Research Paper

Impact of Belt and Road Initiative and China-U.S. Trade Frictions on the Influence of the Chinese Corporate World on Internationalization Performances

Li-Wei Lin[1]. Shih-Yung Wei[2]

1 The School of International Business, Zhejiang Yuexiu University, No.428 Kuaiji Road, Yue Cheng District, Shaoxing312000, China
2. Business School of Yulin Normal University,China(Corresponding Author)

ABSTRACT
This research seeks to examine the impact of the degrees of internationalization of Chinese companies on their performances, in the context of two macro-level drivers: the Belt and Road Initiative and the China-U.S. trade frictions. The study samples non-financial listed companies in China in 2007-2019 and after data cleaning selects a total of 3,646 companies. The findings indicate that the influence of the degrees of internationalization of Chinese companies on their performances shows a positive U-shape correlation, and all the influence is positive. It is costly to establish an understanding of the international market in the beginning, but the benefits of internationalization far outweigh the costs. This is the reason why the effects become positive in the first phase. Once the degree of internationalization reaches a certain threshold, the positive impact on company performances will accelerate. The Belt and Road Initiative also lowers the acceleration threshold of company performance enhancements brought about by the degrees of internationalization. On the other hand, the China-U.S. trade frictions bump up the costs for Chinese companies. As a result, the positive and significant influence on highly internationalized companies becomes a near constant value.
KEYWORDS: Internationalization Performance, Belt and Road Initiative, China-U.S. trade frictions

I.   INTRODUCTION

"The degrees of internationalization" is a term first mentioned by Vernon (1966), who argued that internationalization is a continuous process. In other words, companies become gradually involved in internationalization along with product lifecycles. Internationalization is a gradual evolution in response to increasing requirements for outbound investments by companies. Annavarijula and Beldona (2000) conducted a literature review on internationalization and defined it within three contexts: (1) overseas operations; (2) ownership of overseas assets; (3) management styles, strategies, and structures leaning towards internationalization. These perspectives cover many descriptions and definitions of internationalization.

Can internationalization create profits for companies? This has been a key issue of debate for academics and concern for practitioners. In general, internationalization of a company refers to the degree of its operations outside the home country and the pursuit of profits from product portfolios and geographic diversifications via economies of scale and scope (Hitt et al., 1997). According to the internalization theory and the eclectic theory developed by Buckley (1976) based on the theories about ownership, locations, and internalized advantages for overseas investments, once companies become more international, they can generate profits via internationalization. Most studies indicated that internationalization does boost company profitability (e.g., Daniels and Bracker, 1989). However, some scholars posited that the benefit of internationalization to companies is limited. Some scholars even contended that the relation between internationalization and company performance is not significant. In sum, academic opinions are not conclusive.

Many studies examined the influence of internationalization on company performances, yet there are no definite conclusions. In fact, studies indicated that amid complex international relations, the effect of internationalization on company performances changes from a linear relation of positives/negatives to a high-ordered equation. Scholars supporting the U-shape theory pointed out that the costs of internationalization cannot be covered by the gains in the initial stage. Therefore, there are adverse effects on company

performances in the beginning, but as internationalization continues to progress, the economies of scale allow the gains to compensate for the costs of internationalization. In fact, the gains start to accelerate. However, scholars in favor of the reverse U-shape theory believed that once internationalization reaches a threshold, the cost of communication and coordination will be greatly increased due to overly diversified markets. As resources and capabilities cannot keep up with overseas expansions, over-internationalization has a negative influence on firm performance.

Scholars embracing the S-shape theory noted that the initial costs of internationalization to overcome hurdles cannot be recovered from the countries where operations are limited. Therefore, the initial effect is adverse. During the second stage where internationalization expands, resources, knowledge, and competences are all shared among subsidiaries. This creates synergies within the company, enhances bargaining power by leveraging its footprint in the global market, and allows for differential pricing and arbitrage among subsidies and extension of product lifecycles by selling to different countries. The profits created by advantages of international expansion during this stage more than offset the costs. Hence, the relation between degrees of internationalization and the performance of companies has a positive slope during the second stage. In the third stage, international businesses exceed the optimal point. At this juncture, they have established operations in the most favorable markets, but not yet in the less important markets where profits are lower. Once they have a footprint in more than the optimal number of markets, the complexity of global logistics will bump up the cost of coordination and management and erode profits from further expansions. Therefore, this will have adverse effects on company performances.

Given the conflicting viewpoints, studies on the relation between the degrees of internationalization and the performance of companies have come up with different results due to various factors. Some studies showed a positive correlation (Grant, 1987; Horta, 2016; Feng et al., 2019), others a negative correlation (Collins, 1990; Zhao & Ma, 2016), still others no significant correlation (Zeng et al., 2009; Chen et al., 2015; Christian et al., 2018). Some research papers observed a U-shape correlation curve (Ruigrok and Wagner, 2003; Wei et al., 2019), others a reverse U-shape curve (Hitt, Hoskisson, and Ireland, 1994; Juan et al., 2016; Raquel, 2017; Andres et al., 2018), still others an S-shape curve (Contractor et al., 2003; Hien et al., 2018; Majid & Preet,2018), and even W-shape curve (Zhou, 2018).

What is the impact of the degrees of internationalization on Chinese companies? The existing literature is all based on small studies. Simon et al. (2013) examined state-owned manufacturers in China for 2001-2007 and observed an S-shape relation. Zhou (2018) sampled data of 535 manufacturers in China in 2001-2014 and indicated a W-shape correlation with the performance of small companies and a U-shape correlation with the performance of large firms. In total, 767 listed companies in 2002-2014 were sampled from the CMNE database. The results suggested that the faster intra-regional internationalization is, the better are the company financials. However, the faster inter-regional internationalization is, the worse are the company financials. Kim et al. (2019) examined 767 listed manufacturers in China in 2002-2014 and noticed that the more apace is intra-regional internationalization, the better are the company financials. On the contrary, the more apace is inter-regional internationalization, the wors are the company financials.

This paper explores these issues from the Chinese macro-level perspectives and investigates the positive and negative changes (e.g., the Belt and Road Initiative and the China-U.S. trade frictions) to the influence of the degrees of internationalization on company performances in China. The purpose is to examine whether policies affect the influence of the degrees of internationalization on company performances. Many scholars have conducted similar studies. Genç (2016) indicated that small- and medium-size enterprises, with the assistance of the government and NGOs (non-government-organizations), can improve company performances with internationalization. Giuseppe & Alessandro (2019) sampled seven-year data of the supply chain of Italy's automobile industry. The results indicated that the change of export policies does alter the influence of the degrees of internationalization on the performance of companies. Moreover, the policy and economic effects also lead to changes in how the degrees of internationalization affect the performance of companies.

To multinational companies, firm-specific advantages are also one of the key factors that influence their operations and performances. Most studies posited that firm-specific advantages have positive effects on company performances (Morck and Yeung, 1991). Some scholars contended that owner advantages (e.g., R&D intensity, advertising intensity, and capital intensity) of companies help boost their performances (Jung, 1991). Firm-specific assets (FSAs) are considered the most important resource for companies (Dess, Gupta, Hennart, and Hitt, 1995). Peter (2019) emphasized the pivotal role of FSAs in the relation between internationalization and company performances in specific industries. Therefore, this paper includes firm-specific assets (FSAs) as a control variable in the research model.

This paper is structured as follows. Section 1 introduces relevant literature on internationalization and sets the tone for the research directions. Section 2 describes the research data and the research methodology. This paper defines eight research variables in aggregate, with a research period of 13 years. Panel data of a total

---

of 3,645 companies are sampled for the purpose of panel data analysis. Section 3 conducts an empirical analysis, by constructing three research models. Section 4 presents the conclusions. The results indicate the influence of the degrees of internationalization on the performance of Chinese companies comes in a reverse U-shape illustration. China-U.S. trade frictions cap the rise of the U-shape when it comes to the influence of degrees of internationalization on the performance of Chinese companies.

II.   RESEARCH DATA AND RESEARCH METHOD

This paper examines the degrees of internationalization on the performance of companies by sampling non-financial listed companies in China spanning 2007-2019 (2007 is the starting point, because Chinese state-owned enterprises began to adopt IFRS in that year). The data are sourced from annual reports of these listed companies and from the share prices published by the Shanghai Stock Exchange and the Shenzhen Stock Exchange. The main explanatory variable is the degree of internationalization. Company performances are based on Tobin's Q, a frequently used indicator by researchers for market performances. The control variables are divided into two groups, including frequently used variables such as firm size, debt ratio, and listing history. Firm-specific assets are added as moderating variables; i.e., R&D intensity, marketing intensity, and capital intensity. The calculation of the degrees of internationalization is based on the revenues by geography disclosed by annual reports. Companies not disclosing this information are tagged for missing data. Market capitalizations are required as a measurement of market performances. Companies that have been suspended for trading are also tagged for missing data. The extreme values (<1%) of individual variables are deleted. The companies analyzed for different years are shown in Table 1.

Table 1 Sample Distribution by Year

year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Obs.	1305	1401	1432	1803	2088	2302	2220	2304	2460	2738	3159	3279	3243	29734

The research period is 13 years. The research data are panel data. Given the different number of companies examined during the research years, the data are unbalanced.

2.1 Research Variables

As mentioned above, the research variables in this paper are classified into four types: degrees of internationalization as the explanatory variable; Tobin's Q as the explained variable; firm-specific assets as the moderating variables (i.e., R&D intensity, marketing intensity, and capital intensity); and control variables (i.e., firm size, debt ratio, and listing history). The variables are described as follows.

2.1.1   Independent variable

There are many indicators for the degrees of internationalization such as performance-based indicators (e.g., export sales as a percentage of total sales, ESTS; foreign profits as a percentage of total profits, FPTP)), structure-based indicators (e.g., foreign assets as a percentage of total assets, FATA), and attitude-based indicators (e.g., total number of years of top managers' international experience, TMIE). This paper explores the influence on performances by changing export sales as a percentage of total sales (ESTS) (Michel and Shaked (1986); Shaked (1986)) into overseas sales divided by domestic sales. The natural logarithm of this ratio is then used (by adding 1 respectively to avoid incalculability). The calculation is as follows.

$$DOI = LN \left(\frac{OS + 1}{IS + 1} \right) \qquad (1)$$

$$OS : export \ sales \ as \ a \ percentage$$

$$IS : import \ sales \ as \ a \ percentage$$

The data are sourced from the revenues by geography disclosed in annual reports published by listed companies. The revenue breakdown is translated into overseas sales and domestic sales, and the calculation is performed based on the above equation. The domestic sales and the degrees of internationalization of sampled companies for different years are summarized in Table 2. The trend for the degrees of internationalization is depicted in Figure 1.

According to Table 2 and Figure 1, the degrees of internationalization started to taper off in the wake of the global financial crisis. Overseas sales declined only in 2009 and continued to rise significantly throughout the period. Both domestic and overseas sales climbed up after China had become the world's factory. The announcement of the Belt and Road Initiative saw a significant uptick in the degrees of internationalization,

exceeding 10% in the second year. The degrees of internationalization went down slightly in 2018 due to China-U.S. trade frictions.

Table 2 Change in Degrees of Internationalization by Year

| year	export sales	import sales	Total	DOI
2007	1,091,578,280	7,454,081,621	8,545,659,901	-1.92
2008	1,337,291,860	9,784,390,559	11,121,682,419	-1.99
2009	953,113,069	10,934,860,631	11,887,973,700	-2.44
2010	1,491,303,776	16,098,612,016	17,589,915,792	-2.38
2011	1,864,091,696	20,779,143,179	22,643,234,875	-2.41
2012	1,997,621,767	25,843,535,088	27,841,156,855	-2.56
2013	2,124,904,564	20,496,420,209	22,621,324,773	-2.27
2014	2,488,641,664	23,600,763,872	26,089,405,536	-2.25
2015	2,899,616,676	26,227,008,448	29,126,625,123	-2.20
2016	3,227,292,302	28,327,876,957	31,555,169,259	-2.17
2017	3,972,036,185	30,547,368,678	34,519,404,863	-2.04
2018	5,046,270,871	39,325,837,777	44,372,108,648	-2.05
2019	5,320,654,592	40,836,528,964	46,157,183,556	-2.04
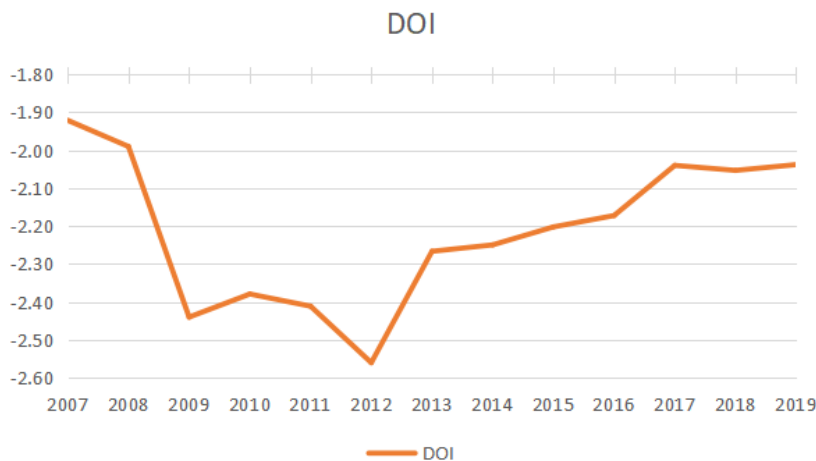
Figure 1 Trend of Degrees of Internationalization

2.1.2   Dummy variables

In addition to the influence of the degrees of internationalization on the performance of companies, this paper also analyzes the effects of the Belt and Road Initiative and the aftermath of the China-U.S. trade frictions. Two dummy variables are thus established to explore the impact of the Belt and Road Initiative and the implications of the China-U.S. trade frictions to companies.

$$D_1 = \begin{cases} 0 & \text{Before the Belt and Road Initiative 2007-2013} \\ 1 & \text{After the Belt and Road Initiative 2014-2019} \end{cases} \quad (2)$$

$$D_2 = \begin{cases} 0 & \text{Before the China} - \text{U.S. Trade Frictions} \quad \text{2007-2017} \\ 1 & \text{After the China} - \text{U.S. Trade Frictions} \quad \text{2018-2019} \end{cases} \quad (3)$$

2.1.3   Dependent variable

As companies seek to maximize shareholders' wealth, this paper refers to Tobin's Q, the most frequently used market-based performance indicator. Given the difficulty to access data concerning asset replacement costs and market values of debts, this paper uses Proxy Q proposed by Porta et al. (2002).

$$CFP(t)_i = Proxy \quad Q(t)_i = \frac{ME(t)_i + BD(t)_i}{BA(t)_i} \quad (4)$$

$ME(t)_i$: total market value of i compant of for t - period

$BD(t)_i$: total debt of i compant of for t - period

$BA(t)_i$: total asset of i compant of for t - period

<div align="right">

Sources: Shanghai Stock Exchange; Shenzhen Stock Exchange (for share price data)
Annual reports published by listed companies
Calculations by this paper

</div>

2.1.4 Control variables

The selection of control variables is typically dependent on company characteristics. This paper incorporates firm-specific assets as control variables. The term "firm-specific assets" was first brought up by Morck and Yeung (1991) in the examination of moderating effects on the relation between the degrees of internationalization and the performance of companies. Subsequently, many scholars chose different firm-specific assets in their studies. This paper collates the findings by different scholars and adopts three variables for firm-specific assets: R&D intensity, marketing intensity, and capital intensity (first developed by Jung, 1991).

$$RDI(t)_i = \frac{RD(t)_i}{S(t)_i} \quad (5)$$

$RD(t)_i$: R & D expenses of i compant of t - period

$S(t)_i$: Total sale of i compant of t - period

$$MI(t)_i = \frac{MK(t)_i}{S(t)_i} \quad (6)$$

$MK(t)_i$: marketing expenses of i compant of t - period

$S(t)_i$: Total sale of i compant of t - period

$$CI(t)_i = \ln\left(\frac{LA(t)_i}{LA(t-1)_i}\right) \quad (7)$$

$LA(t)_i$: illiquid assets of i compant of t - period

<div align="center">

Sources: Annual reports published by listed companies and Calculations by this paper

</div>

Firm size is selected as a variable given the consideration for the economies of scale. The examination of capital structure (Myers, 1977) is based on debt ratios. However, to bring the observations close to a normal distribution, this paper uses the natural logarithms of equity ratios. To accommodate the characteristics of securities laws in China, the length of stock public are also a control variable, calculated as follows.

$$SC = \ln (total\ asset) \quad (8)$$

$$ER(t)_i = \ln\left(\frac{BD(t)_i}{BE(t)_i}\right) \quad (9)$$

$BE(t)_i$: total equity of i compant of t - period

the length of stock public(AG)

$$AG(t)_i = \ln(DATA(t)_i - IPO_i) \quad (10)$$

$DATA(t)_i$: 12/31 of the t - year

IPO_i : stock public of the date of i company

<div align="center">

Sources: Annual reports published by listed companies and Calculations by this paper

</div>

2.2 Descriptive statistics

This paper contains a total of eight variables (excluding dummy variables) and samples 29,734 observations in aggregate. The descriptive statistics of individual variables are shown in Table 3.

Table 3 Descriptive Statistics of Research Variables

	CMP	DOI	RDI	MI	CI	SC	ER	AG
Obs.	29734	29734	29734	29734	29734	29734	29734	29734
Mean	2.59	-2.95	0.03	0.07	0.19	22.05	-0.33	7.76
Med.	1.96	-3.67	0.02	0.04	0.11	21.88	-0.29	8.07
Max.	19.90	4.62	0.60	0.60	3.97	28.64	7.55	9.27
Min.	0.01	-4.62	0.00	0.00	-3.73	17.88	-4.94	0.00
Std. D.	1.95	1.90	0.04	0.08	0.39	1.31	1.07	1.18
Sk	2.87	0.90	3.52	2.65	2.05	0.82	-0.05	-1.69
K	15.46	2.98	24.06	11.58	19.66	4.11	3.75	7.56

As outliers have been removed, there are no extreme values shown in the descriptive statistics (Table 3) or the histogram (Figure 2). All the variables are skewed to the right (SK>) except for equity ratio (-0.05) and listing history (-1.69), which are left skewed. All the variables are leptokurtic except for the degrees of internationalization (K=2.98<3).
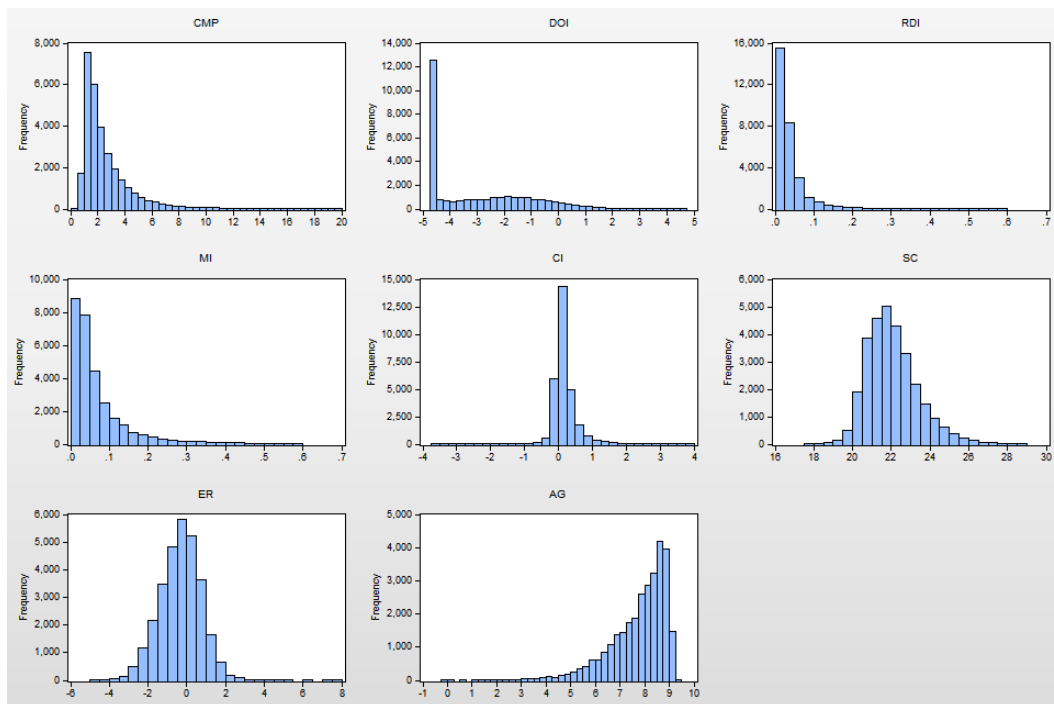

Figure 2 Histograms for Research Variables

2.3 Research Methodology

As previously mentioned, this paper samples a total of 29734 observations for the research period 2007-2019, and the data are unbalanced. Given the panel data sourced, panel data analysis should be a suitable approach. Panel data consist of cross-sectional data and time-series data, and so data volume tends to be larger than most datasets. We use dynamic analysis, because of the presence of time-series data. Most importantly, panel data are relatively immune to collinearity and estimates can be consistent, thus mitigating the endogeneity problem of explained variables. As mentioned, not all panel data are appropriate for panel data analysis.

This paper conducts pooled analysis to determine whether it is the case. We thus compare the weighted statistics and the unweighted statistics after pooled regression analysis. If the R^2 (R-squared) of the weighted statistics is larger than that of the unweighted statistics and the SSE (sum of squared errors) of the weighted statistics is smaller than that of the unweighted statistics, then the dataset is good for panel data analysis. This is followed with a Hausman test (Hausman, 1978) to determine whether the effects are fixed or random.

2.4 Research Modeling

      This paper builds three models that cover the whole research period, analyzes the Belt and Road Initiative, and examines the influence of the China-U.S. trade frictions. As mentioned in the literature review, many studies have identified a high-order relation between the degrees of internationalization and the performance of companies (such as U-shape, S-shape, and W-shape). Hence, this paper constructs high-power models for internationalization indicators. A two-power equation is also established to accommodate the threshold effects of firm sizes.

$$\text{Model i} \quad CFP = \beta_0 + \sum_{i=1}^{k} \beta_i DOI^i \tag{11}$$

$$+ \beta_{k+1} RDI + \beta_{k+2} MI + \beta_{k+3} CI + \beta_{k+4} SC + \beta_{k+5} SC^2 + \beta_{k+6} ER + \beta_{k+7} AG$$

$$\text{Model ii} \quad CFP = \beta_0 + \sum_{i=1}^{k} \beta_i DOI^i + \sum_{i=k+1}^{2k} \beta_i D_1 \cdot DOI^{i-k} \tag{12}$$

$$+ \beta_{2k+1} RDI + \beta_{2k+2} MI + \beta_{2k+3} CI + \beta_{2k+4} SC + \beta_{2k+5} SC^2 + \beta_{2k+6} ER + \beta_{2k+7} AG$$

$$\text{Model iii} \quad CFP = \beta_0 + \sum_{i=1}^{k} \beta_i DOI^i + \sum_{i=k+1}^{2k} \beta_i D_1 \cdot DOI^{i-k} + \sum_{i=2k+1}^{3k} \beta_i D_1 \cdot DOI^{i-2k} \tag{13}$$

$$+ \beta_{3k+1} RDI + \beta_{3k+2} MI + \beta_{2k+3} CI + \beta_{3k+4} SC + \beta_{3k+5} SC^2 + \beta_{3k+6} ER + \beta_{3k+7} AG$$

III. EMPIRICAL ANALYSIS

3.1 Correlation coefficient matrix analysis

      This paper incorporates a total of eight variables. It is ten variables in aggregate if the squared items of the research variables are included. The correlation coefficients are summarized in Table 4. According to the Table, the main explanatory variable (degrees of internationalization) and the moderating variables (i.e., R&D intensity, marketing intensity, and capital intensity) positively correlate with company performances. The control variables (i.e., firm size, equity ratio, and listing history) and the explained variable negatively correlate. There is also no high correlation between explanatory variables.

Table 4 Correlation Coefficient Matrix

	CMP	DOI	DOI^2	RDI	MI	CI	SC	SC^2	ER	AG
CMP	1	0.0012	0.0382	0.2398	0.1709	0.0763	-0.4558	-0.0189	-0.3560	-0.2747
DOI		1	0.6420	0.1205	-0.0952	0.0081	-0.0481	-0.0342	-0.0727	-0.1202
DOI^2			1	0.0053	-0.0577	0.0050	-0.0672	-0.0154	-0.0589	-0.0797
RDI				1	0.2288	0.1013	-0.1901	-0.0843	-0.3404	-0.2331
MI					1	0.0199	-0.1512	-0.0897	-0.2356	-0.0779
CI						1	0.0031	-0.0176	-0.0704	-0.1978
SC							1	0.4660	0.4668	0.3610
SC^2								1	0.1758	0.0542
ER									1	0.3813
AG										1

While collinearity is typically less of an issue for panel data, a robust test is necessary to check whether collinearity exists between variables. This paper conducts the cointegration test developed by Engle and Granger (1987). The test results (t-Statistic=-37.89; P≤0.001) indicate no cointegration. In other words, there is no collinearity among all the research variables.

3.2 Pooled Regression Analysis

The analysis suggests a high-order influence in the degrees of internationalization. A regression discontinuity analysis indicates insignificant statistical results with certain variables. Therefore, the research model is modified into the following.

Model I
$$CFP = \beta_0 + \beta_1 DOI + \beta_2 DOI'^2 + \beta_3 RDI + \beta_4 MI + \beta_5 CI + \beta_6 SC + \beta_7 SC'^2 + \beta_8 ER + \beta_9 AG \qquad (14)$$

Model II
$$CFP = \beta_0 + \beta_1 DOI + \beta_2 DOI'^2 + \beta_3 D_1 \cdot DOI + \beta_4 D_1 \cdot DOI'^2 + \beta_5 RDI + \beta_6 MI + \beta_7 CI + \beta_8 SC + \beta_9 SC'^2 + \beta_{10} ER + \beta_{11} AG \qquad (15)$$

Model III
$$CFP = \beta_0 + + \beta_1 DOI + \beta_2 DOI'^2 + \beta_3 D_1 \cdot DOI + \beta_4 D_1 \cdot DOI'^2 + \beta_5 D_2 \cdot DOI + \beta_6 D_2 \cdot DOI'^2 + \beta_7 RDI + \beta_8 MI + \beta_9 CI + \beta_{10} SC + \beta_{11} SC'^2 + \beta_{12} ER + \beta_{13} AG \qquad (16)$$

DOI' 、 SC' : the value of the decentralization, decentralization : $X' = X - \overline{X}$

Before performing a panel data analysis, it is first necessary to determine the suitability of the dataset. This paper conducts a pooled regression analysis for this performance, and the results are summarized in Table 5.

As shown in Table 5, the R^2 values of weighted statistics of 0.99, 0.87, and 0.95, are all higher than those of unweighted statistics of 0.28, 0.29, and 0.34, respectively, in the three models. At the same time, the SSE values of the weighted statistics of 73808, 70145, and 67059 are all lower than those of unweighted statistics of 80536, 79512, and 74812, respectively, in the three models. In conclusion, panel data analysis is appropriate for all the three research models.

Table 5 Pooled Regression Analysis

	MODEL	I	II	III
R^2	Weighted	0.99	0.87	0.95
	Unweighted	0.28	0.29	0.34
SSE	Weighted	73808	70145	67059
	Unweighted	80536	79512	74812

3.3 Panel Data Analysis

Panel data analysis examines two effects: fixed effects and random effects. A Hausman test is typically used for this examination. Table 6 shows the model's test results. As all the p values are smaller than 0.05, the research models are suitable for the fixed effect approach. The analysis of fixed effects on the three models is presented in Table 7.

Table 6. Hausman Test

	. Statistic	d.f.	Prob.
I	333.96	9	≤0.001
II	889.94	11	≤0.001
III	493.34	13	≤0.001

Without considering the policy effect of the Belt and Road Initiative or the implication of the China-U.S. trade frictions (Model 1), this paper observes a U-shape trend in the influence of the degrees of internationalization of Chinese companies. The trend plotted in Figure 3 shows a positive influence of the degrees of internationalization on the performance of companies. However, this positive effect starts to taper off at higher degrees of internationalization, with the inflection point at -1. When overseas sales account for 26.9%, the positive impact of the degrees of internationalization on the performance of companies begins to accelerate.

Table 7 Analysis of Fixed Effects

Variable	I	II	III
	Coefficient	t-Statistic	Significant level
C	18.52	18.52	18.52
	(95.81) ***	(95.86) ***	(95.87) ***
DOI	-0.06	-0.08	-0.08
	(-10.54) ***	-(8.60) ***	-(8.59) ***
DOI'^2	0.02	0.01	0.01
	(7.87) ***	(3.49) ***	(3.49) ***
D1*DOI		0.03	0.01
		(2.25) **	(0.44)
$D1*DOI'^2$		0.01	0.02
		(1.96) *	(3.59) ***

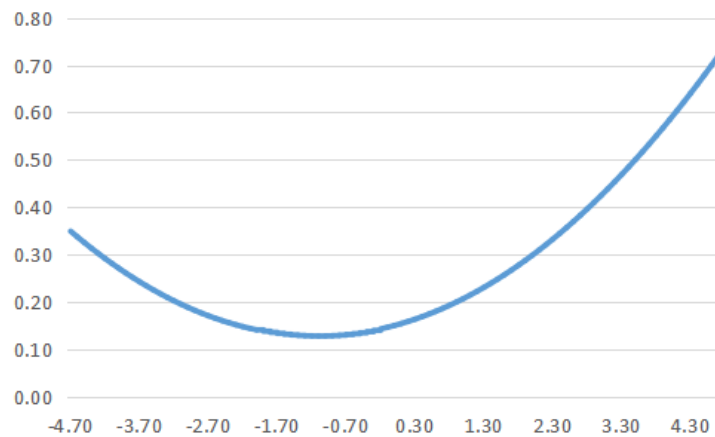|			
D2*DOI			0.05
			(3.46) ***
D2*DOI'²			-0.02
	(≤0.001) ***		-(4.05) ***
RDI	4.86	4.83	4.82
	(22.17) ***	(22.02) ***	(21.97) ***
MI	1.46	1.46	1.47
	(13.51) ***	(13.48) ***	(13.54) ***
CI	0.20	0.20	0.20
	(8.84) ***	(8.77) ***	(8.82) ***
SC	-0.74	-0.74	-0.74
	(-83.46) ***	(-83.47) ***	(-83.50) ***
SC²	0.16	0.16	0.16
	(49.24) ***	(49.32) ***	(49.36) ***
ER	-0.17	-0.17	-0.18
	(-17.57) ***	(-17.68) ***	(-17.73) ***
AG	-0.06	-0.06	-0.06
	(-7.15) ***	(-7.24) ***	(-7.20) ***
R^2	0.43	0.43	0.43
F-statistic	1073.82	982.27	904.87
significance level	***	***	***

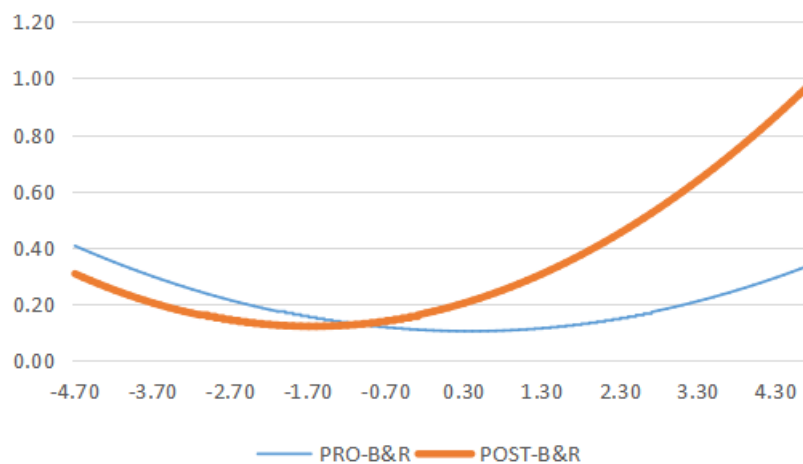**Figure 3** Trend of the Influence of Degrees of Internationalization on the Performance of Companies

Figure 4 Influence of the Policy of Belt and Road Initiative and the Degrees of Internationalization on the Performance of Companies

The next step is to examine how the policy of the Belt and Road Initiative affects the influence of degrees of internationalization on the performance of companies (Model II). This paper observes a U-shape pattern in terms of how the degrees of internationalization of Chinese companies affect their performances

(Figure 4). The degrees of internationalization still have a positive influence on the performance of companies after the implementation of the Belt and Road Initiative. However, such influence starts to accelerate at -1.6 (with overseas sales at 16.8%) under the Belt and Road Initiative.

This paper finally explores the effect of the China-U.S. trade frictions (Model III). The results show that under the Belt and Road Initiative, the degrees of internationalization still boost the performance of companies (in a U-shape). However, this U-shape sees a slowdown (almost a one-off) in the accelerator to company performances due to the China-U.S. trade frictions. The shape is plotted in Figure 5.
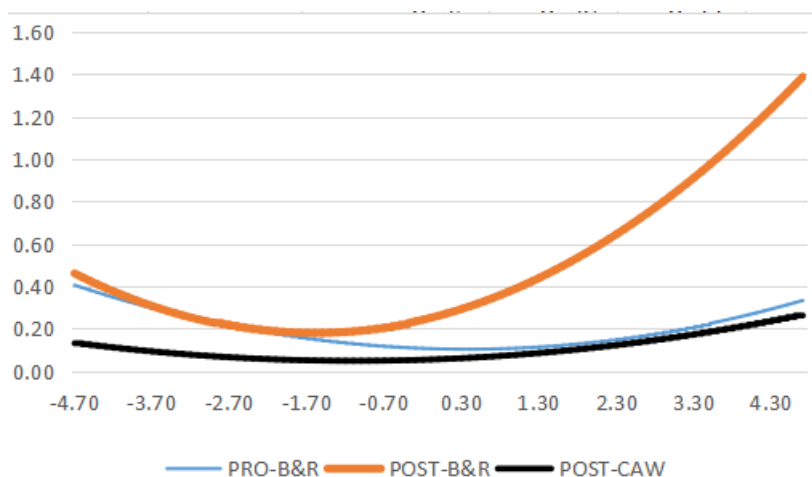

Figure 5 Impact of China-U.S. Trade Frictions on Influence of Degrees of Internationalization on Performance of Companies

All the moderating variables (i.e., R&D intensity (4.82), marketing intensity (1.47), and capital intensity (0.20)) play a positive and significant role in the influence of the degrees of internationalization to the performance of companies, according to the research findings of this paper. The influence of firm sizes comes in a U-shape form. In other words, economies of scale is reached. Equity ratios have a negative and significant impact (-0.18). The higher the firm debt is, the worse effect it has on company performance. The longer the listing history (-0.06) is, the more adverse influence it has on company performance.

IV. CONCLUSION

This paper conducts panel data analysis by sampling a total of 3,645 non-financial listed companies in China for 2007-2019 in order to explore the degrees of internationalization on the performance of companies. Regression discontinuity analysis is conducted on the impact of the policy of the Belt and Road Initiative and the implication of the China-U.S. trade frictions.

The study indicates a U-shape relationship in terms of the degrees of internationalization on the performance of companies. In general, the initial cost of internationalization outweighs the benefits for companies due to unfamiliarity with overseas environments, inadequate resources, capability still under development, and a lack of economies of scale. However, once the economies of scale kick in with higher degrees of internationalization, the benefits will outweigh the costs. At this juncture, the degrees of internationalization on the performance of companies turn positive. Moreover, the U-shape pattern indicates that Chinese companies benefit from better performances. While costs increase in the initial stage of internationalization to establish an understanding of the international market, the benefits of internationalization more than offset these huge costs. Even after the inflection point at a certain degree of internationalization, economies of scale speed up the improvement of company performances.

The Belt and Road Initiative lowers the threshold for economies of scale (from 27% to 17%) and enhances the positive influence of the degrees of internationalization on the performance of companies.

The China-U.S. trade frictions have extremely significant influence on the degrees of internationalization of Chinese companies. The impact of the degrees of internationalization changes from an accelerating U-shape pattern to a positive effect close to a parallel line. In fact, the major effect of the trade frictions is an increase in tariffs and subsequent company costs. This creates operational pressures on companies who trade with the U.S. and puts downward pressure on company performances as a result of the degrees of internationalization. If it were not for the assistance from the Belt and Road Initiative, the China-U.S. trade frictions could have had an impact so great that turns the direction from positive to negative. As the Belt and Road Initiative is a global policy, internationalization remains a significant booster to the performance of companies not trading with the U.S.

This paper has examined the influence of the degrees of globalization and internationalization, in order to explore how China-U.S. trade frictions change the impact on Chinese companies. Segmentation of internationalization by region will realize a change in costs and benefits. This will perhaps yield different outcomes from the theme of this paper.

REFERENCES

[1]. Andres Velez-Calle, Fernando Sanchez-Henriquez, Farok Contractor, (2018), "Internationalization and performance: the role of depth and breadth", Academia Revista Latinoamericana de Administración, 31(1), 91-104.
[2]. Annavarijula, Madan and Sam Beldona (2000), "Multinationality-Performance Relationship: A review and Reconceptualization," The International Journal of Organizational Analysis, 8 (1), pp. 48-67.
[3]. Buckley, Peter, J.and Casson, M.. (1976), The Future of the Multinational Enterprise,New York: Jolmes & Meier.
[4]. Chen, Y., Zhai, R., Wang, C. and Zhong, C.. (2015), "Home institutions, internationalization and firm performance: Evidence from listed Chinese firms", Management Decision, 53(1), 160-178.
[5]. Christian Schwens, Florian B. Zapkau, Michael Bierwerth, Rodrigo Isidor, Gary Knight, Rüdiger Kabst, (2018)," International Entrepreneurship: A Meta–Analysis on the Internationalization and Performance Relationship", Entrepreneurship Theory and Practice, 42(5), 734-768
[6]. Collins, J. M., (1990). "A market performance comparison of U.S. firms active in domestic developed and developing countries", Journal of International Business Studies 21 (2): 271-87.
[7]. Contractor, F.J., Kundu, S.K. and Hsu, C.C., (2003), "A three-stage theory of international expansion: The link between multinationality and performance in the service sector ", Journal of International Business Studies 34(1):5-18.
[8]. Daniels, J.D. and Bracker, J., (1989), "Profit performance: Do foreign operations make a difference?", Management International Review 29(1):46-56.
[9]. Delian Feng, Qun Chen, Malin Song& Lianbiao Cui, (2019)," Relationship Between the Degree of Internationalization and Performance in Manufacturing Enterprises of the Yangtze River Delta Region", Emerging Markets Finance and Trade, 55(7), 1455-1471
[10]. Dess, Gregory G., Anil Gupta, Jean Francois Hennart, and Charles W. L. Hill, (1995), "Conducting and Integrating Strategy Research at the International, Corporate, and Business Levels: Issues and Directions," Journal of Management, 21 (3), pp.357-393.
[11]. Genç, Ö. F., (2016), "The Role of NGO-SME Cooperation in Internationalization Process and Performance of SMEs." International Journal of Trade, Economics and Finance 7 (6): 224–228.
[12]. Giuseppe Giulio Calabrese, Alessandro Manello, (2019), "Firm internationalization and performance: Evidence for designing policies", Journal of Policy Modeling, (40)6, 1221-1242
[13]. Grant, R.M., (1987) "Multinationality and performance among british manufacturing companies", Journal of International Business Studies 18(3):79-89.
[14]. Hausman , J. A., (1978), "Specification Tests in Econometrics," *Econometrica*, 46, 1251-1271.
[15]. Hien Thi Ngoc Huynh, Phuong V. Nguyen andKhoa T. Tran, (2018)," Internationalization and Performance of Vietnamese Manufacturing Firms: Does Organizational Slack Matter?", Administrative Sciences, 8(4), 64; https://doi.org/10.3390/admsci8040064
[16]. Hitt, M. A., R. E. Hoskisson, and R. D. Ireland (1994), "A mid-range theory of the interactive effects of international and product diversification on innovation and performance," Journal of Management, 20(2), pp.297-326.
[17]. Hongxin (John) Zhao & Jieqiong (Jeccy) Ma, (2016), Founding Environment, Inward Internationalization, and Firm Performance: Evidence from Chinese Private Enterprises Journal of East-West Business, 2016, 22(4), 296-323
[18]. Isabel M. Horta, Magdalena Kapelko, Alfons Oude Lansink &Ana S. Camanho, (2016)," The impact of internationalization and diversification on construction industry performance", International Journal of Strategic Property Management, 2, 172-183
[19]. Juan Gabriel Bri, Oana Driha, Ana B.Ramón-Rodriguez, Maria JesusSuch-Devesac, (2016)," The inverted-U relationship between the degree of internationalization and the performance: The case of Spanish hotel chains", Tourism Management Perspectives, 17, 72-81
[20]. Jung, Y. (1991) "Multinationality and profitability", Journal of Business Research 23(2), 79-87.
[21]. Kim, H. , Wu, J. , Schuler, D. A. , & Hoskisson, R. E. . (2020). Chinese multinationals' fast internationalization: financial performance advantage in one region, disadvantage in another. Journal of International Business Studies, 51, 1076-1106
[22]. La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R.W. (2002)"Investor protection and corporate valuation", Journal of Finance. 57, 1147–1171.
[23]. Majid Abdi & Preet S. Aulakh, (2018), "Internationalization and performance: Degree, duration, and scale of operations", Journal of International Business Studies, 49, 832–857
[24]. Michel, A. and Shaked, I., (1986), "Multinational corporations vs. domestic corporations: Financial performance and characteristics", Journal of International Business Studies 18(3):89-100.
[25]. Morck, R. and B. Yeung, (1991), "Why do investors value multinationality?", Journal of Business, 64(2), pp.165-187.
[26]. Myers, S. C. and S. Turnbull, (1977), "Determinants of Corporate Borrowing," Journal of Financial Economics, 5, 147-175.
[27]. Peter Tashmana, Valentina Marano, Jessica Babinc, (2019)," Firm-specific assets and the internationalization–performance relationship in the U.S. movie studio industry", International Business Review, 28(4), 785-795
[28]. Raquel García-Garcí, Esteban García-Canal, Mauro F. Guillénc, (2017)," Rapid internationalization and long-term performance: The knowledge link", Journal of World Business, 52(1), 97-110
[29]. Robert F. Engle; C. W. J. Granger, (1987)," Co-Integration and Error Correction: Representation, Estimation, and Testing", Econometrica, 55(2), 251-276.
[30]. Rugman, A. M. and Verbeke, A., (2002), "Edith penrose's contribution to the resource-based view of strategic management", Strategic Management Journal, 23(8), pp. 769-780.
[31]. Shaked, Israel, (1986), "Are Multinational Corporations Safer?", Journal of International Business Studies 17 (1): 75-80
[32]. Shih-Yung, Wei; Li-Wei, Lin; Su-Mei, Gan, (2019)," The Influence of Internationalization Degree on the Performance of Industry-Specific Companies: A Case Study of Taiwan (2001-2017)", International Journal of Economics and Financial Issues, 9(4), 212-227
[33]. Simon Shufeng Xi,Insik Jeongb, Jon Jungbien Moonb, Chris Changwha Chungb Jaiho Chungb, (2013)," Internationalization and Performance of Firms in China: Moderating Effects of Governance Structure and the Degree of Centralized Control", Journal of International Management, 19(2), 118-137
[34]. Vernon, Raymond, (1966), "International Investment and International Trade in the Product Cycle," Quarterly Journal of Economics,

80, pp. 190-207.

[35]. Zeng, S. X., Xie, X. M., Tam, C. M. and Wan, T. W., (2009), "Relationships between business factors and performance in internationalization an empirical study in China", Management Decision, 47(2), pp. 308-329.

[36]. Zhou, C., (2018). Internationalization and performance: evidence from Chinese firms. Chinese Management Studies, 12(1), 19-34.