of scope and geographical advantages. In the subsequent overseas expansion process, enterprises will gradually expand the market with different cultures. The diversified environment and complicated organization will inevitably lead to the sharp rise of management costs and supervision costs, and eventually exceed the benefits brought by internationalization. Daniels and Bracker (1989) divided the research samples into six groups with internationalization degree from low to high according to the percentage

of FSTS and FATA, and found that the inflection point of internationalization was more than 50%(Daniels & Bracker, 1989). Geringer et al. (1989) adopted a similar method to conduct an empirical analysis of the top 100 European and American enterprises from 1977 to 1981, and found that the inflection point of internationalization was within the range of 60%-79.9% FSTS(Geringer et al., 1989). Ramaswamy (1993) analyzed FATA data of nearly 30 chemical and pharmaceutical enterprises in the United States and found that there was an inverted U-shaped influence of enterprise internationalization on performance, and the turning point was 0.56, that is, before the overseas investment of international enterprises accounted for 56% of the total investment of enterprises, the business performance of enterprises increased with the increase of internationalization degree, and after 56%, Enterprise performance presents a slow decline trend(Ramaswamy, 1993). Han Weiwei (2010) made use of the data of 214 manufacturing enterprises in China in 2009, Zhao Jiayan (2012) through relevant empirical studies, and Juan Gabriel Brida et al. (2016) found that performance would increase first and then decrease in an inverted U-shaped influence due to the increase of internationalization degree(Han, 2010; Brida et al., 2016; Zhao, 2012). Raquel García-García et al. (2017) provide a first attempt at analyzing the effect of speed of internationalization on long-term performance, using a panel-data sample of Spanish listed firms (1986–2010), and find that there is an inverted U-shaped relationship between speed of internationalization and long-term performance(García-García et al., 2017).

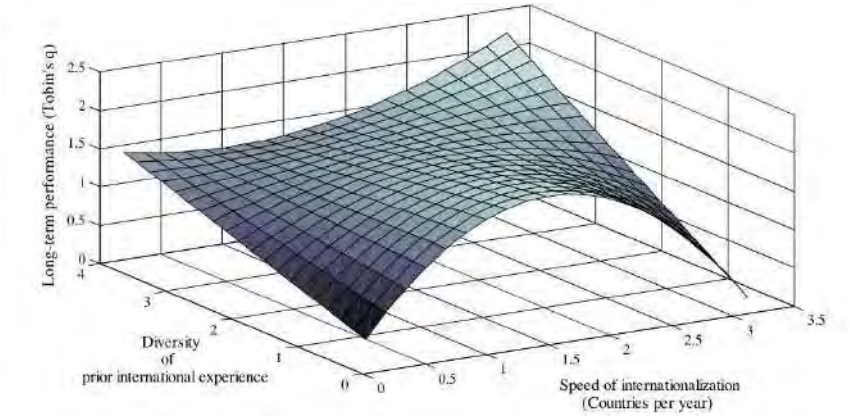


Figure 2.3.3 Long-term Performance and Speed of Internationalization by Diversity of Prior International Experience
(Source: Raquel et al., 2017)

2.3.4 Internationalization has a U-shaped influence on enterprise performance

Some scholars believe that there is a U-shaped influence of internationalization degree on the enterprise performance. That is to say, when an enterprise performs well in the domestic market, it begins to consider entering the international market in order to gain more profits. Therefore, the enterprise usually performs well in the process of internationalization. With the emergence of internationalization costs, especially in the initial stage of adaptation, the internationalization costs are at a high level due to its own knowledge, experience and competitiveness. Therefore, in the adaptation stage, enterprise performance gradually declines until it reaches the lowest point. Later, with the improvement of enterprise internationalization experience, internationalization cost gradually decreases and enterprise performance gradually recovers to a higher level. Therefore, there is a U-shaped influence of enterprise internationalization degree on performance. Ruigrok and Wagner (2003) took the data of 84 large German manufacturing multinational companies from 1993 to 1997 as research objects to verify the U-shaped influence of enterprise internationalization in performance(Ruigrok & Wagner, 2003). Analyzing panel data on 43 US and European supermarket chains, Assaf et al. (2012) came up with the conclusion that

the relationship between internationalization and firm performance is U-shaped, and is positively moderated by mergers and acquisitions intensity and negatively moderated by age at entry to international markets and size of home country's GDP(Assaf et al., 2012). Based on the data of 436 South Korean manufacturing enterprises from 1993 to 2003, Kim et al. (2015) found that the resource situation of the host country has different impacts on the internationalization and performance of the enterprise. When the enterprise conducts internationalization in the resource-deficient host country, the internationalization and performance are positively correlated. When firms are located in resource-rich host countries, the influence of internationalization on performance is U-shaped(Kim et al., 2015). Wang Fang and Li Guobao (2014) studied the impact of internationalization on the performance of 260 Chinese enterprises and concluded that there was a significant U-shaped influence of internationalization on performance. The slope of the lowest point between internationalization and performance was -0.115(Wang & Li, 2014). Zhang Xiaotao and Chen Guomei (2017) took Chinese listed manufacturing enterprises as samples, and their conclusions also supported the U-shaped influence(Zhang & Chen, 2017). Ge Wang et al.(2020) analyzed 32 Chinese construction firms listed in the Engineering News-Record during the 2010-2017 period, the results revealed that there is a U-shaped influence of degree of internationalization of construction firms on their financial performance(Ge et al., 2020).

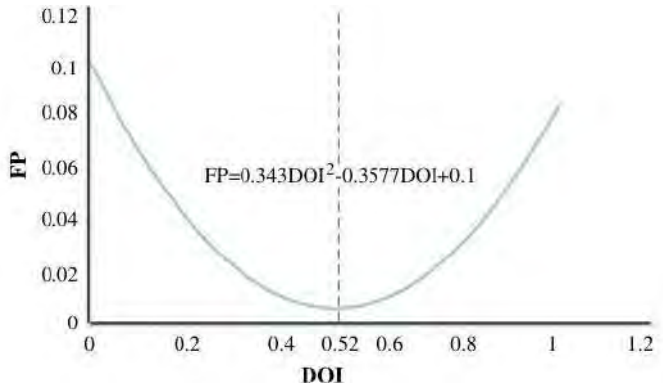


Figure 2.3.4 DOI-FP(Financial Performance) Curve
(Source: Ge Wang et al., 2020)

2.3.5 Internationalization has an S-shaped influence on enterprise performance

Lu and Beamish (2004) tracked the data of 1489 Japanese international enterprises from 1986 to 1997, and concluded that the internationalization of enterprises has both benefits and costs, and the net benefits are different at different stages. In general, the influence of enterprise internationalization on its performance is S-shaped(Lu & Beamish, 2004). The research results of Yang Yichen and Yu Ying (2008) show that the influence of internationalization degree on performance of Chinese manufacturing enterprises is similar to the S-type influence model. They believe that the degree of internationalization has the greatest influence on enterprise performance in the early stage of internationalization, and with the deepening of internationalization, its influence on enterprise performance will gradually decrease, and there is a gradually increasing positive influence on international operation and business performance. After that, when the degree of internationalization reaches a very high level, enterprise business performance will decrease with the increase of internationalization degree(Yang & Yu, 2008). Nielsen (2010) analyzed the data of 165 Swiss enterprises from 2002 to 2004, and the results showed that with the deepening of internationalization degree, the performance of enterprises showed a curve of first decline, then increase and then decline(Nielsen, 2010). Wu Xiaobo, Zhou Haojun (2011) and Wang Rong et al. (2016) took the manufacturing industry of China's listed companies as the research object, and conducted research on the relevant data of 318 enterprises from 1999 to 2008 and 1,735 enterprises in 2014 respectively. The results showed that the internationalization development of companies would go through three stages, which showed a level S-shaped correlation with performance(Wu & Zhou, 2011; Wang et al., 2016). Oh et al. (2015) also believe intraregional diversification has a S-curve relationship with firm performance, which is negatively moderated by unrelated format and assortment diversification(Oh et al., 2015). Another recent S-shaped conclusion was drawn by Dimitrova, Kim and Smith

(2019), who also believe that the S-shape is strengthened by foreign market growth but weakened by store format diversification(Dimitrova et al., 2019). Henrique Correa da Cunha et all, (2023) launched research on exporting Brazilian firms about the multinationality-performance (M-P) relationship, and the results point to a horizontal S-shape pattern which conforms to the theoretical assumptions of the three-stage internationalization process(Cunha et al., 2023).

Figure 2.3.5 Relationship between ROA and Degree of Internationalization
(Source: Wu Xiaobo and Zhou Haojun, 2011)

2.3.6 Internationalization has an N-shaped influence on enterprise performance

Contractor et al. (2003) proposed a three-stage model of internationalization expansion. They believe that with the increase of internationalization, enterprise performance will first decline, then rise, and finally decline again(Contractor et al., 2003). Ruigrok et al. (2007), taking 87 Swiss enterprises with a high degree of internationalization as samples, also found that the influence of internationalization on performance presents an N-shaped curve with positive cubic coefficient(Ruigrok et al., 2007). Powell(2014) took 102 American law firms as samples, and also reached the conclusion that the influence of internationalization on performance was N-shaped curve(Powell, 2014). L. Huang and D. Marciano(2020) used 88 Indonesian listed firms and 989 Chinese listed firms to investigate the interrelationship between

performance and internationalization of Indonesian and Chinese manufacturing firms, and found out that the firm's overseas expansion speed has an N-shaped influence on a firm's performance both in Indonesia firms and Chinese firms(Huang & Marciano, 2020). Shi-Yung Wei and Li-Wei Lin(2021) analyzed 2175 listed companies in Taiwan, China, and found that there is an N-shaped influence of extent of internationalization on firm performance with high Tobin's Q(Wei & Lin, 2021).

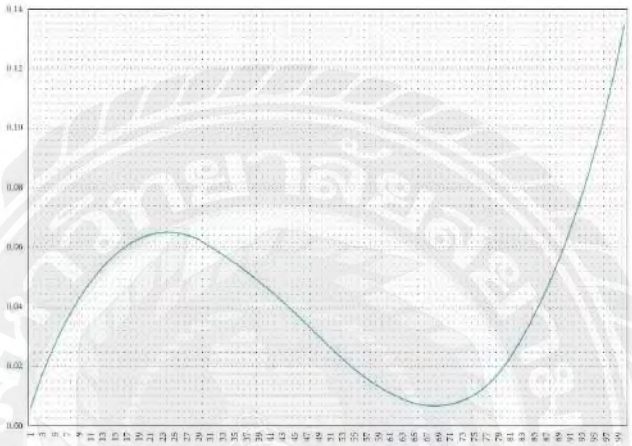


Figure 2.3.6 Relationship between High Tobin's Q and Extent of Internationalization (Source: Shih-Yung Wei and Li-Wei Lin,2021)

Based on the above literatures, the Empirical Studies on the Influence of Enterprise Internationalization on Performance is summarized as table 2.2:

Table 2.2(1/3) Summary of Empirical Studies on the Relationship between Enterprise Internationalization and Performance

Auther (Year)	Sample	Measurement of Internationalization	Measurement of Performance	Relationship
Vernon(1971)	187 US big manufacturing enterprises	FSTS	ROA/ROS	Positive
Hughes et al. (1975)	46 American multinational enterprises	FSTS	Shareholder Return Rate, Beta value, Overall Returns	
Buckley et al. (1978)	largest 500 US firms	FSTS	Rate of growth, profitability	
Errunza and Senbet (1981)	US MNEs	FATA, FETE, FSTS	Profitability	
Dunning (1985)	188 large multinational enterprises in the UK	Overseas Output	ROS	
Yoshihara (1985)	118 of the largest Japanese companies	Overseas vs nonoversea	ROE, sales growth	
Grant(1987)	304 UK big manufacturing enterprises	FSTS	ROA, ROS, ROE	
Grant et al.(1988)	304 UK big manufacturing enterprises	FSTS	ROA	
Daniels and Bracker(1989)	116 US enterprises	FSTS, FATA	ROA/ROS	
Morck and Yeung(1991)	1644 US enterprises	NOS, NCOS	Tobin's Q	
Kim et al.(1993)	125 US big MNEs	Entropy (based on NCOS and sales)	ROA after risk adjustment	
Tallman and Li(1996)	US manufacturing enterprises	FSTS, NOCS	ROS	
Delios and Beamish(1999)	399 Japan manufacturing enterprises	NOS, NCOS	ROA, ROS, ROE	
Jeong(2003)	179 US enterprises and 250 Chinese enterprises	FSTS	new product performance	
Georzen and Beamish(2003)	580 Japan MNEs	Distribution of international assets	economic performance	
Yeoh(2004)	258 US new ventures	Geographic diversification(Entropy)	The degree of satisfaction with changes in profits	
Hitt et al.(2006)	72 law firms	Entropy(based on NCOS and number of lawers)	ROS	
Hsu and Pereira(2008)	110 US MNEs	FSTS, FATA, FPTP	product advantage	
Zhang Qianzi (2008)	China's listed manufacturing enterprises	TETS	ROA	
Li and Yue(2008)	435 MNEs from developed countries	FSTS	ROS	
Gaur and Kumar(2009)	Indian enterprises	FSTS	ROS	
Eckert et al.(2010)	13120 German enterprises	FSTS, FATA	Tobin's Q	
Fisch and Zschoche(2011)	878 US enterprises	FSTS, NCOS	foreign profit/sales	
Yang Weiwei (2020)	China's listed service enterprises	Transnational mergers and acquisitions	Comprehensive performance system	

Table 2.2 (2/3) Summary of Empirical Studies on the Relationship between Enterprise Internationalization and Performance

Kohers (1975)	US MNEs	Overseas vs nonoversea	ROS	**Negative**
Brewer (1981)	US-based MNEs and NNEs	FETE	Return Rate of Shareholders	
Siddharthan and Lall (1982)	74 of the largest US manufacturing MNEs	Firm size and geographical diversification	Enterprise scale, marketing intensity, R&D intensity, profitability and economies of scale	
Kumar (1984)	672 British enterprises	Overseas vs nonoversea	Enterprise profitability and growth	
Michel and Shaked (1986)	58 US MNEs and 43 NNEs	20% FSTS	Sharpe, Jensen and Treynor index	
Bühner (1987)	West German corporations	FSTS	ROS	
Geyikdagi (1989)	Latin American enterprises	FATA	Beta value	
Haar (1989)	Largest US, European and Japanese MNEs	FSTS	ROA, ROS	
Collins (1990)	133 American Fortune 500 companies	Overseas vs nonoversea	Rate of Return	
Katrishen and Scordis (1998)	93 insurance companies in 15 countries	Geographical scale of business	Operating costs in total revenue	
Denis et al. (2002)	7520 American companies	FSTS	Stock premium and volatility	
Georzen and Beamish(2003)	580 Japan MNEs	Diversification of international environment	economic performance	
Wang and Hu (2006)	China's listed manufacturing companies	FSTS	ROA, ROS, ROE, Net Interest Rate on Total Assets	
Brock and Yaffe(2008)	The world's biggest law firms	FETE, NCOS	Profit growth	
Yin Zhihui(2013)	China's listed IT companies	FSTS	Operational cost	
Daniels and Bracker (1989)	US MNEs	FSTS, FATA	Profit Rate	**Inverted U-shaped**
Geringer et al.(1989)	100 US and European MNEs	FSTS	ROS, ROA	
Ramaswamy (1993)	30 US chemical and pharmaceutical enterprises	FATA	Cost efficiency	
Sullivan(1994)	Deta in multiple detabases	Linear combination of five indicators	ROS, ROA	
Hitt et al.(1997)	295 US manufacturing enterprises	Entropy (based on NCOS and sales)	ROA	
Gomes and Ramswamy(1999)	570 US manufacturing enterprises	FSTS, FATA, NCOS	ROA, operational cost/sales	
Qian(2002)	US SMEs	FSTS	ROS	
Qian and Li(2002)	125 US big MNEs	Geographical scale and scope of business	ROA(ROS, ROE)	
Chang and Wang(2007)	US enterprises	Entropy (based on NCOS and sales)	Tobin's Q	
Han Weiwei (2010)	214 manufacturing enterprises in China	FSTS	ROA, profit rate	
Zhao Jiayan (2012)	536 Chinese manufacturing MNEs	FSTS	ROA	

Table 2.2 (3/3) Summary of Empirical Studies on the Relationship between Enterprise Internationalization and Performance

Lu and Beamish(2001)	164 Japan SMEs	FDI country number	ROA	**U-shaped**
Ruigrok and Wagner(2003)	84 German big manufacturing enterprises	FSTS	ROA, operational cost/sales	
Capar and Kotabe(2003)	81 German service enterprises	FSTS	ROS	
Thomas(2006)	Mexican enterprises	FSTS	ROS	
Contractor et al.(2007)	269 Indian enterprises	FSTS	ROA, ROS, ROE	
Wang Fang and Li Guobao (2014)	260 Chinese enterprises	FSTS	ROS, ROA	
Kim et al. (2015)	Korean manufacturing MNEs	Geographic diversification	Firm profitability	
Zhang and Chen (2017)	Chinese manufacturing MNEs	FATA	ROA	
Riahi-Belkaoui(1998)	100 Us manufacturing and service enterprises	FSTS	ROA	**S-shaped**
Lu and Beamish(2004)	1489 Japanese enterprises (longitudinal data)	NOS, NCOS	ROA, Tobin's Q	
Thomas and Eden(2004)	151 US manufacturing enterprises	FSTS, FATA, NCOS	ROA, ROE, EMV	
Li(2005)	574 US service enterprises	FSTS	ROS	
Chang(2007)	Emerging market MNEs in APAC	FSTS+FATA	ROS	
Yang Yichen and Yu Ying (2008)	Chinese manufacturing enterprises	FSTS	Enterprise Scale, debt ratio	
Nielsen (2010)	165 Swiss enterprises	Blau index, a measure of group heterogeneity	ROA	
Wu Xiaobo, Zhou Haojun (2011)	Chinese manufacturing enterprises	FSTS	ROA, ROE	
Wang Rong et al. (2016)	Chinese manufacturing enterprises	FSTS	ROA	
Contractor et al. (2003)	11 service industries	FSTS, FETE, FOTO	ROS, ROA	**N-shaped**
Ruigrok et al. (2007)	87 Swiss enterprises	FSTS	ROA	
Powell(2014)	102 American law firms	FOTO	PPP	
L. Huang and D. Marciano(2020)	88 Indonesian listed firms and 989 Chinese listed firms	FSTS	ROA	

Annotation: Foreign Sales to Total Sales(FSTS), Export Sales to Revenue(ESR), Foreign Revenue to Total Revenue(FRTR), Foreign Assets to Total Assets(FATA), Foreign Employee to Total Employee(FETE), Foreign Offices to Total Office(FOTO), Oversea Subsidiaries to Total Subsidiaries(OSTS), Total Exports to Total Sales (TETS), Number of Oversea Subsidiaries(NOS), Number of Countries with Oversea Subsidiaries(NCOS), Profits-Per-Partner/A firm's Net income Divided by the Total Number of Equity Partners (PPP), Return on Assets(ROA), Return on Sales(ROS), Return on Equity(ROE), Excess Market Value(EMV). Multinational Enterprises(MNEs), National Enterprises(NNEs).

2.4 Influencing Factors Affecting International Operations

Both external and internal factors affect international operations and thus the performance level. According to the research of previous scholars, the relevant findings are summarized as follows:

2.4.1 External Environment

(1) Institutional Distance

Scholars generally agree that the host country system has a significant impact on the transnational operation of enterprises(Blonigen, 2005; Asiedu, 2006; Gani, 2007; Jiang & Jiang, 2012; Pan & Jin, 2015), scholars generally believe that the institutional defects of the host country will increase the risk of investors' international investment and thus affect the performance, so the host country with institutional defects is often not the first choice for international investment. By analyzing the data of direct investment in 117 countries from 2003 to 2013, Pan Zhen and Jin Zhongkun(2015) found that in general, China's outward foreign direct investment tends to flow to host countries with good political relations and high institutional risks (Pan & Jin, 2015). Jiang Guanhong and Jiang Dianchun (2012), based on the data of China's FDI to 107 developing countries from 2003 to 2010, found that the stability of the host country's regime and the quality of supervision were the factors that affected whether China's FDI entered or not, and the host country's legal system had a negative impact on the scale of China's FDI. The institutional quality of host country has a negative impact on China's resource-seeking FDI. The higher or lower the efficiency of the host country's government, the better the quality of the host country's supervision or the

proximity to the home country is positively correlated with China's FDI(Jiang & Jiang, 2012). Habib and Zurawicki (2002) confirmed this point in their study of 89 countries. They believed that the smaller the absolute difference between the home country and the host country's system, the easier it is for both sides to adapt to each other's system environment, and thus the more beneficial to FDI(Habib & Zurawicki, 2002).

(2) Psychological Distance

Psychological distance refers to the sum of various obstacles for international enterprises to exchange information with the international market, such as differences in language, education, culture, business practices and industrial development. Johanson and Wiedersheim believed that enterprises tend to choose countries and regions with small psychological distance at the initial stage of international expansion, and expand to countries and regions with large psychological distance with the development of internationalization (Johanson and Wiedersheim, 1999). Scholars represented by Kogut and Singh (1988) and O'Grady & Lane (1996) pay particular attention to the impact of "psychological distance" on the international operation of enterprises, and believe that as the psychological distance between home and host countries increases, enterprises are more willing to choose joint ventures or greenfield investments rather than acquiring other enterprises as the path of internationalization. The larger the psychological distance is, the more significant the differences between the home country and the host country are in terms of economic development level, education level, relevant legal system, business practices, culture, language and other aspects. These differences further enhance the uncertainty and operating risks of enterprises entering overseas markets(Kogut & Singh, 1988; O'Grady & Lane, 1996).

Therefore, in order to reduce risks, enterprises often choose to enter the market with small psychological distance in the initial stage of internationalization. Later, with the improvement of internationalization experience, enterprises will gradually consider choosing the market with larger psychological distance.

(3) Cultural Difference

Cultural distance in different countries is important factors affecting the risk of FDI, especially for multinational enterprises. Many scholars have studied the influence of cultural distance on multinational enterprises. Morosini et al. (1998) studied 52 merger and acquisition cases from 1987 to 1992, and concluded that the cultural distance between the two countries can help reduce the merger risk and improve the performance of enterprises after merger. They believed that although enterprises need to pay the cost of integrating the cultural distance between the two countries, the cultural diversity caused by cultural distance can be improved. It is helpful for enterprises to develop diversified products. Therefore, their research conclusion is that cultural distance contributes to improving corporate performance(Morosini et al., 1998). Shuhui Sophy Cheng and Matthew W Seeger (2012) studied the influence of cultural awareness of equality and cultural distance on cross-border mergers and acquisitions of enterprises in the two countries, and found that the difference of equality awareness had a significant impact on cross-border mergers and acquisitions and equity transaction flows(Cheng & Seeger, 2012).

(4) Industry Distinction

The industry of the enterprise will directly affect the internationalization decision of the enterprise. Yang et al. (2014) found that the higher the level of industrial

development of an enterprise, the more likely it is to choose direct investment in the process of internationalization to make up for the competitive disadvantage of lack of experience in the host country(Yang et al., 2014). Gaur (2014) found that enterprises engaged in internationalization in manufacturing and service industries in emerging markets are more likely to acquire technology, capital and other competitive advantages through internationalization than other enterprises in the same industries in their home countries(Gaur et al., 2014).

2.4.2 Enterprise Capability

(1) Enterprise Scale and History

Enterprise scale is one of the most studied factors influencing internationalization. It is generally believed that large enterprises have the ability to obtain higher than normal profits. Due to the incompleteness of the market, large enterprises can obtain higher excess profits through their monopoly advantage. Not only that, larger enterprises are able to access capital markets at a lower cost and can operate in the market at a lower cost. Therefore, enterprise scale and the explicit resources represented by enterprise scale play an important role in the process of enterprise internationalization. Grant et al.(1988) conducted an empirical study on 304 large British manufacturing enterprises and concluded that firm size has a positive impact on the influence of the degree of international diversification on its performance(Grant et al., 1988). Bloodgood, Sapienza and Almeida(1996) came to a similar conclusion in an empirical study of a new venture capital firm in the United States. This proves that the availability of resources has a certain impact on the internationalization decisions of enterprises(Bloodgood et al., 1996). However, since

the 1990s, driven by many factors such as economic globalization, rapid development of science and technology, extensive application of information technology and Internet, a large number of small and medium-sized enterprises(SMEs) have become increasingly active in the international market, which means that scale and the explicit resources represented by scale do not play a dominant role in the process of enterprise internationalization. Empirical studies conducted by Goerzen and Beamish(2003), Hsu and Pereira(2008) and others after the 1990s all show that there is no significant correlation between enterprise scale and internationalization degree or enterprise performance(Goerzen & Beamish, 2003; Hsu & Pereira, 2008). According to Uppsala Model, enterprise internationalization is a gradual process of acquiring foreign market knowledge through organizational learning. Due to the existence of learning experience curve, the older an enterprise is, the more likely it is to expand internationally and the better its international performance will be. However, empirical studies by Zahra et al. (2001), Qian et al. (2002) show that the age of enterprises has no significant influence on the influence of internationalization degree on enterprise performance(Zahra et al., 2001) (Qian, 2002). Bausch and Krist (2007) used Meta-analysis to integrate previous studies, and the results showed that the internationalization performance of newly established large enterprises is better than that of small enterprises with a long history, that is, the age factor has a negative impact on internationalization degree and enterprise performance. Moreover, the influence of age factor is greater than that of enterprise scale, that is, the flexibility of operation is more critical to the success of enterprise overseas operation than the availability of resources(Bausch & Krist, 2007).

(2) Top Management Team

Sahaym (2013) found that the internationalization experience of top management team(TMT) (including overseas study, overseas work experience and international management experience) can help enterprises solve the problems and uncertainties in the process of internationalization(Sahaym, 2013). Kalasin (2014) found that the internationalization experience of TMTs can help enterprises adopt more advanced R&D strategies and ensure their competitiveness in the international market(Kalasin, 2014). Agnihotri and Saurabh (2015) found that there was a significant positive correlation between the overseas education experience, work experience and age of enterprise executives and the export intensity when the enterprise was internationalized, and a higher age of the TMT would reduce the export intensity(Agnihotri & Bhattacharya, 2015). Another point of discussion is the CEO duality-the combination of the two roles of CEO and chairman of the board. Zhong Xi et al. (2018) collected the data of Chinese manufacturing enterprises from 2008 to 2016 as the research object, and found that internationalization speed is negatively correlated with enterprise performance, and the international experience of CEO weakens the negative impact of the influence, while CEO duality increases the negative influence(Zhong et al., 2018). The age and educational background of CEO had no significant effect on the influence of enterprise internationalization.

(3) International Strategy

Delios and Beamish (1999) conducts a study using data from 399 companies in the Japanese manufacturing industry. The results showed that the overall profitability of enterprises begins to decline when expanding industrial fields. If strategic alliances

can be reached with companies in the host country, the negative impact of internationalization on enterprise performance can be alleviated. The negative impact between the two will be further enhanced if cooperation is formed with domestic enterprises(Delios & Beamish, 1999). Lu and Beamish (2001) takes Japanese SMEs as the research object, and the results showed that the export mode chosen by the company will have a negative impact on internationalization and performance(Lu & Beamish, 2001). Vermeulen and Barkema (2002) believes that the pace or speed of internationalization will affect the influence of an enterprise's overseas business development on its own performance. Excessive or irregular overseas expansion will have a negative impact on the positive correlation between the two. Therefore, appropriate development speed should be adopted in overseas business expansion(Vermeulen & Barkema, 2002). Wang Gang (2018) collected relevant data of 89 Chinese enterprises from 2013 to 2016 as research objects, and the results showed that product diversification can positively affect the influence of enterprise internationalization(Wang, 2018).

2.4.3 Enterprise's Specific Advantage

The influence of specific advantages on enterprises' internationalization operations has been elaborated in numerous international business literature, which is considered to be the most important factor to determine the internationalization activities of enterprises, and also the main reason for the differences in the performance of enterprises in the process of internationalization. Rugman and Verbeke (1992) believe that technologic-based assets are specific advantages that are not subject to location restrictions and can be transferred relatively easily in the

international market without too much adjustment, thus achieving global economies of scale, reducing costs and obtaining production efficiency(Rugman & Verbeke, 1992). Many scholars have used R&D intensity (the proportion of R&D expenditure in sales revenue) and marketing intensity (the proportion of advertising expenditure in sales revenue) as moderating variables to introduce the influence model of internationalization degree on enterprise performance.

(1) Marketing Capability

An important embodiment of the specific advantages of an enterprise's internationalization-the marketing capability reflects the ability of an enterprise to distinguish its products from its competitors and establish its brand. An enterprise that invests more in advertising can emphasize the differentiation of its products and services, and it is easier to succeed in the dispersed overseas market. Companies with strong brands can also gain profits by sharing price spillovers in overseas markets(Helsen et al., 1993). Lu and Beamish's (2004) empirical study on Japanese enterprises proves that those enterprises that invest more in intangible assets can gain higher profits from the growth of FDI(Lu & Beamish, 2004). Chitra Singla and Rejie George (2013) took 787 Indian manufacturing enterprises as the research object, and its empirical analysis showed that marketing expenses would positively affect the influence of internationalization on performance(Singla & George, 2013).

(2) R&D Intensity

Based on the data of industrial enterprises in 30 provinces, Hu Chenguang and Xu Mei (2016) drew the conclusion that R&D intensity can positively influence the influence of internationalization on performance through correlation regression

analysis(Hu & Xu, 2016). However, some scholars' research has also come to the opposite conclusion. For example, Majocchi and Zucchella (2003) made a study on 220 Italian international SMEs, showing that the high R&D investment has led to the decline of enterprises' economic performance(Majocchi & Zucchella, 2003). Hsu and Boggs(2003) conducted a study on 118 large American multinational corporations and found that R&D expenditure had a significant negative impact on the return on equity(Hsu & Boggs, 2003). Based on the research objects of 90 manufacturing enterprises, the empirical results of Xiong Jina (2012) showed that both technological competence and marketing competence of enterprises have a positive impact on internationalization degree and performance (Xiong Jina, 2012). Kotabe et al. (2002) collected data of 49 manufacturing enterprises in the United States during 1988-1993 as samples, and found through empirical analysis that the influence of internationalization level on corporate performance was affected by R&D and marketing capabilities, and had a positive effect on the influence of enterprise internationalization (Kotabe et al., 2002).

2.5 Conceptual Framework

This study primarily investigates the influence of the DOI on enterprise performance, with DOI divided into DOB and DOC. Consequently, this study will separately discuss the influence of DOB on enterprise performance as well as the influence of DOC on enterprise performance. The analysis of moderating variables will also be conducted accordingly. Specifically, the study will examine the moderating effect of institutional distance on the influence of DOB on enterprise

performance, as well as its moderating effect on the influence of DOC on enterprise performance. Similarly, the study will explore the moderating effect of the overseas experience of TMT on the influence of DOB on enterprise performance, and the effect of overseas experience of TMT on the influence of DOC on enterprise performance. Additionally, the study will investigate the moderating effect of R&D intensity on the influence of DOB on enterprise performance, and the effect of R&D intensity on the influence of DOC on enterprise performance. Based on the major management literatures examined, a conceptual framework on the influence of internationalization on enterprise performance is developed as Figure 2.5:

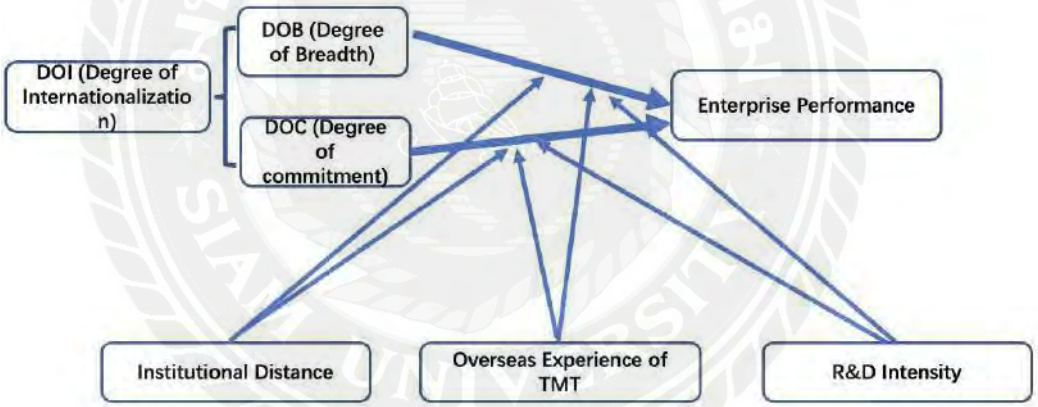


Figure 2.5 Conceptual Framework
(Source: Researcher, 2024)

Explanations on the Conceptual Framework

Internationalization Theory, such as Monopoly Advantage theory, Product Life Cycle Theory, The Eclectic Theory of International Production, Location Advantage Theory, Internalization Theory, and Marginal Industry Expansion Theory hold that enterprises can obtain competitive advantage by adopting internationalization strategy. By analyzing the internationalization process of various transnational enterprises,

many scholars have found that most enterprises adopting internationalization strategy can obtain better results. However, due to different factors, the impact of internationalization on business performance will vary with the different degree of internationalization. This study analyzes the influence of the degree of internationalization on the performance of Chinese manufacturing enterprises from a theoretical perspective, drawing on the research findings of many scholars in the field of internationalization. Additionally, considering the factors that influence international operations, this study goes beyond simply discussing the influence of independent variable on dependent variable, and further examines how this influence varies under different circumstances.

In this study, institutional distance, overseas experience of TMT and R&D Intensity are selected as the moderating variables from the nine factors affecting international operations, for the following reasons: (1) This study did not find an effective method to measure psychological distance and cultural distance from the previous literature. Using them as moderating variables might lead to inaccuracy and unreliability. (2) The research object of this study is listed manufacturing enterprises in China, discussion about industry distinction should be ignored. (3) Internationalization strategy is a complex multidimensional concept involving multiple factors and decisions, and taking internationalization strategy as a single moderating variable may not fully take into account its nuances and diversity. (4) All the literature reviewed in this study agrees that increased marketing intensity is good for international operations, and further study of its moderating effects may not provide new insights. (5) Since the indicators for enterprise scale are closely related to

performance indicators. There might be multicollinearity if it is adopted as moderating variables since performance is dependent variable. Therefore, this study decided to focus on the moderating effects of institutional distance, overseas experience of corporate TMT and R&D Intensity on the influence of enterprise internationalization on performance.

2.6 Mechanism of the Influence of Degree of Internationalization on Performance and Related Hypotheses

Most studies believe that the impact of DOI on enterprise performance is non-linear, and mainly analyzed from the perspective of cost and benefit. Chen Yeting and Zhang Xiaotao (2015) believe that enterprises' international operation has benefits such as reducing transaction costs, eliciting learning effects, discovering new market opportunities and obtaining strategic resources by taking advantage of internalization advantages, as well as costs caused by new entry, management coordination and transnational operation risks(Chen & Zhang, 2015). The profit and cost of international operation of enterprises change with the change of DOI. The performance of enterprises is the comparison of cost and income. When the cost is greater than the income, the performance of enterprises will decline, while when the cost is less, the performance increases(Sullivan, 1994; Ruigrok & Wagner, 2003; Yang & Zhang, 2009). In 1989, Buckley noted that a number of studies in 1978 showed that many companies' first foreign direct investments failed, but subsequent foreign investments were mostly successful. These enterprises lack overseas investment experience and international business management ability, lack of

understanding of the host country, so the risk of international business is very high, especially for the first-time investors without absorbable experience. These problems are more severe in SMEs(small and medium-sized enterprises) in developing countries, which lack international talent and professional managers to shift through complex decisions. Decisions are often biased and unscientific, so the initial overseas investment is usually a failure. However, with the increase of investment, enterprises continue to learn from mistakes and draw lessons from successes through the "learning effect", thus gradually achieving success(Buckley, 1989). At present, China is still in the stage of "Made in China 2025" to let the manufacturing industry go abroad, and quite a number of manufacturing enterprises lack overseas direct investment experience and talents, and it is often difficult to make the first overseas investment decision consequently. Coupled with the challenges of the new environment in the host country, the risks of enterprises' initial overseas direct investment are often very high, and the cost of new entry is often greater than the benefit. Therefore, enterprise performance is reduced; However, with the increase of investment and the play of "learning effect", enterprises continue to accumulate experience and gradually adapt to the new environment. The benefits of internationalization gradually become prominent and exceed the costs of internationalization, and the performance of enterprises begins to rise. Therefore, this study proposes the following hypotheses:

H1: When DOB increases, enterprise performance will first decline and then rise, that is, DOB has a U-shaped influence on the enterprise performance.

H2: When DOC increases, enterprise performance will first decline and then rise, that is, DOC has a U-shaped influence on the enterprise performance.

2.7 Moderating Effect of Moderating Variables and Related Hypotheses

2.7.1 Moderating Effect of Institutional Distance

Different countries have different national systems. If a multinational enterprise expands into foreign markets, the distance between these systems will become wider and wider, and the cost of international operation of the multinational enterprise will continue to increase, which may even exceed the profits of the company engaged in international operation. With different institutional environments in host countries, DOI has different impacts on enterprise performance(Chen et al., 2016). First of all, compared with domestic enterprises, one of the main sources of competitive advantages of multinational enterprises is that they have the ability to internalize technologies and knowledge of different host countries(Caves, 1984), and then pass the learned knowledge back to their home countries and subsidiaries in other countries, thus achieving better overall performance(Doz et al., 2001). If the institutional distance in the foreign market is very large, the transfer of subsidiaries between countries or transfer of strategic resources to these overseas subsidiaries will become a relatively difficult task, so that economies of scale and economies of scope can not be successfully obtained. Secondly, in addition to the assimilation, internalization and transfer of technology and knowledge, multinational enterprises will continue to strive to achieve a balance between global economic integration and local development. Studies have shown that the external environmental pressure for local development is

stronger than the internal cultural and management pressure for compliance(Rosenzweig & Nohria, 1994). The problem with dealing with the pressures of the local external environment and achieving external legitimacy is that the host country and the home country often have very different regulatory regimes and business practices. As the distance between these regulatory regimes and business regulation regimes grows, it becomes more difficult to obtain legitimacy in the host country(Kostova & Zaheer, 1999). The lack of necessary external legitimacy will lead to the lower performance level of the whole multinational corporation. As a result, multinational enterprises have to meet both local requirements and global integration, and this conflict pressure will become very complicated, which will eventually lead to an increase in control costs, coordination costs and overall governance costs. Finally, Gaur and Lu(2007) studied the ownership strategy and survival rate of subsidiary businesses of Japanese enterprises in host countries with different systems and found that with the increasing institutional distance, enterprises would increase their level of equity control or enter foreign markets by establishing wholly-owned subsidiaries, which is the most expensive way(Gaur & Lu, 2007). The company adopts this strategy to strengthen the control of subsidiaries in the host country, but it will also become an important source of increasing the company's operating costs. Therefore, if the company adopts such a high-cost entry method and operation mode, it may have a negative impact on the overall performance of the company in the short term.

From the above discussion, it can be concluded that when the institutional distance between the host country and the home country increases, the cost of international operation will increase, thus affecting the performance of enterprises.

The state institution is divided into formal institution and informal institution, so the following hypotheses are proposed:

H3a: When the formal institutional distance between home and host countries increases, the influence of DOB on enterprise performance will be negatively affected.

H3b: When the informal institutional distance between home and host countries increases, the influence of DOB on enterprise performance will be negatively affected.

H4a: When the formal institutional distance between home and host countries increases, the influence of DOC on enterprise performance will be negatively affected.

H4b: When the informal institutional distance between home and host countries increases, the influence of DOC on enterprise performance will be negatively affected.

2.7.2 Moderating Effect of Overseas Experience of Top Management Team

First of all, the overseas experience of top management team(TMT) is an important intangible asset of international enterprises, which can enhance the competitive advantage of enterprises in internationalization. The "imprinting effect" perspective explains the effects of imprinting theory on individuals and organizations(Marquis & Tilcsik, 2013). “Imprinting” refers to a period of external influence during which features associated with the surrounding environment are imprinted on the focus subject, and although these features change over time, they remain and have a lasting effect on the focus subject. Mathias et al. (2015) later confirmed this "imprinting effect" on entrepreneurs. After being imprinted, TMT members have different values and they have a broader perspective, which makes them think more about the long-term future of the company when making decisions(Mathias et al., 2015). At the same time, combined with the more advanced

management concepts and skills they have learned overseas, they can improve the management efficiency of the internationalization process, so as to improve the efficiency of converting DOI into company performance. Second, the international experience of TMT can reduce international risks. Sapienza et al. (2006) believes that when an enterprise enters a foreign market, it will face uncertainties and risks due to lack of understanding of the industry practices, customer needs and market organization of the host country, which will increase the operating cost and greatly increase the possibility of failure(Sapienza et al., 2006b). The experience and knowledge of entrepreneurs can provide relevant experience that start-ups lack, and help enterprises solve problems encountered in foreign markets. For example, understanding relevant research and development in foreign markets can reduce the time it takes to develop an internationalization plan, which in turn reduces the number of lost or missed opportunities.

To sum up, hiring a senior management team with overseas experience can improve the competitive advantage of internationalization and avoid some risks, thus contributing to the improvement of internationalization performance. Therefore, the following hypotheses are proposed in this study:

H5: When the overseas experience of TMT increases, the influence of DOB on enterprise performance will be positively affected.

H6: When the overseas experience of TMT increases, the influence of DOC on enterprise performance will be positively affected.

2.7.3 Moderating Effect of R&D Intensity

According to Monopoly Advantage Theory, the quality difference and cost difference of products play an important role in ensuring the internationalization advantage of enterprises. The Product Life Cycle Theory also points out that the arrival time of the maturity period of the product will determine the same product in different national markets have different competitive positions. For enterprises with strong "differentiation", R&D can promote the output of new knowledge and technology, so as to enhance the advantages of enterprises in new products and new technologies, so that enterprises can obtain obvious core competitiveness in the international competitive market. For products with strong "homogeneity", the improvement of automation level and the optimization of product and organization management brought by R&D can directly promote the improvement of enterprise productivity. In previous studies, Hu Chenguang et al. (2016) used the data of industrial enterprises in 30 provinces to draw a conclusion that R&D intensity can positively affect the influence of DOI on business performance through correlation regression analysis(Hu & Xu, 2016). Taking 90 manufacturing enterprises as research objects, the empirical results from Hai Benlu(2012) show that both technical competence and marketing competence of enterprises have a positive impact on DOI and performance(Hai, 2012). Kotabe et al. (2002) collected the data of 49 manufacturing enterprises in the United States during 1988-1993 as samples, and found through empirical analysis that the inlfluence of internationalization level on corporate performance was affected by R&D intensity and marketing capabilities which both have positive effect on the influence of the two(Kotabe et al., 2002).

Therefore, the following hypotheses are proposed:

H7: When R&D intensity increases, the influence of DOB on enterprise performance will be positively affected.

H8: When R&D intensity increases, the influence of DOC on enterprise performance will be positively affected.

2.8 Summary

This chapter defines the concepts of enterprise internationalization and internationalization performance, and reviews the literature related to enterprise internationalization theory, the influence of enterprise internationalization on enterprise performance, and the factors affecting enterprise international operations. Conclusions and issues worthy of further study drawn are as follows:

(1) From the perspective of research objects, the studies on the influence of internationalization on performance published in international journals are mainly aimed at developed countries, and seldom pay attention to the internationalization of enterprises in developing countries. With the rapid growth of China's economy, the transformation and upgrading of China's manufacturing industry in recent years and the implementation of the policy of promoting "Made in China" to the international market, the internationalization of China's manufacturing enterprises is bound to have its own characteristics. The research on the internationalization of Chinese manufacturing enterprises is of reference significance to the internationalization of enterprises in other developing countries.

(2) From the literature on the influence of internationalization on enterprise performance, it can be seen that the influence of internationalization on enterprise performance is considered to be very diversified, and there are even some opposite conclusions, mainly including linear positive influence, linear negative influence, U-shaped influence, inverted U-shaped influence, S-shaped influence and N-type influence. The main reason for multiple conclusions on one topic is that internationalization has multiple benefits and costs(Lu & Beamish, 2004). These benefits and costs have different trends with the improvement of the degree of internationalization, and their combination makes the influence of internationalization on performance very complicated(Zahra et al., 2000). On the one hand, by observing Figure 2.2, we can see that the measurement methods and index systems of internationalization degree and enterprise performance adopted by many previous studies are not exactly the same, which makes these conclusions not comparable. On the other hand, it is the reliability of the measurement of internationalization degree that leads to the confusion of the conclusion. For example, many previous studies used FSTS(Foreign Sales to Total Sales) to measure the degree of internationalization, but Qiao Youqing et al. (2002) raised doubts through two case studies. Among the two companies he studied, one company FSTS reached 95%, but only has one overseas subsidiary, while the other company FSTS only had 80%, while it has 20 subsidiaries in 16 countries (Qiao Youqing et al., 2002). Therefore, a single index is less likely comprehensive to be used to measure the international business activities of all enterprises, and the accuracy of measurement is not good enough. Relevant study

should reconstruct the index system of internationalization degree and enterprise internationalization performance.

(3) Many scholars have made studies on the influencing factors affecting the international operations. It can be basically divided into external environment factors (institutional distance, psychological distance, cultural difference and industry distinction.), enterprise capability factors (enterprise scale and history, senior executive, international strategy, etc.) and enterprise's specific advantage factors (marketing capability, R&D intensity, etc.). Since the dominant effect is influenced by various situational factors, the introduction of appropriate moderating factors into the influence of internationalization on performance is also the breakthrough point of this study. At the same time, the research on the moderating factors can provide suggestions and establish a foundation for improving the internationalization performance.

(4) By summarizing the literature, this chapter deeply analyzes the mechanism of the influence of internationalization degree on performance, and puts forward relevant hypotheses. And through analyzing the mechanism of the three moderating factors, relevant hypotheses are put forward.

Chapter 3

Research Methodology

This chapter first introduces the method used. Then, by discussing the source of data, the reason why the data selected is reliable and valid is illustrated, after which an analytical framework is built. The following part is manipulation of variables, explaining how the variables are measured, represented and calculated. Once all the variables and corresponding parameters have been determined, the most critical modeling process begins. This chapter also introduces the data analysis method and an analysis framework.

Content:

3.1 Method Used

To achieve the objectives of this research, quantitative research method is regarded as the most appropriate method. In view of the fact that this study takes the listed manufacturing enterprises in China as subjects, which are generally large in

scale and have detailed divisions of labor, and the general employees do not have an accurate grasp of the data involved in this study. Meanwhile, senior managers within are usually busy with work. It is thus very unlikely that a conclusion with high credibility can be formed by subjective investigation through questionnaire survey or interviews. and Fixed Effect Model is conducted to empirically study the data. Therefore, this study is more inclined to obtain relevant data from authoritative databases, and draw relatively objective and reliable conclusions through comprehensive analysis of a large number of complete and detailed data. And Fixed Effect Model is conducted to empirically study the data.

3.2 Data Collection

This study is a quantitative research endeavor. It utilizes data from Chinese manufacturing listed enterprises from 2005 to 2021, with a total sample size of 1,089 enterprises. The data source is China Stock Market & Accounting Research Database(CSMAR) and enterprises' Corporate Annual Report. CSMAR is widely recognized as a comprehensive and reliable source of financial and accounting data for Chinese listed companies for the following reasons:

(1) Official background and institutional support: CSMAR is operated and managed by the Institute of Finance and Banking of the Chinese Academy of Social Sciences and China Securities Credit Management Co., LTD., under the guidance of the China Securities Regulatory Commission. The CSMAR database is the only database product in Greater China to be selected by the Wharton Research Services System (WRDS) in the United States, and has been highly recognized by Nobel Prize

winner Robert William Fogel. The support and participation of these institutions gives authority and reliability to the CSMAR database.

(2) Source and coverage of data: After unremitting efforts, the CSMAR financial and economic database has expanded to 15 series, 115 sub-databases, including stocks, companies, funds, bonds, derivatives, economy, industry, money market, overseas, sectors, information, technology and finance, special topics and more than 2,000 tables, tens of thousands of indicators, more than 40,000 fields. The earliest data time interval can be traced back to 1949, and these data can be CSMAR data query, download, drawing, statistics, and support EXCEL, DBF, plain text and other output formats, can achieve seamless docking with SAS, SPSS, STATA and other statistical software.

(3) Quality and accuracy of data: CSMAR is known for its data quality and reliability. The database sources its data directly from officials and follows strict validation processes to ensure accuracy. This enhances the credibility of research findings and allows for robust analysis.

(4) Academic recognition and extensive use: So far, more than 1,000 universities (such as Harvard, Peking University, etc.) and research institutions (such as Boshi Fund, China Securities, etc.), more than 15,000 customers, more than 17,000 high-quality papers published by first-class journals at home and abroad are using CSMAR economic and financial research database.

(5) Function and characteristics: Considering the needs of academic research, CSMAR’s development is drawn on the United States University of Chicago CRSP, Standard & Poor's Compustat and other international well-known database

professional standards. The data of CSMAR can be queried, downloaded, drawn, and statistics, and supports EXCEL, DBF, plain text and other output formats, which can realize seamless docking with statistical software such as SAS and SPSS. It has the characteristics of accuracy, authority, comprehensiveness, timeliness, Chinese and English bilingual.

3.3 Selection Criteria for Sample Enterprises

The selection criteria for the sample enterprises chosen in my research are based on several key factors to ensure the representativeness and relevance of the sample. These criteria include:

(1) Industry Representation: Ensuring that the selected enterprises span various sectors within the manufacturing industry to capture the diversity of the sector. This may include sectors such as automotive, electronics, machinery, chemicals, etc.

(2) Market Capitalization: Considering enterprises with varying market capitalizations to represent both large-cap and small-cap firms within the manufacturing sector.

(3) Geographic Representation: Including enterprises from different regions or countries to account for regional variations and to provide a broader perspective on the internationalization process.

(4) Listing Status: Focusing on publicly listed enterprises to ensure the availability of reliable and transparent financial data for analysis.

(5) International Presence: Prioritizing enterprises that have a significant international presence or are actively engaged in international markets to study the impact of internationalization on performance.

(6) Financial Stability: Selecting enterprises with stable financial performance and a history of profitability to ensure the reliability of financial data and minimize the impact of outliers.

(7) Data Availability: Ensuring that sufficient data, including financial statements, annual reports, and other relevant information, are readily accessible for analysis.

By adhering to these selection criteria, the sample companies chosen for my research will be representative of the manufacturing industry and provide valuable insights into the relationship between internationalization and performance.

3.4 Analytical Framework

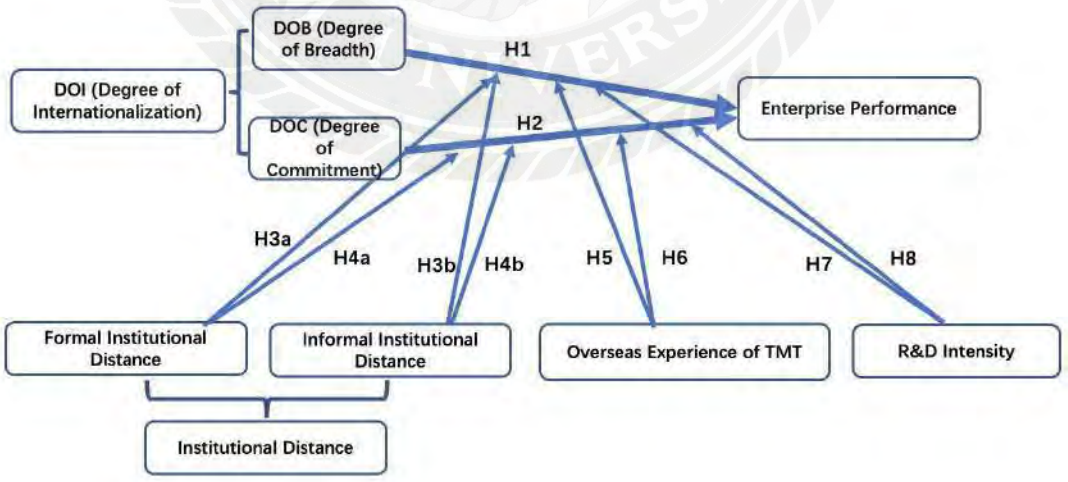


Figure 3.4 Analytical Framework

(Source: Researcher, 2024)

3.5 Variable Manipulation

3.5.1 Independent Variable

The independent variable is Degree of Internationalization (DOI). According to literature research, most scholars have used single-dimensional single or multiple indicators when measuring the degree of internationalization. For example, in previous studies, many researchers have used FSTS to measure the degree of internationalization of enterprises. However, Qiao Youqing (2022) raised doubts based on the study of two cases. In the two companies studied by him, one company had an FSTS of 95% but only had one subsidiary overseas, while the other company had an FSTS of only 80% and had 20 subsidiaries in 16 countries. If only FSTS is used to measure the degree of internationalization, significant biases may occur in the research conclusions. Pangarkar (2008) pointed out that the most fatal flaw of FSTS is its inability to reflect the market dispersion of overseas sales, and this market dispersion or breadth plays a more important role in the performance of enterprises compared to traditional operational depth.

This study draws on the perspective of Hitt et al. (1997) to define internationalization degree as "the extent to which a firm's expansion activities cross borders and enter different markets or regions." This degree should simultaneously reflect both the breadth and depth of a firm's international business operations. The degree of commitment(DOC) of internationalization refers to the extent of a firm's resource commitment to a particular market, which can be reflected in the firm's market entry patterns. According to existing literature, measures such as FSTS, FATA,

FOTO, and FETE can serve as indicators of the depth of penetration into foreign markets.

On the other hand, the degree of breadth(DOB) of internationalization refers to the extent of a firm's overseas market operations. Measures such as NOS or NCOS, Hirschman-Herfindahl Index based on sales revenue or the number of subsidiaries in various regions, or entropy indices can reflect the degree of dispersion of location costs and benefits. Some scholars have also discussed the use of the Foreign Statistical Dispersion Parameter (FSDP) to measure internationalization breadth.

The Number of Countries with Overseas Subsidiaries(NCOS) provides a clear and specific indicator by calculating the actual number of countries in which a company has established overseas subsidiaries. This indicator directly reflects the geographical scope of a company's international presence, providing a direct indication of its global influence. Unlike FSDP, which only focuses on statistical dispersion without considering the potential operational aspects of internationalization, NOCS captures a company's business expansion into different markets. It considers factors such as market entry strategies, investment decisions, and geographical diversification, providing a more comprehensive assessment of DOB of internationalization. Additionally, for many companies, establishing overseas subsidiaries represents a significant commitment and investment in international markets. By calculating the number of countries with subsidiaries, companies can measure their level of global expansion and assess their competitiveness on an international scale. This measure is closely related to strategic goals regarding global market penetration and diversification. Overall, the decision to use NCOS reflects a

preference for direct and operationally relevant measures of DOB of internationalization, which reflect the actual expansion of a company's global footprint.

Therefore, in constructing the indicator system for measuring the degree of internationalization, this study decides to divide it into two dimensions: DOB and DOC of internationalization. It adopts NCOS to measure DOB of internationalization and FSTS to measure DOC of internationalization, as shown in Figure 3.5.1.

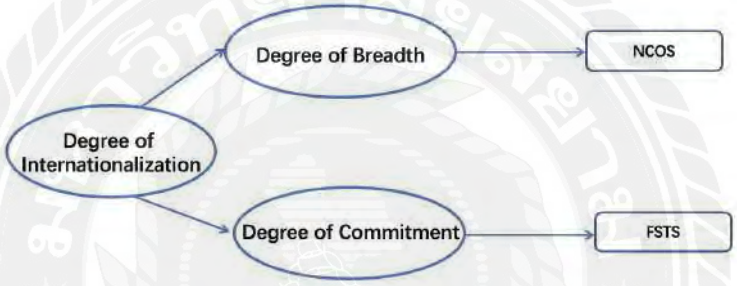


Figure 3.5.1 Measurement Index System of DOI
(Source: Researcher, 2024)

$$FSTS = \frac{foreign\ sales}{total\ sales} \quad (3\text{-}1)$$

3.5.2 Dependent Variable

The evaluation of the enterprises performance in international operation should be combined with the motivation of enterprises in international operation(Wu, 2003). In other words, the performance of international operation should reflect the extent to which an enterprise achieves its established strategic objectives. In the actual operation process, since the ultimate goal of enterprises is to chase profit maximization, various motives of international business will eventually be reflected in the form of profit. Enterprise performance should be measured comprehensively through a quantifiable evaluation system. Financial indicators are the most commonly

used indicators to evaluate organizational performance according to previous literature.

Financial indicators usually includes: Return on Assets (ROA), Return on Equity (ROE), Return on Sales (ROS), Return on Investment (ROI), Earnings Per Share (EPS) and Sales Growth Rate(Liu, 2020). Among them, ROA is used to measure the ability of an enterprise to generate Earnings Before Interest and Tax (EBIT) profits using all capital including liabilities and shareholders' equity. Total assets are usually the average of total capital at the beginning of the period and total capital at the end of the period, and can also be calculated by weighted average. ROE refers to the rate of return on shareholders' equity, which is used to measure the enterprise's ability to use shareholders' capital to generate interest and after-tax profits. ROS stands for return on sales, which is used to measure the operating efficiency of enterprises. ROI is the rate of return on investment, which is used to measure the capital obtained by an enterprise through investment. EPS is an important indicator to measure corporate profitability in the stock market. Sales Growth Rate is a measure of a startup's ability to grow, usually expressed in terms of current year sales growth/total sales in the previous year. According to literature review, in empirical studies on the influence of DOI on enterprise performance, most scholars have adopted financial indicators such as ROA and ROE. To obtain comparable results, this study uses ROA as measures of firm performance.

$$ROA = \frac{net\ profit}{total\ assets} \tag{3-2}$$

3.5.3 Moderating Variables

Institutional Distance

For the measurement of institutional distance, this study draws on the measurement method by Dean Xu and Oded Shenkar (2002) in their research. Xu and Shenkar divided the institutional distance between home and host countries into Regulative Distance(RD) and Normative Distance(ND) representing formal institutional distance and informal institutional distance(Xu & Shenkar, 2002). These institutional indicators are determined based on national institutional environment scores in the Geneva-based World Economic Forum's 2022 Global Competitiveness Report.

The 2022 Global Competitiveness Report is based on publicly available information and data from 142 countries and territories. It includes more than 170 projects to measure national differences, which can be divided into 12 parts: Institutional systems, infrastructure, macroeconomic environment, health and primary education, higher education and training, commodity market efficiency, labor market efficiency, financial market development, science and technology reserves, market size, firm maturity and reform and innovation. In this study, the formal system is measured by the "institutional system" part, which mainly includes 7 investigation factors describing a country's civil administration system. The informal system selects 9 factors that affect the market efficiency of the host country and mainly describes the management attitude and norms. Specifically, the measurement items are shown in Table 3.5.3.1:

Table 3.5.3.1 Measurement Factors of Regulative Distance and Normative Distance

Regulative Distance (7 factors):
1. Anti-trust law: The country has an anti-trust law and anti-trust policy that can effectively promote competition.
2. Property rights: The property rights of the residents of the country can be effectively guaranteed.
3. Independence of the judiciary: The country's legal system effectively enforces commercial contracts and private businesses can file lawsuits in independent and impartial courts if they challenge jurisdiction.
4. Investor protection: Investors can be protected by the local government.
5. Efficiency of dispute resolution: Citizens are willing to accept legal means to decide disputes, rather than resorting to force or illegal means.
6. Transparency of government policy: The country's legal and political institutions are less likely to change significantly in the next five years.
7. Efficiency of the public security apparatus: The public security apparatus in this country can play an effective role in protecting the personal safety of commercial activities.
Normative Distance (9 factors):
1. Product design: Attach great importance to product design ability.
2. Customer orientation: Companies in the country generally focus on customer satisfaction.
3. Staff training: pay attention to staff training.
4. Willingness to delegate: Strong willingness to delegate power to subordinates.
5. Merit pay: Compensation policies where pay is closely related to performance.
6. Professional manager efficiency: Owners are more willing to hire outside professional managers than to appoint their children or relatives.
7. The effectiveness of the corporate board of directors: The corporate board of directors can effectively supervise and manage the performance and represent the interests of shareholders.
8. Industrial relations: Workers in this country are able to maintain good relations with businesses.
9. Difficulty in obtaining loans: It is easier for investors to obtain loans locally.

(Source: 2022 Global Competitiveness Report)

Each country is given a score for these factors in the Global Competitiveness Report. Using the same method as Xu and Shenkar, this study collected these data and calculated the simple average of the scores of the above 7 factors and 9 factors respectively for each country, and finally used them as the scores of the formal system and informal system for each country. Then, by calculating the absolute value of the score difference between China and other host countries on relevant dimensions, the formal and informal institutional distance of the two countries are calculated. Since some multinational enterprises(MNEs) in the sample have more than one overseas subsidiaries and may have overseas subsidiaries in more than one host countries, there will be multiple absolute differences, so MNEs are faced with multiple institutional distances. In our study, we take the weighted average of these institutional distances. In other words, each absolute distance is weighted by the number of overseas subsidiaries of MNEs in specific host countries. All the weighted differential absolute values are then added up to become the firm's formal or informal institutional distance. The specific calculation method is as follows:

Table 3.5.3.2 Scores of RD and ND in each country (region)

Country (region)	RD	ND	Country (region)	RD	ND
China	4.54	4.23	Austria	5.2	4.79
Hongkong	6.17	4.8	Spain	4.54	3.74
U.S.	5.41	4.97	Mongolia	3.7	3.44
France	5.21	4.31	Philippines	3.41	4.12
Germany	5.39	4.88	Bangladesh	3.43	3.47
Mexico	3.76	3.79.	Belgium	5.26	4.76
Korea	4.26	4.09	Turkey	4.23	3.71
Japan	5.6	5.17	Katar	5.27	5.08
India	4.49	4.17	Czech	3.94	4.24
Thailand	4.47	4.19	Denmark	5.99	5.23
Vietnam	3.81	3.77	Brazil	4.27	4.2
Singapore	6.5	5.33	Hungary	4.01	3.68
Poland	4.39	3.92	Kazakhstan	3.81	3.61
Bolivia	3.16	3.33	Russia	3.27	3.46
Italy	4.07	3.54	Taiwan	5.14	4.86
Luxembourg	5.5	4.89	Ukraine	3.04	3.47
Australia	5.47	4.86	United Arab Emirates	4.89	4.71
Kazakhstan	4.13	3.62	Britain	5.99	4.82
Tunisia	4.73	4.04	Morocco	3.97	3.81
Malaysia	5.5	5.14	Sri Lanka	4.43	4.3
Indonesia	4.2	4.18	Saudi Arabia	5.54	4.9
Pakistan	3.94	3.73	Surinam	3.43	3.38
Netherlands	5.63	5.07	Norway	5.81	5.18
South Africa	5.29	4.23	Panama	4.14	3.9
Canada	6.14	4.96	Peru	3.99	4.06
Kyrgyzstan	3.81	3.61			

(Source: Calculated using data from the Global Competitiveness Report 2022)

For example, if a domestic multinational enterprise has 6 overseas subsidiaries, including 2 subsidiaries in Japan, 3 subsidiaries in Germany and 1 subsidiary in India, the formal institutional distance calculation formula faced by the company is as follows:

$$RD = |4.54 - 5.60|\frac{2}{6} + |4.54 - 5.39|\frac{3}{6} + |4.54 - 4.49|\frac{1}{6} \qquad (3\text{-}3)$$

In this formula, RD represents the formal system distance that a company is faced with. 4.54 represents the formal system score of China, 5.60 represents the formal system score of Japan, 5.39 represents the formal system score of Germany, and 4.49 represents the formal system score of India. 2/6, 3/6, and 1/6 are the weights of the three countries respectively. ND is also calculated in this way.

Overseas Experience of Top Management Team

In this study, overseas experience of Top Management Team (TMT) is defined as a dummy variable. When the chairman, vice chairman, CEO and other TMT members in the enterprise have overseas experience, the enterprise is defined as having overseas experience, which is specified as Exp and the value is 1; otherwise, it is not having overseas background and the value is 0.

R&D Intensity

Compared with expenditure, the R&D investment intensity can better reflect the R&D investment that is commensurate with the enterprise scale and market position, and is more comparable among different enterprises. This study selects R&D expenditure/revenue as the index to measure R&D intensity, represented as R&D Int and expressed as:

$$\text{R\&D Int}=\frac{R\&D\ Expenditure}{Revenue} \tag{3-4}$$

3.6 Model Development

3.6.1 Model of Degree of Breadth and Enterprise Performance

Due to the potential endogeneity issue arising from mutual causality between the independent variable(DOB) and the dependent variable(ROA), as well as between

control variables(presented as Z) and the dependent variable(ROA), this study follows the approach used by previous scholars by incorporating lagged independent and control variables (by one period) in the model(Du et al., 2012; Liu & Zhou, 2018; Zhang & Bai, 2023).

Based on the mechanism analysis and hypothesis mentioned above, the model is constructed as follows:

$$ROA_{i,t} = ß_0 + ß_1 \times DOB_{i,t-1} + ß_2 \times DOB_{i,t-1}^2 + Z_{i,t-1} \times ó + ø_i + ø_t + ξ_{i,t} \quad (3\text{-}5)$$

Where, t denotes the time period, i denotes enterprise, DOB denotes degree of breadth, $Z_{i,t-1}$ denotes a series of control variables that change with time at the enterprise level. $Ø_i$ is the firm fixed effect, $Ø_t$ is the time fixed effect, $ξ_{i,t}$ is the random disturbance term.

Dependent Variables: ROA is used as mentioned above.

Independent Variable: The main independent variable is DOB. NCOS is selected to measure the degree of breadth.

Control Variables: Usually refer to the variables that may affect the research results in addition to the independent variables and moderating variables concerned in this study. The control variables selected in this study are as follows:

Enterprise Scale (SIZE) : Indicates the size of the enterprise, expressed as the natural logarithm of total assets.

Leverage Ratio (LEV): It measures the ratio of total liabilities to total assets, representing the company's leverage.

Revenue Growth Rate (GROWTH): This metric characterizes the growth potential of a company, calculated as (current period revenue - previous period revenue) / previous period revenue.

Proportion of Independent Directors (INDEP): It indicates the independence of the company, represented by the ratio of the number of independent directors to the total number of directors.

Dual Roles (DUAL): This variable reflects the decision-making power of the CEO to some extent. It is represented by 1 if the chairman and CEO are the same person, otherwise 0.

Board Size (BOARD): The number of directors on the board, represented by the natural logarithm.

Top Shareholder's Ownership Ratio (TOP1): This metric reflects the concentration of ownership in the company to some extent, represented by the proportion of shares held by the largest shareholder to the total shares outstanding.

ß1 and ß2 denotes the influence of DOB on enterprise performance.

Note: All independent variables, moderating variables, and control variables in the text are lagged by one year; all empirical regressions include firm fixed effects and year fixed effects, and standard errors are clustered at the firm level.

Table 3.6 Definition of Relevant Variables

Name	Symbol	Definition and Description
Independent Variable		
Return on Assets	ROA	Net Profit/Total Assets
Dependent Variable		
Number of Countries with Oversea Subsidiaries	NCOS	Number of Countries with Oversea Subsidiaries
Control Variables		
Enterprise Scale	SIZE	Logarithm of total assets
Leverage Ratio	LEV	Measured by the ratio of total liabilities to total assets
Revenue Growth Rate	GROWTH	(Current period's income - last period's income)/ last period's income
Proportion of Independent Directors	INDEP	Number of independent directors/ number of directors on the board.
Dual Roles	DUAL	When the chairman of the board is the same person as the general manager, it is denoted as 1; otherwise, it is denoted as 0.
Board Size	BOARD	Natural logarithm of the number of supervisory boards
Top Shareholder's Ownership Ratio	TOP1	The proportion of shareholding held by the largest shareholder in total equity.

Note: All dependent, moderating, and control variables lag by one year.

3.6.2 Model of Degree of Commitment and Enterprise Performance

The approach to addressing potential endogeneity issues can be referenced in Section 3.6.1. Based on the mechanism analysis and hypotheses mentioned above, the model is constructed as follows:

$$ROA_{i,t} = ß_0 + ß_1 \times DOC_{i,t-1} + ß_2 \times DOC_{i,t-1}^2 + Z_{i,t-1} \times ó + ø_i + ø_t + \xi_{i,t} \quad (3\text{-}6)$$

where, t denotes the time period, i denotes enterprise, DOC denotes degree of commitment, $Z_{i,t-1}$ denotes a series of control variables that change with time at the enterprise level. $Ø_i$ is the firm fixed effect, $Ø_t$ is the time fixed effect, $\xi_{i,t}$ is the random disturbance term.

Dependent Variables: ROA are used as mentioned above.

Independent Variable: The main independent variable is DOC. FSTS is selected to be the measuring indicator.

Control variables are the same as 3.6.1.

$ß_1$ and $ß_2$ denotes the influence of DOC on enterprise performance.

Note: All independent variables, moderating variables, and control variables in the text are lagged by one year; all empirical regressions include firm fixed effects and year fixed effects, and standard errors are clustered at the firm level.

Table 3.6.2 Definition of Relevant Variables

Name	Symbol	Definition and Description
Independent Variable		
Return on Assets	ROA	Net Profit/Total Assets
Dependent Variable		
Foreign Sales to Total Sales	FSTS	Foreign Sales/Total Sales
Control Variables		
Enterprise Scale	SIZE	Logarithm of total assets
Leverage Ratio	LEV	Measured by the ratio of total liabilities to total assets
Revenue Growth Rate	GROWTH	(Current period's income - last period's income)/ last period's income
Proportion of Independent Directors	INDEP	Number of independent directors/ number of directors on the board.
Dual Roles	DUAL	When the chairman of the board is the same person as the general manager, it is denoted as 1; otherwise, it is denoted as 0.
Board Size	BOARD	Natural logarithm of the number of supervisory boards
Top Shareholder's Ownership Ratio	TOP1	The proportion of shareholding held by the largest shareholder in total equity.

Note: All dependent, moderating, and control variables lag by one year.

3.6.3 Model of Moderating Effect of Institutional Distance, Overseas Experience of Top Management Team and R&D Intensity

The approach to addressing potential endogeneity issues can be referenced in Section 3.6.1. Based on the hypotheses mentioned earlier, the main model is constructed as follows:

$$ROA_{i,t}=\partial+\beta_1\times DOI_{i,t-1.}+\beta_2\times RD_{i,t-1} \quad (3\text{-}7)$$

For moderating effect, we use the interaction term model to represent it, and the model is constructed as follows:

(1) The moderating effect model of the influence of DOB on enterprise performance:

① The models for the moderating effect of RD and ND are as follows:

$$ROA_{i,t}=\beta_0+\beta_1\times DOB_{i,t-1.}+\beta_2\times DOB^2_{i,t-1}+\beta_3\times RD_{i,t-1}+\beta_4\times DOB\times RD_{i,t-1}+\beta_5\times DOB^2\times RD_{i,t-1}+Z_{,t-1.}\times\acute{o}+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}8)$$

$$ROA_{i,t}=\beta_0+\beta_1\times DOB_{i,t-1}+\beta_2\times DOB^2_{i,t-1}+\beta_3\times ND_{i,t-1}+\beta_4\times DOB\times ND_{i,t-1}+\beta_5\times DOB^2\times ND_{i,t-1}+Z,t-1\times\acute{o}+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}9)$$

② The model for the moderating effect of overseas experience of top management team is as follows:

$$ROA_{i,t}=\beta_0+\beta_1\times DOB_{i,t-1}+\beta_2\times DOB^2_{i,t-1}+\beta_3\times overseaback_{i,t-1}+\beta_4\times DOB\times overseaback_{i,t-1}+\beta_5\times DOB^2\times overseaback_{i,t-1}+Z_{,t-1}\times\acute{o}+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}10)$$

③ The model for the moderating effect of R&D intensity is as follows:

$$ROA_{i,t}=\beta_0+\beta_1\times DOB_{i,t-1.}+\beta_2\times DOB^2_{i,t-1}+\beta_3\times \mathrm{R\&D}_{i,t-1}+\beta_4\times DOB\times \mathrm{R\&D}_{i,t-1}+\beta_5\times DOB^2\times \mathrm{R\&D}_{i,t-1}+Z_{,t-1.}\times\acute{o}+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}11)$$

Where t represents the time baseline, i represents an individual company, $DOB_{i,t-1.}$ denotes the degree of internationalization of the enterprise, $Z_{,t-1}$ denotes a series of time-varying control variables at the enterprise level; ϕ_i represents enterprise fixed

effects, ϕ_t represents time fixed effects, and $\varepsilon_{i,t}$ represents the random disturbance term.

(2) The moderating effect model of the influence of DOC on enterprise performance:

① The models for the moderating effect of RD and ND are as follows:

$$ROA_{i,t}=\beta_0+\beta_1\times DOB_{i,t-1}+\beta_2\times DOC^2_{i,t-1}+\beta_3\times RD_{i,t-1}+\beta_4\times DOC\times RD_{i,t-1}+\beta_5\times DOC^2\times RD_{i,t-1}+Z_{,t-1}\times\delta+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}12)$$

$$ROA_{i,t}=\beta_0+\beta_1\times DOC_{i,t-1}+\beta_2\times DOC^2_{i,t-1}+\beta_3\times ND_{i,t-1}+\beta_4\times DOC\times ND_{i,t-1}+\beta_5\times DOC^2\times ND_{i,t-1}+Z,t-1\times\delta+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}13)$$

② The model for the moderating effect of overseas experience of top management team is as follows:

$$ROA_{i,t}=\beta_0+\beta_1\times DOB_{i,t-1}+\beta_2\times DOC^2_{i,t-1}+\beta_3\times overseaback_{i,t-1}+\beta_4\times DOC\times overseaback_{i,t-1}+\beta_5\times DOC^2\times overseaback_{i,t-1}+Z_{,t-1}\times\delta+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}14)$$

③ The model for the moderating effect of R&D intensity is as follows:

$$ROA_{i,t}=\beta_0+\beta_1\times DOC_{i,t-1}+\beta_2\times DOC^2_{i,t-1}+\beta_3\times \mathrm{R\&D}_{i,t-1}+\beta_4\times DOC\times \mathrm{R\&D}_{i,t-1}+\beta_5\times DOC^2\times \mathrm{R\&D}_{i,t-1}+Z_{,t-1}\times\delta+\phi_i+\phi_t+\varepsilon_{i,t} \quad (3\text{-}15)$$

Where t represents the time baseline, i represents an individual company, $DOC_{i,t-1}$ denotes the degree of internationalization of the enterprise, $Z_{,t-1}$ denotes a series of time-varying control variables at the enterprise level; ϕ_i represents enterprise fixed effects, ϕ_t represents time fixed effects, and $\varepsilon_{i,t}$ represents the random disturbance term.

3.7 Data Analysis Method

Given my data is from 2005 to 2021, a suitable analyzing method would be panel data regression analysis. Panel data regression analysis allows to account for both cross-sectional and time-series variations in the data. By including panel data, which consists of observations over multiple time periods for each individual entity (in this case, manufacturing enterprises), the research can capture individual heterogeneity and control for time-invariant unobserved factors. This is particularly relevant when examining the influence of DOI on enterprise performance over an extended period of time and across different firms.

To incorporate the moderating variables (institutional distance, overseas experience of TMT, and R&D intensity) into the analysis, this study would introduce interaction terms in the panel data regression model. Interaction terms allow to examine whether the influence of DOI on enterprise performance is moderated by these additional factors.

The specific steps for conducting panel data regression analysis with interaction terms would through STATA involve:

1. Constructing a panel dataset with the variables for each Chinese listed manufacturing enterprise over the years 2005-2021.

2. Developing a panel data regression model, including the main effects of DOI and the moderating variables, as well as their interaction terms.

3. Assessing the significance and magnitude of the coefficients for the interaction terms to determine the moderating effects of institutional distance, overseas

experience of TMT, and R&D intensity on the influence of DOI on enterprise performance.

4. Robustness Checks: Perform robustness checks to assess the sensitivity of the results.

Chapter 4

Results of the Research

This chapter presents the results of data collection and analysis, followed by a discussion of these results. The objectives of this study are to examine the influence of internationalization on enterprise performance of Chinese listed manufacturing enterprises, to investigate the moderating effects of three major influencing factors, and to provide suggestions to aid in the development of Chinese manufacturing enterprises.

The presentation of research results is divided into three parts. The first part illustrates the influence of the independent variables on dependent variable, which includes descriptive statistics, correlation analysis, multicollinearity test, regression analysis, robustness test, and heterogeneity analysis. The second part demonstrates the role of moderating variables. A summary of the analysis results from the first and second parts of this chapter on the research hypotheses is provided. In the third part, some suggestions are proposed concerning the verification of hypotheses.

Content:

4.1 Regression Results Analysis on the Influence of Internationalization on Enterprise Performance

4.1.1 Descriptive Statistics

Before regression analysis, descriptive statistical analysis was carried out on the main variables of regression. Table 4.1.1 lists the descriptive statistical results of independent variables (NCOS, FSTS), dependent variable(ROA), moderating variables (RD, ND, TMT, R&D) and control variables. It mainly involves the mean, standard deviation, minimum, median and maximum values of the variable.

Table 4.1.1 Pearson Descriptive Statistics

Variable	N	Mean	SD	Min	p50	Max
ROA	6772	0.0411	0.0806	-1.333	0.0405	0.964
NCOS	6792	1.526	1.302	0	1	22
FSTS	6018	0.296	0.254	0.001	0.223	1
SIZE	6983	22.51	1.284	17.88	22.36	27.55
LEV	6983	0.450	0.249	0.00750	0.446	9.429
GROWTH	6771	0.269	2.548	-0.960	0.129	168.5
INDEP	6981	37.74	5.723	16.67	36.36	80
DUAL	6983	0.309	0.462	0	0	1
BOARD	6981	2.124	0.200	1.386	2.197	2.890
TOP1	6983	33.05	14.70	3.003	31.07	89.99
RD	6983	-0.634	0.616	-1.960	-0.850	1.500
ND	6983	-0.453	0.423	-1.100	-0.630	0.900
R&D	6657	0.0489	0.0582	0	0.0396	3.077
TMT	6983	0.670	0.470	0	1	1

From the perspective of enterprise performance (ROA), the maximum value of enterprise performance of manufacturing enterprises is 0.964, the minimum value is -1.333, and the average value is 0.0411, indicating that the enterprise performance of different manufacturing enterprises is significantly different, and the median value is

0.0405, indicating that the overall performance of listed manufacturing companies is good.

From the perspective of the number of countries of overseas subsidiaries (NCOS), the maximum NCOS of manufacturing enterprises is 22, the minimum value is 0, and the average value is 1.526, indicating that there is a great difference in the Degree of Breadth(DOB) of internationalization of different manufacturing enterprises. The median value is 1, indicating that DOB of internationalization of most manufacturing enterprises is narrow.

From the perspective of the ratio of foreign sales to total sales revenue (FSTS) for enterprises, the maximum value of FSTS for manufacturing enterprises is 1, the minimum value is 0.001, and the average value is 0.223. This indicates significant disparities in the Degree of Commitment(DOC) of internationalization among different manufacturing enterprises. The median value of 0.223 suggests that the majority of manufacturing enterprises have a shallow level of internationalization, implying a relatively low degree of external dependency.

In examining the asset-to-liability ratio (LEV), it is observed that for manufacturing enterprises, the maximum value of the LEV is 9.429, the minimum value is 0.00750, and the average value is 0.446. This indicates that the majority of manufacturing enterprises maintain their LEV at a relatively healthy level.

In analyzing the growth rate of operating income (GROWTH), it is observed that for manufacturing enterprises, the maximum value of GROWTH is 168.5, the minimum value is -0.960, and the average value is 0.269. This indicates significant variations in the GROWTH among different manufacturing enterprises.

Examining the formal institutional distance--Regulative Distance (RD), it is observed that for manufacturing enterprises, the maximum value of RD for outward investments is 1.500, the minimum value is -1.960, and the average value is -0.634. This suggests that there is not a substantial difference in RD for outward investments among different manufacturing enterprises. Consequently, the cost differentials in engaging in internationalized operations are not significantly pronounced.

Examining the informal institutional distance--Normative Distance (ND), it is observed that for manufacturing enterprises, the maximum value of ND for outward investments is 0.900, the minimum value is -1.100, and the average value is -0.453. This indicates that there is not a significant disparity in ND for outward investments among different manufacturing enterprises.

Examining research and development intensity (R&D), it is observed that for manufacturing enterprises, the maximum value of R&D is 3.077, the minimum value is 0, and the average value is 0.0489. This suggests significant disparities in R&D among different manufacturing enterprises. With a median value of 0.0396, it is indicated that Chinese manufacturing enterprises need to increase their investment in R&D to maintain a competitive advantage.

In examining overseas experience of Top Management Team (TMT), it is observed that, for manufacturing enterprises, the maximum value of TMT is 1, the minimum value is 0, and the average value is 0.670. This indicates significant variations in TMT among different manufacturing enterprises, with approximately half of Chinese manufacturing enterprises opting to appoint executives with overseas experience.

4.1.2 Correlation Analysis

Conducting Pearson correlation analysis by incorporating independent variables, dependent variables, and moderating variables into the model is essential for assessing the degree of linear relationships among variables and validating the effectiveness of hypotheses. The correlation test results among variables are presented in Table 4.1.2. It is observed that the correlation coefficient between the dependent variable (ROA) and the independent variable (NCOS) is -0.008, which is not statistically significant. Given that the Pearson correlation coefficient can only preliminarily reflect simple correlations between pairs of variables, and considering that the influence of internationalization on enterprise performance may involve more intricate correlations, further complicated by the influence of control variables, the specific influence will be explored in subsequent sections using a fixed-effects model.

The correlation between the proportion of independent directors (INDEP) and the number of directors (BOARD) is the highest, at 0.489. Additionally, significant correlations are observed between enterprise size (SIZE), asset-to-liability ratio (LEV), operating income growth rate (GROWTH), the proportion of independent directors (INDEP), dual roles (DUAL), the number of directors (BOARD), and the shareholding percentage of the largest shareholder (TOP1) with the dependent variable. All correlation coefficients are below 0.5, indicating that the selection of control variables is reasonably appropriate. While the correlation analysis between the core dependent variable and the core independent variable is negative, it is crucial to note that correlation analysis provides only a rough assessment of the relationship between two variables. It does not consider the impact of other control variables on

these variables. Therefore, further regression analysis is necessary to validate and explore the relationship more comprehensively.

Table 4.1.2 Pearson Correlation Analysis

Variables	ROA	NCOS	SIZE	LEV	GROWTH	INDEP	DUAL	BOARD	TOP1
ROA	1.000								
NCOS	-0.008	1.000							
SIZE	0.074***	0.220***	1.000						
LEV	-0.299***	0.071***	0.305***	1.000					
GROWTH	0.060***	0.0100	0.00700	0.027**	1.000				
INDEP	-0.022*	0.0170	0.033***	-0.0140	0.0100	1.000			
DUAL	0.032***	0.00400	-0.142***	-0.099***	0.026**	0.121***	1.000		
BOARD	0.036***	-0.034***	0.223***	0.132***	-0.00600	-0.489***	-0.203***	1.000	
TOP1	0.128***	-0.0110	0.122***	-0.0160	0.00600	0.094***	-0.044***	-0.044***	1.000

4.1.3 Collinearity Test

To further mitigate the issue of multicollinearity, this study conducted Variance Inflation Factor (VIF) tests on all independent variables and control variables involved in the research, as presented in Table 4.1.3. The VIF values were all below 2, well below the critical threshold of 10. Hence, multicollinearity is not anticipated to exert a substantive impact on the estimation results, allowing for the continuation of subsequent regression analyses.

Table 4.1.3 Collinearity Test

Variable	VIF	1/VIF
NCOS	1.07	0.938804
FSTS	1.05	0.953651
SIZE	1.46	0.683176
LEV	1.25	0.800107
GROWTH	1.00	0.995112
INDEP	1.39	0.721071
DUAL	1.06	0.946037
BOARD	1.50	0.666193
TOP1	1.03	0.972674
Mean VIF	1.20	

4.1.4 ADF Test

The stationarity test is a fundamental requirement for conducting regression analysis with panel data. This study employs Stata software and utilizes the ADF test to assess the stationarity of the panel data. The results indicate that all variables in the overall panel data are stationary. Detailed test results are presented in the table 4.1.4.

Table 4.1.4 Stationarity Results for the Overall Panel Data

Variable	ADF Test
NCOS	17.145***
FSTS	8.378***
SIZE	13.6501**
LEV	1.965**
GROWTH	12.753***
INDEP	3.856***
DUAL	9.376***
BOARD	1.746**
TOP1	4.534***

4.1.5 Regression Results Analysis

Building upon the descriptive statistics, correlation analysis, and multicollinearity results of the main variables presented earlier, this section undertakes an empirical analysis of the research hypotheses based on the established model, focusing on the research sample. The primary focus of this section is the empirical investigation of the influence of internationalization on enterprise performance. The analysis delves into the influence of DOB and DOC of internationalization and the operational performance of enterprises.

The Hausman test is commonly used to determine whether a fixed effects model or a random effects model should be employed for parameter estimation. When the null hypothesis of the Hausman test holds, the random effects model is preferred; conversely, if the null hypothesis is rejected, the fixed effects model should be used. In this study, the results of the Hausman test show a p-value of 0.0007, which is less than 1%. This leads to the rejection of the null hypothesis, indicating that the fixed effects model is superior to both the random effects and mixed models. Therefore, the fixed effects model is adopted for the subsequent regression analysis.

Following the benchmark regression model in this study, separate regressions are conducted for DOB and DOC of internationalization. During the specific regression process, this study sequentially incorporates the squared terms of independent variables and control variables. In Table 4.1.4, the first column represents the regression model introducing only DOB of internationalization, the second column introduces the regression model with the squared term of DOB of internationalization, the third column includes the regression model with the addition of enterprise-level

control variables to DOB of internationalization, and the fourth column presents the complete regression model with the introduction of the squared term of DOB of internationalization. The regression results are presented in Table 4.1.5.1.

Table 4.1.5.1 Regression Results for DOB of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA	(4) ROA
NCOS	-0.0031** (0.0015)	-0.0047* (0.0027)	-0.0035** (0.0015)	-0.0058** (0.0025)
$NCOS^2$		0.0003* (0.0002)		0.0002** (0.0001)
SIZE			0.0373*** (0.0071)	0.0244*** (0.0078)
LEV			-0.2688*** (0.0296)	-0.2688*** (0.0297)
GROWTH			0.0039*** (0.0007)	0.0032*** (0.0007)
INDEP			0.0001 (0.0003)	0.0002 (0.0003)
DUAL			0.0001 (0.0039)	0.0018 (0.0044)
BOARD			0.0160 (0.0121)	0.0201 (0.0128)
TOP1			0.0011*** (0.0003)	0.0011*** (0.0003)
Constant	0.0438*** (0.0022)	0.0440*** (0.0036)	-0.7530*** (0.1633)	-0.5895*** (0.1810)
Controls	NO	NO	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	6,469	6,469	5931	5931
R-squared	0.4780	0.4844	0.5829	0.5028

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

From the results of the regression model displayed in Table 4.1.5.1, the coefficients in column (3) indicate that NCOS has a coefficient of -0.0035, and is significant at the 5% level. This suggests an inverse relationship between NCOS and ROA. In other words, there is an inverse relationship between DOB of internationalization and the enterprise performance. With the introduction of the squared term of NCOS, as per the results in column (4), the coefficient for NCOS is -0.0058, and the coefficient for the squared term is 0.0002, both significant at the 5% confidence level. This indicates that as the DOB of internationalization increases, the initial correlation between internationalization and the enterprise performance is negative, and then it turns into a positive correlation. It can be observed that NCOS has a positive "U"-shaped influence on ROA for manufacturing enterprises. Moreover, it passes the significance level test at 1%, confirming that when DOB of internationalization is narrow, an increase in DOB of internationalization is detrimental to the improvement of operational performance for manufacturing enterprises. However, when DOB of internationalization exceeds a certain critical value, expanding DOB of internationalization promotes the enhancement of operational performance. Therefore, this validates H1 in this study.

In traditional approaches, to validate the existence of a U-shaped influence, quadratic terms of independent variables are typically added to regression models. Determination of a U-shaped influence relies on the significance of the quadratic term coefficient, as well as the positive or negative sign of the quadratic term coefficient in relation to the linear term coefficient. However, this method has notable limitations. To address this issue, Lind et al. (2010) proposed additional criteria for confirming a

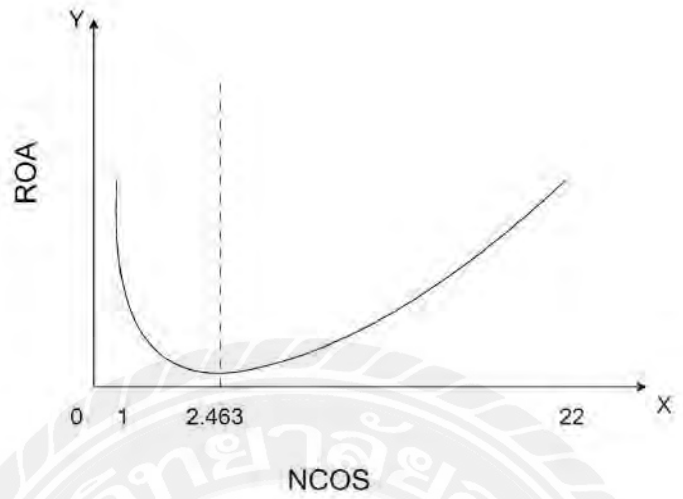
U-shaped relationship: (1) the slopes must have opposite signs at the upper and lower bounds of the independent variable range, indicating a decreasing (or increasing) trend on one side of the interval and an increasing (or decreasing) trend on the other side; (2) the inflection point of the curve must fall within the upper and lower bounds of the independent variable(Lind & Mehlum, 2010). Therefore, leveraging the utest command, this study further verifies the U-shaped influence of the DOB of internationalization on operational performance for manufacturing enterprises. The verification results are presented in Table 4.1.5.2 as follows:

Table 4.1.5.2 Results of the U-shaped Influence Test of DOB on Performance

	Lower bound	Upper bound
Interval	1	22
slope value	-0.3264	4.4511
t statistic	-2.4122	6.7540
p statistic	0.0079	0.0000

The Utest test indicates that the inflection point is 2.4346. Examining the results in Table 4.1.5.2, it is observed that the range of NCOS is [1, 22]. The inflection point falls within the data range. The slope value is negative in the left interval (Lower bound) and positive in the right interval (Upper bound). This further confirms the existence of a U-shaped influence of DOB of internationalization on enterprise performance. Figure 4.1.5.1 describes these results.

Figure 4.1.5.1 DOB-Performance Curve



(Source: Researcher, 2024)

In Table 4.1.5.3, the first column represents the regression model introducing only the variable for DOC of internationalization, the second column introduces the regression model with the squared term of DOC of internationalization, the third column includes the regression model with the addition of enterprise-level control variables to DOC of internationalization, and the fourth column presents the complete regression model with the introduction of the squared term of DOC of internationalization. The regression results are displayed in Table 4.1.5.3.

Table 4.1.5.3 Regression Results for DOC of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA	(4) ROA
FSTS	-0.0308*	-0.0776***	-0.0370**	-0.0703***
	(0.0169)	(0.0190)	(0.0148)	(0.0264)
$FSTS^2$		0.0523***		0.0372**
		(0.0188)		(0.0169)
SIZE			0.0334***	0.0335***
			(0.0066)	(0.0065)
LEV			-0.2613***	-0.2606***
			(0.0291)	(0.0294)
GROWTH			0.0037***	0.0037***
			(0.0006)	(0.0006)
INDEP			0.0000	0.0000
			(0.0004)	(0.0004)
DUAL			-0.0020	-0.0022
			(0.0038)	(0.0038)
BOARD			0.0130	0.0127
			(0.0128)	(0.0127)
TOP1			0.0011***	0.0011***
			(0.0003)	(0.0003)
Constant	0.0476***	0.0535***	-0.6505***	-0.6488***
	(0.0049)	(0.0034)	(0.1514)	(0.1526)
Controls	NO	NO	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	5,634	5,634	5,724	5,724
R-squared	0.4791	0.4799	0.5824	0.5828

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

Table 4.1.5.3 displays the results of the current regression model. The regression results in column (3) indicate that the coefficient for FSTS is -0.0370, significant at the 5% level. This suggests an inverse influence of FSTS on ROA. In other words, there is an inverse relationship between DOC of internationalization and the operational performance of the enterprise. With the introduction of the squared term of FSTS, according to the results in column (4), the coefficient for the ratio is -0.0703, and the squared term coefficient is 0.0372, both significant at the 1% confidence level. This indicates that as DOC of internationalization increases, the initial influence of DOC on enterprise performance of the enterprise is negative, and then it turns into a positive influence. It can be observed that FSTS has a positive "U"-shaped influence on ROA for manufacturing enterprises. Moreover, it is significant at a 1% confidence level, confirming that when DOC of internationalization is shallow, an increase in DOC of internationalization is detrimental to the improvement of operational performance. However, when DOC of internationalization exceeds a certain critical value, an increase in DOC of internationalization promotes the enhancement of operational performance. Therefore, this validates H2 in this study.

From the perspective of control variables, the coefficient for enterprise size (SIZE) is 0.0335, significant at the 1% confidence level. This suggests that larger enterprises exhibit better operational performance, as an increase in the size of manufacturing enterprises can lead to cost advantages, enhance resource utilization efficiency, and improve market competitiveness, thereby promoting an enhancement in enterprise performance. The coefficient for the the asset-to-liability ratio(LEV) is -0.2606, significant at the 1% confidence level. This indicates that higher LEV

correspond to poorer enterprise performance. Excessively high LEV create repayment pressure for enterprises, exposing them to higher financial risks. Additionally, interest expenses, as a fixed financial cost, reduce an enterprise's net profit, thus exerting a negative influence on performance.

The coefficient for the operating income growth rate (GROWTH) is 0.0037, significant at the 1% confidence level. This signifies that higher GROWTH correlate with better enterprise performance, as GROWTH directly increases an enterprise's revenue, contributing to enhanced profitability.

The coefficient for the shareholding percentage of the largest shareholder (TOP1) is 0.0011, significant at the 1% confidence level. An increase in TOP1 implies strengthened control within the company, enabling more effective influence over decision-making processes, thereby improving operational efficiency. Simultaneously, major shareholders often prioritize the long-term development of the company over short-term gains, which can mitigate agency problems between minority and majority shareholders, consequently enhancing the operational performance of the enterprise.

The impact of the proportion of independent directors (INDEP), the combination of dual roles (DUAL), and the number of directors (BOARD) on the operational performance of the enterprise is not significant.

Possible explanations for these results: China's early-stage internationalization leads to challenges for domestic enterprises, as they lack overseas experience and business management capabilities. Initially, significant resources are needed for market research, relationship coordination, and establishing supply chains, which can strain finances and negatively impact performance. However, as enterprises adapt to

overseas markets and develop effective management systems, the initial investments start to pay off, resulting in a "U"-shaped effect on performance, with an initial decline followed by improvement.

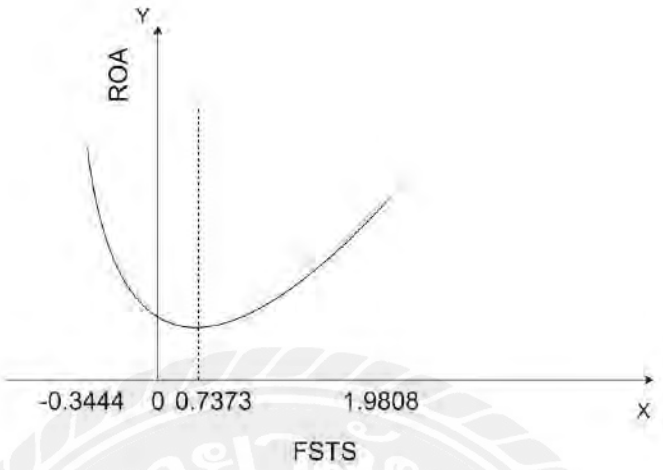
To verify the accuracy of the U-shaped influence, the Utest command in Stata software was employed to conduct further validation of the U-shaped influence of DOC of internationalization on enterprise performance in manufacturing enterprises. The validation results are presented in Table 4.1.5.4 as follows:

Table 4.1.5.4 Results of the U-shaped Influence Test of DOC on Performance

	Lower bound	Upper bound
Interval	-0.3444	1.9808
slope value	-0.1202	0.1381
t statistic	-3.9600	2.4203
p statistic	0.0000	0.0078

The Utest verifies that the extremum point is 0.7373. Examining the results in Table 4.1.5.4 reveals that the range of FSTS for enterprises is [-0.3444, 1.9808]. The extremum point falls within the data range. The slope value is negative in the left interval (Lower bound) and positive in the right interval (Upper bound). This further confirms the existence of a U-shaped influence of DOC of internationalization on enterprise performance . Figure 4.1.5.2 describes these results.

Figure 4.1.5.2 DOC-Performance Curve



(Source: Researcher, 2024)

4.1.6 Robustness Test

4.1.6.1 Instrumental Variable Method

Generally, endogeneity issues arise due to omitted variable factors that are correlated with other variables introduced into the model, the causal relationship between independent and dependent variables, self-selection bias factors and sample selection bias factors. Considering that whether an enterprise adopts an internationalization strategy is not randomly assigned or exogenously determined but influenced by various factors, it may be chosen based on the enterprise's own size, level of resource possession, and degree of expansion demand, among other factors. Hence, it is not a random event, and there may exist endogeneity issues caused by sample self-selection. Therefore, this research adopts the Two-Stage Least Squares (2SLS) instrumental variable regression to address potential endogeneity issues. In this section, the average number of countries of distribution of overseas subsidiaries and the proportion of total overseas sales to total sales revenue of enterprises in the

listed company's industry are taken as instrumental variables for DOB and DOC, and the above research conclusions are re-tested.

Table 4.1.6.1 Results of the Instrumental Variable Regression

Variable	（1）		(2)	
	First Stage Regression	Second Stage Regression	First Stage Regression	Second Stage Regression
FSTS		-0.1596***		
		(0.0596)		
FSTS2		0.0640 ***		
		(0.0115)		
IV	-0.0928 **			
	(0.0483)			
IV2	0.5969 ***			
	(0.1925)			
NCOS				-0.0008***
				(0.0002)
NCOS2				0.0001**
				(0.000)
IV			-0.2616***	
			(0.1021)	
IV2			0.8069**	
			(0.3918)	
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	5724	5724	6467	6467
C-D Wald F statistic	71.810		80.936	
K-P Wald rk F statistic	19.666		29.614	

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

Table 4.1.6.1 reports the estimation results using the Instrumental Variables Method (2SLS) as well as the relevant tests for the validity of the instruments. The Kleibergen-Paap Wald rk F-statistic exceeds the critical value of the Stock-Yogo weak instrument test at the 1% significance level, thereby rejecting the null hypothesis of weak instruments and confirming the validity of the chosen instruments. After accounting for endogeneity, the U-shaped influence of DOI and enterprisel performance remains robust.

4.1.6.2 Variable Replacement

To ensure result accuracy and mitigate the impact of variable selection, a robustness test involving variable replacement was conducted. In this robustness test, Tobin's Q (tobinq) was used as a replacement for ROA. The results are presented in Table 4.1.6.2. After incorporating proxy variable into the regression model, the influence of DOB and DOC of internationalization on enterprise performance remained substantively unchanged. Only the significance level experienced a slight reduction, affirming the robustness of the regression results.

Table 4.1.6.2 Regression Results after Variable Replacement

Variable	(1) Tobin's Q	(2) Tobin's Q	(3) Tobin's Q	(4) Tobin's Q
FSTS	-0.2411** (0.1292)	-0.8402** (0.3513)		
$FSTS^2$		1.0010*** (0.3568)		
NCOS			-0.0323* (0.0181)	-0.0711** (0.0344)
$NCOS^2$				0.0034** (0.0017)
SIZE	-0.2926*** (0.0820)	-0.2877*** (0.0803)	-0.2971*** (0.0767)	-0.2401*** (0.0624)
LEV	0.5500 (0.3808)	0.5705 (0.3788)	0.3835 (0.3500)	0.3517** (0.1678)
GROWTH	0.0112** (0.0051)	0.0100* (0.0051)	0.0837*** (0.0304)	0.0098* (0.0056)
INDEP	0.0020 (0.0071)	0.0018 (0.0071)	0.0012 (0.0057)	0.0018 (0.0037)
DUAL	-0.0477 (0.0769)	-0.0535 (0.0762)	-0.0578 (0.0690)	-0.0969* (0.0579)
BOARD	0.0037 (0.1921)	-0.0061 (0.1927)	0.0264 (0.1477)	-0.0657 (0.1723)
TOP1	-0.0083** (0.0036)	-0.0085** (0.0036)	-0.0073** (0.0036)	-0.0053 (0.0034)
Constant	8.5121*** (1.7299)	8.5420*** (1.7103)	8.7172*** (1.6664)	7.6068*** (1.4732)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	5,523	5,523	5,608	5,608
R-squared	0.6765	0.6776	0.7075	0.7084

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

4.1.6.3 Introducing Additional Control Variable

As businesses mature over time, they tend to accumulate more operational and market experience, contributing to enhanced decision-making quality and efficiency. Simultaneously, older enterprises often amass greater brand reputation, maintaining market competitiveness and exerting a positive influence on enterprise performance. To further scrutinize the robustness of the regression results, this study introduces a new control variable, the age of the enterprise (FIRMAGE), for additional robustness testing. The regression analysis results with the inclusion of the additional control variable are presented in Table 4.1.6.3. Even with the addition of the control variable, specifically FIRMAGE, the conclusions remain valid. It is evident that the inclusion of this control variable does not impact the estimation results, affirming the robustness of the study's conclusions.

Table 4.1.6.3 Regression Results with Additional Control Variable

Variable	(1) ROA	(2) ROA	(3) ROA	(4) ROA
FSTS	-0.0370** (0.0148)	-0.0706*** (0.0264)		
$FSTS^2$		0.0480** (0.0231)		
NCOS			-0.0022* (0.0012)	-0.0044* (0.0027)
$NCOS^2$				0.0001** (0.0001)
SIZE	0.0331*** (0.0065)	0.0332*** (0.0065)	0.0251*** (0.0071)	0.0275*** (0.0065)
LEV	-0.2622*** (0.0294)	-0.2615*** (0.0296)	-0.2314*** (0.0362)	-0.02209*** (0.0382)
GROWTH	0.0037*** (0.0006)	0.0038*** (0.0006)	0.0038*** (0.0006)	0.0039*** (0.0008)
INDEP	0.0000 (0.0004)	0.0000 (0.0004)	-0.0001 (0.0003)	-0.0004 (0.0004)
DUAL	-0.0020 (0.0038)	-0.0022 (0.0038)	0.0005 (0.0036)	0.0113** (0.0047)
BOARD	0.0134 (0.0128)	0.0130 (0.0127)	0.0093 (0.0113)	0.0064 (0.0138)
TOP1	0.0011*** (0.0003)	0.0011*** (0.0003)	0.0011*** (0.0002)	0.0008*** (0.0002)
firmage	0.0128*** (0.0037)	0.0136*** (0.0020)	0.0103** (0.0050)	0.0114*** (0.0029)
Constant	-0.6820*** (0.1670)	-0.6823*** (0.1677)	-0.5003*** (0.1685)	-0.5970*** (0.1516)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	5,724	5,724	6,467	6,467
R-squared	0.5825	0.5829	0.5594	0.4958

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

4.1.6.4 Excluding the Impact of the COVID-19 Pandemic and 2008 Financial Crisis

The financial crisis can significantly impact enterprise performance, particularly for multinational enterprises. Therefore, to further test the robustness of the regression results, this study excludes the 2008 financial crisis sample for additional robustness checks. Additionally, since the outbreak of the COVID-19 pandemic in 2020, it has had a significant impact on corporate investment behavior, leading to a sharp decline in global cross-border investment. To mitigate the influence of the COVID-19 pandemic on the conclusions of this study, samples from the years 2008, 2020 and 2021 are excluded. Thus, only the influence of internationalization degree of manufacturing enterprises from 2005 to 2007, and 2009 to 2019 is examined in table 4.1.6.4. After removing the influence of the COVID-19 pandemic and of the 2008 financial crisis, the baseline regression results remain valid.

Table 4.1.6.4 Regression Results of 2005-2009, 2009-2019

Variable	(1)	(2)	(3)	(4)
	ROA	ROA	ROA	ROA
FSTS	-0.0394***	-0.0732***		
	(0.0113)	(0.0288)		
$FSTS^2$		0.0337***		
		(0.0104)		
NCOS			-0.0021**	-0.0069**
			(0.0009)	(0.0033)
$NCOS^2$				0.0002**
				(0.0001)
SIZE	0.0324***	0.0337***	0.0225**	0.0209**
	(0.0077)	(0.0085)	(0.0097)	(0.0090)
LEV	-0.2754***	-0.2699***	-0.2497***	-0.2233***
	(0.0399)	(0.0289)	(0.0499)	(0.0476)
GROWTH	0.0048***	0.0050***	0.0049***	0.0048***
	(0.0010)	(0.0010)	(0.0010)	(0.0011)
INDEP	-0.0001	-0.0002	-0.0003	-0.0003
	(0.0004)	(0.0004)	(0.0005)	(0.0007)
DUAL	-0.0017	-0.0023	-0.0005	-0.0004
	(0.0055)	(0.0050)	(0.0046)	(0.0077)
BOARD	0.0039	0.0076	0.0044	0.0043
	(0.0143)	(0.0142)	(0.0135)	(0.0128)
TOP1	0.0011***	0.0011***	0.0011***	0.0009***
	(0.0004)	(0.0002)	(0.0003)	(0.0003)
Constant	-0.6835***	-0.6855***	-0.4108*	-0.4156**
	(0.2049)	(0.2077)	(0.2169)	(0.2025)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	3916	3916	4537	4537
R-squared	0.5734	0.5689	0.5677	0.5703

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

4.1.7 Heterogeneity Analysis

The impact of corporate ownership structure on the international operational performance of enterprises mainly manifests in aspects such as corporate decision-making mechanisms, resource allocation capabilities, and risk response abilities. For example, state-owned enterprises typically possess strong decision-making power and resource integration capabilities, making it easier for them to obtain policy support and financial security during the internationalization process. Additionally, state-owned enterprises can leverage national credit to gain better reputation and trust in the international market. On the other hand, private enterprises, due to their flexibility and quick decision-making, are more adaptable to changes in the international market, thereby enhancing their international operational performance. Based on the different nature of corporate ownership, listed enterprises can be categorized into state-owned and non-state-owned enterprises. The differences in corporate ownership nature will also have varying impacts on the internationalization and performance improvement of enterprises. Therefore, this study will further segment the sample enterprises based on their different ownership structures.

Table 4.1.7 Heterogeneity Examination of the Influence of Enterprise Internationalization on Performance

Variable	State-owned Enterprises		Non-state-owned Enterprises	
	(1) ROA	(2) ROA	(3) ROA	(4) ROA
SIZE	0.0078*	-0.0039	0.0423***	0.0412***
	(0.0041)	(0.0036)	(0.0032)	(0.0030)
LEV	-0.2042***	-0.1692***	-0.2642***	-0.2703***
	(0.0149)	(0.0134)	(0.0107)	(0.0101)
GROWTH	0.0048***	0.0044***	0.0036***	0.0037***
	(0.0007)	(0.0008)	(0.0003)	(0.0003)
INDEP	-0.0007**	-0.0008**	0.0004	0.0004
	(0.0003)	(0.0003)	(0.0004)	(0.0004)
DUAL	-0.0012	0.0013	-0.0013	0.0008
	(0.0048)	(0.0047)	(0.0036)	(0.0033)
BOARD	-0.0289**	-0.0254*	0.0311**	0.0268**
	(0.0132)	(0.0132)	(0.0133)	(0.0118)
TOP1	0.0001	0.0000	0.0015***	0.0014***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)
FSTS	-0.0265		-0.0857***	
	(0.0300)		(0.0213)	
$FSTS^2$	0.0254		0.0450**	
	(0.0368)		(0.0201)	
NCOS		0.0013		-0.0067**
		(0.0024)		(0.0030)
$NCOS^2$		-0.0001		0.0006*
		(0.0001)		(0.0003)
Constant	0.0474	0.3015***	-0.8961***	-0.8704***
	(0.0994)	(0.0892)	(0.0789)	(0.0735)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	1,509	1,851	4,037	4,420
R-squared	0.7039	0.6231	0.5724	0.5759

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

From Table 4.1.7, it can be observed that in non-state-owned enterprises in the manufacturing sector, there exists a U-shaped influence of DOB and DOC of internationalization on enterprise performance. However, such an influence is not evident in state-owned enterprises, potentially due to the sensitive identity label of state-owned entities, subjecting them to heightened scrutiny and constraints in host countries, and facing greater disadvantages from foreign counterparts, thereby incurring more social, political, and other associated costs. Consequently, the influence of enterprise internationalization on performance in state-owned enterprises does not exhibit a U-shaped pattern. For non-state-owned enterprises, during the initial stages of outward investment, they often encounter significant financial constraints, which may affect their short-term operational performance. Nevertheless, non-state-owned enterprises typically possess clearer investment motivations and flexible market autonomy in their outbound direct investment activities. They can leverage innovation advantages more effectively during the internationalization process, thereby better absorbing and digesting overseas market technologies, knowledge, etc. Consequently, they experience an enhanced enterprise performance in the later stages of internationalization, thereby exhibiting a more pronounced U-shaped pattern.

4.2 Moderation Effect Test

In order to validate the moderating effects of institutional distance, overseas experience of top management team(TMT), and R&D intensity on the influence of internationalization on enterprise performance in manufacturing enterprises, this study

conducted further examinations. Based on the main effects research model, this study generated interaction terms between the degree of internationalization(DOI) and institutional distance, DOI and overseas experience of TMT, as well as DOI and R&D intensity. These interaction terms were then incorporated into the main effects model for regression analysis. Since the moderating effects of the U-shaped influence manifest in both the movement of the inflection point and the slope, this study adopted a method inspired by Haan (2016), utilizing a stratified regression approach for empirical testing. Next, this study will separately examine the moderating effects of formal institutional distance--Regulative Distance (RD) on the influence of DOB of internationalization on enterprise performance, the moderating effects of formal institutional distance--Regulative Distance (RD) on the influence of DOC of internationalization on enterprise performance, the moderating effects of informal institutional distance--Normative Distance (ND) on the influence of DOC of internationalization on enterprise performance, and the moderating effects of informal institutional distance--Normative Distance (ND) on the influence of DOC of internationalization on enterprise performance. Therefore, this research uses the measurement method of Haan (2016) for reference and adopts the hierarchical regression method for empirical test(Haans et al., 2016).

4.2.1 Moderating Effect of Institutional Distance

Table 4.2.1.1 Moderating Effects of RD on DOB of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0281***	0.0281***	0.0254***
	(0.0065)	(0.0029)	(0.0072)
LEV	-0.0711	-0.0708***	-0.2311***
	(0.0480)	(0.0100)	(0.0359)
GROWTH	0.0039***	0.0039***	0.0038***
	(0.0007)	(0.0007)	(0.0006)
INDEP	-0.0004	-0.0004	-0.0001
	(0.0003)	(0.0003)	(0.0003)
DUAL	0.0113**	0.0113***	0.0004
	(0.0047)	(0.0034)	(0.0036)
BOARD	0.0071	0.0071	0.0088
	(0.0137)	(0.0113)	(0.0113)
TOP1	0.0008***	0.0008***	0.0011***
	(0.0002)	(0.0002)	(0.0002)
NCOS	-0.0046*	-0.0052**	-0.0069*
	(0.0027)	(0.0024)	(0.0036)
$NCOS^2$	0.0002**	0.0001	0.0003**
	(0.0001)	(0.0002)	(0.0002)
RD	-0.0108**	-0.0082*	0.0090*
	(0.0044)	(0.0049)	(0.0054)
RD×NCOS		0.0017***	0.0072*
		(0.0006)	(0.0038)
$RD×NCOS^2$			-0.0005*
			(0.0003)
Constant	-0.6083***	-0.6102***	-0.6681***
	(0.1386)	(0.0713)	(0.1612)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	5,529	5,529	5529
R-squared	0.4967	0.4968	0.5597

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

Table 4.2.1.2 Moderating Effects of RD on DOC of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0303***	0.0304***	0.0335***
	(0.0074)	(0.0074)	(0.0066)
LEV	-0.0758	-0.0757	-0.2613***
	(0.0553)	(0.0554)	(0.0293)
GROWTH	0.0037***	0.0037***	0.0038***
	(0.0007)	(0.0007)	(0.0006)
INDEP	-0.0003	-0.0003	-0.0000
	(0.0004)	(0.0004)	(0.0004)
DUAL	0.0115**	0.0116**	-0.0022
	(0.0051)	(0.0051)	(0.0038)
BOARD	0.0160	0.0161	0.0127
	(0.0147)	(0.0147)	(0.0127)
TOP1	0.0009***	0.0009***	0.0011***
	(0.0003)	(0.0003)	(0.0003)
FSTS	-0.0738***	-0.0681**	-0.0826**
	(0.0283)	(0.0289)	(0.0358)
$FSTS^2$	0.0467**	0.0482**	0.0666*
	(0.0230)	(0.0231)	(0.0377)
RD	-0.0079	-0.0108	0.0016
	(0.0057)	(0.0080)	(0.0062)
RD×FSTS		0.0110*	0.0133**
		(0.0061)	(0.0065)
$RD \times FSTS^2$			-0.0369*
			(0.0215)
Constant	-0.6383***	-0.6375***	-0.6483***
	(0.1586)	(0.1586)	(0.1529)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	5724	5724	5724
R-squared	0.5043	0.5044	0.5831

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

Table 4.2.1.3 Moderating Effects of ND on DOB of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0252*** (0.0023)	0.0253*** (0.0023)	0.0279*** (0.0079)
LEV	-0.2309*** (0.0078)	-0.2310*** (0.0078)	-0.2632*** (0.0336)
GROWTH	0.0038*** (0.0003)	0.0038*** (0.0003)	0.0044*** (0.0009)
INDEP	-0.0001 (0.0003)	-0.0001 (0.0003)	-0.0001 (0.0003)
DUAL	0.0005 (0.0027)	0.0005 (0.0027)	-0.0008 (0.0040)
BOARD	0.0091 (0.0091)	0.0093 (0.0091)	0.0112 (0.0123)
TOP1	0.0011*** (0.0002)	0.0011*** (0.0002)	0.0011*** (0.0003)
NCOS	-0.0013 (0.0018)	-0.0032 (0.0020)	-0.0011 (0.0021)
$NCOS^2$	-0.0001 (0.0001)	-0.0001 (0.0001)	0.0001** (0.0001)
ND	-0.0021 (0.0043)	0.0058 (0.0059	0.0074 (0.0087)
ND×NCOS		-0.0053* (0.0027)	-0.0054 (0.0072)
$ND \times NCOS^2$			-0.0001 (0.0003)
Constant	-0.4744*** (0.0564)	-0.4719*** (0.0564)	-0.5209*** (0.1805)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	6,467	6,467	6467
R-squared	0.5594	0.5597	0.5800

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

Table 4.2.1.4 Moderating Effects of ND on DOC of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0337*** (0.0025)	0.0333*** (0.0025)	0.0334*** (0.0065)
LEV	-0.2609*** (0.0086)	-0.2615*** (0.0086)	-0.2615*** (0.0291)
GROWTH	0.0038*** (0.0003)	0.0037*** (0.0003)	0.0037*** (0.0006)
INDEP	0.0000 (0.0003)	0.0000 (0.0003)	0.0000 (0.0004)
DUAL	-0.0022 (0.0029)	-0.0021 (0.0029)	-0.0021 (0.0038)
BOARD	0.0125 (0.0098)	0.0131 (0.0098)	0.0130 (0.0126)
TOP1	0.0011*** (0.0002)	0.0011*** (0.0002)	0.0011*** (0.0003)
FSTS	-0.0708*** (0.0170)	-0.0635*** (0.0172)	-0.0563** (0.0265)
$FSTS^2$	0.0376** (0.0169)	0.0494*** (0.0174)	0.0427** (0.0211)
ND	-0.0039 (0.0048)	-0.0026 (0.0053	-0.0058 (0.0095)
ND×FSTS		0.0230 (0.0162)	-0.0227 (0.0255)
$ND \times FSTS^2$			0.0213 (0.0256)
Constant	-0.6510*** (0.0605)	-0.6483*** (0.0605)	-0.6504*** (0.1514)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	5,724	5,724	5,724
R-squared	0.5829	0.5835	0.5836

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

As shown in Tables 4.2.1.1-4.2.1.4, the coefficient of the first-order interaction term between RD and DOB of internationalization is 0.0072, significant at a 10% confidence level. The coefficient of the second-order interaction term is -0.0005, significant at a 10% confidence level, and its direction is opposite to the baseline regression. For the first-order interaction term between RD and DOC of internationalization, the coefficient is 0.0133, significant at a 5% confidence level. The coefficient of the second-order interaction term is -0.0369, significant at a 10% confidence level, and its direction is opposite to the previous regression results. This implies that formal institutional distance negatively moderates the U-shaped influence of DOB, as well as DOC of internationalization on enterprise performance for manufacturing enterprises, validating hypotheses H3a and H4a.

The coefficient of the first-order interaction term between informal institutional distance and DOB of internationalization is -0.0054, not statistically significant, and the coefficient of the second-order interaction term is -0.0001, also not statistically significant. Similarly, for the first-order interaction term between informal institutional distance and DOC of internationalization, the coefficient is -0.0227, not statistically significant, and the coefficient of the second-order interaction term is 0.0213, not statistically significant. This indicates that informal institutional distance does not have a moderating effect on the influence of DOI on enterprise performance of manufacturing enterprises. Hence, Hypotheses H3b and H4b are not supported.

Explanation for the results: Countries with greater formal institutional distance face more barriers in international cooperation, making international operations more difficult and reducing the success of investments. In contrast, non-formal institutional

distance, such as cultural norms and social practices, does not significantly impact the U-shaped relationship. This is because informal institutions are more adaptable and flexible, allowing businesses to adjust strategies more easily. Formal institutional distance has a greater effect due to its direct impact on legal compliance and market entry, while informal differences are less constraining on internationalization and performance.

4.2.2 Moderating Effect of Overseas Experience of Top Management Team(TMT)

Table 4.2.2.1 Moderating Effects of TMT on DOB of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0160***	0.0274***	0.0273***
	(0.0024)	(0.0065)	(0.0065)
LEV	-0.0696	-0.0697	-0.0702
	(0.0480)	(0.0481)	(0.0481)
GROWTH	0.0033***	0.0039***	0.0039***
	(0.0003)	(0.0008)	(0.0008)
INDEP	-0.0000	-0.0004	-0.0004
	(0.0003)	(0.0004)	(0.0004)
DUAL	0.0038	0.0112**	0.0111**
	(0.0029)	(0.0047)	(0.0048)
BOARD	0.0122	0.0066	0.0064
	(0.0097)	(0.0138)	(0.0138)
TOP1	0.0012***	0.0008***	0.0008***
	(0.0002)	(0.0002)	(0.0002)
NCOS	-0.0045**	-0.0052*	-0.0107**
	(0.0019)	(0.0030)	(0.0053)
$NCOS^2$	0.0000	0.0001	0.0007***
	(0.0001)	(0.0002)	(0.0002)
overseaback	-0.0032	-0.0031	-0.0097
	(0.0026)	(0.0047)	(0.0070)
overseaback×NCOS		0.0012	-0.0072**
		(0.0022)	(0.0032)
overseaback×$NCOS^2$			0.0007*
			(0.0004)
Constant	0.4739***	0.6015***	0.6052***
	(0.0563)	(0.1394)	(0.1395)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	5,529	5,529	5,529
R-squared	0.4956	0.4958	0.4961

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

Table 4.2.2.2 Moderating Effects of TMT on DOC of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0336*** (0.0024)	0.0336*** (0.0024)	0.0337*** (0.0065)
LEV	-0.2609*** (0.0086)	-0.2609*** (0.0086)	-0.2607*** (0.0294)
GROWTH	0.0038*** (0.0003)	0.0038*** (0.0003)	0.0038*** (0.0006)
INDEP	0.0000 (0.0003)	0.0000 (0.0003)	0.0000 (0.0004)
DUAL	-0.0022 (0.0029)	-0.0022 (0.0029)	-0.0023 (0.0038)
BOARD	0.0134 (0.0098)	0.0134 (0.0098)	0.0130 (0.0128)
TOP1	0.0011*** (0.0002)	0.0011*** (0.0002)	0.0011*** (0.0003)
FSTS	-0.0506*** (0.0170)	-0.0701*** (0.0182)	-0.0243** (0.0102)
$FSTS^2$	0.0381** (0.0169)	0.0382** (0.0169)	0.0218*** (0.005)
overseaback		0.0054*** (0.008)	0.0062*** (0.003)
overseaback×FSTS		-0.0368*** (0.0102)	-0.0542** (0.0205)
overseaback×$FSTS^2$			0.0685* (0.0405)
Constant	-0.6485*** (0.0604)	-0.6487*** (0.0605)	-0.6555*** (0.1531)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	5,724	5,724	5,724
R-squared	0.5832	0.5832	0.5835

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

As shown in Tables 4.2.2.1 and 4.2.2.2, the coefficient of the first-order interaction between TMT and DOB of internationalization is -0.0072, significant at the 5% confidence level, while the coefficient of the second-order interaction is 0.0007, significant at the 10% confidence level, with the same direction as the baseline regression. The coefficient of the first-order interaction between TMT and DOC of internationalization is -0.0542, significant at the 5% confidence level, while the coefficient of the second-order interaction is 0.0685, significant at the 10% confidence level, with the same direction as the baseline regression. This implies that the U-shaped influence of internationalization on enterprise performance for manufacturing enterprises becomes more significant, confirming H5 and H6 of this study. It can be inferred that overseas experience of TMT has a significant positive moderating effect on the U-shaped influence of DOB as well as DOC of internationalization on enterprise performance.

Explanation for the results: In the early stages, TMT's prolonged overseas experiences may lead to a lack of understanding of China's market conditions, affecting decision-making. However, as DOI deepens, TMT’s accumulated overseas experience becomes an advantage. They utilize their expertise, networks, and understanding of global markets to make better investment decisions and navigate complex international environments. Their exposure to diverse practices fosters innovation, helping the enterprise develop competitive advantages and adapt to market changes, ultimately improving performance in later stages of internationalization.

4.2.3 Moderating Effect of R&D Intensity(R&D)

Table 4.2.3.1 Moderating Effects of R&D on DOB of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0271***	0.0279***	0.0271***
	(0.0023)	(0.0031)	(0.0023)
LEV	-0.2464***	0.0712***	-0.2469***
	(0.0083)	(0.0108)	(0.0083)
GROWTH	0.0030***	0.0042***	0.0030***
	(0.0003)	(0.0007)	(0.0003)
INDEP	-0.0000	-0.0003	-0.0000
	(0.0003)	(0.0003)	(0.0003)
DUAL	0.0015	0.0095***	0.0015
	(0.0026)	(0.0034)	(0.0026)
BOARD	0.0139	0.0081	0.0142
	(0.0088)	(0.0114)	(0.0088)
TOP1	0.0010***	0.0008***	0.0010***
	(0.0002)	(0.0002)	(0.0002)
NCOS	-0.0015***	-0.0008***	-0.0011***
	(0.0005)	(0.0002)	(0.0004)
$NCOS^2$	0.0002**	0.0003***	0.0003*
	(0.0001)	(0.0001)	(0.0002)
R&D	-0.2728***	-0.1770***	-0.1911***
	(0.0178)	(0.0342)	(0.0438)
R&D×NCOS		-0.0726***	-0.0941**
		(0.0199)	(0.0413)
$R\&D\times NCOS^2$			0.0159***
			(0.0061)
Constant	-0.5058***	-0.5969***	-0.5079***
	(0.0567)	(0.0751)	(0.0568)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	6,159	6,159	6,159
R-squared	0.6049	0.6089	0.6054

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

Table 4.2.3.2 Moderating Effects of R&D on DOC of Internationalization

Variable	(1) ROA	(2) ROA	(3) ROA
SIZE	0.0288***	0.0289***	0.0289***
	(0.0025)	(0.0025)	(0.0025)
LEV	-0.2506***	-0.2516***	-0.2516***
	(0.0089)	(0.0089)	(0.0089)
GROWTH	0.0029***	0.0029***	0.0029***
	(0.0003)	(0.0003)	(0.0003)
INDEP	0.0000	0.0000	0.0000
	(0.0003)	(0.0003)	(0.0003)
DUAL	-0.0003	-0.0004	-0.0004
	(0.0028)	(0.0028)	(0.0028)
BOARD	0.0177*	0.0181*	0.0181*
	(0.0097)	(0.0097)	(0.0097)
TOP1	0.0010***	0.0010***	0.0010***
	(0.0002)	(0.0002)	(0.0002)
FSTS	-0.0776***	-0.0807***	-0.0781***
	(0.0169)	(0.0169)	(0.0207)
$FSTS^2$	0.0479***	0.0465***	0.0444**
	(0.0167)	(0.0167)	(0.0194)
R&D	-0.2658***	-0.3407***	-0.3316***
	(0.0190)	(0.0459)	(0.0622)
R&D×FSTS		-0.0337***	-0.0272**
		(0.0105)	(0.0125)
$R\&D\times FSTS^2$			0.0585***
			(0.0201)
Constant	-0.5414***	-0.5409***	-0.5423***
	(0.0608)	(0.0608)	(0.0611)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Firm FE	YES	YES	YES
N	6159	6159	6159
R-squared	0.6066	0.6068	0.6055

Note: Standard errors are reported in parentheses; *, **, *** denote significance levels at 10%, 5%, and 1%, respectively.

As shown in Tables 4.2.3.1 and 4.2.3.2, the coefficient of the first-order interaction term between R&D intensity and DOB of internationalization in manufacturing enterprises is -0.0941, significant at the 5% confidence level, with the coefficient of the second-order interaction term being 0.0159, significant at the 1% confidence level, and the direction consistent with the baseline regression. The coefficient of the first-order interaction term between R&D intensity and DOC of internationalization in manufacturing enterprises is 0.0272, significant at the 5% confidence level, with the coefficient of the second-order interaction term being 0.0585, significant at the 1% confidence level, and the direction consistent with the baseline regression. This implies that the U-shaped curve of internationalization and enterprise performance becomes more significant, validating H7 and H8 of this study. Moreover, it suggests that R&D intensity in manufacturing enterprises has a significant positive moderating effect on the influence of DOB as well as DOC of internationalization on enterprise performance. Therefore, enterprises should strengthen their R&D investment to enhance their competitiveness.

Explanation for the results: In the early stages of internationalization, increased R&D intensity can initially lower performance due to resource diversion, unfamiliarity with new markets, and the delayed realization of R&D benefits. Enterprises face challenges like suboptimal product offerings, inefficient operations, and high risks. However, as internationalization progresses, performance improves due to better market understanding, innovation, economies of scale, and strategic partnerships. These factors help tailor products to local demands, drive

competitiveness, and enhance profitability, leading to long-term performance gains as the enterprise matures in its global expansion.

4.2.4 Summary of Hypotheses Verification

The first two parts of this chapter have confirmed the validity of all hypotheses in this study through data analysis. Now, a summary is provided as shown in Table 4.2.4.

Table 4.2.4 Summary of Hypotheses Verification

No.	Hypothesis	Verification
H1	DOB has a U-shaped influence on the enterprise performance.	Accepted
H2	DOC has a U-shaped influence on the enterprise performance.	Accepted
H3a	When the formal institutional distance increases, the influence of DOB will be negatively affected.	Accepted
H3b	When the informal institutional distance increases, the influence of DOB will be negatively affected.	Rejected
H4a	When the formal institutional distance increases, the influence of DOC will be negatively affected.	Accepted
H4b	When the informal institutional distance increases, the influence of DOC will be negatively affected.	Rejected
H5	When the overseas experience of TMT increases, the influence of DOB on enterprise performance will be positively affected.	Accepted
H6	When the overseas experience of TMT increases, the influence of DOC on enterprise performance will be positively affected.	Accepted
H7	When R&D intensity increases, the influence of DOB on enterprise performance will be positively affected.	Accepted
H8	When R&D intensity increases, the influence of DOC on enterprise performance will be positively affected.	Accepted

4.3 Suggestions Based on the Findings

Based on the research findings from sections 4.1 and 4.2, the following related suggestions are provided.

1. Finding: When DOI increases, enterprise performance will first decline and then rise, that is, DOI has a U-shaped influence on the enterprise performance.

Related suggestions:

1) Enterprises are encouraged to carefully assess the optimal degree of internationalization based on their specific circumstances. This involves balancing the benefits of international expansion with the potential short-term performance decline.

2) Consider the timing of international expansion initiatives. It may be beneficial to delay rapid expansion until the enterprise is better prepared to manage potential performance fluctuations associated with increased internationalization.

3) Implement robust risk management practices to mitigate potential negative impacts during the initial phase of internationalization. This includes thorough market research, financial planning, and establishing contingency measures.

4) Enterprises are supposed to remain adaptable and flexible in their internationalization strategies, allowing for adjustments as needed to optimize performance over time.

5) Regularly monitor the performance metrics and adjust strategies accordingly. This ensures that the enterprise remains responsive to changes in market conditions and effectively leverages the benefits of internationalization while minimizing associated risks.

6) Engage in knowledge sharing and collaboration with other enterprises or industry experts who have experience navigating similar challenges associated with international expansion. This can provide valuable insights and strategies for optimizing performance.

2. Finding: When the formal institutional distance between home and host countries increases, the influence of DOI on enterprise performance will be negatively affected.

Related suggestions:

1) Enterprises are more recommended to invest in understanding and adapting to the formal institutional differences between their home and host countries. This may involve customizing business practices, policies, and strategies to align with the regulatory and legal frameworks of the host country.

2) Conduct a thorough risk assessment to identify potential challenges and barriers arising from increased formal institutional distance. Develop contingency plans and mitigation strategies to address these challenges effectively.

3) Form strategic partnerships or alliances with local entities in the host country. Collaborating with local businesses or organizations can provide valuable insights, resources, and support in navigating institutional differences and mitigating their negative impact on performance.

4) Continuously monitor changes in formal institutional distance and their impact on enterprise performance. Stay agile and adaptable, adjusting strategies and operations as needed to mitigate negative effects and capitalize on emerging opportunities.

5) Engage in advocacy and lobbying efforts to influence regulatory and institutional environments in the host country. Participating in industry associations or coalitions can amplify the enterprise's voice and promote favorable regulatory changes that facilitate business operations.

6) Develop cultural competence among employees and leadership to effectively navigate institutional differences and build productive relationships with stakeholders in the host country. Cultural sensitivity and understanding can help mitigate misunderstandings and conflicts that may arise due to institutional disparities.

3. Finding: When the overseas experience of TMT increases, the influence of DOI on enterprise performance will be positively affected.

Related suggestions:

1) Leverage the overseas experience of TMT to strategically guide internationalization efforts. Draw upon their insights, networks, and cultural competence to navigate foreign markets effectively and capitalize on global opportunities.

2) Invest in ongoing leadership development programs to further enhance the overseas experience of TMT. Provide training and exposure to diverse international business environments, languages, and cultural nuances to better equip them for leading global expansion initiatives.

3) Encourage the integration of diverse perspectives and experiences from TMT in strategic decision-making processes. Utilize their collective knowledge to assess risks, identify growth opportunities, and formulate effective internationalization strategies that optimize enterprise performance.

4) Foster open communication channels within TMT to facilitate the exchange of ideas and experiences across different cultural backgrounds. Promote a culture of mutual respect, collaboration, and inclusivity to harness the benefits of diversity in driving international business success.

5) Facilitate mentorship programs and knowledge-sharing initiatives within the organization to facilitate the transfer of overseas experience from senior leaders to junior staff members. Encourage cross-functional collaboration and learning opportunities to cultivate a talent pipeline with international expertise.

6) Embrace a culture of continuous learning and adaptation to stay abreast of evolving global trends, market dynamics, and regulatory changes. Encourage TMT to actively seek out new experiences, insights, and best practices to enhance their effectiveness in driving internationalization efforts.

4. Finding: When R&D intensity increases, the influence of DOI on enterprise performance will be positively affected.

Related suggestions:

1) Allocate resources towards R&D activities that align with the internationalization goals of the enterprise. Focus on developing innovative products, technologies, and processes that cater to global markets and enhance competitiveness.

2) Conduct comprehensive market research to identify emerging trends, customer preferences, and competitive landscapes in target international markets. Use insights from market research to inform R&D priorities and tailor product development efforts to meet international demand.

3) Collaborate with research institutions, universities, and industry partners across borders to access diverse expertise, talent, and resources. Establish joint R&D projects or partnerships to leverage complementary strengths and accelerate innovation in international markets.

4) Implement robust intellectual property (IP) protection strategies to safeguard R&D investments and innovations in international markets. Secure patents, trademarks, and copyrights to prevent unauthorized use or imitation by competitors.

5) Adopt agile product development methodologies to streamline R&D processes and accelerate time-to-market for new products or innovations. Embrace iterative testing, prototyping, and feedback loops to rapidly iterate and refine products based on market feedback.

6) Invest in recruiting, training, and retaining top R&D talent with expertise in international markets and technologies. Create a supportive and collaborative work environment that encourages creativity, experimentation, and knowledge sharing among R&D teams.

7) Establish key performance indicators (KPIs) to track the effectiveness and impact of R&D investments on enterprise performance. Regularly assess R&D outcomes, such as product innovation, market penetration, and revenue growth, to inform future investment decisions.

The findings and related suggestions can be summarized as table 4.3.

Table 4.3 Summary of Research Findings and Suggestions

No.	Description of the Finding	Suggestions
Finding 1	DOI has a U-shaped influence on the enterprise performance.	1) Optimal Expansion Strategy 2) Strategic Timing 3) Risk Management 4) Adaptation and Flexibility 5) Continuous Monitoring 6) Knowledge Sharing and Collaboration
Finding 2	When the formal institutional distance increases, the influence of DOI will be negatively affected.	1) Adaptation to Institutional Differences 2) Comprehensive Risk Assessment 3) Strategic Partnering and Alliances 4) Continuous Monitoring and Adaptation 5) Advocacy and Lobbying Efforts 6) Invest in Cultural Competence
Finding 3	When the overseas experience of TMT increases, the influence of DOI on enterprise performance will be positively affected.	1) Utilize Overseas Expertise 2) Global Leadership Development 3) Strategic Decision Making 4) Cross-Cultural Communication 5) Mentorship and Knowledge Sharing 6) Continuous Learning and Adaptation
Finding 4	When R&D intensity increases, the influence of DOI on enterprise performance will be positively affected.	1) Invest Strategically in R&D 2) Global Market Research 3) Foster Cross-Border Collaboration 4) Enhance Intellectual Property Protection 5) Agile Product Development Processes 6) Talent Development and Retention 7)Monitor and Measure R&D Performance

Chapter 5

Conclusion and Recommendations

This chapter synthesizes the findings from the analysis presented. It outlines the primary conclusion derived from the empirical study with corresponding discussion, evaluates the moderating effects of institutional distance, overseas experience of the Top Management Team(TMT), and R&D intensity, and offers actionable recommendations for both practitioners and policymakers. This chapter also discusses directions for future research.

Content:

5.1 Discussion

This section provides a more detailed discussion of the data analysis results presented in Chapter 4. The discussion will delve into the underlying reasons for the findings, comparing and contrasting them with existing literature to obtain further support.

5.1.1 Influence of Enterprise Internationalization on Performance

The results of Hypothesis 1 and Hypothesis 2 demonstrate that when DOB of internationalization is narrow, an increase in DOB of internationalization is detrimental to the improvement of operational performance for manufacturing

enterprises. However, when DOB of internationalization exceeds a certain critical value, expanding DOB of internationalization promotes the enhancement of operational performance. The same scenario occurs when DOC is relatively shallow and exceeds a certain critical value. Overall, enterprise internationalization has a U-shaped influence on performance.

Given that Chinese manufacturing enterprises' internationalization efforts are relatively nascent, domestic enterprises often find themselves at a disadvantage due to their limited experience in overseas investments and international business management(Ding, 2011). In the early stages of internationalization, enterprises must channel considerable resources into foundational activities. These activities include conducting comprehensive market research to understand the nuances of foreign markets, navigating complex and often unfamiliar regulatory environments, establishing relationships with key local stakeholders, and setting up overseas supply chains and sales networks. As Location Advantage Theory illustrates, enterprises must allocate substantial resources to critical activities such as conducting comprehensive market research, coordinating complex relationships, and establishing overseas supply chains and sales networks. These preliminary costs, though essential for laying the groundwork for future international operations, can impose significant financial strain on enterprises(Wei & Lin, 2021). This strain can negatively impact operational performance, as resources are diverted from other vital areas, leading to inefficiencies and a temporary decline in overall performance metrics(Shi et al., 2018).

As the internationalization process advances, however, enterprises begin to acclimate to the nuances of operating in foreign markets. They gradually develop the

necessary competencies and establish robust international business management systems. Explained by Internationalization Theory and Internalization Theory, the initial investments made in the early stages of internationalization start to pay off as enterprises become more adept at navigating the complexities of global operations by reducing transaction cost(Weisfelder, 2001; Dunning, 2012; Buckley & Casson, 2016), thus, transactional enterprises are the best way to actualize the goal. With time, the firms not only recover the costs incurred but also begin to see a positive return on their investments(Williamson, 2000). This transition reflects the U-shaped influence of DOI on enterprise performance, where an initial decline in performance is eventually followed by a marked improvement as the firm matures in its internationalization efforts.

Some previous studies hold a completely opposite view, believing that in the early stage of international expansion, enterprises usually enter the market environment similar to the culture and system of their home country, so that they can quickly obtain the benefits brought by economies of scale; in the subsequent overseas expansion process, the diversified environment and complicated organization will inevitably lead to the sharp rise of management costs and supervision costs, and eventually exceed the benefits brought by internationalization(Han, 2010; Daniels & Bracker, 1989; García-García et al., 2017). Unfortunately, these researches do not fully consider the initial investment and basic costs of internationalization. With the emergence of internationalization costs, especially in the initial stage of adaptation, the internationalization costs are at a high level due to its own knowledge, experience and competitiveness. Later, with the improvement of enterprise internationalization

experience, internationalization cost gradually decreases(Ge et al., 2020; Zhang & Chen, 2017).

This U-shaped pattern underscores the importance of persistence and strategic investment during the early phases of internationalization(Kim et al., 2015). While the initial stages may be fraught with challenges and financial pressures, the long-term benefits of a well-executed internationalization strategy can significantly enhance an enterprise's competitive position and overall performance in the global market.

5.1.2 Moderating Effect of Institutional Distance

The results of this study underscore the critical role that formal institutional distance plays in shaping the success of international operations for manufacturing enterprises(Limin et al., 2016). According to Location Advantage Theory, location advantage refers to the unique conditions conducive to internationalization of an investment country, such as those generated by factor endowment based on natural resources, geographical location and market size, and those generated by social factors such as legal system and economic policy(Dunning, 2012). Countries with greater formal institutional distance—defined by differences in legal systems, regulatory frameworks, and enforcement mechanisms—encounter more substantial barriers to international cooperation. These barriers complicate cross-border transactions and increase the risk and cost of compliance(Jiang & Jiang, 2012), making it more challenging for enterprises to operate effectively in foreign markets. The heightened difficulty associated with navigating these complex and often unfamiliar formal institutions can reduce the likelihood of successful international

investments(Manolova et al., 2002), thereby exerting a negative impact on the early stages of internationalization.

In contrast, the study found that informal institutional distance, which encompasses differences in cultural norms, social practices, and other informal aspects, does not significantly influence the U-shaped influence of DOI on enterprise performance. One possible explanation for this is that informal institutional differences may be less rigid and more adaptable compared to formal institutions(Morosini et al., 1998). This flexibility allows multinational corporations to adjust their strategies and operations to better align with local cultural nuances and social practices, thereby mitigating potential challenges.

Moreover, informal institutions may facilitate rather than hinder the internationalization process, as they often enable businesses to build trust and establish relationships more effectively in foreign markets(Robinson, 1984). The adaptability of informal institutions can ease the integration of multinational corporations into new environments, allowing them to operate more smoothly despite cultural differences. For example, an enterprise entering a new market may find that while it needs to comply with strict formal regulations, it can more easily adapt to informal cultural practices by leveraging its global experience and local partnerships.

Regarding formal institutional distance, it is indeed consistent with the findings of previous scholars. Scholars generally believe that the institutional defects of the host country will increase the risk of investors' international investment and thus affect the performance, so the host country with institutional defects is often not the first choice for international investment(Pan & Jin, 2015). Different from the research

results, previous scholars believed that non-institutional distance such as cultural distance would also have a negative impact on international performance. For example, the difference of equality awareness had a significant impact on cross-border mergers and acquisitions and equity transaction flows(Cheng & Seeger, 2012). But in fact, cultural diversity can often provide more business opportunities.

The distinction between formal and informal institutional distances also highlights why the impact of formal institutional distance is often more pronounced. Formal institutions directly affect key aspects of international business, such as legal compliance, market entry, and regulatory adherence(Kostova & Zaheer, 1999), all of which are crucial for the successful execution of international strategies. A greater formal institutional distance increases the complexity and cost of these processes(Gaur et al., 2014), posing significant challenges that can undermine the performance of international ventures. On the other hand, the less stringent nature of informal institutions may pose fewer constraints, allowing firms to navigate these differences more effectively without severely compromising their operations.

Therefore, the absence of a significant effect from informal institutional distance on the U-shaped influence suggests that informal institutional factors do not constitute substantial barriers to the internationalization efforts of manufacturing enterprises. Instead, the primary challenges arise from formal institutional differences, which necessitate a more cautious and strategic approach to international expansion(Rosenzweig & Nohria, 1994). Understanding and addressing these formal institutional barriers is crucial for manufacturing enterprises seeking to enhance their

international performance and successfully navigate the complexities of global markets.

5.1.3 Moderating Effect of Overseas Experience of Top Management Team

In the initial stages of internationalization, the extended overseas experiences of the TMT may lead to a period of unfamiliarity with China’s fundamental national conditions and market environments. During this phase, TMT members might struggle with an inadequate understanding of the local context and the specific challenges faced by the enterprise(Zhang, 2016). This lack of familiarity can hinder the effective application of their international experiences, potentially resulting in suboptimal decision-making and performance outcomes. However, as the DOI progresses and deepens, the TMT's overseas experiences accumulate, and the benefits of such experiences begin to materialize(Wu, 2022). Over time, TMT members become adept at leveraging the skills and expertise they have gained from international exposure. Their accumulated knowledge enables them to make more informed investment decisions and effectively navigate the complexities of international markets.

In the later stages of internationalization, TMT members who have developed significant overseas experience are better positioned to utilize their comprehensive understanding of global markets, regulatory frameworks, and cultural nuances(Wu et al., 2016). This enhanced knowledge base allows for more strategic and nuanced decision-making, facilitating the enterprise’s ability to manage and capitalize on international business opportunities. Moreover, the extensive networks and relationships that TMT members cultivate through their international experiences can

offer valuable insights and opportunities for expansion and growth(Dong & Song, 2017). These connections provide access to critical market information, strategic partnerships, and potential business ventures, further bolstering the enterprise's international performance. Additionally, exposure to diverse business practices and perspectives gained from international experiences fosters innovation and creativity within the organization(Sahaym, 2013; Kalasin, 2014). This cultural and operational diversity contributes to the development of competitive advantages, enabling the enterprise to adapt more effectively to evolving market conditions and emerging trends.

Compared with previous studies, the results of this study are generally consistent about overseas experinece of TMT. The cumulative effect of TMT's international experiences leads to a gradual improvement in the enterprise's performance as the DOI advances. The initial challenges and unfamiliarity give way to enhanced capabilities and strategic acumen, underscoring the positive impact of TMT's overseas experiences on the enterprise's international success.

5.1.4 Moderating Effect of R&D Intensity

During the initial stages of internationalization, increased R&D intensity may lead to a temporary decline in performance due to several reasons. Initially, substantial resources are diverted towards R&D activities, which may temporarily reduce funds available for other critical operational areas such as marketing, production, or distribution(Deng, 2013). This redistribution of resources can lead to a short-term decline in performance metrics. Additionally, as the enterprise enters new international markets, it faces a steep learning curve characterized by unfamiliarity

with local consumer preferences, market dynamics, regulatory frameworks, and cultural nuances(Cazavan-Jeny & Jeanjean, 2006). This lack of market knowledge and experience may result in suboptimal product offerings, inefficient operations, and lower profitability initially. Moreover, the benefits of R&D investment often take time to materialize(Oswald et al., 2022). Research projects may require extensive time for development, testing, and market adoption before generating tangible returns. Finally, international expansion entails inherent risks and uncertainties such as currency fluctuations, political instability, regulatory changes, and market competition(Xie & Tang, 2011). The uncertainty surrounding new international markets can exacerbate the challenges associated with R&D intensity, leading to a temporary decline in performance as enterprises navigate these complexities.

Fortunately, as the enterprise progresses through the internationalization process, several factors contribute to the eventual improvement in performance: Firstly, with time, the enterprise gains valuable insights into international markets, consumer preferences, and competitive landscapes. This enhanced market understanding enables more effective tailoring of products and services to meet local demands, resulting in improved customer satisfaction and market penetration(Zhang, 2022). Secondly, continued R&D intensity fosters innovation and product development, enabling the enterprise to introduce new and improved offerings that better meet evolving customer needs(Zhang, 2016). Innovations in product design, technology, or processes can drive differentiation, enhance competitiveness, and stimulate revenue growth(Zhou et al., 2024). Thirdly, as the enterprise expands its international operations, it can achieve economies of scale in production, distribution, and

R&D(Han, 2023). Increased market presence allows for the spread of fixed costs over a larger revenue base, leading to improved cost efficiency and profitability. Last but not least, collaborations with local partners, suppliers, or research institutions in international markets can facilitate knowledge sharing, access to new technologies(Hai, 2012), and entry into previously untapped market segments. Strategic partnerships can accelerate innovation cycles, reduce market entry barriers, and enhance overall performance.

Compared with previous studies, the results of this study are generally consistent about R&D intensity: While increased R&D intensity during the initial stages of internationalization may temporarily lower performance, the long-term benefits of market adaptation, innovation, economies of scale, and strategic partnerships contribute to the eventual improvement in performance as the enterprise matures in its international expansion efforts.

5.2 Conclusion

After reviewing and summarizing the relevant literature, this study proposes the 10 hypotheses. Employing quantitative methodology , the study obtained panel data of 1,089 Chinese manufacturing enterprises listed from 2005 to 2021. The analysis was conducts using Fixed Effect Model via STATA to empirically study the data. Additionally, the study excludes the years affected by 2008 financial crisis and the COVID-19 pandemic to ensure the reliability. In the end this study draws the following conclusion:

DOI has a U-shaped influence on the enterprise performance of China's manufacturing enterprises. When formal institutional distance increases, the influence will be negatively affected; when the overseas experience of TMT increases, the influence will be positively affected; when R&D intensity increases, the influence will be positively affected. However, the informal institutional distance does not have a moderating effect on the influence.

5.3 Recommendations

Building on the findings presented, this section provides comprehensive recommendations for the internationalization development of Chinese manufacturing enterprises. By taking full advantage of the U-shaped influence of internationalization on enterprise performance and the moderating effects of institutional distance, overseas experience of TMT, and R&D intensity, the proposed recommendations aim to: (1) Enable enterprises to optimize their internationalization efforts and enhance their competitive performance in the global market. (2) Assist the government to formulate relevant policies that are more conducive to the international development of manufacturing enterprises. Finally, the study highlights several areas for future research.

Policy recommendations for government:

1. Targeted Financial and Strategic Support During Early Internationalization: The Chinese government should offer specialized support to manufacturing enterprises, particularly in the critical early stages of internationalization, where they often face the greatest challenges due to the U-shaped influence

on performance. This could involve establishing a dedicated “SME Internationalization Support Fund” that provides financial incentives, such as low-interest loans and export subsidies, specifically for small and medium-sized manufacturing enterprises (SMEs) expanding abroad. In addition to financial support, the program could offer comprehensive assistance with market entry strategies, such as “Export Mentorship Programs” where experienced enterprises mentor new entrants. These initiatives could help enterprises mitigate risks and reduce the costs associated with entering foreign markets, thereby accelerating their global expansion.

2. Improving Bilateral and Multilateral Trade Agreements to Ease Institutional Barriers: To counteract the negative effects of institutional distance on enterprise performance, the government should actively pursue the enhancement of bilateral and multilateral trade agreements, with a particular focus on aligning regulatory standards and streamlining legal procedures relevant to the manufacturing sector. The establishment of “China-Partner Country Industrial Cooperation Committees” could facilitate ongoing dialogue and cooperation with key trading partners to harmonize standards and reduce non-tariff barriers. Additionally, simplifying customs procedures and offering “Fast-Track Certification Programs” for Chinese enterprises that comply with international standards can make it easier for them to enter and operate in overseas markets.

3. Promoting Global Experience for Top Management Teams (TMTs): The government should implement programs that expose the TMTs of Chinese manufacturing enterprises to global business environments. This could include expanding the “Global Executive Exchange Program,” where TMTs participate in short-term assignments with foreign enterprises or multinationals, and enhancing “International Business Leadership Scholarships” for executive education at top global business schools. Furthermore, establishing partnerships with foreign trade associations and industry leaders can facilitate direct learning opportunities and collaboration, ensuring that Chinese enterprises are led by globally-savvy management teams capable of navigating international markets effectively.
4. Enhancing R&D Incentives to Foster Innovation in Manufacturing: Recognizing the critical role of R&D intensity in successful internationalization, the government should significantly bolster funding and incentives for research and development within the manufacturing sector, particularly in high-tech fields. This could be achieved by expanding the scope and funding of the “Made in China 2025” initiative, with a focus on cutting-edge technologies such as artificial intelligence and advanced robotics. Additionally, offering “Innovation Grants” for SMEs collaborating with universities and research institutions could stimulate breakthrough innovations. Expanding tax credits for R&D investments, particularly in sectors identified as strategic for China’s long-term economic growth, would further incentivize private-sector participation in innovation-driven initiatives.

Strategic recommendations for enterprises:

1. Timing and Extent of Internationalization: Enterprises should strategically plan the timing and scale of their internationalization efforts, considering the U-shaped influence on performance. For example, a Chinese electronics manufacturer could begin by exporting to ASEAN countries like Vietnam or Thailand, where market entry barriers are relatively low and cultural similarities exist. After establishing a strong presence in these markets, the company could progressively expand to more distant and complex markets such as the United States or Germany. By gradually increasing the Degree of Breadth (DOB) and Degree of Commitment (DOC) in foreign markets, the enterprise can leverage its initial experiences to mitigate risks and optimize long-term performance.
2. Managing Institutional Distance: Enterprises should conduct comprehensive analyses of institutional environments in target markets and devise strategies to manage institutional distance effectively. This could involve establishing joint ventures with local companies, engaging local regulatory consultants, or customizing products to meet local standards. For instance, a Chinese automotive manufacturer planning to enter the Indian market might collaborate with an Indian partner that has deep insights into local consumer preferences and regulatory requirements. Additionally, the company could set up a local advisory board comprising industry experts who understand the nuances of doing business in India, thus minimizing institutional friction and improving the chances of successful market entry.

3. Recruiting Internationally Experienced TMTs: To enhance their international expansion, Chinese manufacturing enterprises should prioritize the recruitment and development of top management teams (TMTs) with substantial international experience. This involves identifying and hiring executives who have proven track records in the target markets, such as a Chief Marketing Officer with extensive experience in Latin America for a company entering that region. These executives bring invaluable insights into local market dynamics, regulatory environments, and consumer preferences, enabling the enterprise to navigate complex international landscapes more effectively. Additionally, investing in cross-cultural training for existing managers and implementing mentorship programs with experienced international executives can further bolster the team's capability to handle global operations. By leveraging such expertise, enterprises can significantly improve their strategic decision-making and market entry success.
4. Investing in R&D for Global Competitiveness: To strengthen the positive influence of internationalization on performance, Chinese manufacturing enterprises should strategically invest in R&D that aligns with global market demands and technological advancements. This involves focusing R&D efforts on innovations tailored to specific regional needs and leveraging local expertise through partnerships with international research institutions. For example, a Chinese robotics company could establish an R&D center in a technology hub like Silicon Valley to develop advanced automation technologies that meet the latest global standards. Additionally, investing in

customer-centric design, such as creating products with features suited to European energy regulations, can help differentiate the company in competitive global markets. By continually benchmarking against international competitors and fostering a culture of innovation, enterprises can enhance their global competitiveness and achieve sustainable growth.

Recommendations for Future Research

1. Conduct longitudinal studies to track the long-term performance of enterprises as they internationalize, providing deeper insights into the evolution of the U-shaped relationship. Longitudinal studies can offer a detailed view of how the effects of internationalization on enterprise performance unfold over time. By following the same firms over an extended period, researchers can better capture the nuances of the U-shaped relationship, understanding the phases of decline and subsequent improvement in performance. This approach can also help identify the specific factors and strategies that contribute to the turnaround in performance, providing valuable insights for both academia and industry.
2. Explore the impact of internationalization on different sectors within manufacturing to identify sector-specific strategies and challenges. The manufacturing industry encompasses a wide range of sectors, each with its unique characteristics and challenges. A sector-specific analysis can uncover how different manufacturing sectors respond to internationalization, highlighting best practices and tailored strategies. For example, the strategies that work for high-tech manufacturing firms may differ significantly from

those applicable to traditional manufacturing sectors. Understanding these differences can help enterprises in various sectors to adopt more effective internationalization strategies.

3. Expand the geographic scope to include comparative studies between Chinese enterprises and those from other emerging markets, enhancing the generalizability of the findings. While this study focuses on Chinese manufacturing enterprises, internationalization is a global phenomenon that affects firms from various emerging markets. Comparative studies involving enterprises from other emerging economies can provide a broader perspective on the factors influencing internationalization and performance. Such studies can reveal common patterns and unique differences, contributing to a more comprehensive understanding of internationalization in diverse contexts. Additionally, insights from comparative studies can help policymakers and business leaders develop more effective support mechanisms for enterprises venturing into international markets.
4. Investigate other potential moderating variables such as cultural distance, technological capability, and market conditions to provide a more comprehensive understanding of the factors influencing internationalization performance. The influence of internationalization on enterprise performance is multifaceted, and several additional factors could play a moderating role. For instance, cultural distance between the home country and host countries can impact communication, management practices, and overall integration of international operations. Similarly, an enterprise's technological capability

can affect its ability to innovate and compete in international markets. Market conditions, including competition intensity and customer preferences, can also influence performance outcomes. By exploring these and other moderating variables, future research can offer a richer and more nuanced understanding of the dynamics of internationalization, helping enterprises to better navigate the complexities of global markets.

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