An Analysis of the Influence of Enterprise Internationalization on Performance: A Case of China's Listed Manufacturing Enterprises

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Abstract

This study aimed to examine the influence of internationalization on enterprise performance concerning Chinese-listed manufacturing enterprises and to investigate how institutional distance moderates the influence by introducing a scientifically measured framework. First, panel data of 1089 Chinese manufacturing enterprises listed from 2005 to 2021 were obtained. Then, this study subdivided the degree of internationalization (DOI) into the degree of breadth (DOB) and degree of commitment (DOC) as independent variables while using revenue on assets (ROA) as the dependent variable. After that, a fixed effect model was conducted to analyze the data.

The results found that for DOB, NCOS had a coefficient of –0.0035, and with the squared NCOS, the coefficient was –0.0053, while for the squared term was 0.0002; for DOC, the coefficient for FSTS was –0.0370, with the squared FSTS, the coefficient was –0.0703, while the squared term coefficient was 0.0372. The findings revealed that internationalization had a U-shaped influence on performance. This suggests that enterprises may face challenges during the initial stages of internationalization, leading to a decline in performance; however, as internationalization deepens, enterprises gradually adapt to foreign markets and optimize resource allocation, resulting in performance improvement. Formal institutional distance negatively moderates the U-shaped influence, while informal institutional distance does not exhibit a moderating effect. The research findings serve as a valuable resource for governments in formulating effective policies and for enterprises adjusting strategies to achieve better internationalization performance.

Introduction

The rapid globalization of markets and the increasing competition among manufacturing enterprises have made internationalization a critical strategy for growth and survival. (Liao et al., 2023). In 2015, the "Made in China 2025" multiple Chinese government departments jointly formulated a policy to accelerate the innovation and development of the manufacturing industry, improve quality and efficiency, and transform China from a big manufacturer to a strong manufacturer. According to the statistics of the Ministry of Commerce of China, from the industrial distribution of domestic investment subjects, the 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. The implementation of the Belt and Road Initiative and the proposed "Made in China 2025", has pointed out the direction for the transformation of China's manufacturing industry, which is showing new characteristics and transforming towards the direction of servitization, internationalization, and technological leapfrog. (Zhao & Wang, 2017). Realize enterprise upgrading under open conditions through international operation can effectively integrate international resources, help Chinese manufacturing enterprises improve their R&D, innovation, and management ability, and help enterprises improve their performance and enhance their international competitiveness. (Chen et al., 2013). However, the complexity brought by the competitive environment has led to difficulties in internationalization. (Ma, 2023).

The vast differences in laws and regulations, social culture, consumption patterns, and other aspects between hand 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 significantly increased the complexity of enterprise business environment. (Yang et al., 2020). The enterprise's internal control system may be "unable to cope with these changes," or even more severe control loopholes and defects will appear. Therefore, internationalization not only enables enterprises to win projects and opportunities that may achieve higher returns but also to undertake higher risks, which increases the uncertainty of the business environment, thus pushing up the level of risk-taking for enterprises. An increase in

internationalization does not necessarily imply an improvement in performance levels. (Lee & Cogin, 2022).

Although some enterprises have successfully achieved sustainable development through internationalization, such as Huawei, Geely Automobile, and Wanxiang Group, many enterprises have suffered heavy losses. Take SAIC as an example. Its acquisition of Ssangyong Motor did not bring the 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 rights and accepted huge losses.

Despite the growing body of literature on enterprise internationalization, there remains a gap in understanding how different degrees of internationalization. (Han, 2010)—such as breadth and commitment—influence the performance of Chinese manufacturing enterprises. Additionally, the role of institutional distance, particularly the measurement of formal and informal institutional distances, has not been fully explored (Cunha et al., 2023). This study aimed to fill these gaps by providing empirical evidence on the influence of internationalization on performance and examining how formal institutional distance moderates this influence. The insights gained from this study could guide policymakers in creating supportive environments for internationalization and help enterprises devise strategies that enhance their international competitiveness.

This study redefined the indicators of the degree of internationalization (DOI) into two dimensions: Degree of Breadth (DOB) and Degree of Commitment (DOC). The respective influences of these dimensions on return on assets (ROA) are rigorously analyzed. Additionally, institutional distance is quantified using data from the Global Competitiveness Report 2022 to explore its moderating effect. The study concluded with a discussion, conclusion, and suggestions based on the findings. Consequently, the research provides a series of suggestions on internationalization with a reference value for Chinese manufacturing enterprises to improve systematic cognition and is committed to improving the performance of multinational enterprises and actualizing internationalization management strategy. The research can also provide a theoretical basis and reference for the government to formulate relevant policies and has important practical application value for enhancing international competitiveness.

Objectives

1. To examine the influence of internationalization on the performance of China's listed manufacturing enterprises.

2. To investigate how institutional distance moderates the influence of internationalization on performance.

Literature Review

Internationalization Theory

Scholars' research on enterprise internationalization mainly focused 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. Monopoly Advantage Theory believes that the incomplete market encourages enterprises to make overseas investments and gain profits. According to the Product Life Cycle Theory, a product in the market goes through a complete cycle of a product innovation period, a developing period, a maturity period, a 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 levels, market demand, and residents' income levels. 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. Location Advantage Theory believes that when an enterprise can profit from market incompleteness, that is, when it has geographical advantages including production capacity, market position, and operation, it will make foreign direct investment. 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. 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 foreign direct investment for developing countries. 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 Influence of Enterprise Internationalization on Performance

Part 1 Positive Influence of Internationalization

Grant (1987) selected 304 manufacturing enterprises among the top 500 British enterprises of Time magazine, and the dynamic regression results showed that international management has a significant positive impact on ROE and the growth rate of sales (Grant, 1987). Errunza and Senbet (1981) used a set of indicators–FATA, FETE, and FRTR, to represent the degree of internationalization. They found that internationalization can bring excess profits to enterprises (Errunza & Senbet, 1981). Tallman and Li (1996) and Bausch and Krist(2007) also believe that the degree of internationalization is positively correlated with enterprise performance (Tallman & Li, 1996; Bausch & Krist, 2007). 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). By analyzing the internationalization process of China's listed service enterprises, Yang (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).

Part 2 Negative Influence of Internationalization

Some scholars have suggested the exact opposite. FETE was used to measure the degree of internationalization of the Return Rate of Shareholders to represent the enterprise performance. Brewer concluded that the two had negative influences. (Brewer, 1981). FRTR was used to represent the degree of internationalization and concluded that it had a negative linear influence on market returns (Bühner, 1987). 93 insurance companies in 15 countries were empirically analyzed with 1984–1992 data. They found that the operating costs in total revenue increased rapidly with expanding the geographical scope of business. (Katrishen & Scordis, 1998). 329 export enterprises were selected from listed manufacturing companies in Shenzhen and Shanghai based on the data from 2004. The empirical research results showed that the degree of internationalization was significantly negatively correlated with the net interest rate of sales and the net interest rate of total assets of enterprises (Wang & Hu, 2006). Research on format

diversification was launched to conclude that format diversification negatively affects performance, and the two negatively interact. (Shi et al., 2018).

Part 3 Nonlinear Influence of Internationalization

In recent years, nonlinear conclusions have become mainstream. A first attempt at analyzing the effect of the speed of internationalization on long-term performance was provided using a panel-data sample of Spanish-listed firms (1986–2010) and found that there was an inverted U-shaped relationship between the speed of internationalization and long-term performance(García-García et al., 2017). Also, researchers found that when firms conduct internationalization in a 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). The manufacturing industry of China's listed companies was taken 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(Wang et al., 2016). Research on exporting Brazilian firms about the multinational-performance (M-P) relationship was launched and the results point to a horizontal S-shape pattern that conforms to the theoretical assumptions of the three-stage internationalization process (Cunha et al., 2023). 88 Indonesian listed firms and 989 Chinese firms were used to investigate the interrelationship between the performance and internationalization of manufacturing firms. They found that the firm's overseas expansion speed had an N-shaped influence on the firm's performance in Indonesia and Chinese firms(Huang & Marciano, 2020). 2175 listed companies were analyzed in Taiwan and China. They found an N-shaped influence of the extent of internationalization on performance with high Tobin's Q (Wei & Lin, 2021).

Moderating Effect of Institutional Distance

Different countries have different national systems. 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 can internalize technologies and knowledge of different host countries (Li & Hsieh, 2009), and then pass the learned knowledge back to their home countries and subsidiaries in other countries, thus achieving better overall performance (Wang & Zhang,

2023). If the institutional distance in the foreign market is very large, the transfer of subsidiaries between countries or strategic resources will become a relatively difficult task, so economies of scale and economies of scope cannot 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 (Liu et al., 2024). 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. The lack of necessary external legitimacy will lead to a lower performance level for 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.

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 discuss the influence of DOB on enterprise performance and DOC separately. Specifically, the study will examine the moderating effect of institutional distance on the influence of DOB on performance and DOC on performance. Based on the major literature examined, a conceptual framework is developed in Figure 1:
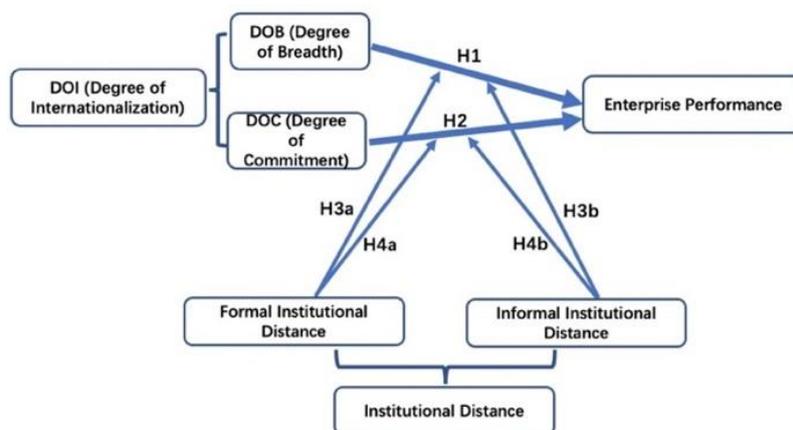

Figure 1 Conceptual Framework

The hypotheses are accordingly proposed:

H1: DOB has a U-shaped influence on enterprise performance; H2: DOC has a U-shaped influence on enterprise performance; H3a: When formal institutional distance increases, the influence of DOB is negatively affected; H3b: When informal institutional distance increases, the influence of DOB will be negatively affected; H4a: When formal institutional distance increases, the influence of DOC will be negatively affected; H4b: When informal institutional distance increases, the influence of DOC will be negatively affected.

Research Methodology

Research Design

To achieve the objectives of this research, the quantitative research method is regarded as the most appropriate method. 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 are usually busy with work. It is thus very unlikely that a conclusion with high credibility can be formed by subjective investigation through questionnaire surveys or interviews, and a 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 a comprehensive analysis of a large number of complete and detailed data. And Fixed Effect Model is conducted to empirically study the data.

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 the 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, not the least, the following two 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 give authority and reliability to the CSMAR database. (2) 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.

Selection Criteria for Sample Enterprises

1. Industry Representation: Ensuring that the selected enterprises span various sectors within the manufacturing industry.

2. Market Capitalization: Considering enterprises with varying market capitalizations.

3. Geographic Representation: Including enterprises from different regions or countries.

4. Listing Status: Focusing on publicly listed enterprises.

5. Financial Stability: Selecting enterprises with stable financial performance and a history of profitability.

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

Variable description

Part 1 Independent Variables and Dependent Variable

This study adopts NCOS (number of countries with overseas subsidiaries) to measure DOB (degree of the breath of the degree of internationalization) and FSTS (foreign sales to total sales) to measure DOC (degree of commitment to the degree of internationalization), and ROA (return on asset) is used to measure enterprise performance.

Part 2 Moderating Variable

This study divides the institutional distance between home and host countries into regulative distance (RD) and normative distance (ND), representing formal institutional distance and informal institutional distance.

Part 3 Control Variables

Furthermore, the study considers the control variables shown in Table 1.

Table 1 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.

Model Development

To validate the hypotheses H1 and H2, this study uses the models listed in Part 1 and Part 2. To validate the hypotheses H3a, H3b, H4a, and H4b, which relate to the role of the moderation of institutional distance, this study uses the model listed in Part 3.

Part 1 Model of Degree of Breadth and Enterprise Performance

$$ROA_{i,t}=\beta 0 +\beta 1 \times DOB_{i,t-1}+ \beta 2 \times DOB2_{i,t-1}+Z_{i,t-1} \times \acute{o} + \phi_i + \phi_t + \xi_{i,t}$$

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

Part 2 Model of Degree of Commitment and Enterprise Performance

$$ROA_{i,t}=\beta 0 +\beta 1 \times DOC_{i,t-1}+ \beta 2 \times DOC2_{i,t-1}+Z_{i,t-1} \times \acute{o} + \phi_i + \phi_t + \xi_{i,t}$$

Part 3 Model of Moderating Effect of Institutional Distance

$$ROA_{i,t}=\partial+ \beta 1 \times DOI_{i,t-1}.+ \beta 2 \times RD_{i,t-1}$$

1. The moderating effect model of the influence of DOB

$$ROA_{i,t}=\beta 0 +\beta 1 \times DOB_{i,t-1}+ \beta 2 \times DOB2_{i,t-1}+ \beta 3 \times RD_{i,t-1}+ \beta 4 \times DOB \times RD_{i,t-1}+\beta 5 \times DOB2 \times RD_{i,t-1}+Z_{,t-1}. \times \acute{o}+ \phi_i + \phi_t + \xi_{i,t}$$

$$ROA_{i,t}=\beta 0+\beta 1 \times DOB_{i,t-1}+ \beta 2 \times DOB2_{i,t-1}+ \beta 3 \times ND_{i,t-1}+ \beta 4 \times DOB \times ND_{i,t-1}+\beta 5 \times DOB2 \times ND_{i,t-1}+Z_{,t-1} \times \acute{o}+ \phi_i + \phi_t + \xi_{i,}$$

2. The moderating effect model of the influence of DOC

ROAi,t=β0 +β1 ×DOBi,t–1+ β2×DOC2i,t–1+ β3×RDi,t–1+ β4×DOC×RDi, t–1+β5×DOC2×RDi, t–1+Z,t–1.×ó+ øi + øt + ^{ξ}i,t

ROAi,t=β0+β1×DOCi,t–1+ β2×DOC2i,t–1+ β3×NDi,t–1+ β4×DOC×NDi, t–1+β5×DOC2×NDi,t–1+Z,t–1×ó+ øi + øt + ^{ξ}i,t

Data Analysis

The data analysis performed on the models of Parts 1, 2, and 3 are listed in the following:

1. Constructing a panel dataset for each Chinese-listed manufacturing enterprise.

2. Developing panel data regression models.

3. Use the software STATA to analyze the data.

4. Assessing the significance and magnitude of the coefficients for the interaction terms to determine the moderating effect of institutional distance.

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

Research Results

Collinearity Test

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

Table 2 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	

Regression Results Analysis

This section undertakes the regression analysis of the hypotheses, as shown in Table 3, for the models listed in Parts 1, 2, and 3 in the methodological sections.

From the results in Table 3, the coefficients in column (1) indicate that NCOS has a coefficient of –0.0035 and is significant at the 5% level, suggesting an inverse relationship between NCOS and ROA. In other words, there is an inverse relationship between DOB and performance. With the introduction of the squared term of NCOS, as per the results in column (2), the coefficient for NCOS is –0.0058, and the coefficient for the squared term is 0.0002, both significant at the 5% confidence level, indicating that as DOB increases, the initial influence is negative. Then, it turns into a positive influence. It can be observed that NCOS distribution has a positive U–shaped influence on ROA.

Table 3 Regression Results for DOI of Internationalization

Variable	(1)	(2)	(3)	(4)
	ROA	ROA	ROA	ROA
NCOS	–0.0035**	–0.0058**		
	(0.0015)	(0.0025)		
NCOS2		0.0002**		
		(0.0001)		
FSTS			–0.0370**	–0.0703***
			(0.0148)	(0.0264)
FSTS2				0.0372***
				(0.0169)
SIZE	0.0373***	0.0244***	0.0334***	0.0335***
	(0.0071)	(0.0078)	(0.0066)	(0.0065)
LEV	–0.2688***	–0.2688***	–0.2613***	–0.2606***
	(0.0296)	(0.0297)	(0.0291)	(0.0294)
GROWTH	0.0039***	0.0032***	0.0037***	0.0037***
	(0.0007)	(0.0007)	(0.0006)	(0.0006)
INDEP	0.0001	0.0002	0.0000	0.0000
	(0.0003)	(0.0003)	(0.0004)	(0.0004)
DUAL	0.0001	0.0018	–0.0020	–0.0022
	(0.0039)	(0.0044)	(0.0038)	(0.0038)
BOARD	0.0160	0.0201	0.0130	0.0127
	(0.0121)	(0.0128)	(0.0128)	(0.0127)
TOP1	0.0011***	0.0011***	0.0011***	0.0011***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Constant	–0.7530***	–0.5895***	–0.6505***	–0.6488***
	(0.1633)	(0.1810)	(0.1514)	(0.1526)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	5931	5931	5,724	5,724
R–squared	0.5829	0.5028	0.5824	0.5828

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

Moreover, it passes the significance level test at 1%, confirming that an increase in DOB is detrimental to performance improvement when DOB is narrow. However, when the DOB exceeds a certain critical value, expanding the DOB promotes performance enhancement. Further rules were added by Lind et al. (2010) to confirm a U–shaped relationship: (1) the slopes must have opposite signs at the upper and lower bounds of the independent variable range, showing a trend of decreasing (or increasing) on one side of the interval and increasing (or decreasing) on the other side; and (2) the curve's inflection point must fall within the upper and lower bounds of the independent variable. (Lind & Mehlum, 2010). Therefore, leveraging the latest command, this study verifies the U–shaped influence of DOB on performance. Therefore, H1 is validated.

The results in column (3) indicate that the coefficient for FSTS is –0.0370, which is significant at the 5% level. This suggests an inverse relationship between FSTS and ROA. 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 increases, the influence of DOC on performance is negative, and then it turns into a positive correlation. It can be observed that FSTS has a positive U–shaped influence on ROA.

Moreover, it is significant at a 1% confidence level, confirming that when DOC is shallow, an increase in DOC is detrimental to improving performance. However, when DOC exceeds a certain critical value, an increase in DOC promotes performance enhancement. Therefore, H2 is validated.

Robustness Test

This study adopts the Two–Stage Least Squares (2SLS) instrumental variable regression to address potential endogeneity issues. Table 4 reports the estimation results and the relevant tests for the instruments' validity. The Kleibergen–Paap Wald rk F statistic is greater than the critical value of 16.38 of the Stock–Yogo test at the significance level of 10%, indicating that there is no weak instrumental variable problem and verifying the rationality of the selection of instrumental variables. After accounting for endogeneity, the U–shaped influence of DOI and enterprise performance remains robust.

Table 4 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	
	[16.38]		[16.38]	

Moderation Effect Test of Institutional Distance

Table 5 Moderating Effect of RD

Variable	(1)	(2)	(3)	(4)
	ROA	ROA	ROA	ROA
NCOS	–0.0052**	–0.0069*		
	(0.0024)	(0.0036)		
NCOS2	0.0001	0.0003**		
	(0.0002)	(0.0002)		
RD	–0.0082*	0.0090*		
	(0.0049)	(0.0054)		
RD×NCOS	0.0017***	0.0072*		
	(0.0006)	(0.0038)		
RD×NCOS2		–0.0005*		
		(0.0003)		
FSTS			–0.0681**	–0.0826**
			(0.0289)	(0.0358)
FSTS2			0.0482**	0.0666*
			(0.0231)	(0.0377)
RD			–0.0108	0.0016
			(0.0080)	(0.0062)
RD×FSTS			0.0110*	0.0133**
			(0.0061)	(0.0065)
RD×FSTS2				–0.0369*
				(0.0215)
Constant	–0.6102***	–0.6681***	–0.6375***	–0.6483***
	(0.0713)	(0.1612)	(0.1586)	(0.1529)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	5,529	5529	5724	5724
R–squared	0.4968	0.5597	0.5044	0.5831

Table 6 Moderating Effect of ND

Variable	(1) ROA	(2) ROA	(3) ROA	(4) ROA
NCOS	–0.0032	–0.0011		
	(0.0020)	(0.0021)		
NCOS2	–0.0001	0.0001**		
	(0.0001)	(0.0001)		
ND	0.0058	0.0074		
	(0.0059	(0.0087)		
ND×NCOS	–0.0053*	–0.0054		
	(0.0027)	(0.0072)		
ND×NCOS2		–0.0001		
		(0.0003)		
FSTS			–0.0635***	–0.0563**
			(0.0172)	(0.0265)
FSTS2			0.0494***	0.0427**
			(0.0174)	(0.0211)
ND			–0.0026	–0.0058
			(0.0053	(0.0095)
ND×FSTS			0.0230	–0.0227
			(0.0162)	(0.0255)
ND×FSTS2				0.0213
				(0.0256)
Constant	–0.4719***	–0.5209***	–0.6483***	–0.6504***
	(0.0564)	(0.1805)	(0.0605)	(0.1514)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	6,467	6467	5,724	5,724
R–squared	0.5597	0.5800	0.5835	0.5836

Tables 5 and 6 show that the first–order interaction terms between RD and DOB are positively significant. The coefficient of the second–order interaction term is negative and significant, and its direction is opposite to the baseline regression. The first–order interaction term between RD and DOC is positively significant for internationalization. The second–order interaction term is negatively significant, and its direction is opposite to the previous regression results. This means the formal institutional distance negatively moderates the U–shaped influence of DOB and DOC on performance, validating H3a and H4a. Similarly, it can be proven that H3b and H4b are not supported.

Discussion

Influence of Enterprise Internationalization on Performance

The results of H1 and H2 demonstrate that enterprise internationalization has a U-shaped influence on performance, consistent with what 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 can impose significant financial strain on enterprises. As Shi et al. (2018) have pointed out, the 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. However, as the internationalization process advances, enterprises begin to acclimate to the nuances of operating in foreign markets. Buckley and Casson (2016) explained how overseas enterprises gradually develop competencies and establish robust international business management systems.

Additionally, as enterprises become more skilled at navigating the complexities of global operations by reducing transaction costs, the initial investments made in the early stages of internationalization start to pay off. With time, the firms recover the costs incurred and begin to see a positive return on their investments. Researchers Zhang and Chen (2017) and Ge et al. (2021) have shown that internationalization costs are high initially, especially during the adaptation stage, because of knowledge, experience, and competition. However, the costs gradually decrease as an enterprise gains more internationalization experience.

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. According to Jiang and Jiang (2012), barriers created by institutional distance, such as differences in legal systems regulatory frameworks, and enforcement mechanisms, complicate cross-border transactions and increase the risk and cost of compliance, making it more challenging for enterprises to operate in foreign markets. Manolova et al. (2002) have found that the heightened difficulty of navigating these complex and often unfamiliar formal institutions can reduce the likelihood of successful international investments, thereby negatively impacting the early stages of internationalization. In contrast, the study found that informal institutional distance does not significantly influence the U-shaped influence. One possible explanation from Morosini et al. (1998) is that informal institutional

differences may be less rigid and more adaptable. This flexibility allows multinational corporations to adjust their strategies and operations to better align with local cultural nuances and social practices, mitigating potential challenges. The results are indeed consistent with the findings of previous scholars. Pan and Jin (2015) 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. Gaur et al. (2014) also proved that formal institutions directly affect critical aspects of international business, such as legal compliance, market entry, and regulatory adherence, which are crucial for successfully executing international strategies. Therefore, a greater formal institutional distance increases the complexity and cost of these processes, posing significant challenges that can undermine the performance of international ventures.

New Knowledge

Through the research results and conclusion, this study finds that the influence of internationalization on enterprise performance may be U-shaped as Figure 2 and Figure 3 show. When Chinese manufacturing enterprises expand overseas business, if they need to improve their performance, they need to bear the risk of declining performance in the early stage. How to control the advance of the critical value and the ability to bear the lowest performance should be the focus of the government and enterprises.
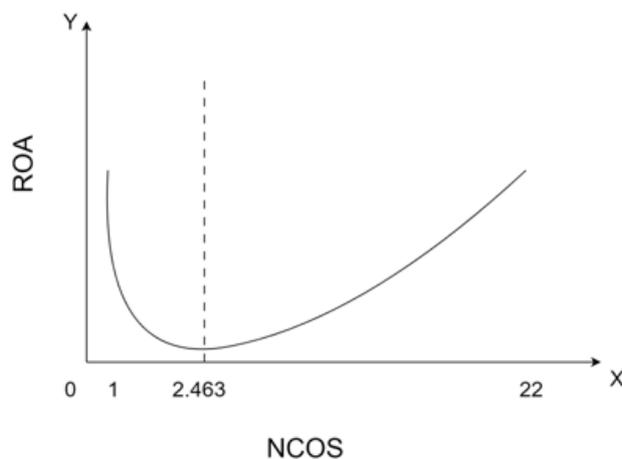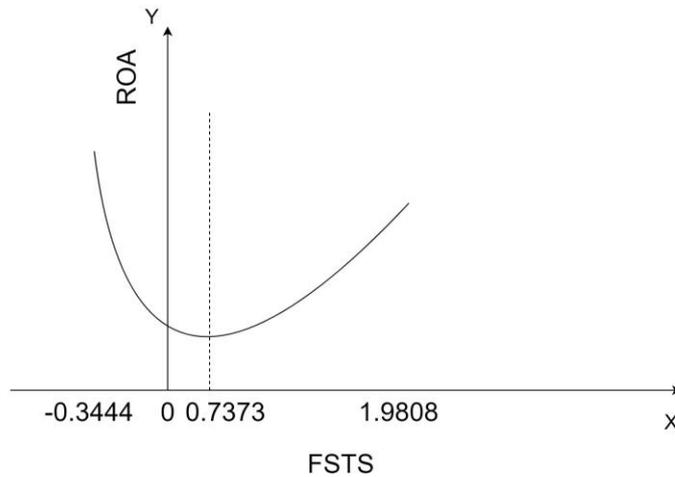

Figure 2 DOB-Performance Curve

Figure 3 DOC–Performance Curve

Conclusion

The study draws the following conclusions: (1) Internationalization has a U–shaped influence on performance. The critical value of DOB on performance is 2.463, and the critical value of DOC on performance is 0.7373. Before the critical value, the influence is negative, and after the critical value, the influence is positive. This U–shaped pattern underscores the importance of persistence and strategic investment during the early phases of internationalization. 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. (2) Formal institutional distance negatively moderates this U–shaped influence by intensifying the differences in market environments. The fact that informal institutional distance did not have a significant effect suggests that informal institutional factors must be getting in the way of manufacturing companies going global. Instead, the primary challenges arise from formal institutional differences, necessitating a more cautious and strategic approach to international expansion. Understanding and addressing these formal institutional barriers is crucial for manufacturing enterprises seeking to enhance their international performance and navigate the complexities of global markets.

Suggestions

Policy Suggestions for Government

The Chinese government should offer specialized support to manufacturing enterprises, particularly in the early stages of internationalization, where they often face more significant

challenges due to the U-shaped influence. 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 expanding abroad. Besides financial support, the program could offer comprehensive assistance with market entry strategies, such as "Export Mentorship Programs," where experienced enterprises mentor new entrants.

To counteract the adverse effects of institutional distance on enterprise performance, the government should actively pursue enhancing bilateral and multilateral trade agreements, focusing on aligning regulatory standards and streamlining legal procedures relevant to the manufacturing sector. Establishing "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 entering and operating in overseas markets easier.

Strategic Suggestions for Enterprises

Enterprises should strategically plan the timing of their internationalization efforts, considering the U-shaped influence. For example, a Chinese electronics manufacturer could begin by exporting to ASEAN countries like Vietnam or Thailand, where market entry barriers are relatively low. After establishing a solid presence in these markets, the company could expand to more distant and complex markets, such as the United States or Germany. By gradually increasing DOB and DOC in foreign markets, the enterprise can leverage its initial experiences to mitigate risks and optimize long-term performance.

Enterprises should comprehensively analyze 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 with 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.

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