THE IMPACT OF CAPITAL EXPENDITURE AND RESEARCH AND DEVELOPMENT EXPENDITURE ON THE INTERNATIONALIZATION OF CHINESE FIRMS

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THE IMPACT OF CAPITAL EXPENDITURE AND RESEARCH AND DEVELOPMENT EXPENDITURE ON THE INTERNATIONALIZATION OF CHINESE FIRMS

by

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LIST OF ABBREVIATIONS

ICT	Information and Communications Technology
OECD	Organization for Economic Co-operation and Development
R&D	Research and Development
CAPEX	Capital Expenditures
FDI	Foreign Direct Investment
ASEAN	Association of Southeast Asian Nations
SMEs	Small and Medium-sized Enterprises

KESAN PERBELANJAAN MODAL DAN PERBELANJAAN PENYELIDIKAN DAN PEMBANGUNAN TERHADAP PENGANTARABANGSAAN FIRMA CHINA

ABSTRAK

Eksport negeri China mengalami pertumbuhan negatif buat kali pertamanya pada tahun 2015. Di samping itu, sumbangan eksport kepada Keluaran Dalam Negeri Kasar menurun sebanyak separuh dari 2006 hingga 2019. Walau bagaimanapun, terdapat kekurangan bukti empirikal dalam literatur mengenai kesan perbelanjaan modal dan perbelanjaan penyelidikan dan pembangunan (R&D) untuk pengantarabangsaan firma China, dan sama ada kesannya berubah di bawah kejutan COVID-19. Kajian ini menggunakan data panel 1,181 firma tersenarai di China bagi tahun 2012-2021. Kaedah ekonometrik iaitu kuasa dua terkecil biasa (OLS), kesan rawak, dan model regresi kesan tetap digunakan untuk membuat analisis empirikal. Kekukuhan analisis juga diuji menggunakan penganggar GMM. Hasil kajian menunjukkan bahawa perbelanjaan modal dan perbelanjaan pembangunan dan penyelidikan mempunyai hubungan yang positif dengan FSTS. Ini selaras dengan tuntutan Teori Kelebihan Daya Saing. Ia mencadangkan bahawa dengan melabur dalam kemudahan

pengeluaran baharu, penambahbaikan teknologi, dan pembangunan pasaran, firma boleh meningkatkan kapasiti pengeluaran dan kualiti produk mereka untuk memenuhi permintaan pasaran antarabangsa. Melalui inovasi dan pelaburan berterusan dalam penyelidikan, firma boleh menyediakan produk atau perkhidmatan unik yang memenuhi keperluan pasaran global dan memperoleh kedudukan yang lebih baik dalam pasaran antarabangsa yang kompetitif. Perbelanjaan modal menyediakan asas fizikal dan kapasiti pengeluaran yang diperlukan, manakala perbelanjaan penyelidikan mencipta kelebihan daya saing yang unik untuk syarikat. Walaupun perbelanjaan penyelidikan mempunyai hubungan positif dengan pengantarabangsaan yang kukuh, impaknya telah dikurangkan selepas COVID-19, konsisten dengan tuntutan Teori Angsa Hitam. Secara ringkasnya, kajian ini memberi rujukan berfaedah kepada firma untuk merancang perbelanjaan modal dan penyelidikan mereka. Ia juga menambah pandangan baru teori kepada badan pengetahuan dalam kesusasteraan yang berkaitan.

THE IMPACT OF CAPITAL EXPENDITURE AND RESEARCH AND DEVELOPMENT EXPENDITURE ON THE INTERNATIONALIZATION OF CHINESE FIRMS

ABSTRACT

China's exports experienced a negative growth rate for the first time in 2015. In addition, the contribution of exports to GDP dropped by half from 2006 to 2019. However, there is a lack of empirical evidence in the literature on the impact of capital expenditure and research and development (R&D) expenditure on the internationalization of Chinese firms, and whether the impact changes under the COVID-19 shocks. This study utilizes a panel of 1,181 listed firms in China for the years 2012-2021. This study employs econometric methods for empirical analyses, using pooled ordinary least squares (Pooled OLS), random effects, and fixed effects regression models. Robustness is also tested using the GMM estimator. Findings reveal that capital expenditure and R&D expenditure have a positive relationship with the ratio of foreign sales to total sales (FSTS). This is consistent with the claims of the Competitive Advantage Theory. It suggests that by investing in new production facilities, technological improvements, and market development, firms can increase

their production capacity and product quality to meet international market demand. Through continuous innovation and investment in R&D, firms can provide unique products or services that meet the needs of global markets and gain a better position in the competitive international market. Capital expenditure provides the necessary physical base and production capacity, while R&D expenditure creates a unique competitive advantage for the company. Although R&D expenditure has a positive relationship with firm internationalization, the impact was reduced after COVID-19, which is consistent with the claims of the Black Swan Theory. In summary, the results provide a useful reference for firms to plan their capital and R&D expenditure. It also adds new theoretical insights to the body of knowledge in the related literature.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Internationalization is one of the possible ways to seek performance improvement (García-García et al., 2022). As a result, many firms use internationalization as a strategy to secure long-term survival and growth (Xu et al., 2017). Internationalization is seen as a collection of strategies, technologies, and tools (Ţâu, 2017). In the internationalization process, the traditional export requires the least number of resources and the least occurrence of risks. Exporting is defined as a simple technique, and the most prevalent initial market entry strategy during internationalization (Beber et al., 2021; Cavusgil & Knight, 2015). Firms are increasingly recognizing the significance of generating foreign sales (Dai et al., 2014). A company's successful international expansion demonstrates its ability to navigate diverse environments with varying levels of competition, institutions, and resources (S. A. Zahra & George, 2002). After the 2008 financial crisis, countries around the world implemented trade protection policies to seek momentum for economic recovery, and these policies have led to a rise in "anti-globalization" trends. Other than that, the UK has withdrawn from the EU, the US has withdrawn from the Trans-Pacific Partnership, and the trade friction between the US and China has intensified.

The trend of anti-globalization was intensified by the global spread of the COVID-19 pandemic in early 2020 (Abdal & Ferreira, 2021). To prevent the spread of COVID-19, national borders were closed, cross-border travel was halted, and international transport was cut (Golunov & Smirnova, 2022). To ensure adequate medical supplies during COVID-19 and to reduce the dependence on foreign aid, some countries have begun to relocate their manufacturing and production facilities back to their domestic markets (Strange, 2020). These policies alter fundamentally the current global economic structure and weaken the prospects for globalization (Barbieri et al., 2020). As a result, China's export trade faces even greater challenges in international markets (Fang et al., 2022; Y. Zhao et al., 2021).

1.2 Background of the Study

1.2.1 Internationalization of Chinese Firms

Since Hoskisson et al., (2000) first comprehensive analysis of the internationalization of emerging markets, several articles have appeared to advance the boundary of this research (Z. Khan et al., 2022; M. Wright et al., 2005). Business practitioners and scholars have paid significant attention to the internationalization of firms from emerging economies (D. Tan et al., 2020). The most remarkable new characteristic of emerging markets is the tendency to internationalize rapidly (Batsakis & Mohr, 2017; Y. Wang et al., 2022). As a representative of emerging markets (Park & Roh, 2019), China's significant position in world trade has led many scholars to

research China's internationalization (Gaur & Kumar, 2010; Park & Roh, 2019; H. Tan & Mathews, 2015).

The internationalization of China can be divided into three stages. The first stage of internationalization of Chinese enterprises is from the beginning of China's reform, which lasted from 1978 to 2001. During this period, the internationalization process is exploratory. China focused on reforms in economic systems to attract some export-oriented foreign investors and to advance China's industrialization process (WEI, 2001). China suffered from institutional, legal, and economic backwardness, and also weak in scientific advancement and new technologies in international competition (Dahlman & Aubert, 2001). In the year 2000, China's total exports were less than $2,500 billion (Figure 1.1).

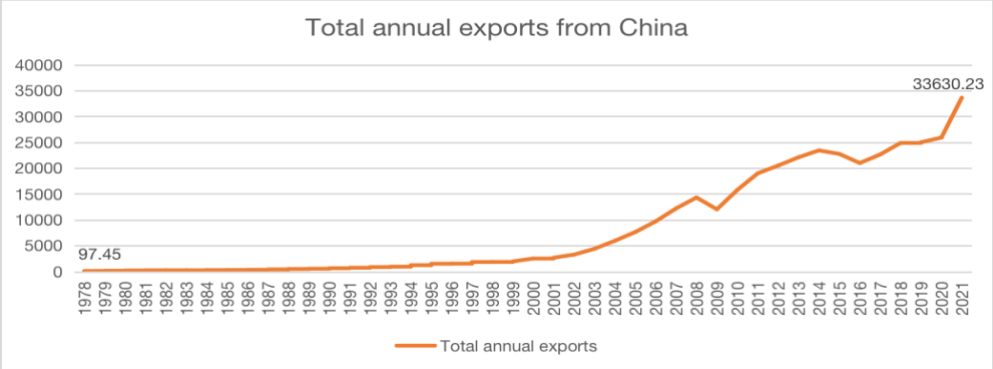

Figure 1.1 Total Annual Exports from China (Source: CSMAR) Unit:100 Million Dollars

The second phase lasted from 2002 to 2010 when China joined the World Trade Organization (WTO). During this period, trade in goods and services developed rapidly (Rumbaugh & Blancher, 2004). China opened up significantly and it allowed

easy access to foreign investment (Buckley et al., 2009). This greatly increased the attractiveness of foreign investment and led to a tremendous increase in the number of multinational companies (MNCs) investing in China (Froese et al., 2019). Chinese companies took the opportunity to engage with MNCs to strengthen the capital, technology, management, and overseas sales channels in their business operations (Froese et al., 2019; N. Zheng et al., 2016). Most Chinese companies engage low labor costs and inexpensive land to produce goods that are price competitive (Wei et al., 2017). Thus, China's economy entered a "golden decade" of rapid growth (H. X. Wu & Yu, 2022). During this period, exports increased more than five times. By 2010, China had become the world's second-largest economy (Leung, 2011), and its international status had been enhanced further, making investment in China attractive to the world (Bapat et al., 2011).

The third phase is from 2011 to the present, that is, the phase of trade globalization. The international market share increased steadily (Ministry of Commerce of China: Report on China's foreign trade situation). According to the latest statistics from WTO (2022), the international market share of China's exports is about 15.1%, and it continues to maintain its status as the largest world trade country in goods. The total annual exports from China increased to $33,630 billion during this period. The ability of the Chinese government to implement a successful export-oriented economic model is a major contributor to China's success (Dunford, 2017; Xiang & Li, 2023).

Overall, the three factors driving the economic growth of China are consumption, investment, and exports (Iqbal et al., 2023; Liang et al., 2016). Exports have become an important driving force for China's economic growth (Wei et al., 2017). Hence, it is particularly important to improve the competitiveness of Chinese exports to maintain a steady growth of exports and to maintain a healthy development for China's economy (Efrat et al., 2018; K. H. Zhang, 2015). Since China acceded to WTO from 2001 to 2015, exports have contributed to above 20% of the country's GDP (Y. Li et al., 2021). Rapid export-driven industrialization and an abundant labor supply played a crucial part in this accomplishment (Aiginger & Rodrik, 2020). To support more market players in the export trade, the General Office of the State Council issued a document entitled “Implementation Opinions on Promoting Innovative Development of Foreign Trade” in November 2020. Subsequently, “Opinions on Accelerating the Development of New Business Models and Modes of Foreign Trade” was issued in July 2021. Both documents revealed the support in terms of policy given by the state to the enterprises engaging in export trade. Based on the above arguments, it is worthwhile to investigate the factors that influence the level of exports of Chinese companies.

Firms in emerging markets frequently suffer from various liabilities in the international markets (V. Kumar et al., 2020; Madhok & Keyhani, 2012). Firms lack firm-specific advantages essential for effective internationalization in conventional

international business (Panibratov & Klishevich, 2020). Unlike multinational corporations from developed nations, firms from emerging markets originate from countries with inadequate resources, inefficient technologies, and underdeveloped institutions (Buckley & Tian, 2017; Nair et al., 2015; Nanda et al., 2020). Most industries in China are involved in commissioned processing and assembly, resulting in China becoming a "world factory" with low value-added and low technology manufacturing and weak research and development (R&D) capabilities (B. Yang et al., 2022).

1.2.2 Capital Expenditure of Chinese Firms

A distinctive characteristic of China's ascent is its high levels of capital expenditure compared to other developing countries (e.g., Vietnam, Nigeria, and India) (Oh, 2021). The motivations driving capital investments in Chinese companies are rooted in the pursuit of resources, market share, proprietary technologies, high-tech capabilities, and overall competitiveness (Jin & Li, 2023; K.-S. Li & Xiong, 2022).

One noteworthy aspect is the disparity in investment intensity highlights a notable shortfall in China's capital expenditure compared to developed countries (Shahbaz et al., 2022). In 2022, while Chinese firms achieved an average capital expenditure of 17.3%, there remains a gap when compared to the United States at 21.1%, the Republic of Korea at 24.4%, and Japan at 30.2% (Shao et al., 2022). This gap also reflects the challenges faced by Chinese enterprises in terms of capital allocation. While the

Chinese economy has achieved remarkable growth, there is still further room to improve the efficiency of capital expenditure, promote technological innovation and enhance global competitiveness (Song & Wang, 2018).

1.2.3 R&D Expenditure of Chinese Firms

Although China has some internationally known high-tech companies such as Huawei, Lenovo, and DJI in the electronics and information and communication technology (ICT) sectors; and Tencent, Alibaba, and Baidu in the internet industry, only a few Chinese companies have been able to make reasonable profits from international markets (Child & Rodrigues, 2005). ***Fortune*** magazine released a new edition of its list of the world's top 500 companies in 2022. China has 145 companies on the list, surpassing the United States as the top country. However, the profitability of Chinese companies remains weak. The average profit of the Fortune 500 companies is $6.20 billion, 50% higher than the Chinese companies on the list. Due to the complexity of international markets, the costs of competing could outweigh its benefits, and this hurts a company's future profit (García-Sánchez et al., 2021; Geringer et al., 2000).

In mid-2018, trade friction between China and the United States intensified. A ban on sales was imposed on ZTE in April 2018, followed by a series of sanctions against Huawei. Also, in August 2022, the U.S. signed a chip bill banning the sale of high-end chips to Chinese companies. Many core technologies, such as semiconductor

chips are monopolized by developed countries (Huang et al., 2023). China's focus on low-value-added operations, like assembly and testing, has resulted in a lack of bargaining power for core technology products and accessories (Grimes & Du, 2022).

China has experienced significant economic growth in recent decades, but innovation's importance has been undervalued early on (Wen & Zhao, 2021). Firms' R&D investment is deficient in extensive growth, relying heavily on the increase of productive factors (Wen & Zhao, 2021). The Chinese government has implemented many policies, such as tax incentives and financial support mechanisms, to encourage firms to invest in R&D independently (S. Wang et al., 2020; Z. Zhang et al., 2020). In recent years, China has demonstrated a remarkable surge in R&D spending, indicating a deliberate commitment to technological advancement and innovation (Wei et al., 2017). "China Statistical Yearbook" data indicates that R&D expenditures increased at an annual rate of 17.97% from RMB 89.566 billion in 2000 to RMB 2439.31 billion in 2020 (X. Huang, 2023).

1.2.4 COVID-19 in China

The COVID-19 pandemic spread globally in early 2020. COVID-19 has caused significant issues in international transportation and supply chains, including production line shutdown and a significant decrease in international shipping capacities (P. T.-W. Lee & Song, 2023). The COVID-19 pandemic has exacerbated global tensions and conflicts, including trade disputes between China and the US,

production line reshoring, and diplomatic disputes between China and Australia (Chowdhury et al., 2021; Notteboom et al., 2021).

Before the COVID-19 pandemic, China was known as the World Factory (Wang et al., 2020), highlighting the scale of its cross-border trade and the depth of its industry coverage in the global supply chain. However, to prevent the spread of COVID-19, national borders were closed, cross-border travel was halted, and international transport was cut (Shiraef et al., 2021). The Chinese government has implemented stricter measures to control COVID-19, including digital technology, a zero-case policy, nucleic acid testing, vaccination, quarantine, and an official accountability system (Ding & Zhang, 2022). These methods have significantly reduced the rate of COVID-19 transmission and maintained a low number of confirmed cases in China for a long time (Burki, 2020). On the other hand, the government was spending too much money on these measures, which incurred huge expenses and much strain on the Chinese economy (Ding & Zhang, 2022). The World Bank's 2022 summary highlights China's efforts to support the economy and financial system, including injecting cash into the banking system and providing Small and Medium-sized Enterprises (SMEs) with better access to loans (Gong et al., 2020). The risk tolerance of SMEs is generally lower than that of large organizations, due to constraints in resource accumulation and personnel capacity (Asgary et al., 2020).

Hence, many enterprises have closed down, and millions of people have lost their jobs, which resulted in escalating non-performing bank loans (Kryzanowski et al., 2022).

1.3 Problem Statement

Exports have been a crucial element in economic development, with areas like the Asian Tigers using them as a stepping stone (Atasoy, 2021). China, following this strategy, has developed into a major world trading nation, from a highly centralized and planned economic system and became the world's largest economy by purchasing power parity in 2014 (Atasoy, 2021). The country's economy has grown rapidly with a real integration into the global economy after the economic reforms in 1978 (Ahmad & Jabeen, 2020). The economic growth was driven by market-oriented institutional reforms, including openness to international trade and direct investment (W. Zheng, 2021), low wages, and a favorable demographic structure (I. Khan et al., 2021). In the 20 years since China's accession to WTO, on average, it has contributed about 30% annually to global economic growth, and its global share has increased from 4% to 17.4% (source: National Bureau of Statistics).

Since joining the WTO in 2001, China opened a golden decade of rapid economic growth (H. X. Wu & Yu, 2022). According to data published by the China Statistical Yearbook, from 2002 to 2011, except for the global financial crisis in 2008, the average annual growth rate of China's exports exceeded 15%. However, China's export growth rate was negative for the first time in 2015. As can be seen in Figure 1.2,

China's export growth rate has been on a downward trend since peaking in 2004 until 2019 (pre-COVID-19).

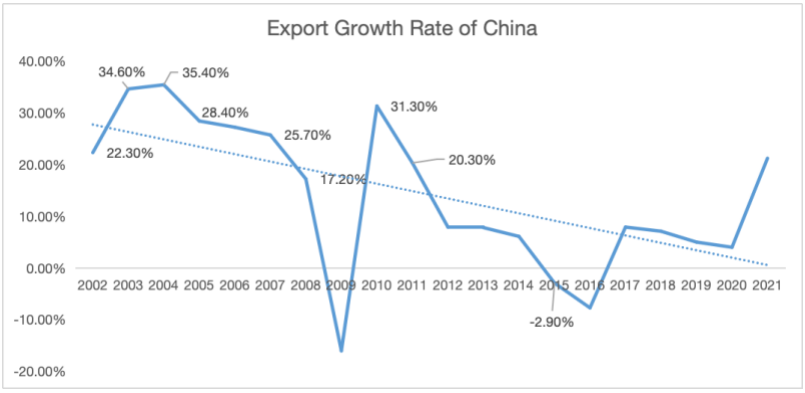

Figure 1.2 Export Growth Rate of China (Source: China Statistical Yearbook)

Export is a factor that significantly impacts GDP growth (Cui et al., 2011; Iqbal et al., 2023). In 2006, the contribution of exports to GDP reached a new peak, that is, 35.36% of GDP. However, after that, the contribution of exports to GDP declined steadily. In 2019, the contribution of exports to GDP dropped to 17.69%, a reduction by half of the previous figure (Figure 1.3). According to Wei et al. (2017), a portion of the decline may be cyclical, resulting from a relatively poor global economy. However, a substantial portion of the cause is structural and fundamental.

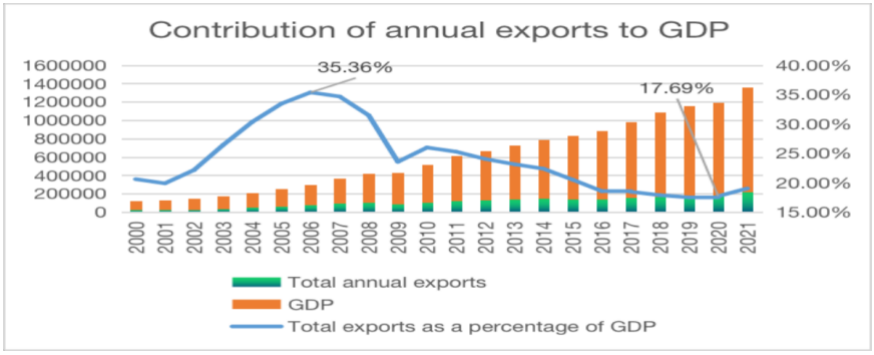

Figure 1.3 China: Exports, GDP, and Percentage of GDP (Source: CSMAR)

As China's demographic dividend and the advantage of cheap labor costs fades, the world factory is moving to other markets with lower labor costs (Y. Huang, 2016). Many multinational companies, such as Nike, Uniqlo, and Samsung, have moved from China to Southeast Asian countries.

Due to the increased uncertainty of obtaining satisfactory returns (S. Zahra et al., 2001) and the need to understand customer preferences and overcome the challenges of operating in unfamiliar markets (Shrader et al., 2000), internationalization of firms entails significant costs (Lu & Beamish, 2001). This leads to fewer opportunities for inefficient firms (Dominguez & Mayrhofer, 2017). A low-end lock-in of global manufacturing has resulted from their trade development model emphasizing low-quality, low-priced goods (A. Chen & Liu, 2011). This lock-in hinders the attainment of high returns (Safarzyńska & Van Den Bergh, 2010). However, the competitive advantage of inexpensive labor disappears for Chinese enterprises. Furthermore, the effects of the COVID-19 pandemic on international trade are intricately intertwined with the escalation of tensions and conflicts in international politics and commerce (Chowdhury et al., 2021; Notteboom et al., 2021). Difficult export obstacles confront Chinese enterprises. Determining how Chinese exporters can increase their competitive advantage and efficacy is crucial to resolving the issue of China's declining export growth.

1.4 Motivation of the Study

It is believed that China's ability to draw in a sizable amount of foreign direct investment and grow into the world's top exporter was primarily due to its abundant and seemingly limitless cheap labor supply (Y. Huang et al., 2021). Low price advantage seems to be the critical strategy many Chinese firms use to gain international market share (Ouyang et al., 2015; B. Yang et al., 2022). However, China's natural population growth rate has fallen sharply, that is, from 7.43% in 2012 to 0.34% in 2021 (Figure 1.4). In addition, the average annual wage in China has increased more than twofold over the past decade from RMB32,244 in 2012 to RMB106,837 in 2021.

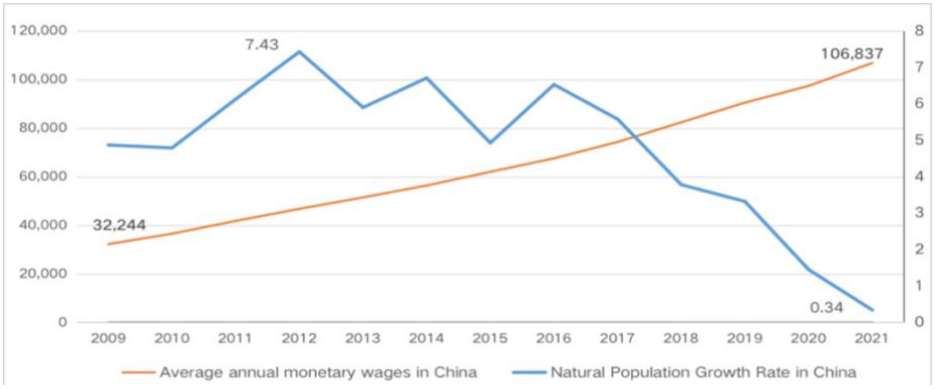

Figure 1.4 China: Average Annual Monetary Wages and Natural Population Growth Rate (Source: CSMAR)

Wages in China are now higher than those of many non-Organization for Economic Cooperation and Development (OECD) countries (D. T. Yang et al., 2010). For instance, wages in China are about three times higher than in India, which has a labor force almost the same size as China's (J.-W. Lee & Wie, 2017). Chinese firms,

especially those involved in internationalization, initially rely on cheap labor costs to sell in international markets (Sun et al., 2021). Rapidly rising labor costs, raise concerns that this could erode China's competitive advantage in the global marketplace and make the country unattractive to multinational corporations (Golley & Song, 2011; Y. Huang et al., 2021). The increase in the nation's wealth led to higher average wages for workers, which in turn prompted business owners to adopt machines for manual tasks (Mohajan, 2019).

The literature on Chinese firms' internationalization has expanded, but there is limited understanding of the impact of capital expenditures on this process. Therefore, in this thesis, this study chooses capital expenditure, which is an important part of corporate investment decision-making, as the object of study to explore how the capital expenditure of firms affects their degree of internationalization. By referring to the relevant literature in this research direction, this study examines the impact of capital expenditures on the degree of internationalization of Chinese listed firms.

Since the beginning of the 21st century, the dramatic increase in Chinese workers' wages provides a unique research setting. Do increases in capital and R&D expenditures affect internationalization, when low labor cost is no longer an advantage for Chinese firms?

China's Zero COVID approach, involving lockdowns and border controls, led to factory shutdowns, while global responses varied, other countries did not take as extreme measures (Hancock & Mora, 2023). In this context, this study will further explore whether the effect of capital and R&D expenditures on internationalization will change as they experience the COVID-19 pandemic.

1.5 Scope of the Study

The scope of this study is the internationalization of Chinese-listed companies. There are two reasons for setting this scope. First, China is an emerging country, and firms are still the main driver of economic growth. Internationalization, in the form of exports, is crucial to China’s GDP growth and the firms' survival. To address China's loss of competitive advantage in terms of cheap labor, Chinese companies need to shift their strategies to improve their competitiveness in other ways. In this context, studying enterprise competitiveness becomes a key issue. Therefore, this study will help us to answer whether competitiveness, represented by capital expenditure and R&D expenditure, creates export value.

Second, the primary reflection of the impact of the COVID-19 pandemic on economic globalization is the contraction of international trade. More countries are focusing on industrial repatriation and domestic circulation to avoid external factors that hold back their economies. This strategy undoubtedly has artificially exacerbated the trend of reverse globalization during the COVID-19 pandemic. Hence, this study

examines whether the COVID-19 pandemic influenced the impact of capital expenditure and R&D expenditures on internationalization.

The study period is from 2012 to 2021. The year 2012 was chosen as the beginning of the sample period due to the stabilization of government international trade policy and the new vibrance of Chinese listed firms (F. Liu et al., 2023). The study also examined the effect of COVID-19 between 2020 and 2021.

1.6 Research Questions

The main research questions for the study are as follows:

1. Do capital expenditures affect the internationalization of Chinese firms?

2. Do R&D expenditures affect the internationalization of Chinese firms?

1.7 Research Objectives

The objectives of this study are:

1. To examine whether capital expenditures affect the internationalization of Chinese firms.

2. To examine whether R&D expenditures affect the internationalization of Chinese firms.

1.8 Significance of the Study

1.8.1 Theoretical Significance

The thesis collates the extant literature on enterprise internationalization and finds that research on enterprise internationalization focuses mainly on the path of enterprise internationalization and the factors affecting enterprise internationalization. Although the research content varies, it is well recognized that the degree of internationalization is closely related to the risks and rewards faced by firms. Internationalization involves various aspects of the firm, such as production, sales, financing, talent, etc. Therefore, factors affecting the level of internationalization of the firm are manifold. Capital expenditure is an important long-term investment decision for firms, and less attention has been paid to the existing literature to study whether the investment behavior of firms affects the level of internationalization. Studying the impact of capital expenditure on the degree of internationalization of firms will help us explore the influencing factors of firms' internationalization from the perspective of investment and make the research on firms' internationalization more comprehensive. Due to a lack of research, this study expands the literature on the impact of Chinese corporate assets and R&D investment on firm internationalization. The effects of corporate capital expenditures and R&D expenditures on internationalization in the context of the COVID-19 pandemic also contribute to expanding the existing literature.

1.8.2 Practical Significance

Internationalization is a growth strategy for companies and an essential national development agenda, and export is one of the factors driving GDP growth. Particularly after China acceded to WTO, China has become the world's second-largest economy and a prime example of emerging markets through exports, which attracts many foreign investments. The fifth plenary session of the 19th Central Committee of the Communist Party of China put forward innovation as an important aspect of China's modernization. It also stresses self-reliance and self-improvement in science and technology as the strategic support for national development.

This study is noteworthy because it investigates the relationship between capital expenditure, R&D expenditure, and the internationalization of Chinese companies. Our findings impact numerous interest groups, including shareholders, businesses, the government, and other affiliated institutions. For shareholders, the results of this study are a crucial reference for determining if capital expenditures and R&D expenditures are worthwhile. Capital and R&D expenditures may substantially affect the company's future growth because they use a substantial amount of cash. Investors are worried about the contribution of capital and R&D expenditures to the company's internationalization. The firm can analyze the situations that may increase the impact of internationalization. The conclusions of the analysis may have an impact on their budgeting and investment planning strategies. The empirical findings of this study also

help the government to evaluate whether capital expenditures and R&D expenditures contribute to internationalization. Therefore, the Chinese government may formulate effective policies to support the internationalization of enterprises.

In China, there is a preliminary study to determine the relationship between capital spending, R&D expenditure, and internationalization under the influence of the COVID-19 pandemic. The COVID-19 pandemic has severe consequences for social and economic life. Also, when estimating future socioeconomic indices, policymakers need to take into account the black swan effect, which contributes to offering empirical evidence.

1.9 Definition of Key Terms

Key terms in this study are listed and defined below:

Internationalization refers to designing products to meet users' needs in multiple countries, aiming to increase a company's footprint or market share outside its home country (Y. Huang, 2016).

Capital expenditures (CAPEX) are funds used to acquire or upgrade a company's fixed assets, such as property, plant, or equipment (Nguyen & Nguyen, 2020).

Research and development (R&D) expenditure is the money spent on creative work undertaken systematically to increase the stock of knowledge and the use of this knowledge to devise new applications (Karim et al., 2021).

1.10 Organization of Thesis

This study consists of the following chapters:

Chapter One: Introduction

Chapter One discusses the significance of internationalization as a business strategy, and internationalization in emerging markets, represented by China, has attracted much scholarly interest. It also discusses internationalization issues, the problem statement, and the objectives of the study. In the last section, the contribution and significance of the study are addressed.

Chapter Two: Literature Review

Chapter two examines numerous scholars' literature and past studies on internationalization and the variables under investigation. Altogether, four sections accommodate the four variables: capital expenditure, R&D expenditure, internationalization, and the COVID-19 pandemic.

Chapter Three: Theoretical Framework and Hypotheses Development

Chapter three discusses the theoretical framework that provides the general foundation for this study and describes the methodologies applied in this investigation.

Chapter Four: Research Findings

Chapter Four presents the statistical results and discusses the findings of data analyses and their interpretations.

Chapter Five: Discussion and Conclusions

Chapter Five summarizes and discusses the findings. This chapter also includes the implications of the study. In addition, the limitations and future directions of the study are discussed.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

While Chapter 1 identified research questions and research environment, the purpose of this chapter is to describe, summarize, analyze, and provide an in-depth discussion of the research questions. Sections 2.2 to 2.5 examine prior research on corporate internationalization, and related theories, by citing relevant published literature (mainly scientific journals). Based on the accepted theories, a variety of hypotheses are presented, which are outlined in Section 2.6. Finally, Section 2.7 draws some conclusions, based on past literature.

2.2 Definition of Internationalization

Explaining and predicting the development of internationalization is one of the major research areas in international business (Buckley, 2002). Corporate internationalization emerged in the 1960s, and it has continued to evolve and is still an essential part of international business research. There are several views on the elaboration of the concept of corporate internationalization.

The first type is represented by Carlson (1966), Johanson and Wiedersheim-Paul (1975). They view the internationalization of firms as a gradual process and consider it a gradual evolution of the expansion of firms from domestic to international markets.

The second type of defining internationalization is proposed by Buckley and Casson (1976). It comes from the economic perspective, whereby firms choose internal governance over external markets, due to the incompleteness of the knowledge market. Multinational corporations arise when the internalization process transcends national borders. Multinational corporations commit international direct investment to avoid high transaction costs arising from transaction uncertainty.

The third type of explanation is offered by British scholars, such as Young et al. (1989), who define the internationalization of firms as all activities and ways in which firms conduct business across boundaries. Internationalization can be classified into various forms: exporting, greenfield investment, franchising, technology licensing, management contracts, and subcontracting production.

The fourth definition is based on the Resource Dependency Theory by Calof and Beamish (1995), which considers internationalization as the process of changing the way of doing business to match the international market. In this process, enterprises gradually recognize and understand the direct and indirect impact of international market transactions on enterprises' future development, and then they develop trading activities in foreign markets.

The fifth definition is introduced by Andersen (1997), who synthesizes the views of the previous studies and argues that internationalized growth differs from other

growth strategies in two ways: First, internationalized growth is necessarily accompanied by cross-border transfer of products, services, information, and capital, and thus it involves the choice of international markets by firms; Second, the process of internationalized growth necessarily involves the choice of entry modes. Thus, internationalization is considered to be the process of entering the right international markets with the correct entry modes.

2.3 Underlying Theories of Internationalization

2.3.1 Competitive Advantage Theory

Porter (1989) proposed that there are two ways a company can get a competitive advantage to improve the level of international competitiveness over its competitors: cost advantage or differentiation advantage. Having a cost advantage means that a company can provide the same benefits as its competitors at a lower price while having a differentiation advantage means that its benefits go above those of the competing products.

Businesses with a cost leadership strategy work to reduce their production costs to the lowest level possible. In many (perhaps all) areas of the industry, suppliers prioritize keeping prices low (Wen-Cheng et al., 2011). The investment in manufacturing assets constitutes a barrier to entry for enterprises that may not be able to get sufficient funds to buy the assets (Wright, 1987). A low-cost leader approach is common among huge corporations that offer products with little to no uniqueness, and