THE UNIVERSITY
of EDINBURGH

CEOs with International Experience under Weak Institutions

by

Tinghua Duan

Doctor of Philosophy

The University of Edinburgh

2017

Declaration Page

This is to certify that that the work contained within has been composed by me and is entirely my own work. No part of this thesis has been submitted for any other degree or professional qualification.

Signature:

Date:

Acknowledgements

I would like to offer my sincere thanks to all the people who help me throughout my PhD study. This thesis could not be accomplished without the support of many people.

First, I would like to thank my principal supervisor, Professor Wenxuan Hou, who has been a significant person in my life, and more than a supervisor to me. Professor Hou ignited my interest for corporate governance, provided many valuable insights into academic life and research, encouraged me when I suffered difficulties, and supported me in every possible way. I would also like to thank my second supervisor, Professor William Rees, for always giving me constructive suggestions to improve my studies.

Second, I would like to thank to my external advisor, Professor Douglas Cumming, for providing many valuable constructive comments, and for sharpening my understanding of the entrepreneurial finance field.

Third, I am grateful for helpful comments from David Yermack, Raghavendra Rau, Brian Main, Mariassunta Giannetti, Chen Lin, Daniel Ferreira, Sudipto Dasgupta, Ashwini Agrawal, Warren Bailey, Alessandra Guariglia, Nancy Huyghebaert, Chao Jiang, Maxim Mironov, William Rees, Rik Sen, Ane Tamayo, Martin Walker.

Forth, I am grateful for helpful comments of Chapter 4 from participants at the Auckland Finance Meeting, East Lake Forum in Wuhan, the FMA Annual Meeting in Nashville, BAFA Conferences in London and Edinburgh and the 15th

Money and Finance Conference in Mumbai, and seminar participants at Duke University, University of Cardiff, University of Lancaster, University of Reading, University of Stirling, University of Birmingham, University of Nottingham, Huazhong University of Science and Technology, Nanjing Audit University, University of Plymouth, University of Edinburgh, SKEMA Business School and University of Glasgow. I am grateful for helpful comments of Chapter 5 from participants at CICF in Shenzhen, Entrepreneurial Financial Management Conference at ESMT Berlin, FMA European Meeting in Helsinki, 29th AFBC, Edinburgh Conference on Legal Institutions and Finance, 43th Annual Meeting of the Academy of Management. I am grateful for helpful comments of Chapter 6 from participants at International Workshop & Small Business Economics Special Issue conference.

Finally, I would like to thank for the unconditional support of my parents, and the full understanding of my wife.

Abstract

In the context of the globalization of human capital, this thesis examines the role of CEOs with international experience, known as returnee CEOs. The first essay argues that that CEOs' international expertise is acquired at the opportunity cost of local social capital, such as political and business ties, which is more critical than expertise in transition economies with weak legal institutions. Based on the sample of 2847 CEOs appointments in China, I find that returnee CEOs are associated with inferior performance, lower market reactions to appointment announcements and an adverse regulatory environment. The negative relation disappears when social capital is acquired, regional legal institutions are strong or returnees' international expertise is in demand. Exploiting an exogenous increase in the supply of returnee talent as a result of new provincial policies, I find the results consistent. The second essay examines the returnee CEOs in newly public entrepreneurial firms that are in transition period. I propose that returnee CEOs possess the tacit knowledge of foreign advanced legal institutions, which can help entrepreneurial firms overcome the formalization challenges they face in getting listed. The results based on 355 newly public Chinese entrepreneurial firms indicate that returnee CEOs, especially those who have returned from countries with advanced legal institutions are associated with superior post-IPO performance. In addition, foreign venture capitals (VCs) are found to strengthen the positive impact of returnee CEOs, especially when both VCs and CEOs are from countries with advanced institutions. In the third essay, I examine returnee CEOs' managerial decision of listing location. Based on the sample of IPOs of Chinese entrepreneurial firms, I find that returnee CEOs are more likely to undertake foreign IPOs, especially for entrepreneurial firms operating in

high-tech industries, until the credibility crisis of US-listed Chinese firms was triggered by Muddy Water Research in 2011. Overall, this thesis provides original evidence on the impact of international experience of CEOs and makes important implication on the benefits realization of brain gains in countries with weak legal institutions.

Table of Contents

Declaration Page ..... **i**
Acknowledgements ..... **ii**
Abstract ..... **iv**
List of Tables ..... **ix**
List of Figures ..... **x**

Chapter 1 Introduction **1**

Chapter 2 The Role of Returnees in Business: A Review **6**
2.1 Introduction 7
2.2 History and Institutional Background 9
2.3. Review and Discussion 11
2.3.1 Historical Perspective 11
2.3.2 The impact of returnees on Chinese listed firms 11
2.3.3 The impact of returnees on small Business 13
2.4 Conclusion 17
References 18

Chapter 3 Returnees' Influences on China: A Business Perspective (1840s to 1940s) **23**
3.1 Introduction 24
3.2 The Influence of the Overseas Study Experience 29
3.3 Saving the Nation through Industrialization 32
3.4 Contributions to Light Industry 35
3.4.1 The Cigarette Industry 35
3.4.2 The Cotton Textile Industry 37
3.4.3 The Pharmaceutical Industry 40
3.4.4 The Electronics Industry 42
3.5 Contributions to Heavy Industry 43
3.5.1 The Chemical Industry 43
3.6 Contributions to the Service Industry 46
3.6.1 The Banking Industry 46
3.6.2 The Entertainment Industry 49
3.7 Discussion and Conclusion 50
References 53

Chapter 4 Returnee CEOs under Weak Institutions: Blessing or Curse? **58**
4.1 Introduction 59
4.2 Institutional Background and Data 69
4.2.1 Returnees in China 69
4.2.2 Policies to Attract Returnees 70
4.2.3 Data and Sample 73
4.3 Characteristics of Returnee CEOs 75
4.3.1 Strengths of Returnee CEOs 75

4.3.2 Weaknesses of Returnee CEOs 77
4.4 Returnee CEOs and Firm Performance 80
4.4.1 Baseline Results 80
4.4.2 The Type and Length of Overseas Experience 84
4.4.3 Social Capital and Returnee CEOs 85
4.4.4 Regional Institutions and Returnee CEOs 86
4.4.5 International Business and Returnee CEOs 88
4.5 Identification Strategies 89
4.5.1 Unobserved CEO heterogeneity 89
4.5.2 Propensity Score Matching 91
4.5.3 Switch in the Type of CEOs 93
4.5.4 Instrumental Variable Approach 96
4.6 Additional Tests 100
4.6.1 Returnee CEOs and Regulatory Conditions 100
4.6.2 Returnee CEOs and the Appointment of Executives 101
4.6.3 Returnee CEOs and Corporate Strategy 102
4.7 Conclusion 103
References 106
Appendix 132

Chapter 5 Legal Enforcements and Institutional Transition of Chinese Entrepreneurial Firms: Evidence From Returnee CEOs 137
5.1 Introduction 138
5.2 Institutional Background 143
5.2.1 Returnees and Legal Institutions 143
5.2.2 ChiNext and Challenges in the Transition Period 145
5.3 Theory and Hypotheses 147
5.3.1 Tacit Knowledge of Legal Institutions 147
5.3.2 Tacit Knowledge and Firm Transitions 149
5.3.3 The Match of Tacit Knowledge on Legal Institutions 151
5.4 Data and Research Method 153
5.4.1 Data 153
5.4.2 Dependent Variables 154
5.4.3 Returnee CEOs, VCs, and Institutions 154
5.4.4 Control Variables 156
5.5 Results 158
5.5.1 Baseline Regression 158
5.5.2 Endogeneity Issue 158
5.5.3 Tacit knowledge of Returnee CEOs 162
5.5.4 The Match of Tacit Knowledge 163
5.6 Discussion 165
5.7 Conclusion 167
References 168
Appendix 183

Chapter 6 Does Overseas Experience of CEOs Determine the Listing Location of Chinese Entrepreneurial Firms? 185
6.1 Introduction 186

6.2 Institutional Background 190
6.2.1 Policies for Returnees 190
6.2.2 ChiNext Board Market 191
6.2.3 Foreign Listing Requirements 192
6.3 Theory and Hypotheses Development 193
6.3.1 IPO Markets Selection 193
6.3.2 Moderating Effects for High-tech Industries 196
6.3.3 Moderating Effects for the Credibility Crisis 197
6.4 Research Method 198
6.4.1 Sample and Data Collection Procedure 198
6.4.2 Dependent Variables 199
6.4.3 Independent Variables 200
6.4.4 Control Variables 200
6.5 Results 202
6.5.1 Market Selection 202
6.5.2 Moderating Effects for High-tech Industry and Muddy Water Research 203
6.5.3 IPO Underpricing 204
6.5.4 Endogeneity Issue: Reverse Causality 205
6.5.5 Other Top Management Team Members 207
6.6 Discussion 208
6.6.1 Contribution to Chinese returnee studies 208
6.6.2 Contribution to TMT characteristics and IPOs 209
6.6.3 Contribution to IPO Market Selection Studies 210
6.6.4 Policy and Practical Implications 210
6.6.5 Limitations and Future Studies 211
6.7 Conclusion 211
References 213
Appendix 226

CHAPTER 7 Conclusion 227

List of Tables

Table 4.1 International Schools and Returnee Policies to Attract Returnee CEOs 113
Table 4.2 Descriptive Statistics.....115
Table 4.3 Returnee CEOs and Firm Performance.....116
Table 4.4 Returnee CEOs with Foreign Working Experience and Firm Performance 117
Table 4.5 Effect of Local Resources, Institutions and Firm Demands 119
Table 4.6 CEO Innate Characteristics and Firm Performance.....121
Table 4.7 Propensity Score Matching 122
Table 4.8 Switches of CEO Type and Change in Firm Performance 126
Table 4.9 Market Reaction to Switch in Type of CEO.....127
Table 4.10 Instrumental Variable (IV).....128
Table 4.11 Returnee CEOs and Regulatory Environment 129
Table 4.12 The Effect of Returnee CEOs on Executive Appointments.....130
Table 4.13 The Effect of Returnee CEOs on Corporate Strategy.....131
Table A4.1 Variable Definitions.....132
Table A4.2 Returnee CEOs and Long-run Performance 134
Table A4.3 Summary Statistics of Returnee CEO Classification.....136
Table 5.1A Returnee CEOs' Host Countries and Legal Institutions 174
Table 5.1B Summary Statistics.....175
Table 5.2 The Effect of a Returnee CEO on Post-IPO One-year Operating Performance by OLS and Instrument Variable.....176
Table 5.3 Returnee CEO and Post-IPO One-year Operating Performance in Propensity-matched Sample by OLS 177
Table 5.4 Returnee CEO Origin, Legal Institution, and National Culture in Propensity-matched Sample.....178
Table 5.5 Returnee CEO and VC Origin Match 179
Table 5.6 Returnee CEO Origin and VC Origin Match.....181
Table A5.1.....183
Table 6.1 Summary Statistics.....219
Table 6.2 Returnee CEOs and Foreign IPOs (China Mainland, US or HK).....220
Table 6.3 Returnee CEOs and Foreign IPOs: Moderating Effects by High-tech Industry and Muddy Water Research.....221
Table 6.4 Returnee CEOs and Foreign IPO Underpricing.....223
Table 6.5 Returnee CEOs and Foreign IPOs: Subsample tests by Founder CEOs, Chairman CEOs, and both Founder and Chairman CEOs. 224
Table 6.6 Chairman, CFO, Other Senior Executives and Foreign IPOs.....225
Table A6.1.....226

List of Figures

Figure 4.1 Growth Rates of New Returnees and New Returnee CEOs 110
Figure 4.2. Returnee CEOs Appointment Frequency 110
Figure 4.3 Returnee CEOs Appointments by Industry 111
Figure 4.4 Mean CARs around Changes of CEOs.....112
Figure 6.1 Distribution of Foreign IPOs over Time.....218

Chapter 1 Introduction[1]

In the context of the globalization of human capital, this thesis aims to examine the role of CEOs with international experience, known as returnee CEOs, in Chinese capital markets. This thesis makes three main contributions to the finance and entrepreneurship literature.

First, this thesis contributes to the growing literature on the impact of CEOs' experience or characteristics on firm decisions and financial outcomes (Benmelech and Frydman, 2015; Custódio and Metzger, 2013, 2014; El-Khatib et al., 2015; Kaplan et al., 2012; Malmendier and Tate, 2009; Mironov, 2015; Bernile et al., 2017). In particular, this thesis complements and extends the seminal work of Bertrand and Schoar (2003), which documents that managers' person-specific impact can explain a large amount of the unexplained variation in corporate practices, after controlling for firm-level characteristics and industry effects. Quantifying the personal traits of CEOs with international experience, this thesis adds a new dimension to studies of CEO managerial effects and reveals how the international experience of CEOs shapes corporate performance and decisions.

Second, this thesis also makes timely contributions to the research on brain gain in capital markets by revealing how it has impacted legal institutions. Giannetti et al. (2015) argue that directors with foreign experience facilitate the adoption of strong management practices and internationalization that could improve firm productivity and profitability. Masulis et al. (2012) find the advisory capability of foreign directors on cross-border acquisitions to be enhanced by their knowledge of

[1] The references of Chapter 1 are combined with Chapter 2.

foreign markets. In terms of CEO international experience, the literature shows that CEO international experience plays a role in international interdependence (Roth, 1995) and operating firm performance (Carpenter et al., 2001; Certo et al., 2000). Chinese returnee entrepreneurs tend to have accumulated explicit knowledge about technology and foreign markets through their overseas experience, which can bring about advantages in terms of high-tech firm innovation, high-tech industry development, and exportation and entrepreneurial decisions (Liu et al., 2010; Filatotchev et al., 2009; Filatotchev et al., 2011; Kenney et al., 2013; Lin et al., 2016). I examine the role of returnee CEOs in firm performance, post-IPO performance and foreign IPO choice with considering the weak institutions, and provide evidence that fit of CEO characteristics and institutional environment is vital, and then explain the benefits of brain gain depend on both macro and micro institutions.

Finally, this thesis adds to the literature on the relationship between cross-border institution differences and financial markets in entrepreneurship studies. The literature largely focuses on the impact of institutional differences on the implementation of corporate strategies (Estrin et al., 2009; Meyer et al., 2009; Moore et al., 2012). Glynn and Abzug (2002) further point out that the host country's institution can influence the behavior of foreign countries after entering the host country. Kwok and Tadesse (2006) provide evidence that multinational companies could shape the legal institutions of host countries. To the best of my knowledge, this thesis is the first to provide evidence that cross-border differences in the legal institutions of host countries and home countries play an important role in home countries through international human capital movement.

The thesis consists of seven independent chapters, in addition to the introduction chapter, which study the role of returnee CEOs in China. The Chapter 1 introduce the whole thesis.

In Chapter 2, "The Role of Returnees in Business: A Review", I review the literature about returnees in China, and note that returnees have played an important role in society since the 1840s. Returnees contribute to modern business through facilitating knowledge transfer, increasing innovation, boosting productivity and ensuring economic growth. The evidence from other countries and the disadvantages of returnees are also discussed.

In Chapter 3, "Returnees' Influences on China: A Business Perspective (1840s to 1940s)", I review the important role played by returnees in business in China from the 1840s to the 1940s in order to delineate a complete picture of the role of returnees. By analyzing cases of a number of representative returnees in various industries, I summarize their charateristics and the contributions they have made to the advancement of modern business in China, such as the application of new technologies to boost productivity, their focus on R&D and the training of employees, and the implementation of modern management systems.

In Chapter 4, "Returnee CEOs under Weak Institutions: Blessing or Curse?", I study the impact of returnee CEOs' appointment on the performance of listed firms in China. Based on a sample of 2,847 CEO appointments in China, I find that Chinese returnee CEOs are associated with inferior performance, lower market reactions to appointment announcements and an adverse regulatory environment. I argue that CEOs' international expertise is acquired at the opportunity cost of local

social capital, such as political and business ties, which is more critical than expertise in transition economies with weak legal institutions. The negative effect disappears when social capital is acquired, regional legal institutions are strong or returnees' international expertise is in demand.

In Chapter 5, "Legal Enforcements and Institutional Transition of Chinese Entrepreneurial Firms*:* Evidence from Returnee CEOs*"*, I focus on newly public entrepreneurial firms, and examine the role of returnee CEOs in firms that are in a transition period. I argue that returnee CEOs possess tacit knowledge of foreign advanced legal institutions, which can help entrepreneurial firms overcome the formalization challenges they face in getting listed. Based on data from 355 newly public Chinese entrepreneurial firms, I find that returnee CEOs, especially those who have returned from countries with advanced legal institutions, are associated with superior post-IPO performance. In addition, the positive impact is more pronounced in foreign venture capitals (VCs) backed firms, especially when both VCs and CEOs are from countries with advanced institutions.

In Chapter 6, "Does Overseas Experience of CEOs Determine the Listing Location of Chinese Entrepreneurial Firms?", I examine the managerial decisions for returnee CEOs in entrepreneurial firms for listing on Growth Enterprise Markets. Using a sample of IPOs of Chinese entrepreneurial firms in mainland China, the US and HK, I show that Chinese entrepreneurial firms with returnee CEOs, especially those operating in high-tech industries, are likely to undertake foreign IPOs. However, the credibility crisis for Chinese firms impedes the decision by entrepreneurial firms with returnee CEOs to undertake foreign IPOs.

In Chapter 7, I conclude the whole thesis.

Chapter 2 The Role of Return in Business: A Review[2]

Abstract

In recent years, a growing number of overseas Chinese students and immigrants return to China to take advantage of the development opportunities by engaging business. Their roles in business receive increasing attention from policy makers, the media and scholars. This chapter intends to provide a review of the relevant literature. I note that returnees have started playing an important role in the society since 1840s. Returnees contribute to the modern business through facilitating knowledge transfer, increasing innovation, boosting productivity and ensuring economic growth. The evidence from other countries and the disadvantages of returnees are also discussed.

[2] This chapter has been accepted as chapter 3 of *Entrepreneur and Talent Management from a Global Perspective* that is published by Edward Elgar.

2.1 Introduction

With the development and increasing importance of a number of developing countries, a growing number of immigrants or international students started returning to their home country in order to explore the opportunity by establishing business as returnee entrepreneurs (Kapur, 2001). Recent studies show that returnees have gained significance in their home countries (Dai and Liu, 2009; Filatotchev et al., 2009; Lin, et al., 2014; Liu, et al., 2010b; Liu et al., 2014; Pruthi, 2014; Wright et al., 2008). Such a trend of "brain gain" mitigates the concern of the phenomena of "brain drain" observed in early days when the talents from developing countries were attracted to developed countries (Bhagwati and Hamada, 1974). With the trend of "brain gain", Chinese returnees play a key role in linking China to the world (Wang et al., 2011).

In modern China, from the first overseas student in 1841 to 413,900 overseas students in 2013, China had overtaken India becoming the largest origin of international students. With an increasing number of returning overseas Chinese, Chinese returnees made a great contribution to the development of society, economy and business. For example, from Xinhai Revolution in 1911 to the establishment of People's Republic of China, returnees launched and led the China's social change. In addition, the reform of the Chinese economy in 1978 and the establishment of the capital market in 1990 were led by returnee as well. The Chinese government launched a series of policies to attract overseas talents returning since returnees could bring the benefits in the past decades. For example, 'Cheung Kong Scholars Programme', 'Recruitment Program of Global Experts' and 'Recruitment Program of

Global Experts' were implemented in 1998, 2008, 2011, respectively, intending to support overseas talents to contribute to the innovation of the academic and the business. Relying on survey data, Wadhwa et al. (2011) find that the government incentive is very important for the return of Chinese overseas talents. Accordingly, these policies could motivate the returning of overseas talents with the higher education. Wang and Lu (2012) document that among returnees 36.1% has postgraduate degrees and 35.5% has PhD degrees. The increasing importance of returnees has stimulated research interest, and there is a growing number of studies on this topic.

From the historical perspective during 1840s to 1940s, returnee entrepreneurs contribute to the nation's industrialization and the nation's business through applying the advanced technology and the management mode as well as focusing on the R&D and the employees training (Wang et al., 2014).

In addition to the historical perspective, returnees also contribute to the modern business by bringing expertise or technology from other countries to China. For example, returnees have a positive impact on firm innovation (Liu et al., 2010; Filatotchev et al., 2011), growth (Wright et al., 2008), and operating performance (Filatotchev et al., 2009; Giannetti, et al., 2014). The evidence of other countries is consistent with China's studies. However, due to the underdeveloped institutions in China (Allen et al., 2005), the "brain gain" through returnees may be acquired at the cost of "resource loss". Duan and Hou (2014) find the supportive evidence that returnees CEOs underperform local CEOs in the listed firms due to the lack of local resources. Li et al. (2012) find the returnee entrepreneurs underperform native entrepreneurs in the technology ventures.

This chapter reviews the previous literature studying returnees and contributes to the existing literature in several ways. First, I systematically review the existing literature that is related to returnees and talents mobility in China. Second, I not only discuss the role of returnee in business, but note that returnees contribute to the innovation of academia for their home country. Third, I extend the discussion of the role of returnees to other countries.

The rest of this chapter proceeds as follows. Section 2 discusses history and institutional background. Section 3 reviews and discusses the literature about the role of returnees. Section 4 concludes.

2.2 History and Institutional Background

Returnees play an important role in the development of society in the modern China. The first overseas student of the modern China could be traced back to 1850. Rong Hong, the father of overseas students, attended Yale University in the US. After graduation, he returned China and led the "Westernization Movement". The movement helped the Qing Dynasty start learning from the West in developing industries and education. In addition, in 1872, the Qing dynasty started to dispatch youth to study overseas with the advice of Rong Hong.

Along with the large-scale trend for Chinese studying abroad, a large number of overseas Chinese returned to China and contributed to the development of the Chinese society in the following century, especially three large leaps. First, in 1911, the Xinhai revolution led by Sun Yat-sen, a returnee from Japan, overthrew China's imperial rule of 2000 years. Second, the People's Republic of China was established by a batch of returnees in 1949. More specifically, 6 out of 10 founding marshals

were returnees. Third, the reform and opening-up in 1978 was led by Xiaoping Deng who returned China from France. The reform establishes the independent role of the market and introduces the market economy.

In addition to three large leaps for the development of society in modern China, returnees also contribute to the development of China's modern business and the capital market, especially after 1978. For example, the establishment of the Chinese capital market was launched in 1990 by 8 returnees from the US, which accelerated the development of Chinese enterprises, and offered returnee CEOs opportunities to use their expertise and experience. They acted as the 'pushing hand' in developing corporate governance and corporate strategic management and bringing experiences and expertise from foreign mature stock markets to China.

Since returnees play an important role in the modern China, the Chinese government launches a series of policies to support and attract overseas Chinese. For example, the "Recruitment Program of Global Experts" was launched in 2008 by the Organization Department of the Communist Party in order to attract and support overseas outstanding Chinese to enhance innovation in enterprises and academia. The program intended to recruit approximately 2000 experts (including university professors, corporate top executives, and other technology- or innovation-oriented talents) with overseas PhD degrees within five to ten years. The Chinese government also offers favourable treatments in terms of registered residences (*hukou*), residence permits (for foreigners), a premier medical service, social security for the spouses and children of returnees, and even allows returnees to buy real estate without restrictions.

2.3. Review and Discussion

Previous literature has widely explored the role of returnees in the business, ranging from the historical perspective to their impact on modern business in China. In particular, an increasing number of studies has examined the impact of international experience of returnees on the modern business not only in China, but also in other countries such as India, Argentina. In addition, returnees in developed countries, such as the US, also play a role in the business (Roth, 1995; Daily et al., 2000; Carpenter et al., 2001), but the perspective of these studies focus on the international working experience which could facilitate firms obtain the information about foreign markets.

2.3.1 Historical Perspective

During 1840s to 1940s, China started to learn from western countries and accelerated the nation's industrialization. Returnees helped the nation's industrialization to take-off with bringing back the advanced technology and ideology from foreign countries which had completed the industrialization revolution. Wang et al. (2014) conduct the case studies that include several industries with a number of representative returnees, and subsequently analyse the role of returnees in the development of the nation's industrialization during 1840s to 1940s. They find that returnee entrepreneurs apply the advanced technology and the management mode to boost productivity, and focus on R&D and employees' training.

2.3.2 The impact of returnees on Chinese listed firms

As the largest emerging market, the role of returnees in the Chinese capital market is a debatable issue. Giannetti, et al. (2014) argue that the expertise of board

directors is valuable to firms and find that the proportion of board directors with international experience is associated with the higher profitability and the higher productivity in listed firms. In addition, the proportion of board directors with international experience is positively associated with firm internationalization. However, although returnees are expected to add value to firms with their knowledge and expertise, they still have weaknesses, such as the lack of local resources due to their absence from the home-country environment for a period of time when living in foreign countries (Li, et al., 2012; Obukhova, Wang and Li, 2012; Lin et al., 2014). By testing the competing hypothesis from expertise- and resource-perspective, Duan and Hou (2014) find that returnee CEOs underperform local CEOs by ROA, ROS and market-to-book ratio, and such underperformance is driven by the overseas working experience. The possible explanation for their underperformance is that returnee CEOs are less likely to appoint politically connected executives to compensate their weaknesses. Returnee CEOs are also more likely to adopt aggressive corporate strategies due to the overconfidence.

In addition to the Chinese capital market, international experience which constitutes the representative feature of returnees, has been confirmed to have a positive effect on firm performance in the US capital market (Roth, 1995; Daily et al., 2000; Carpenter et al., 2001) since they are familiar with foreign markets. More specifically, Roth (1995) and Daily et al. (2000) find that CEO international working experience has a positive effect on ROA, ROI, and Market-to-Book ratio. Moreover, they further test that CEOs with international working experience could positively affect ROA, ROA and market-to-book ratio if the degree of firm internationalization is high. From the perspective of multinational firms, Carpenter et al. (2001) find that

U.S. multinational companies performed better with CEOs with international assignment experience through using ROA and stock return to proxy firm performance. Their findings support the resource- and dynamic capability-based theory. In addition, as the compensation to CEOs with international experience, these CEOs receive the higher salary.

2.3.3 The impact of returnees on small Business

Although returnees are expected to carry technical expertise, managerial and entrepreneurial skills acquired in developed countries, Kenney et al. (2013) question the importance of returnees for igniting the take-off of the ICT (information and communications technology) industry in India, China and Taiwan in that most returnee entrepreneurs only returned after the success had been achieved by local entrepreneurs. Therefore, returnee entrepreneurs only contributed to the subsequent expansion phase of the industry rather than serving as the critical factor in the early formation and development of the ICT industry. Contrary to the impression of returnees, they are more beneficiaries of home nation development rather than initiators of the change. Almeida and Kogut (1999) and Song et al. (2003) note the importance of the talent mobility in helping emerging economies to catch up by adopting advanced technology through human mobility.

Specific to China, seeing the benefits brought about by returnees, the Chinese government launched a series of talent schemes to encourage overseas Chinese talents return to the home country. Cheung Kong Scholars Programme attracted new faculty members from overseas reputable universities, typically the overseas alumni, and provided critical academic resources for Chinese universities. Li et al. (2014) find the alumni returnee scholars as faculty tend to publish in journals with a higher

impact than non-alumni returnee ones. However, returnee scholars exhibit decrease in international collaboration.

In addition to the impact of returnees on Chinese higher education, existing research has found that returnees act as a new channel for international knowledge spillovers and also contribute to the innovation of Chinese entrepreneurial firms (Filatotchev et al., 2011; Liu et al., 2010a; 2010b; Obukhova, 2012b). The findings from these studies show that returnee entrepreneurs positively affect the innovative activities of local firms through knowledge spillovers, and the presence of returnee-owned firms helps to enhance the technological capabilities of other local firms (Filatotchev et al., 2011). The technology gap between returnee-owned firms and non-returnee firm strengthens the positive impact of returnee-owned firms on the innovation of local firms based on a sample of SMEs in Zhongguancun Science Park (ZSP) in Beijing (Liu et al., 2010b). These studies suggest that returnees, as "knowledge brokers", facilitate knowledge flows and stimulate innovation in emerging economies due to their dual exposure to the home and host countries. By transferring knowledge to local engineers, returnee entrepreneurs have a positive impact on the emergence of technological clusters in China (Obukhova, 2012b).

In addition, returnee entrepreneurs also contribute to firm performance and employment growth. By analysing high-tech Small- and Medium-sized Enterprises (SMEs), Wright et al. (2008) investigated how returnees choose locations for starting their new venture and how their location choices subsequently affect firm performance (Wright et al., 2008). The findings indicate that returnee entrepreneurs with knowledge advantage proxied by the number of patents they transferred from abroad tend to locate in non-university science parks, while those with previous start-

up experience abroad choose university science parks to start their business. Moreover, the firms set up by returnee entrepreneurs in non-university science parks enjoy stronger employment growth, and those with commercial experience abroad perform better in university science parks. The empirical evidence confirms the view that returnee entrepreneurs seek complementarity concerning their location choices in the home country and have a positive effect on employment growth on their firms located in non-university science parks. Also focusing on SMEs in science parks, Filatotchev et al. (2009) find that returnee entrepreneurs are associated with the higher export orientation and the better export performance. Liu et al., (2014) examine the impact of the learning capabilities of returnee entrepreneurs on firm performance. They found that experiential and vicarious learning help enhance firm performance, whereas vicarious learning is positively associated with employment growth. Firm age weakens reduces the impact of vicarious learning on employment growth. By examining the interrelationship between returnee entrepreneurs' learning capabilities and firm age, their research indicates that the impact of returnees' learning capabilities is contingent on organizational contexts.

Relatedly, Batjargal (2007) finds that the interaction of social capital and Western overseas experience of entrepreneurs help to increase the chance of survival of Internet firms based on the Internet ventures in an earlier sample period,. The overseas experience brings returnee entrepreneurs benefits in sparse networks which help to connect different clusters, regions and countries. For entrepreneurial firms in the IPO that is the transition period from the private to the public, Cumming et al. (2014) find that returnee CEOs outperform local CEOs in terms of IPO performance and post-IPO performance.

However, Li et al. (2012) find that the new technology ventures managed by returnee entrepreneurs underperform those managed by native entrepreneurs. Lin et al. (2014) use the survey data from the Zhongguancun Science Park and find that SMEs with returnee CEOs are not more innovative than those with native CEOs. Obukhova (2012a) uses the survey data of Shanghai's semiconductor-design industry and finds that the role of brokers for returnee entrepreneurs is insecure when they launched firms in the home country. These mixed empirical findings may imply that returnees have weaknesses due to their absence from the home-country environment for a period of time when living in foreign countries. They may encounter cultural shock, and face considerable difficulties in adjusting to China's under developed institutional environment (Li, et al., 2012; Obukhova et al., 2012; Lin et al., 2014; Zhou and Hsu, 2011). Some earlier studies may have overestimated the advantages of returnees.

From the perspective of other counties, returnees also play an important role in the innovation. For example, Alnuaimi et al. (2012) examine to extent to which labour mobility promotes innovation in India. Indian firms can hires new inventors from abroad and some of them could be returnees. The impact of their patents is higher in comparison to inventors hired from other Indian organisations. Jonkers and Cruz-Castro (2013) examine the collaboration patterns and outputs upon return of the Argentinean returnee scholars, and find the overseas experience indeed increases the propensity to publish in journals with a higher impact. A big proportion of such publications are made without having international co-authorship. Gibson and McKenzie (2014) survey the migration outcomes and scientific productivity of researchers from small Pacific Islands countries. Although the overseas scholars

from these countries have better access to research funds and more active scientific networks, they find the return rates of overseas scholars are 5-8 times larger than previous results (e.g. Gaule, 2011). Also using the survey data, Scellato et al. (2014) find that returnees and foreign born scientists are associated with the larger international research networks comparing with native scientists across sixteen countries.

2.4 Conclusion

This chapter mainly reviews the role of returnees in China, and furthermore expanding the discussion to other countries. Since returnees play an important role in the development of society and business in modern China, the Chinese government launches a series of programmes to attract and support returnees playing a role. By reviewing a large number of studies for returnees across various issues, I conclude that returnees are associated with a high level of innovation (Liu et al., 2010; Filatotchev et al., 2011), higher growth (Wright et al., 2008), and better export performance (Filatotchev et al., 2009; Giannetti, et al., 2014). However, some scholars have suggested that returnee entrepreneurs have disadvantages due to their exit from the home-country environment for a period of time when living in foreign countries. Returnees may suffer from the liability of 'outsiderness' and a lack of local connections as well as difficulties in cultural readjustment (Li, et al., 2012; Lin et al., 2014). The underdeveloped institutional environment in China may exacerbate difficulties and challenges facing returnees when operating in China (Duan and Hou, 2014; Li et al., 2012). This may explain why returnees underperform locals and imply that the "brain gain" through returnees may be associated with the cost of

"resource loss". Thus, I call for more studies taking account of both the advantages and disadvantages of returnees and interactions between returnees and the local institutional context in their home country.

References

Allen, F., Qian, J., & Qian, M. (2005). Law, finance, and economic growth in China. *Journal of Financial Economics*, *77*(1), 57-116.

Almeida, P., & Kogut, B. (1999). Localization of knowledge and the mobility of engineers in regional networks. *Management Science*, *45*(7), 905-917.

Alnuaimi, T., Opsahl, T., & George, G. (2012). Innovating in the periphery: The impact of local and foreign inventor mobility on the value of Indian patents. *Research Policy*, *41*(9), 1534-1543.

Batjargal, B. (2007). Internet entrepreneurship: social capital, human capital, and performance of internet ventures in China. *Research Policy*, *36*(5), 605-618.

Benmelech, E., & Frydman, C. (2015). Military CEOs. *Journal of Financial Economics*, 117, 43-59.

Bernile, G., Bhagwat, V., & Rau, P. R. (2017). What doesn't kill you will only make you more risk-loving: Early-life disasters and CEO behavior. *Journal of Finance*, 72(1), 167-206.

Bertrand, M., & Schoar, A. (2003). Managing with style: The effect of managers on firm policies. *Quarterly Journal of Economics*, 118(4), 1169-1208.

Bhagwati, J., & Hamada, K. (1974). The brain drain, international integration of markets for professionals and unemployment: a theoretical analysis. *Journal of Development Economics*, 1(1), 19-42.

Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling human capital with organizational context: The impact of international assignment experience on multinational firm performance and CEO pay. *Academy of Management Journal*, 44(3), 493-511.

Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling human capital with organizational context: The impact of international assignment

experience on multinational firm performance and CEO pay. *Academy of Management Journal*, *44*(3), 493-511.

Cumming, D., Duan, T., Hou, W. & Rees, W. (2014). Does Overseas Experience Matter? A study of returnee CEOs and IPOs of Chinese entrepreneurial firms. *Working Paper*. University of Edinburgh.

Custódio, C., & Metzger, D. (2013). How do CEOs matter? The effect of industry expertise on acquisition returns. *Review of Financial Studies*, 26(8), 2008-2047.

Dai, O., & Liu, X. (2009). Returnee entrepreneurs and firm performance in Chinese high-technology industries. *International Business Review*, 18(4), 373-386.

Daily, C. M., Certo, S. T., & Dalton, D. R. (2000). International experience in the executive suite: the path to prosperity?. *Strategic Management Journal*, 22(4), 515-523.

Daily, C. M., Certo, S. T., & Dalton, D. R. (2000). International experience in the executive suite: the path to prosperity?. *Strategic Management Journal*, *21*(4), 515-523.

Duan, T., & Hou, W. (2014). Returnee CEOs: Blessing or curse?. *Working Paper*. University of Edinburgh.

El-Khatib, R., Fogel, K., & Jandik, T. (2015). CEO network centrality and merger performance. *Journal of Financial Economics*, 116(2), 349-382.

Estrin, S., Baghdasaryan, D., & Meyer, K. E. (2009). The impact of institutional and human resource distance on international entry strategies. *Journal of Management Studies*, *46*(7), 1171-1196.

Filatotchev, I., Liu, X., Buck, T., & Wright, M. (2009). The export orientation and export performance of high-technology SMEs in emerging markets: The effects of knowledge transfer by returnee entrepreneurs. *Journal of International Business Studies*, *40*(6), 1005-1021.

Filatotchev, I., Liu, X., Lu, J., & Wright, M. (2011). Knowledge spillovers through human mobility across national borders: Evidence from Zhongguancun Science Park in China. *Research Policy*, *40*(3), 453-462.

Giannetti, M., Liao, G., & Yu, X. (2014). The Brain Gain of Corporate Boards: Evidence from China. *Journal of Finance,* forthcoming.

Giannetti, M., Liao, G., & Yu, X. (2015). The brain gain of corporate boards: Evidence from China. *Journal of Finance*, *70*(4), 1629-1682.

Gibson, J., & McKenzie, D. (2014). Scientific mobility and knowledge networks in high emigration countries: evidence from the Pacific. *Research Policy*, forthcoming.

Glynn, M. A., & Abzug, R. (2002). Institutionalizing identity: Symbolic isomorphism and organizational names. *Academy of Management Journal*, *45*(1), 267-280.

Jonkers, K., & Cruz-Castro, L. (2013). Research upon return: The effect of international mobility on scientific ties, production and impact. *Research Policy*, *42*(8), 1366-1377.

Kaplan, S. N., Klebanov, M. M., & Sorensen, M. (2012). Which CEO characteristics and abilities matter?. *Journal of Finance*, 67(3), 973-1007.

Kapur, D. (2001). Diasporas and technology transfer. *Journal of Human Development*, *2*(2), 265-286.

Kenney, M., Breznitz, D., & Murphree, M. (2013). Coming back home after the sun rises: Returnee entrepreneurs and growth of high tech industries. *Research Policy*, *42*(2), 391-407.

Kwok, C. C., & Tadesse, S. (2006). The MNC as an agent of change for host-country institutions: FDI and corruption. *Journal of International Business Studies*, 37, 767-785

Li, F., Miao, Y., & Yang, C. (2014). How do alumni faculty behave in research collaboration? An analysis of Chang Jiang Scholars in China. *Research Policy*, forthcoming

Li, H., Zhang, Y., Li, Y., Zhou, L., & Zhang, W. (2012) Returnees versus locals: Who perform better in China's technology entrepreneurship? *Strategic Entrepreneurship Journal*, 6, 257-272.

Lin, D., Lu, J., Liu, X., & Choi, S. J. (2014). Returnee CEO and innovation in Chinese high–tech SMEs. *International Journal of Technology Management*, 65(1), 151-171.

Lin, D., Lu, J., Liu, X., & Zhang, X. (2016). International knowledge brokerage and returnees' entrepreneurial decisions. *Journal of International Business Studies*, *47*(3), 295-318.

Liu, X. Wright, M. & Filatotchev, I. (2014), 'Learning, firm age and performance: An investigation of returnee entrepreneurs in Chinese high-tech industries', *International Small Business Journal,* Forthcoming.

Liu, X., Lu, J., Filatotchev, I., Buck, T., & Wright, M. (2010a). Returnee entrepreneurs, knowledge spillovers and innovation in high-tech firms in emerging economies. *Journal of International Business Studies*, *41*(7), 1183-1197.

Liu, X., Wright, M., Filatotchev, I., Dai, O. & Lu, J. (2010b), Human mobility and international knowledge spillovers: Evidence from high-tech small and medium enterprises in an emerging market', *Strategic Entrepreneurship Journal*, 4(4), 340-355.

Malmendier, U., & Tate, G. (2009). Superstar CEOs. *Quarterly Journal of Economics*, *124*(4), 1593-1638.

Masulis, R. W., Wang, C., & Xie, F. (2012). Globalizing the boardroom—The effects of foreign directors on corporate governance and firm performance. *Journal of Accounting and Economics*, *53*(3), 527-554.

Meyer, K. E., Estrin, S., Bhaumik, S. K., & Peng, M. W. (2009). Institutions, resources, and entry strategies in emerging economies. *Strategic Management Journal*, 30(1), 61-80.

Mironov, M. (2015). Should one hire a corrupt CEO in a corrupt country?. *Journal of Financial Economics*, *117*(1), 29-42.

Moore, C. B., Bell, R. G., Filatotchev, I., & Rasheed, A. A. (2012). Foreign IPO capital market choice: Understanding the institutional fit of corporate governance. *Strategic Management Journal*, 33(8), 914-937.

Obukhova, E. (2012a). Why not all sea-turtles become brokers: The conflict between category membership and brokerage among returnee-firms in China. *Available at SSRN 1833573.*

Obukhova, E. (2012b). The Role of Returnee-Entrepreneurs in Cluster Emergence: The Case of Shanghai's Semiconductor-Design Industry. *Available at SSRN 2066864*.

Obukhova, E., Wang, Y. & Li, J. (2012), The power of local networks: Returnee entrepreneurs, school ties, and firm performance', *Working Paper*, MIT Sloan School of Management.

Pruthi, S. (2014) 'Social ties and venture creation by returnee entrepreneurs', *International Business Review*, 23(6), 1139-1152.

Roth, K. (1995). Managing international interdependence: CEO characteristics in a resource-based framework. *Academy of Management Journal*, 38(1), 200-231.

Scellato, G., Franzoni, C., & Stephan, P. (2014). Migrant scientists and international networks. *Research Policy*, forthcoming.

Song, J., Almeida, P., & Wu, G. (2003). Learning–by–Hiring: When Is Mobility More Likely to Facilitate Interfirm Knowledge Transfer?. *Management Science*, *49*(4), 351-365.

Wadhwa, V., Jain, S., Saxenian, A., Gereffi, G., & Wang, H. (2011). The Grass is Indeed Greener in India and China for Returnee Entrepreneurs: America's New Immigrant Entrepreneurs–Part VI. *Available at SSRN 1824670*.

Wang, H. & Lu, J. (2012). Annual Report on Chinese Returnee Entrepreneurship. Social Sciences Academic Press (China), Beijing.

Wang, H., Duan, T., & Hou, W. (2014). Returnees' Influences on China: A Business Perspective (1850s to 1940s). *Working Paper*, available at SSRN 2424383.

Wang, H., Zweig, D., & Lin, X. (2011). Returnee Entrepreneurs: impact on China's globalization process. *Journal of Contemporary China*, *20*(70), 413-431.

Wright, M., Liu, X., Buck, T., & Filatochev I. (2008). Returnee entrepreneurs, science park location choice and performance: An analysis of high-technology SMEs in China. *Entrepreneurship, Theory and Practice*, 32(1), 131-155.

Zhou, Y. and J.Y. Hsu (2011), 'Divergent engagements: roles and strategies of Taiwanese and mainland Chinese returnee entrepreneurs in the IT industry', *Global Networks*, 11(3), 398–419.

Chapter 3 Returnees' Influences on China: A Business Perspective (1840s to 1940s)

Abstract

Since the first Chinese student, Yung Wing, studied abroad in 1847, large waves of Chinese have followed his lead, aiming to study advanced technology and ideologies, with the mission to save their backward country. This chapter discusses the benefits and changes of this overseas experience for the students, and reviews the important role played by the returnees in the nation's industrialization. By analyzing the cases of a number of representative returnees in various industries, I summarize their features and the contributions they have made to the advancement of modern business in China, such as the application of new technologies to boost productivity, the focus on R&D and the training of employees, and the implementation of modern management systems.

3.1 Introduction

With as many as 340,000 Chinese students studying in foreign countries in 2011, China has become the largest country of origin of overseas students in the world. When the students return to China after graduation, they are known as 'returnees' or '*haigui* (海归)'. Returnees have played a very important role in society. For example, Sun Yat-sen, the Father of the Republic of China, Zhou Enlai and Zhu De, the main founders of the People's Republic of China under Mao Zedong, and Deng Xiaoping, the 'Chief architect' of Chinese economic reform and the opening-up policy, are all returnees. Returnees are believed to use their expertise acquired from their international experience to contribute to the modernization of China, through revolution, reforms and the development of technology. Despite the importance of the Chinese returnees, their role in business history has not been examined. This chapter aims to shed light on this issue.

In the 19th century, China was very backward as a result of the isolation policy of the Qing dynasty, and foreign products dominated the domestic market because modern national industry had not yet been developed. The situation began to change as Chinese overseas graduates returned to China in the late 19th century to lead the development of modern business practices. The returnees brought back advanced technology and new business modes after studying various subjects in the developed western countries, thus making a great contribution to the development of the national industry and the modern business of China.

The first Chinese overseas higher education student dates back to 1847. With the help of American missionary Samuel Robbins Brown (1810-1880), Yung Wing

(Rong Hong or 容闳，1828-1912), commonly known as the 'Forefather of Chinese Overseas Students', left the isolated 'Middle Kingdom' to study in America (Yung, 1909). His fellow classmates, Wong Shing (黄胜, 1827-1902) and Wong Kuan (黄宽，1829-1878), from the Morrison Memorial School joined him to study abroad as well. Advocated by Yung Wing, the unprecedented state-sponsored study abroad program, named the China Educational Mission (CEM), of the Qing dynasty later dispatched 120 young male Chinese students to study in America from 1872 to 1875, marking the inception of waves of students studying abroad in modern times. Around the same time, prompted by a series of military defeats, the Qing government also sent nearly 100 students to Europe to study naval warfare.

As for the first group of returnees, the three of them made their marks in different areas, and promoted China's modernization on their return. Wong Shing became an editor, writer, translator, publisher and educator, and is commonly regarded as the forerunner of the modern Chinese newspaper industry. In 1858, he launched the first Chinese newspaper, *Sino-Foreign Gazette* (中外新报), in Hong Kong. In 1871, he cofounded the China Printing Company (中华印务总局), the first printing company to be created by Chinese founders in modern Chinese history. The books they produced played an important part in China's early cultural exchanges with the outside world (Xisuo Li, 2009a: 46-48).

Wong Kuan joined the University of Edinburgh to study medicine, and became the first Chinese person to receive a doctorate in medicine. After he returned to China, apart from running hospitals and medical schools, he also set up the first western clinic in China in 1860. Under Wong Kuan's influence, the western hospital

system, medicine, medical education, and medical research began to take root and spread in China (Xisuo Li, 2009a: 49).

Yung Wing, the first Chinese person to receive a degree from a western university, became an educator and a senior advisor to the Qing dynasty. Yung was a staunch supporter of capitalism and economic modernization. Employing his political clout, he earnestly pushed for the learning of American science and technology, the establishment of a banking system, the founding of shipping companies, and the building of mines and factories. To put his ideas for building key modern industries for China into practice, Yung went back to America to purchase industrial equipment at Zeng Guofan's[3] request (Jiansheng Xu, 2011: 9). With the equipment bought by Yung, the Jiangnan arsenal (江南制造总局), the supreme arsenal of the late Qing dynasty and one of the early modern industrial bases in China, was established in 1865.

In terms of the development level of countries such as the US, the UK, and Japan in that period, they had already experienced the industrial revolution. Both their societies and their technology enjoyed dramatic development as a result. Firstly, the ideology of the society in such countries had developed from the 'divine right of kings' to one of freedom and republic. The new ideology provided a precondition for change in society, and subsequently laid a foundation for the development of modern science and technology. Secondly, the application of the modern machine raised productivity and improved work efficiency. For example, in the UK during the 18th century, steam heating technology was widely applied in the cotton textile industry

[3] Zeng Guofan was the officials of Qing dynasty and the representative officials of westernizationists.

(Tann, 1973), and sewing machines in the clothing industry (Godley, 1995). Thirdly, university disciplines were greatly expanded. For example, business programs were launched in the late 19th century to teach the efficient operation of modern firms. Finally, the development of the modern city changed people's lifestyles. For example, high-rise buildings started to appear in the late 19th century in the US, and the private car made daily life more convenient. In contrast, China did not keep pace with the western countries' industrial revolution as the Qing dynasty adopted an isolation policy. As a result, China's development in many aspects fell far behind western countries'.

Overseas Chinese students were shocked by the development gap between western countries and their home country, and were therefore determined to acquire the advanced ideologies and technology they learned there to revitalize China. The waves of Chinese students studying abroad bore the clear imprint of the prevailing national strategy of the time, namely, the 'Self-strengthening Movement'. This referred to an internal reform of the economy and technology, driven by the westernizationists of the Qing dynasty, with the objective of 'self-strengthening' and 'wealth seeking'. Although the 'Self-strengthening Movement' did not prevent the fall of the Qing dynasty, it still opened the way for and advanced the modernization of China, laying the foundations for national capitalism. Despite their relatively small numbers, the early returnees played a key role in creating and developing China's early mining, transportation, telegraph and defense industries.

Previous studies on returnees have largely focused on returnees' contributions to China from political, social, cultural, and educational angles (Zweig, Chen, and Rosen, 2004; Han and Zweig, 2010; Zweig and Wang, 2013), though attempts have

been made to examine contemporary returnees' roles in China's economic development (Duan and Hou, 2014; Liu et al., 2010). This chapter adds a historical perspective to this important issue and aims to examine the differences in business mode development between returned and domestic entrepreneurs, and to discuss how the returned entrepreneurs have contributed to modern business through their expertise and experience during the periods of the late Qing dynasty and the Republic of China.

I specifically focus on the national industry development by examining the role of returnees in various industries. From the analysis of the characteristics of returnee-operated businesses, I summarize three major contributions they have made. First of all, returnee entrepreneurs tend to be experts in their industries and therefore put more effort into research and development (R&D). For example, Fan Xudong, known as the king of salt and sodium carbonate, studied chemistry in Japan and subsequently established the first national soda factory (Di, 2005; Xiong, 2011). Secondly, returnee-managed companies try to establish industrial chains in order to obtain raw materials of good quality at a lower cost. For example, Mu Ouchu, China's cotton textile tycoon, a returnee from the US, imported cotton seeds from the US in order to produce quality cotton (Wu, 2011). Thirdly, returnee entrepreneurs are typically willing to provide support to their employees for studying or training overseas, in order to cultivate and retain their talent pool. For example, Fan Xudong's enterprises selected and dispatched talented employees to study chemistry in the US (Di, 2005). Last but not least, returnees have brought back and implemented new management systems, such as Taylor's scientific management

method[4] that promotes efficiency, and modern accounting systems such as the double-entry bookkeeping approach. Nelson (1974) shows that the application of Taylor's scientific management laid the foundation for 'scientific management' and boosted efficiency and productivity. Boyns and Edwards (1997) emphasize that the double-entry bookkeeping system was already the bedrock of financial accounting in western countries when it was brought to China. Both systems contributed to the modernization of management in China.

The rest of this chapter proceeds as follows. Section 2 discusses the influence of the overseas study experience on Chinese returnees. Section 3 reviews the ideology and practice of saving the nation through industrialization and the inputs of returnees. Sections 4, 5, and 6 analyze cases of a number of representative returnee entrepreneurs in light, heavy, and service industries, respectively. Section 7 concludes.

3.2 The Influence of the Overseas Study Experience

Although Chinese students started going abroad to study in the 1840s, Japan did not become the main destination until the beginning of the 20th century (L. Liu and Sun, 2009). After the Sino-Japan war in 1895, the Qing dynasty started to consider making reforms to save the nation (Sanetou, 2012). Consequently, the Qing dynasty dispatched a group of students to study social reform and technology in Japan, in order to catch up with that country, which had developed rapidly since the 'Meiji Restoration'. Sanetou (2012) points out that the language, culture, and

[4] Taylors' scientific management refers to the promotion of working efficiency and productivity. In order to achieve these targets, Taylor pointed out that employers using special incentives could stimulate workers' enthusiasm greatly.

ideology in Japan were easy for Chinese students to learn, and the lifestyle was also easy for them to adapt to. In addition, it was more convenient and less costly for them to travel between these two neighboring countries. These facts encouraged a large number of Chinese students to study in Japan.

The 'Meiji Restoration' had been launched by the lower-level samurai, and had subsequently overthrown the feudal dynasty of the high-level samurai in Japan. In essence, it had been a revolution carried out to establish a new regime and a new social system. The revolution had not only encouraged Japan to learn advanced science and technology from western countries, but had also advocated western ideologies, starting with the translation of western publications. Chinese overseas students in Japan thus had opportunities to gain exposure to these new ideologies about revolution and capitalism, which had led to Japan's national prosperity.

The returnees' study experience in Japan helped to break the conservative ideology in China (L. Liu and Sun, 2009), directly contributing to the ideas of revolution during the enlightenment stage of China's modernization, and cultivating revolutionists such as Huang Xing and Song Jiaoren. As a result, from 1906, the Qing dynasty restricted studying in Japan (L. Liu and Sun, 2009), and students started going to the US instead, sponsored by the refund of 'Geng Zi Indemnity' in 1908.

China was dominated by the feudal emperor, and the development of Chinese society was still lagging far behind the rest of the world. In contrast, the US ideology focused on cultivating a 'public spirit', which gave the Chinese students a new perspective (Ye, 2012: 30), along with democracy and equality. They were very

active in campus activities and accepted the ideology through practice (Ye, 2012: 22). The returnees from the US brought back new thoughts of changing China into a republic.

Meanwhile, the returnees also brought back modern technology from the US. Due to the industrial revolution, the science and technology of western countries far exceeded that of China in the 19th century. For example, skyscrapers emerged in New York and Chicago at the end of the 19th century[5], and electricity was widely used and private cars commonplace in large cities. The contrast between China and the US shocked the overseas Chinese students and inspired patriotic enthusiasm among them. They were therefore determined to use their knowledge to contribute to the development of their home country.

The Chinese students also benefited greatly from the university curriculum in the US, not available in China, whose education system was totally different from that of the US. The Qing dynasty had inherited the imperial examination system, which had started in 605 AD during the Sui dynasty. As the imperial examination system was mainly aimed at selecting administrative officials for the state's bureaucracy, the contents of the examination focused on the 'Four Books and Five Classics' dealing with the classical Chinese philosophy of Confucianism. However, during the 19th century, the US education system offered a much wider variety of subjects, such as science, technology, and business. Some emerging disciplines related to industrialization were set up. Through some of these courses, Chinese overseas students learned how to transform technology into productivity. For

[5] The first skyscraper was a ten-storey building constructed in 1884 and 1885 in Chicago.

example, the application of machines in the cotton textile industry had boosted productivity and efficiency. Some universities also started business programs at this time6. For example, the first business school in the world was established by the University of Pennsylvania in 1881. The first Chinese banker, Chen Guangfu, graduated from this school and went on to run the first Chinese private commercial bank in China.

In summary, the development gap between China and developed countries inspired the patriotic ardor of the overseas Chinese students, as they gained opportunities to learn advanced technology and access to modern ideologies. Their overseas experience brought about great benefits and made a big difference to them, as they would not have acquire these expertises if they stayed in China. The overseas experience lays a foundation for the important role to be played by the returnees when they return to their home country.

3.3 Saving the Nation through Industrialization

As a result of the Qing dynasty's isolation policy, China fell far behind the western countries that had gone through the Industrial Revolution in the middle of the 18th century. After their failure in the first and second Opium Wars, the Qing dynasty realized that its isolation policy had led to China's backwardness, and felt that the development of the western countries was largely based on modern science and technology. A group of bureaucrats advocated that the Qing dynasty should learn from the western countries for self-strengthening purposes. One, named Wei Yuan,

[6] Chicago University and Harvard University established business schools in 1898 and 1908, respectively.

published a book entitled '*Illustrated Treatise on the Maritime Kingdoms*' (Haiguo Tuzhi) to introduce the science and technology of the western countries to China, and encouraging the Qing dynasty to 'learn from western countries in order to defeat them'. The self-strengtheners initiated the 'Self-strengthening Movement' in 1861, importing advanced industrial technology and business modes in order to obtain powerful modern weapons and increase the national revenues. In addition, during the 'Self-strengthening Movement', on the advice of Yung Wing ('the Father of the Returnees'), the Qing dynasty not only encouraged people to study abroad but also dispatched 30 youths to the US each year between 1872 and 1875 to study advanced industrial technology and advanced production approaches.

At the end of the 19th century, along with the crushing defeat in the Sino-Japanese War (1894-1895), the 'Self-strengthening Movement' failed. However, the reform had provided a welcoming environment in which Chinese returnees could play a role. Meanwhile, it had motivated students to study abroad in order to find a way to make China more powerful. The ideas of 'saving the nation by science' and 'saving the nation by industrialization' gained consensus among Chinese students. Therefore, the majority of overseas students, especially those studying in America, chose science and engineering as their majors. For example, among the first batch of students dispatched to America under the overseas study program of the 'American Remission of the Boxer Indemnity', 43 out of 47 students studied science and engineering (Ye, 2012: 53).

Based on their study experience abroad, some returnees whose studies had been funded by the CEM became China's first generation of mining engineers, including Wu Yangzeng (1862-1939), Kuang Bingguang (1863-1962), and Kuang

Rongguang (1863-1965). In particular, to acknowledge their contribution to China's mining industry, the Qing court conferred 'Jin Shi' on Wu Yangzeng and Kuang Rongguang in 1909[7]. Some became pioneers in China's communications industry. For example, Zhou Wanpeng, Zhu Baokui, Tang Yuanzhan, Yuan Changkun, and Tao Tinggeng built China's first national telegraph system and integrated it with the international telegraph industry. In the railway industry, Zhan Tianyou，the 'Father of the Chinese Railway' and the 'Father of Modern Chinese Engineering' designed and built China's first railway, the Jing-Zhang Railway, which was regarded as a miracle by his western contemporaries (Xu and Mao, 2005). After its completion, in 1909 the Qing court conferred upon him too the award of 'Jin Shi'.

Returnees from studying naval defense in Europe became the mainstay of the Qing dynasty's navy and played a key role in modernizing China's weapons production industry and in building China's civil ship-building industry, which marked the beginning of China's early industrialization (Albert, 1990: 1). These returnees were also pioneers of China's aviation industry. Led by Liu Guanxiong, Chen Shaokuan and other returnees, the Foochow arsenal manufactured China's first planes in 1919 (Wang, 1995).

Returnees not only contributed to the reform of the late Qing dynasty through industrialization but also led to its downfall. In addition to the modern science and technology they brought back, they also spread the ideology of revolution and democracy. In 1911, the Xinhai Revolution overthrew the Qing dynasty, and Sun

[7] During the Qing dynasty, 'Jin Shi' was awarded to people who passed the final examination (central government-level) in the Chinese ancient imperial examination system, or who made a great contribution to the feudal dynasty. After being awarded 'Jin Shi', people would enter the feudal bureaucratic system.

Yet-Sen, a returnee from Japan, became the first president and founding father of the Republic of China. With a new democratic China established, a large batch of overseas Chinese were attracted to return and contribute to the development of the new China. They not only pushed the development of Chinese modernization but also encourage a change in people's ideology. The ideology of 'saving the nation by industrialization' became the mainstream thought. Many returnees set up their own enterprises out of patriotism. Returnees of the late 19th century and early 20th century made remarkable achievements in industries such as textiles, finance, chemicals, electrical, steel, etc. Following the procedure of 'technology introduction – improvement – development' (Feng Zuo, 2011), these returnees helped lay the foundation for China's early industrialization and in turn made substantial contributions to the national economy as a whole.

3.4 Contributions to Light Industry

3.4.1 The Cigarette Industry

As a very profitable industry, the domestic cigarette industry was monopolized in the early 20th century by foreign producers from America, Japan, and Europe, leading to a large wealth outflow to the western countries (Sun, 2012). The tobacco industry started in western countries such as the UK and the US. The operating modes and strategies were mature in the foreign tobacco industry. Cox (1989) shows that tobacco companies in the UK and the US, such as the Imperial Tobacco Company and the American Tobacco Company, not only sold their products to domestic markets but also extensively to overseas markets such as Australia, China, Japan, India and others. This demonstrates the western tobacco companies' international strategy of entering and dominating foreign markets. In

terms of their entry into China, Cox (1997) argues that the Britain American Tobacco Co. relied on its advanced and unique technology as well as established networks with Chinese merchants.[8]

Due to the backwardness of its production facilities, techniques and business mode, the national firms could not compete with foreign companies in the cigarette industry until returnees brought back the mature technology needed to rapidly establish a national tobacco industry in China. For example, Jian Zhaonan and his brother Jian Yujie, returnees from Japan, established the 'Guangdong Nanyang Tobacco Company' in Hong Kong in 1905 to produce a nationally branded cigarette and 'prevent foreign companies from grabbing wealth from China' (Xiong, 2011: 44). Having relevant overseas working experience and a deep understanding of tobacco technology and operating strategies, they established relationships in Japan that enabled them to import cigarette-producing techniques and equipments. With the help of Japanese cigarette production experts, they rapidly developed cigarette products. In addition to their technology advantage, their sales strategy was similar to that of the BAT Company (global strategy), which helped them to rapidly occupy the market in Southeast Asia (W. Xue, 2010). Then, they expanded their business to Guangzhou with their mature cigarette product and competed with foreign cigarette producers. Until 1920, their business had great success, making a yearly profit of more than 4 million US dollars. Finally, the raw material of tobacco leaf was important, as it accounted for a large proportion of the assets of the western tobacco companies (Fitzgerald and Hirao, 2005). They therefore followed the western

[8] The British American Tobacco Co. (BAT) was formed as a result of a joint venture between the Imperial Tobacco Company and the American Tobacco Company, and a consensus agreement to divide the market between themselves in 1902.

companies' lead and imported tobacco seeds to plant in China, so as to obtain quality raw materials at a lower cost, breaking the raw material embargo of the foreign companies (Sun, 2012).

Based on their experience in Japan, the Jian brothers also adopted a modern management system. For example, they recruited a returnee (Chen Qijun) from MIT to manage the company. Following Taylor's management method, the operation and management style of the Jian group was similar to that of a large western enterprise (Sun, 2012). Instead of relying on the compradors[9], they also raised funds from foreign commercial banks such as HSBC and CitiBank, and from insurance companies (Xiong, 2011: 56; Sun, 2012). Similarly to most returnee-owned enterprises, the Jian brothers' enterprises also invested in dispatching employees to study abroad and subsidizing their studies (Sun, 2012).

3.4.2 The Cotton Textile Industry

Following the industrial revolution in western countries, technological progress and the application of machines substantially advanced the cotton manufacturing industry. Mass and Lazonick (1990) explain that, with effort-saving technological change, a given amount of human effort produces more goods and services of a given quality. In addition, the application of modern management methods in the UK's cotton textile industry contributed to its efficiency and productivity (Toms, 1998). Chapman (1979) notes that the application of spinning and power-loom weaving technology contributed to the development of the cotton industry in the 19th century.

[9] Refer to Chinese citizens that helped foreign companies to develop business in China.

Mu Ouchu (穆藕初，1876-1943), a returnee from the US, was arguably the most influential figure in China's early textile industry. Commonly known as China's 'Cotton Textile Tycoon', Mu Ouchu set up the Deda Yarn Factory in 1914, the Housheng Yarn Factory in 1918, and the Yufeng Yarn Factory in 1919 (Yi, 2004: 148-151). In 1920, he also cofounded the China Industrial Bank in Shanghai. Aside from his achievements in the textile industry, Mu Ouchu was also known as a pioneer of Chinese corporate management. He was the first to introduce Taylor's theory of scientific management into China and put it into practice in his own factories (Tang, 2006: 17).

Song Feiqing (宋棐卿, 1898-1956) was another influential returnee in China's textile industry. The East Asia Woolen Company he founded in 1932 produced a series of household brand names such as 'Ram Sheep', 'Peacock', 'Five Sheep' and 'Riding Sheep' in the woolen industry. Other notable returnee entrepreneurs in the textile industry included Zhu Xianfang, who founded the Jiujiang Jiuxing Yarn Factory in Jiangxi, Zhang Pinti, who set up the Dayuanxing Weaving Factory, and Shen Jiuru, who founded the Shanghai Silk Factory, the Tongcheng Silk Factory, and the Fuhua Silk Company (Jiang, 2001).

In the historical context of the development of the national industry, returnees advanced the development of the textile industry in various aspects. Firstly, they brought back the advanced technology needed to improve production. Although many non-returnee entrepreneurs also introduced advanced technology, purchased some machines from foreign companies, and appointed professionals from foreign companies, returnees contributed to technological development by bringing the

systematic techniques of the whole textile industry chain back to China. For example, in the six years Mu Ouchu (穆藕初, 1876-1943) spent studying overseas, he systematically studied the whole technical process from the cotton-planting techniques to the textile techniques (Wu, 2011: 110). In the beginning stages of his start-ups, he focused on improving the planting technique and introducing cotton varieties from the US. Later, he would make his planting technology available to all the cotton planting farmers for free (Wu, 2011: 111). He therefore made a great contribution to the entire cotton planting industry by improving its productive efficiency and quality. In addition, Mu Ouchu's 'Meiya' Silk Textile Company sent employees to Japan to study silk textile technology.

Second, Mu Ouchu introduced Taylor's scientific management method in his own textile company, and also helped other textile companies to improve their management. The modern management method later became widely applied throughout the cotton textile industry, improving productive efficiency for companies managed by returnee entrepreneurs. More specifically, Mu Ouchu formulated a complete management system including an exhaustive reward and punishment system, financial management system, salary system, and employment system (Wu, 2011: 112). This was significantly different from the systems used by his non-returnee peers. First, the traditional textile enterprises applied the 'foreman management style', and the foremen were usually local bullies with no knowledge of production and technology. Mu used engineers and technicians to replace the foremen in managing the textile production process. Second, in order to improve the quality of the employees, Mu set a higher standard for recruitment and also paid higher salaries than other textile enterprises. Third, Chinese enterprises widely used

the single-entry bookkeeping method, which has been shown to lead to financial chaos in enterprises (Zhang, 2003). Mu introduced the double-entry bookkeeping method in his enterprises, and they became the first in China to use modern financial reporting (B. Zhao, 2005). Following Mu's lead, other enterprises also started adopting double-entry bookkeeping.

His reforms to the selection of managers and to the compensation system reflect Mu's awareness of corporate governance issues. Cheffins (2001) shows that US firms started their corporate governance revolution to apply the 'separation of ownership and control' from 1880. Hannah (2007) notes that the separation of ownership from control became very prevalent in British and French companies during 1900. Hannah (2014) documents that the UK issued legislation on corporate governance in 1845. Burhop (2009) shows that the corporate governance mechanism was being used in German banks by the 1870s.

3.4.3 The Pharmaceutical Industry

The pharmaceutical industry was also more advanced in western countries, thanks to the development of science and technology. Liebenau (1984) shows that German drug-producing companies paid more attention to R&D and allocated sufficient funds to R&D staff and facilities. In a later work (Liebenau, 1988), the same author argues that the most important factor influencing the development of the pharmaceutical industry in western countries such as Britain, Germany, and the US before 1914 was science and technology.

With the involvement of returnees, the modern Chinese pharmaceutical industry took off in the 1920s. The case of New Asiatic Pharmaceuticals illustrates the prominent roles that returnees played in the development of this industry. Cofounded in 1926 by Xu Guanqun and Zhao Rudiao, who studied medicine in Japan, New Asiatic Pharmaceuticals gathered a large number of graduates from overseas universities to build its research and management teams. For example, Wang Dianxiang, the manufacturing engineer, and Wu Liguo, the deputy director, had studied in France, Zeng Guangfang, Director of Medical Research, had studied in Japan, Qian Siliang, the chemist, had gained his PhD from the University of Illinois, and Cheng Muyi, the director, had studied in both Japan and America (Huang, 2000: 103). Through their joint efforts, New Asiatic Pharmaceuticals set up and invested in as many as 35 enterprises, making it the leading Chinese pharmaceutical company of the time. Inheriting a set of famous brands from its predecessor, Shanghai New Asiatic Pharmaceuticals is now part of the Shanghai Pharmaceutical Group, a giant in the Chinese pharmaceutical industry.

During the 1910s, following the eruption of World War I, the foreign enterprises that undertook medicine production and sales in China decreased the supply to the Chinese market. As a result, medicine prices in the domestic market increased sharply, which brought opportunities for the development of national medicine production (Xuchu Zuo, 2013: 85). At that time, although non-returnee national entrepreneurs began to establish pharmaceutical-producing factories, they still relied on raw materials provided by foreign pharmaceutical enterprises, and lacked knowledge in medical science and technology. However, with the help of returnees, Chinese enterprises started researching and developing medicine-

producing technology independently from the foreign companies, and subsequently established a complete production chain in the industry. For example, the Tang Shiyi Pharmaceutical Factory was established in 1918 by Tang Shiyi and his son Tang Taiping who was a returnee from Germany with an MD degree. In the 1930s, under the guidance of Tang Taiping, they imported and then updated the production facilities to make them more advanced and efficient (Xuchu Zuo, 2013: 88). This helped their enterprise to increase its productivity and its product quality. They also spent more on R&D for the raw materials of pharmaceutical production in order to decrease their production costs (Xuchu Zuo, 2013: 88). Thus, they laid the foundation for national industry to produce pharmaceuticals independently.

3.4.4 The Electronics Industry

The electronics industry relied on the cutting-edge high technology of that era. Using the expertise they had learned abroad, numerous returnees created their own enterprises in this field. In 1930, Zhang Huikang, a returnee from America, founded the Oriental Nianhong Electrical Lights Company, which manufactured China's first neon lights. In 1944, the company produced China's first single-door refrigerator[10]. In 1924, Su Zuguo, also a returnee from America, cofounded the Asia-America Radio Company, the first radio company in Shanghai. Later, in 1929, the company also founded its own radio station – Asia-America Radio Station, which later became Shanghai Radio Station. In 1925, Cai Shuhou, a returnee from Japan, founded the Shaodun Electrical Motor Company. In 1929, Li Qingxiang, a returnee from America, set up the Huade Electrical Lights Company. Other influential returnee entrepreneurs in this field included Lu Bohong, founder of the Shanghai Huashang

[10] http://www.shtong.gov.cn

Electrical Vehicle Company, Tong Shiheng, founder of Shanghai Pudong Electricals, Li Qingxiang, founder of the Huade Factory, and Zhou Jinshui, founder of Shanghai Huacheng Electricals.

In addition to the industries discussed above, returnees also played important roles in other industries. Ding Zuocheng, a returnee from America, founded the China Scientific Instrument Factory, the first meter manufacturer in China. Feng Jiyu, a returnee from France, created the Baoding Electrical Lights Company, the Tianjin Hengyuan Yarn Factory, the Tianjin Continental Bank, Dacheng Bank, and most successfully, the Oriental Paint Factory (Zhengzhong Li, 2004: 220-221). There are also numerous examples of returnees setting up companies to manufacture pencils, flour, needles, and other daily necessities.

3.5 Contributions to Heavy Industry

3.5.1 The Chemical Industry

The modern science of chemistry was initiated in western countries based on developments in modern science and technology. The success of chemical enterprises relies on the recruitment of chemical experts and investment in R&D. Matthews, Boyns, and Edwards (2003) show that American entrepreneurs spend sufficient funds on exploiting the proper chemical technology, and that engineers with chemical knowledge and complex skills are also important for chemical manufacturing and production management.

Due to their lack of expertise, non-returnee enterpreneurs in China were in a disadvantaged position when it came to the establishment of successful chemical enterprises. The modern Chinese chemical industry was initiated and developed by

Fan Xudong, who graduated from Kyoto University (Japan), majoring in chemistry. He launched the first modern refined-salt-producing company. As the 'Father of the Modern Chinese Chemical Industry' and the 'King of Salt and Sodium Carbonate', he mainly contributed to the establishment and development of techniques for producing refined salt and sodium carbonate.

After returning from Japan in 1912, Fan was appointed by the Peiyang Government as a professional engineer to investigate the laws on selling salt and the facilities for producing salt in Europe (Xiong, 2011:133). Fan first founded the Tianjin Jiuda Refined Salt Company in 1914, with the aim of improving the techniques used in the domestic production of quality salt. At that time, the techniques used to produce salt in China were extremely backward and inefficient, used highly toxic substances, and led to coarse salt. Domestic producers were not able to produce refined salt and therefore foreign products dominated the domestic market (Di, 2005). Based on his research and experiments, Fan successfully produced refined salt and his products rapidly occupied the market. Fan's success in producing refined salt not only broke the monopoly of the foreign salt producers, but also challenged the traditional salt-selling system and pushed for its reform (Di, 2005).

In 1917, Fan established the Yongli Soda Factory, which was the first company in Asia to specialize in the production of sodium carbonate and which is still in operation today (Xiong, 2011; Wen, 2013; Chen, 2006: 3). In 1921, Fan Xudong appointed Hou Debang, a graduate of Columbia University and one of the world's leading experts on soda, as chief engineer at the factory. As the technique for producing sodium carbonate was monopolized as a closely guarded secret of the

western countries, Fan's company had to develop techniques, production facilities and production drawings on its own (J. Zhao and Li, 2007). Without any experience of sodium carbonate factory design, a batch of returnees led by Chen Diaofu finally successfully designed the production factory. Then, Hou Debang solved the company's technical problems and created the so-called 'Hou's Process' to produce the sodium carbonate. His soda-manufacturing method broke the monopoly of the foreign firms, making him another pioneer of China's chemical industry (J. Zhao and Li, 2007; Wen, 2013).

Later, in 1934, Fan Xudong further opened the Yongli Ammonia Factory, the first to produce synthetic ammonia in China. The Jiuda-Yongli-Yellow Sea conglomerate founded by Fan Xudong left indelible marks on China's chemical industry. When he died in 1945, both Chiang Kai-shek and Mao Zedong, the supreme leader of the Republic of China and the soon-to-be leader of the People's Republic of China, mourned the nation's loss (Jin Zhao, 2006: 3). In addition to their technical contribution, Fan Xudong's enterprises also contributed to the cultivation of a batch of individuals talented in chemical techniques, by dispatching them to America for study and training (Di, 2005). This provided the talent pool needed for the development of China' chemical industry.

Returnees' entrepreneurial enthusiasm was also perceptible in other heavy industries. Yu Mingyu, a returnee from America, created the Daxin Steel Factory, which produced China's first arc furnace (Dingxin Xu, 1995: 68-69). The factory later became Shanghai Heavy Machineries. Lu Bohong, a returnee from France, also set up steel factories in Shanghai. Zhou Ren, a graduate of Cornell University, set up ceramic factories and steel factories (Xisuo Li, 2009b: 149).

3.6 Contributions to the Service Industry

3.6.1 The Banking Industry

The financial industry first emerged in western countries to provide services to industrial enterprises. Taking the UK as an example, Davis (1966) documents that commercial banks regularly made mortgage loans, and also made such funds available to manufacturing and trade. The banking industry greatly developed its management approach and operating style to ensure its success. For example, Seltzer (2010) shows that large banks in the UK dramatically increased the number of branches they had and the size of their back offices around 1913. In a 2013 work, Seltzer finds that recruiting women in routine positions helped UK banks to expand their branch networks over the period 1890-1941. In addition, Baker, Eadsforth, and Collins (2009) find that UK commercial banks applied a conservative (i.e. risk-averse) management approach to ensure bank stability and avoid toxic assets during the period of 1880-1910.

In the 1920 and 1930s, returnees dominated China's banking industry. Most of the nation's banks, particularly the famous 'four northern banks' and 'three southern banks', were headed by returnees. For example, four returnees from Japan became prominent bankers of the time. Wu Dingchang led the Yanye Bank; Zhou Zuomin cofounded the Jincheng Bank, one of the best-known banks of that time; Qin Renzhi was a board director for the Continental bank. Zhang Jiaao led the Bank of China for nearly twenty years and built the Bank of China into the largest bank in republican China. According to *Ten Chinese Bankers*, eight of the ten best-known bankers of that time were returnees (Mao Xu, 1997).

Chen Guangfu, a graduate of the University of Pennsylvania, was arguably the most notable entrepreneur in the industry during this period. Chen Guangfu was the first Chinese businessman to introduce modern management models to China's banking industry[11]. In 1915, with the support of Zhang Jiaoao from the Bank of China, and Li Ming from the Bank of Zhejiang, Chen Guangfu founded the Shanghai Commercial and Savings Bank, the first modern private bank in China. Under his leadership, the bank developed into the largest private commercial bank in China within 20 years. Chen developed the banking business in three aspects. First, he focused on providing services to individual civilians who generally had little wealth and could not get services from the foreign commercial banks and traditional Chinese banks ('Qianzhuang') (Xiong, 2011: 175). Since the market was dominated by the large established commercial banks, which only provided services for large amounts of savings and chose to focus on the wholesale banking business, Chen decided to provide services for small savings amounts in order to attract non-wealthy and private customers. Customers could open an account with Chen's bank with just one silver dollar (Xiong, 2011: 175). This policy helped his bank to attract a large number of private customers and obtain a large amount of savings. Second, Chen Guangfu was the first to abolish the currency conversion fees between the silver dollar and the silver (Shi and Xu, 2000). His policy earned him trust and popularity from the public, and savings held at the bank increased quickly. Then, other banks followed his lead, and the entire banking industry abolished the conversion fees (Shi and Xu, 2000). Third, Chen Guangfu made great efforts to maintain the bank's credibility and reputation (N. Xue, 2006). For example, when the government

[11] http://www.china.org.cn/top10/2011-10/30/content_23750853_6.htm

prohibited all banks from providing the currency conversion service in 1927, the Shanghai Commercial and Savings Bank continued providing the service to the public. In addition, during World War II, in his role as the government's financial advisor, Chen Guangfu helped China to obtain huge loans from the US to address the country's urgent financial difficulties.

It is also worth noting that the chief members of the so-called 'Four Big Families' of the Republic of China, who controlled much of China's economy and politics during the first half of 20th century, all had overseas study backgrounds. Chiang Kai-shek, a returnee from Japan, became the first president of the Republic of China; Soong Tse-ven, who once served as governor of the Central Bank of China and as Minister of Finance, studied at Harvard University; Kung Hsiang-hsi, known to be the richest man of that time in China (Tingyi Chen, 2008), and who served as premier of the Republic of China and governor of the Central Bank of China, graduated from Yale University; Chen Li-fu, Minister of Education, was a graduate of the University of Pittsburg.

Returnees' contributions can also be observed in other service industries. Pan Xulun, China's 'Father of Accounting', a graduate of Columbia University, founded the Pan Xulun Accounting Firm, which later became the prestigious Lixin Accounting Firm. Besides his achievements in the banking industry mentioned above, Chen Guangwu also established China's first travel agency, China Travel Service, earning himself the accolade of 'Father of Chinese Travel Agencies' (Shou, 1996).

3.6.2 The Entertainment Industry

The modern (in the early 19th century) entertainment industry emphasized the technological facilities available in western countries, especially in the film industry. Kerr (1990) documents that Vitagraph Company, an American Film Studio, paid more attention to technological expertise than to particular performers, plots, or films in the early 20th century.

In 1905, Ren Jingfeng, a returnee from Japan, produced China's first movie – the silent movie 'Ding Jun Shan'. After that, in addition to writing movie scripts and directing movie production, some returnees also set up their own movie companies to compete with foreign studios. Some also built their own movie theaters. Li Zeyuan, who had studied engineering in the US, cofounded the Great Wall Movie Company in New York in 1921, and then moved it to Shanghai in 1924. In the 1924, Wang Xuchang and Xu Hu, two returnees from France, set up the Divine Land Studios in Shanghai. Three returnees, Tian Han, Tang Huaiqiu and Tanglin, launched the South China Movie Club in 1926. Another influential movie studio of that time was the Diantong Movie Company, which was originally a movie equipment manufacturer set up by Situ Yimin and Gong Yuke, two engineering graduates from Harvard University, and Ma Dejian, a graduate of Washington University. In 1933, Diantong successfully manufactured their own recorder, which enabled them to produce movies with sound on their own. Among their productions, 'Tao Li Jie', 'Feng Yun Er Nv', 'Zi You Shen', and 'Du Shi Feng Guang' are the best known (Xisuo Li, 2009b).

To sum up, the period of the 1850s to the 1940s witnessed the inception and burgeoning of Chinese national capitalism. With their knowledge and experience

acquired abroad, the returnees became the indisputable pioneers of virtually all China's modern economic sectors, including the communications, mining, textiles, chemical, banking, insurance, publishing, medicine and electrical industries. With a strong sense of having the mission to save and strengthen their nation, the returnees, though relatively small in numbers, created numerous enterprises and contributed to the introduction of modern technology and ideology, thereby helping lay the foundation for China's early industrialization and modernization.

3.7 Discussion and Conclusion

After the industrial revolution in the 18th and 19th centuries, western countries surpassed China in many aspects, including technology, ideology, infrastructure, university education, and business operating modes. To learn from the developed countries, Chinese students started going abroad as early as 1847. These overseas Chinese students benefited greatly from their overseas experience, and acquired expertise unavailable in China. When they returned to China with their knowledge and the determination of industrial salvation, they made great contributions to the modernization of national industry and the commercial development of China. This study has provided an overview of how they advanced the development of modern business in various industries with their knowledge and expertise.

From the case analyses of a number of representative returnees in various industries, I have summarized some of the main features of the businesses operated by returnees and their contributions. In terms of technology transfer, returnees contributed by bringing back advanced technology and the knowledge to boost productivity. From the perspective of business operations, returnee entrepreneurs

applied Taylor's scientific management method to corporate management to promote efficiency. Returnees also introduced double-entry bookkeeping, which had been essential to the development of capitalism in western countries (Yamey, 1949), to solve the financial chaos caused by single-entry bookkeeping. In addition to management styles and operating processes, returnees also brought back modern governance ideologies and approaches from western countries, such as the selection of professionals as managers and efficient compensation systems.

As the returnees had obtained advanced knowledge about business operating and management approaches, they tried to implement new business modes. First, returnee-operated businesses tended to allocate more resources to R&D and thus owned core technology that was sometimes even more advanced than that of foreign companies. Second, they tended to construct and develop entire industrial chains. This provided high-quality raw materials for production at a low cost and also broke the raw material trading restrictions of foreign companies. Third, returnee-controlled firms subsidized their employees' training or studying abroad, cultivating their company's talent pool and sustainable development. Finally, the business development and prosperity in the US and UK also provided a new perspective to the Chinese students. Companies there applied different business modes to improve firm performance. For example, the producer co-operatives mode was widely used and achieved success in the British cotton textile industry in late 19th century (Toms, 2012). In Chinese cotton textile industry in the 20th century, the returnee entrepreneurs led and participated to establish the producer co-operative to develop the national industry. For example, Mu Ouchu was elected as the chairman to Cotton

Planting Improving Society of the National Spinners Association in order to help and guide the techniques of cotton planting.

References

Albert, Feuerwerker. *China's Early Industrialization: Sheng Xuanhuai (1844-1916) and Government Supervised Business Enterprises.* Beijing: China Social Sciences Press, 1990.

Baker, M., Eadsforth, C., & Collins, M. (2009). Avoiding toxic assets and ensuring banks' stability: English commecial bank investment, 1880-1910. *Business History*, 51(6), 857-874.

Boyns, T., and Edwards, J.R. (1997). The construction of cost accounting systems in britain up to 1990: The case of the coal, iron and steel industries. *Business History*, 39(3), 1-29.

Burhop, C. (2009). No Need for Governance? The impact of corporate governance on valuation, performance and survival of German banks during the 1870s. *Business History*, 51(4), 569-601.

Chapman, S.D. (1979). Financial restraints on the growth of firms in the cotton industry, 1790-1850. *Economics History Review*, 32(1), 50-69.

Cheffins, B. (2001). History and the global corporate governance revolution: The UK Perspective. *Business History*, 43(4), 87-118.

Chen, Tingyi. *The Richest of Shanxi Province: Kung Hsiang-his.* Beijing: Oriental Press, 2008.

Chen, Yunwen. *History of the Chinese Modern Chemical Industry: 1860-1949.* Beijing: Chemical Industry Press, 2006.

Cox, H. (1989). Growth and ownership in the international tobacco industry: BAT 1902-27. *Business History* 31, no.1 (1989): 44-67.

Cox, H. (1997). Learning to do business in China: The evolution of BAT's cigarette distribution network, 1902-41. *Business History*, 39(3), 30-64.

Davis, L. (1966). The capital markets and industrial concentration: The U.S. and U.K., a comparative study. *Economic History Review* 19(2): 255-272.

Di, Y. (2005). Fan xudong and the 'Yong Jiu Huang' industrial group. *History Teaching*, 4, 64-66.

Duan, T., & Hou, W. (2014). The Curse of Returnee CEOs. *Unpublished Working Paper*, University of Edinburgh Business School.

Fitzgerald, R., & Hirao, Takashi. (2005). Reappraising corporate failure in Britain: Labor management in the tobacco industry before 1939. *Business History Review*, 79(2), 305-337.

Godley, A. (1995). The development of the UK clothing industry, 1850-1950: Output and productivity growth. *Business History*, 37(4), 46-63.

Han, D., and Zweig, D. (2010). Images of the world: studying abroad and Chinese attitudes towards international affairs. *China Quarterly*, 202, 290-306.

Hannah, L. (2014). Corporations in the US and Europe 1790-1860. *Business History,* 56(6), 865–899.

Hannah, L. (2007). The 'Divorce' of Ownership from Control from 1900 Onwards: Re-calibrating Imagined Global Trends. *Business History*, 49(4), 404-438.

Huang, Y. *Century of Vicissitudes: Locus, Experience and Lessons of Chinese Modern Enterprises.* Taiyuan: Shanxi Economy Press, 2000.

Jiang, H. *A Brief History of Chinese Enterprise Development.* Beijing: Xiyuan Press, 2001.

Kerr, C.E. (1990). Incorporating the star: The intersection of business and aesthetic strategies in early American film." *Business History Review*, 64(3), 383-410.

Li, X. *General History of Chinese Overseas Study: Late Qing Dynasty.* Guangzhou: Guangdong Education Press, 2009a.

Li, X. *General History of Chinese Overseas Study: Republic of China.* Guangzhou: Guangdong Education Press, 2009b.

Li, Z. *Modern Tianjin Famous Industry and Commerce.* Tianjin: Tianjing People Press, 2004.

Liebenau, J. (1988). Ethical business: The formation of the pharmaceutical industry in Britain, Germany, and the United States before 1914. *Business History*, 30(1), 116-129.

Liebenau, J. (1984). Industrial R&D in pharmaceutical firms in the early twentieth century. *Business History*, 26(3), 329-346.

Liu, L., & Sun, C. (2009). Overseas education and influence in late Qing dynasty. *Education and Vocation*, 23, 90-91.

Liu, X., Lu, J., Filatotchev, I., Buck, T., & Wright, M. (2010). Returnee entrepreneurs, knowledge spillovers and innovation in high-tech firms in emerging economies. *Journal of International Business Studies*, 41, 1183-1197.

Mass, W., & Lazonick, W. (1990). The British cotton industry and international competitive advantage: The state of the debates. *Business History*, 32(4), 9-65.

Matthews, M., Boyns, T., & Edwards, J.R. (2003). Chandlerian image or mirror image? Managerial and accounting control in the chemical industry: The case of Albright & Wilson, c. 1892 to c. 1923. *Business History*, 45(4), 24-52.

Nelson, D. (1974). Scientific management, systematic management, and labor, 1880-1915. *Business History Review*, 48(4), 479-500.

Sanetou, K. *History of Chinese Students Studying in Japan.* Beijing: Beijing University Press, 2012.

Seltzer, A.J. (2010). Salaries and Promotion Opportunities in the English Banking Industry, 1890-1936. *Business History*, 52(5), 737-759.

Seltzer, A.J. (2013). The impact of female employment on male salaries and careers: Evidence from the English banking industry, 1890-1941. *Economic History Review*, 66(4), 1039-1062.

Shi, Q., & Xu, Y. (2000). Thoughts on the banker Chen Guangfu's business operations. *Jiangsu Social Science*, 1, 126-130.

Shou, C. *Modern China's Industrial and Commercial Figures.* Beijing: China Literature and History Press, 1996.

Sun, F. "Research on Jian Zhaonan's thoughts on enterprise management." *Journal of Xinxiang University* 26, no.5 (2012): 33-34.

Tang, G. *Mu Ouchu: Forerunner of Chinese Modern Enterprise Management.* Shanghai: Shanghai Academy of Social Sciences Press, 2006.

Tann, J. (1973). Fuel saving in the process industries during the industrial revolution: A study in technological diffusion. *Business History*, 15(2), 149-159.

Toms, S. (2012). Producer co-operatives and economic efficiency: Evidence from the nineteenth-century cotton textile industry. *Business History*, 54(6), 855-882.

Toms, S. (1998). Windows of opportunity in the textile industry: The business strategies of Lancashire entrepreneurs, 1880-1914. *Business History*, 40(1), 1-25.

Wang, Q. (1995). Overseas students' involvement in modern China's industry." *China Scholars Abroad*, 6, 21.

Wen, H. *Industry Elites of the Republic of China.* Beijing: China Literature and History Press, 2013.

Wu, A. *Power Business: Magnates' Legends in the Republic of China.* Wuhan: Changjiang Literature and Art Press, 2011.

Xiong, S. *Industrial and Commercial Giants in the Republic of China.* Beijing: Unity Press, 2011.

Xu, D. *Science and Technology-related Power and Effects of Chinese Modern Enterprises.* Shanghai: Shanghai Social Science Press, 1995.

Xu, F., & S. Mao. (2005). Historical influence of children studying in the US on modern China's technology development. *Journal of Dialectics of Nature*, 27(2), 89-94.

Xu, J. *A Brief History of National Industry in China.* Beijing: Social Sciences Academic Press, 2011.

Xu, M. *Ten Chinese Bankers.* Shanghai: Shanghai People Press, 1997.

Xue, N. (2006). Practical rationality: Study on Chen Guangfu's thoughts on business management. *Journal of Tongji University (Social Science Section)*, 17(4), 119-124.

Xue, W. (2010). The tobacco business war of Nanyang brothers." *Business Story*, 6, 28-30.

Yamey, B.S. (1949) Scientific bookkeeping and the rise of capitalism. *Economic History Review*, 1, 99-113.

Ye, W. *Seeking Modernity in China's Name: Chinese Students in the United States, 1900-1927.* Beijing: Beijing University Press, 2012.

Yi, Q. *History of a Hundred Years of Chinese National Industry and Commerce: Chinese National Industry and Commerce during 1900-1949.* Beijing: Beijing Press, 2004.

Yung, W. *My Life in China and America.* New York: Henry Hold and Company, 1909.

Zhang, F. (2003). Mou Ouchu's thoughts on and style of enterprise management." *Chinese Culture Forum*, 1, 89-91.

Zhao, B. (2005). On Mou Ouchu's scientific management thought and practices." *Commercial Research*, 6, 98-99.

Zhao, J., and Li, J. (2007). From imitation to innovation: Analysis of Fan Xudong's enterprise group technology development mode. *Research in Chinese Economic* History, 3, 12-17.

Zhao, J. *Compilation of Historical Materials on Fan Xudong' Enterprise Group: First Volume.* Tianjin: Tianjian People Press, 2006

Zuo, F. *Chinese Modern Industrialization Research: Perspective of Interaction between Institutional Change and Technological Progress.* Shanghai: Shanghai Sanlian Bookstore, 2011.

Zuo, X. *Centuries Shanghai: National Industry Brand.* Shanghai: Shanghai Culture Press, 2013.

Zweig, D., & Wang, H. (2013). Can China bring back the best? The Communist Party organizes China's search for talent. *China Quarterly*, 215, 590-615.

Zweig, D., Chen, C., & Rosen, S. (2004). Globalization and transnational human capital: Overseas and returnee scholars to China." *China Quarterly*, 179, 735-757.

Chapter 4 Returnee CEOs under Weak Institutions: Blessing or Curse?

Abstract

This chapter studies CEOs with overseas experience, known as returnee CEOs. I show that Chinese returnee CEOs are associated with inferior performance, lower market reactions to appointment announcements and an adverse regulatory environment. I argue that CEOs' international expertise is acquired at the opportunity cost of local social capital, such as political and business ties, which is more critical than expertise in transition economies with weak legal institutions. The negative effect disappears when social capital is acquired, regional legal institutions are strong or returnees' international expertise is in demand. Exploiting an exogenous increase in the supply of returnee talent as a result of new provincial policies, I find the results consistent.

4.1 Introduction

The characteristics and experience of CEOs have been found to map onto firm performance (Adams et al., 2005; Bertrand and Schoar, 2003; Kaplan et al., 2012; Malmendier and Tate, 2009; Bernile, et al., 2017). In particular, two major functions of CEOs depend on CEO-specific heterogeneity: knowledge and expertise help CEOs to make superior organizational decisions (Benmelech and Frydman, 2015), and networks help to provide critical resources to offset external uncertainty (Correia, 2014; El-Khatib et al., 2015). In the context of the globalization of human capital, many firms in developing countries hire individuals returned from overseas as CEOs. These "returnee CEOs" are expected to bring the benefits of "brain gain" in terms of advanced knowledge and international expertise. However, having spent years abroad, there is an opportunity cost of local connections for returnees. Weak legal institutions may impede the realization of the benefits in developing countries.[1] Despite the significance of international experience in shaping individuals, this important characteristic of CEOs remains under-researched. I therefore study returnee CEOs in China and explore whether international expertise or local connection is more important under weak legal institutions.

Returnee CEOs in developing countries are often perceived as belonging to an elite social class that possess high-quality education and international expertise. The literature has documented benefits of the international experience of board members (Masulis et al., 2012; Giannetti al., 2015) and for multinational firms (e.g.

[1] Faccio (2006) shows that the value of political connections is more important in countries with higher levels of corruption. Mironov (2015) finds that firms in a corrupt country should hire a corrupt CEO who is able to establish connections by paying bribes, to advance shareholder interest.

Carpenter et al., 2001). I argue that returnee CEOs could strengthen firm performance with their expertise. For example, they may learn more advanced institutions and superior management practices in foreign organizations, which are shown to enhance firm performance and productivity (Bloom and Van Reenen, 2007). They gain exposure to overseas high-quality education, shown to enhance profitability (Chevalier and Ellison, 1999; Gottesman and Morey, 2006). Finally, CEOs tend to have overseas network ties that bring about foreign business and financing opportunities.

Returnees' weaknesses are largely ignored in both public media and the literature. Having spent years abroad, they have missed out on opportunities to accumulate local social capital in the form of political connections and local network ties, whose importance in transition economies is acknowledged in the literature. Social capital refers to the resources linked to the possession of a durable network, through which one can claim access to economic resources such as subsidized loans and protected markets (Portes, 2000). These resources produce favorable business conditions and enhance firm performance (El-Khatib et al., 2015; Faccio, 2006).

In countries where legal institutions are weak, firms confront expropriation risks and limited financing opportunities. Social capital therefore serves as an informal and complementary institution that protects property rights, enhances contract enforcement, alleviates entry barriers and in turn facilitates firm growth (Allen et al., 2005; Guiso et al., 2004). For example, the connections established through bribery in Russia help to secure government contracts and increase firm income (Mironov, 2015). These considerations suggest that a lack of social capital could offset the benefits of returnee CEOs and lead to underperformance.

Concerns about returnee CEOs are consistent with several anecdotes. Jack Ma, the founder and executive chairman of Alibaba Group, compared the mismatch between returnee executives and local firms to "*installing an aero-engine on a tractor*" [2]. He believes that foreign models and experience are not necessarily applicable to Chinese firms. The arguments and evidence from the two sides lead to two competing hypotheses, namely expertise and network views. Determining the net effect on overall firm performance represents a timely and important question and can shed light on how legal institutions determine the preferential resources that firms need.

China provides a unique setting to study the role of returnee CEOs under weak institutions. China is the leading country of origin for international students: there has been as many as 2.6 million studying abroad, 1.1 million having returned to China between 1978 and 2012.[3] The Chinese government launched a series of favorable talent schemes to encourage high-level overseas professionals, including professional managers, to return to China and contribute to the development of its capital markets. Despite China's economic achievement, its legal institutions remain weak. The 2014 Corruption Perceptions Index placed China 100th in the world, close to Algeria and Bolivia. The 2015 Rule of Law Index ranked China 71st, marginally higher than Tanzania and Zambia.[4]

[2] See http://news.xinhuanet.com/fortune/2005-01/11/content_2444728.htm (in Chinese).
[3] Annual report on the development of Chinese students studying abroad, Social Science Academy Press (China), 2013: Beijing.
[4] The Corruption Perceptions Index is provided by Transparency International and measures the perceived levels of public sector corruption in 175 countries and territories. The Rule of Law Index is constructed by the World Justice Project (WJP) and reports how the rule of law is experienced by the general public in 102 countries.

To conduct my research, I hand-collect data on CEOs' international experience by reviewing the biographies of all 2,847 CEOs hired between 2001 and 2010 by firms listed on the Shanghai and Shenzhen Stock Exchanges, from which I identify 247 returnee CEOs, accounting for 8.86% of all appointments. I conduct an initial assessment of the relationship between returnee CEOs and firm performance using regressions that include year, industry, and region fixed effects, along with an assortment of time-varying firm and CEO characteristics. I find that firms with returnee CEOs are associated with lower performance in terms of return on assets (ROA), return on sales (ROS) and market-to-book ratio (MTB). The results of ROA and ROS are robust to the inclusion of firm fixed effects to control for time-invariant unobserved firm heterogeneity. This finding is in line with the view that social capital is more important than international expertise in a country with weak legal institutions. The underperformance of returnee CEOs seems to hold back their prevalence. As shown in Figure 4.1, while the annual number of incoming returnees increased by 1001.04% during the sample period, the annual number of returnee CEO appointments increased by only 20.41%.

[Insert Figure 4.1]

I then build on the initial results to better identify the relation between returnee CEOs and firm performance. If the negative relation is attributed to the opportunity cost of local social capital and weak institutions in China, it should be less pronounced for firms that have social capital in place or that are headquartered in regions with relatively strong regional institutions. I therefore partition my sample along three dimensions, namely social capital, regional institutions and demand for foreign expertise. First, I find that the results are driven by CEOs with international

work experience who stayed abroad longer than those with overseas study experience only, suggesting that the longer the returnees had stayed abroad, the more difficult it was for them to accumulate local resources and adapt to the business culture in China. Second, the negative relation disappears when the firms are state-owned enterprises (SOEs) backed by state-controlled shareholders, or when returnee CEOs acquire political connections or business networks. Third, the negative relation is only concentrated on firms located in cities with a high risk of expropriation and poor rule of law. Finally, the negative relation is not documented in firms engaging in international business, where there is ample scope for the use of returnee CEOs' international knowledge and experience. These results from the partitioned samples further support the network hypothesis.

Interpreting empirical results is a common challenge in the literature on CEO characteristics, due to the nonrandom assignment of CEOs to firms. There are at least two channels that the selection could bias the estimation of any possible effect of CEO characteristics, such as overseas experience, on firm performance. Although I control for many firm and CEO characteristics and time-invariant unobserved firm heterogeneity, there are possible omitted variables at the CEO level. For example, returnee CEOs might be correlated with innate talent or good education. An alternative interpretation of my finding is that Chinese firms tend to attract mediocre returnees as CEOs rather than the most capable ones, who enjoy good opportunities in the international labor market. Or perhaps less talented individuals tend to choose to go abroad. I therefore control directly for proxies of CEO innate talent by assuming that returnee CEOs with prestigious overseas or domestic education experience and with overseas experience in more developed countries are more likely

to grow into talented executives. The consistent result increases my confidence that the underperformance of returnee CEOs is not correlated with omitted variables at the CEO level.

Another concern is that the endogenous matching of CEOs to firms could bias my results. It is possible that unobservable firm or CEO heterogeneity that correlates with the matching between returnee CEOs and firms may also interpret results. For example, certain firms might select returnee CEOs for reasons or returnee CEOs might have preferences to join certain firms. In fact, I find that younger firms and firms with more active boards are more likely to appoint returnee CEOs. The literature shares a common view that endogenous matching of CEOs and firms is not necessarily inconsistent with a casual interpretation of the documented effects (e.g. Custodio and Metzger, 2014; Benmelech and Frydman, 2015; Sunder et al., 2017). The matching and imprinting interpretations are consistent with an effect of CEO traits on firm outcomes. For my study, even firms that face certain challenges or opportunities tend to select or attract returnees, as returnee CEOs might still be crucial to developing and implementing coping strategies.

I use multiple identification strategies to address the concern. Firm-fixed effects regressions document no evidence that endogenous matching determined by unobservable time-invariant firm heterogeneity drives the negative relation between returnee CEOs and firms. Although I do not observe the criteria of hiring decisions, Custodio and Metzger (2014) provide evidence that the observable characteristics of firms and CEOs determine their matching. In an ideal experiment, I would compare the performance of a firm with a returnee CEO to the same firm's performance had a local CEO been hired. Because the counterfactual is not observed, I construct a

hypothetical one by using the propensity score matching (PSM) method to find otherwise identical firms with local CEOs as the control group. I ensure that the treatment and control groups have no observable differences in firm and CEO characteristics except the overseas experience of CEOs. The estimates are in line with my baseline regression estimates.

I take further steps to isolate the effects of returnee CEO from selection effects. I exploit "exogenous" variation by using a subsample of firms that experience switches of CEO type. I find an increase in performance when a firm switches from a local to a returnee CEO, and a decrease in performance when the switch is from a returnee to a local CEO. Although the switch may be endogenous, the timing is likely exogenous. This helps in the identification of returnee CEOs' effect. I find that the CAR (cumulative abnormal return) is about 3% less positive (4.4% vs 1.4%) when a local CEO is succeeded by a returnee than when s/he is succeeded by another local CEO. The analyses provide clearer insights into the relation between returnee CEOs and firm performance.

I use the two-stage least squares (2SLS) approach based on two exogenous policy changes that result in a supply shock of professional talent in different provinces at different times. Since the education opportunities for their children largely affect the career and relocation decisions of returnees, I construct two instrumental variables (IV) related to the policy changes around education opportunities for returnees' children to predict the likelihood of firms having returnee CEOs. The first IV is based on whether the provincial government has promulgated policies to offer returnees' children certain privileges in entering key schools or universities. The second IV is based on whether the province of a firm's headquarters

has approved the opening of an international school. International schools in mainland China use curricula from the US or UK and prepare students for the SAT or A-level university entry exams. The policy changes bring an exogenous supply shock of returnee talent and lower the cost of hiring a returnee CEO for local firms. Since the policies do not explicitly target listed firms, the timing of the introduction is exogenous to firm traits. The two IVs are found to be correlated with the endogenous variable of the hiring of returnee CEOs, and the IV estimates are in line with my baseline results. Overall, the endogenous matching of CEOs to firms caused by omitted variables is unlikely to be driving my results. It is important to note that these IVs still cannot address a concern about the selection of returnee CEOs by particular firms. Methods that allocate returnee CEOs in a truly random fashion are not available. I acknowledge that these results are suggestive rather than conclusive.

Taken together, the findings are consistent with the network hypothesis. As a result of the weak institutions in China, returnee CEOs' absent social capital overrun their advantages of international expertise. The results provide an explanation for the unpopularity of returnee CEOs as documented in Figure 4.1. Despite the dramatic expansion of the returnee talent pool and the tremendous policy efforts made by the Chinese government aimed at introducing returnee professional managers into Chinese capital markets, the underperformance of returnee CEOs has impaired their prevalence. There are a number of possible reasons for firms to hire returnee CEOs, given their underperformance. For example, firms might be overoptimistic about the regional legal environment and irrationally hire returnee CEOs. Alternatively, firms may hire returnee CEOs to signal their intention to improve the internal institutions and culture. Nonetheless, one should not expect returnees to be eliminated in the

CEO labor market, because the hiring decision matrix takes a range of other factors into account (e.g. social value beyond economic value). The network hypothesis implies that the returnee can build up their network after taking on the CEO role. In fact, I find that survived returnee CEOs are no longer inferior to local ones after two to three years with a firm.

To further explore the sources of the underperformance, I examine the regulatory environment faced by returnee CEOs and their personnel strategies. I document a higher incidence of regulatory enforcement actions imposed on firms led by returnee CEOs. This result, based on the matching estimator method, confirms that social capital is important for bringing about favorable regulatory conditions, especially when legal institutions are weak (Correia, 2014; Hou and Moore, 2010). In addition, I find that returnee CEOs are reluctant to appoint politically connected executives who would complement their weaknesses, but tend instead to appoint executives similar to themselves, such as those with a strong educational background. These results provide additional insights into the channel through which returnee CEOs hold back firm performance.

My study complements the growing literature on the impact of CEOs' experience or characteristics on firm decisions and financial outcomes (Benmelech and Frydman, 2015; Custódio and Metzger, 2013, 2014; El-Khatib et al., 2015; Kaplan et al., 2012; Malmendier and Tate, 2009; Mironov, 2015; Bernile et al., 2017). In particular, this study complements and extends the seminal work of Bertrand and Schoar (2003), which documents that managers' person-specific impact can explain a large amount of the unexplained variation in corporate practices, after controlling for firm-level characteristics and industry effects. Quantifying the personal traits of

CEOs with international experience, my study adds a new dimension to studies of CEO managerial effects and reveals how the international experience of CEOs shapes corporate performance and decisions.

My study also makes timely contributions to the limited research on brain gain in capital markets by revealing how it is impacted legal institutions. Giannetti et al. (2015) argue that directors with foreign experience facilitate the adoption of strong management practices and internationalization that could improve firm productivity and profitability. Masulis et al. (2012) find the advisory capability of foreign directors on cross-border acquisitions to be enhanced by their knowledge of foreign markets. Carpenter et al. (2001) suggest that the international assignment experience of CEOs is a valuable, rare and inimitable resource for US multinational firms. We, however, provide original evidence on the impact of weak institutions in shifting the needs regarding CEO characteristics. Despite their international expertise and possible international networks, returnee CEOs who fail to secure local social capital suffer the consequences of inferior performance and an adverse regulatory environment. My results are complementary to those of Mironov (2015), who finds that firms in a corrupt country need corrupt CEOs to advance shareholder interests. My results show that the fit of CEO characteristics and institutional environment is vital, and indicate that the realization of the full benefits of introducing global talent could be restricted by the institutional reliance on political connections and relationships in transition economies like China.

The rest of the chapter proceeds as follows. Section 2 discusses the institutional background relating to Chinese returnees. Section 3 reviews the related literature and develops the competing hypotheses. Section 4 presents the empirical

results and robustness checks. Section 5 reports the identification strategies. Section 6 shows additional analyses. Section 7 concludes.

4.2 Institutional Background and Data

4.2.1 Returnees in China

Ancient Chinese wisdom says it is good to learn from foreign countries. A poem recorded in the 9th century BC in *Shijin* says "*there are other hills whose stones are good for working jade*", implying that the knowledge developed in other places could be used to solve local problems. Returnees have played a very important role in Chinese history by bringing advanced ideologies and technology (Wang et al., 2014). Examples include Xuanzang (AD 602-664), arguably the best-known returnee, who introduced advanced Buddhist knowledge from India to ancient China, and Yung Wing (1828-1912), the first overseas student in modern China, who led the "Self-Strengthening Movement" in Qing Dynasty China to modernize its industry and education (Wang et al., 2014). After 1872, the government of the Qing Dynasty started sending groups of youths to pursue overseas education, starting a large-scale trend for Chinese people to study overseas. Upon returning to China, returnees led the New Culture Movement of 1919, calling for the creation of a new Chinese culture based on Western standards, especially democracy and science.[5]

Despite the contribution of returnees to developing the country, their social status experienced turmoil in the Anti-Rightist Movement (1957-1959) and the Cultural Revolution (1966-1976). Both movements aimed to strengthen the socialist

[5] Sun Yat-sen, a returnee from Japan, led the Xinhai Revolution in 1911, overthrowing China's 2,000 years of imperial rule and bringing the country into the republican era.

system and nip the capitalist ideology from the West in the bud; therefore, returnees, especially those returning from developed capitalist countries, were deemed the main target and were denounced for their capitalist thoughts. Others who had returned from the Soviet Union were not immune, due to the deterioration of Sino-Soviet relations since 1960s. Following this, the Chinese government stopped funding students to study abroad.

Since the first batch of 52 state-funded students went abroad after the Cultural Revolution in 1978, 2.6 million Chinese students have studied overseas. Deng Xiaoping, a returnee from France, ended China's isolation and initiated the opening-up and reform of China. Deng also changed the independent development of the country into a style based on learning from foreign experience, providing a bigger stage for returnees to contribute with their advanced knowledge acquired abroad. China lacked a talent pool of professional managers because there was no modern enterprise in China until 1978. The Chinese government initially encouraged returnees to conduct technology transfer by starting high-tech ventures. Having seen the success of returnee specialists in running small businesses, the government extended an invitation to returnee professional managers to enter the Chinese capital markets, and expected them to replicate the success seen in the small business sector.

4.2.2 Policies to Attract Returnees

To reap the skills and experience of talented emigrants, the Chinese government takes multiple approaches to attract them back to China, including founding returnee venture parks, setting up returnee talent schemes and introducing convenient and supportive regional returnee policies. For example, the Organization Department of the Communist Party initiated a returnee-favorable policy entitled

"*Recruitment Program of Global Experts*" in 2008. The scheme targets full professors at overseas universities and innovation-oriented entrepreneurs, and has attracted 2,263 high-level returnees from 2008 to 2012. Gianetti et al. (2015) find that all provinces in China except Tibet introduced their first regional returnee policies between 1992 and 2007, bringing supply shocks of highly skilled emigrants. They note that the introduction of the policy is not necessarily related to higher economic development, but to the career concerns of the provincial leaders.

The first provincial policies aimed to set the tone to welcome returnees, but were often very vague about the support provided. Many provincial governments therefore issue supplementary policies from time to time to specify the detailed benefits for returnees, and how these will be implemented. For example, some supplement policies regulate that returnees' children can transfer to a key school without taking an exam, or enter a university in the province with reduced entry requirements. In addition, provincial governments permit the opening of international schools, and secure final approval from the Ministry of Education.[6] Many international schools are joint ventures between local schools and foreign education establishments. International schools in China provide children from families of returnees, foreigners and wealthy locals with a similar educational environment to that of primary and secondary schools in Western developed countries. The education system and curricula of international schools mainly follow those from the US or UK, and the schools prepare students for foreign university entry exams, such as SAT or A-level exams.

[6] Until 2013, establishing an international school in China required approval from both the Department of Education of the province and the Ministry of Education of China. Many such applications have been made, but the approval rate was low.

Education is highly valued in Chinese culture, but good schools and universities are scarce resources, leading to fierce competition.[7] Because of the overly intense, exam-oriented nature of education in China, the foreign-born children of returnee families often find it challenging to adapt to the learning environment in China.[8] Those born in China also hope to get access to high-quality education in either a key school or an international school. I argue that preferential treatment in the schooling for returnees' children is an important factor in returnees' relocation decisions. Since the policies do not explicitly aim at listed firms, other aspects of the benefits such as the monetary awards are often not very significant for top-end talents like the CEO candidates. Meanwhile, firm behavior can be affected by the policy changes because the education benefits lower the cost of hiring a returning CEO.

Similar to the policies examined by Giannetti et al. (2015), the policies on education opportunities are not apparently linked to regional economic development. While developed Beijing and Zhejiang issued education policies in 2000 and 2001, far less developed Fujian and Shanxi issued theirs as early as 1992 and 1995. Likewise, the first international school in underdeveloped Qinghai was approved as early as 2000, but the first one in developed Zhejiang was in 2004. More importantly, policies on education opportunities are promulgated by various provincial governmental agencies, including the General Office of the CPC (Communist Party of China) Provincial Committee, the General Office of the Provincial Government, the Provincial Department of Education, the Personnel Department of the Province,

[7] See: https://www.theguardian.com/world/2016/oct/12/gaokao-china-toughest-school-exam-in-world (The Guardian)
[8] See: http://news.xinhuanet.com/overseas/2009-06/09/content_11512171.htm (Xinhua News)

the Science and Technology Office of the Province and the Public Security Department of the Province, among others. Different government departments have different focuses and agendas. The heterogeneity reflects different motivations and considerations for introducing the policies. For example, developing the economy and listed firms is beyond the scope of the Department of Education. Although I cannot rule out the possibility of this being true in a few instances, it is unlikely that the introduction of the policies is related to expected growth opportunities.

4.2.3 Data and Sample

In order to identify returnee CEOs, I review the biographies of 3,324 CEOs disclosed in appointment announcements between 1 January 2001 and 31 December 2010, which I obtain from the China Stock Market and Accounting Research (CSMAR) database. This includes all appointment events of A-share firms listed on the main boards of the Shanghai and Shenzhen Stock Exchanges. A typical short CEO biography contains information on name, age, gender, educational background and work experience. I also cross-check the information with *finance.sina.com.cn* and complete any missing biographies. I identify the provincial policies on the benefits in schooling of returnees' children in Wang et al. (2011) and the Internet. I collect the information of international schools in each province from the Ministry of Education of China.

The cross-sectional sample excludes CEOs with no disclosed biography, foreign CEOs and interim CEOs in office for less than 180 days. I match the CEOs with the firm-level data collected from CSMAR. I require non-missing data on the dependent variables and the control variables on CEOs' personal characteristics, firm

characteristics and governance characteristics. These filters finally leave us with a cross-sectional sample of 2,847 CEO hiring events, in which 247 are returnee CEOs.

Table 4.1 summarizes the starting year of two policies for different provinces and shows the ratio of returnee CEO hiring affected by the policies. Between 1992 and 2010, 23 provinces introduced regional policies entitling returnees' children to reduced entry requirements or transfer opportunities in entering key schools or universities in the province. The year of opening international schools ranges from 1995 to 2010 for the 18 approved provinces. In most provinces, the ratio of returnee CEO appointments increased following the policies. It seems that a supply shock of returnee professionals influences firms' hiring behavior.

[Insert Table 4.1]

Figure 4.2 shows that the appointment of returnee CEOs increases from 17 to 22 from 2001 to 2010, accounting for 8.02% and 7.91% of hiring. Returnee CEOs are classified into two groups according to their overseas experience: (1) CEOs with overseas employment experience, including exclusive work experience or combined study and work experience; and (2) CEOs with exclusive overseas study experience. Study used to be the major route for Chinese people to live abroad. Some return to China immediately after finishing their studies and some choose to work for a number of years before returning to China. Returnee CEOs with work experience generally account for a larger proportion than those with study experience only, except in 2005. These two figures show that the government's efforts to introduce returnee professional managers seem not to have been very effective. Figure 4.3 shows that the proportion of returnee CEOs in various industries is in a narrow range

between 5.43% and 13%, except in the telecommunication services and utilities industries. I control for industry fixed effects in my analyses later to ensure the results are not driven by specific trends in industries that disproportionately hire returnee CEOs.

[Insert Figure 4.2 and Figure 4.3]

Table 4.2 provides the summary statistics for the full sample, as well as the subsamples with and without returnee CEOs. Panel A shows that the number of hired returnee CEOs accounted for 8.68% of the 2,847 CEO appointments in my sample, with 5.02% having overseas work experience and 3.65% having overseas study experience only. Panel D shows that although there is no difference in the one-year-prior operating performance (ROA, ROS and MTB) between firms led by returnee CEOs and those by local ones, the subsequent performance (ROA and MTB) is lower for the former. This supports the network hypothesis.

[Insert Table 4.2]

4.3 Characteristics of Returnee CEOs

4.3.1 Strengths of Returnee CEOs

The rapid growth of the Chinese economy has increased the demand for professional managers. However, the lack of opportunities to accumulate business practice and the backwards education system in the not-so-distant past led to a shortage of professional managers. China's management practices are inferior to all developed countries, and are ranked around the levels of India, Brazil and Argentina (Bloom et al., 2012). Monitoring and target management practices are especially poor. The overseas experience helps Chinese returnees develop international

knowledge and expertise and a high-quality education. Growing up in underdeveloped socialist China, their accomplishments in overseas studies and careers required great effort. Overseas experience widened their horizons and gave them the opportunity to learn the operation of foreign organizations, which could help to develop their superior management practices.

Because studying used to be the only route Chinese people could follow if they wished to live abroad, returnee CEOs normally hold overseas university degrees. A survey by Wang and Lu (2012) shows that 36.1% of returnees have a Master's degree and 35.5% have a PhD. In terms of university rankings, none of the universities from mainland China are in the top 200 in the *Academic Ranking of World Universities,* published annually since 2003, meaning that Chinese universities are substantially lower-ranked than universities in developed countries, which are the major destinations for Chinese students. Returnee CEOs are therefore believed have better quality of education. In addition, the university curricula of Chinese and Western universities used to be very different. Since 1952, universities in China mainly concentrated on technology and engineering, following the higher education model of the Soviet Union. Social sciences and management were mainly taught from a socialism perspective. As a result, returnee CEOs tended to have gained exposure to knowledge that was unavailable in China. The literature documents the value added by education. Chevalier and Ellison (1999) and Gottesman and Morey (2006) find that the risk-adjusted excess returns of funds are higher for fund managers who have graduated from colleges with higher SAT entry requirements and those from prestigious MBA programs, after controlling for expenses, risk and survivorship bias.

Returnee CEOs can also accumulate foreign network resources that may facilitate the expansion of foreign business. Carpenter et al. (2001) show that CEOs with international assignment experience possess important foreign network ties and knowledge of international markets, which could help multinational companies (MNCs) with far-flung operations to establish sustained competitive advantage in the global environment, thus enhancing firm performance. I hereby propose the "expertise hypothesis":

H1a: *Returnee CEOs are positively associated with firm performance*

4.3.2 Weaknesses of Returnee CEOs

Despite being largely ignored by public media and policy makers, returnee CEOs do exhibit weaknesses. They have usually lived abroad for many years before returning to their home country, and therefore are less likely to have accumulated local social capital, such as political connections and network ties. Allen et al. (2005) note that the country-level institutions are so weak in China that its quality of legal enforcement is below the average level of 49 countries in La Porta's (1998) sample. China ranks 100th and 71st worldwide in the 2014 Corruption Perceptions Index and the 2015 Rule of Law Index, respectively. The underdeveloped financial system restricts firms from easily accessing financing to fund growth opportunities. Firms have to rely on relationships and connections to mitigate the barriers and bring about a favorable business environment (see Allen et al., 2005; Guiso et al., 2004; Park and Luo, 2001). The lack of such resources represents the main disadvantage of returnee CEOs.

Returnee CEOs are less likely to have political connections for institutional and personal reasons. When they are abroad, they do not have opportunities to join the Chinese Communist Party, the prerequisite for those wishing to pursue a political career in China. When they return, they do not have any advantage in China's civil service exam, the qualifying requirement for becoming a government bureaucrat, due to the exam's focus on public policy and social knowledge of China. Even if they join the civil service, their overseas experience does not count toward promotion, as the primary criteria are the number of years served in one's current rank and one's civil service track record. The talent schemes normally do not include returnee bureaucrats either. Such circumstances hinder returnees from establishing political connections.

Political connections often bring financing opportunities, lighter taxation and government contracts. The market reacts positively to announcements of newly established political connections (Faccio, 2006). Faccio and Parsley (2009) document a negative market reaction for firms that are headquartered in a politician's hometown around the event of the politician's sudden death, due to the loss of political connections. For the setting of China, Li et al. (2008) find that private entrepreneurs who hold the Chinese Communist Party Membership (CCPM) are positively related to firm performance and access to bank loans, especially for firms located in regions with weaker market institutions and legal protection.

Returnee CEOs have also had fewer opportunities to establish local networks because of their prior geographic distance from China. CEO networks refer to the linkages between CEOs and other individuals or organizations, from which both parties can benefit. Such connections can be established through common

educational, work or recreational experiences. The geographic distance and time zone differences impede returnee CEOs from establishing such connections with local business communities. Even if some returnees had established networks before going abroad, their time overseas would cut them off from local networks.

Returnees' lack of networks restricts the transmission of knowledge, ideas or funds and therefore limits channels for exchanging information and favors. Both formal and informal networks are found to positively impact firm performance and access to essential external resources, reducing environmental uncertainty and consequently contributing to profitability (El-Khatib et al., 2015; Engelberg et al., 2012). CEO networks also increase the CEO's managerial power (Daily and Johnson, 1997), and the lack of a network could undermine the leadership of returnee CEOs.

Portes (2000) notes that social networks are not a given and can only be acquired through cultural inputs. *Guanxi* serves as a special type of network with an ancient and important Chinese cultural element beyond ordinary connections, defined as the exchange of favors and a person's credibility, which is transferable, reciprocal, intangible and utilitarian (Park and Luo, 2001). It has a strong and direct impact on social attitudes and economic life in China. The *2015 White Book of China's Study Abroad* documents that 53.80% of returnees experience culture shock and difficulty integrating into the working environment after they return to China.[9] CEOs in China need to conform to the business culture in order to establish *guanxi*, by paying bribes or exchanging favors in a delicate manner. For example, in order to overcome high entry barriers, CEOs offer profit sharing to government officials

[9] See: http://edu.163.com/special/2015whitebook/ (in Chinese).

(Allen et al., 2005). Without *guanxi*, a returnee CEO will fail to secure a flow of resources, undermine their firm's interaction with the surrounding environment, and in turn depress firm performance.

Local social capital is an inimitable intangible resource for creating firm growth and competitive advantage. Their foreign experience with advanced institutions often make returnees disapprove of Chinese business culture, slowing their adaptation and ability to catch up. Cultural fit is essential for the accumulation of social capital. I hereby propose the following competing "network hypothesis":

H1b: *Returnee CEOs are negatively associated with firm performance.*

4.4 Returnee CEOs and Firm Performance

4.4.1 Baseline Results

To test the competing hypotheses on the relation between returnee CEOs and firm performance, I first apply the following ordinary least squares (OLS) and firm fixed effects regressions on the cross-sectional sample:

$$Performance_{t+1} = \alpha_0 + \alpha_1 Returnee\_CEO_t + \sum_{k=1}^{k} \alpha_{k+1} Control_{k,t} + \varepsilon \quad (1)$$

where *Performance* denotes one-year-lead return on assets (*ROA*), return on sales (*ROS*) and market-to-book ratio (*MTB*). I also test two- and three-year-lead performance in additional analyses. *ROA* is measured by net income over total assets and reflects efficiency in using assets to generate earnings. *ROS* is calculated as net income over total sales and indicates the operational efficiency with which a firm generates profits from revenue. *MTB* is calculated as the market price over the book

value of net assets per common share, and reflects the premium or discount that the market gives to the firm on its net assets.

The independent variable *Returnee CEO* is a dummy variable equal to one if the CEO has overseas experience, and zero otherwise. In addition, I create two dummy variables to capture their type of overseas experience. *Returnee CEO (study)* is set to one for CEOs with exclusive overseas study experience, and zero otherwise. *Returnee CEO (work)* is set to one for CEOs with work experience (including pure work experience and combined work and study experience abroad), and zero otherwise. To support H1a (H1b), I need to observe significantly positive (negative) coefficients on *Returnee CEO*.

I incorporate control variables to account for firm characteristics (market-to-book ratio, firm size, leverage, firm age and block ownership), governance characteristics (board size, supervisory board size,[10] board meeting frequency, supervisory board meeting frequency and board independence) and CEO characteristics (CEO age, MBA, CEO education and gender). These variables have been found by the literature to influence firm performance. Variables are defined in the appendix. Variables are winsorized at the 1% and 99% levels. The regressions include year, industry and region fixed effects.

Table 4.3 shows the results. Columns 1, 3 and 5 present the estimates of ordinary least squares (OLS) regressions. The coefficients of *Returnee CEO* are significantly negative, indicating that firms with returnee CEOs underperform those

[10] In addition to the board of directors, China's company law requires Chinese firms to establish a board of supervisors, usually including shareholder representatives and employee representatives. Board members and executives cannot join the supervisory board.
See: https://www.ft.com/content/b81b7dc2-00d0-11dd-a0c5-000077b07658 (Financial Times)

with non-returnee CEOs. For example, the former achieves 2.51% lower ROA than the latter. Since returnee CEOs might be correlated with some of the firm and CEO characteristics, I apply a univariate test to mitigate the concern of multicollinearity. The untabulated results are consistent. To separate the effect of overseas experience from a pure education effect, I control for CEO education and MBA. Their coefficients are positive in some regression models.

In Columns 2, 4 and 6, I run the same specifications with firm fixed effects to address the joint determination problems in which an unobserved time-invariant variable may simultaneously determine firm performance and the hiring of returnee CEOs. The results for ROA and ROS are consistent, suggesting that the differences between returnee CEOs and local CEOs in terms of operating performance are not explained by time-fixed firm-specific omitted variables. Overall, the results are consistent with the network hypothesis, implying that the lack of local social capital outweighs the benefits of international expertise.

[Insert Table 4.3]

The negative relation is in line with Mironov (2015)'s finding on the importance of social capital of CEOs in corrupt countries, but seemingly contradicts the benefits of international experience among board directors documented in Giannetti et al. (2015). I attribute the contradiction to the different responsibilities of directors and CEOs. Board directors play a monitoring and advisory role, and their function is enhanced by their international experience. By contrast, CEOs are responsible for continuously securing critical resources to diminish the uncertain

external environment and implement their strategic decisions. A lack of social capital undermines their capability.

The negative relation helps to explain the increasing discrepancy between the returnee talent pool and the hiring of returnee CEOs, as shown in Figure 4.1. The annual number of incoming returnees increased by 1001.04% from 2001 to 2010, but the annual number of returnee CEO appointments only increased by 20.41%. I argue that despite the tremendous efforts of the government to introduce returnee professional managers, returnees' weaknesses in social capital hindered a greater prevalence of such managers in the capital markets. There are several possible reasons for firms to appoint returnee CEOs. For example, companies cannot forecast the environment perfectly. It is possible that some firms expected the environment to require less social capital in future and therefore rationally hired returnee CEOs, but the environment did not improve in the direction that they forecast. It is also possible that appointing a returnee CEO is done to send a signal to the market that the firm does not rely on social capital or corruption to do business. One should not expect that CEOs with certain characteristics that may depress operating performance would be eliminated in the labor markets.[11]

The network hypothesis implies that returnees can start accumulating social capital after taking office as CEOs. I test whether returnee CEOs who are still in their job two to three years after their appointment remain inferior. The results reported in Appendix A2 show that the coefficients of returnee CEOs are no longer significantly

[11] For example, Masulis et al. (2012) show that although foreign directors are associated with firm underperformance and poor governance, 12.74% of firms in the US still appoint at least one foreign director.

negative for ROA or ROS two years after their appointment. The results suggest that returnee CEOs who have been in their role for two to three years are no longer inferior to local CEOs. Firms that appoint returnees as CEOs may believe that they could remedy the shortcomings in a few years.

4.4.2 The Type and Length of Overseas Experience

The baseline results provide evidence supporting the network hypothesis. Next, I aim to further establish that the inferior performance of returnee CEOs is indeed due to the lack of social capital under weak legal institutions. The partitioned sample strategy helps to address challenges and limitations of the baseline specification by assessing whether returnee CEOs differently affect performance across firms as predicted by the network hypothesis.

The network view implies a higher opportunity cost for returnees who stay aboard for a long period. Living abroad longer also makes it more difficult for returnees to adapt to Chinese business culture. Returnee CEOs with work experience tend to stay abroad longer than those with study experience only, because the most common overseas degree (80 out of 105 in the sample) for returnee CEOs is a Master's degree, which typically takes no more than two years. The biographies included in appointment announcements do not report the exact duration of returnee CEOs' stays abroad. I therefore search for the name of each CEO in Baidu, the leading Chinese search engine, and find detailed information for about 10% of the returnee CEOs in my sample. Confirming my conjecture, the average time spent abroad for returnee CEOs with and without work experience is 6.9 years and 1.5 years, respectively.

To confirm my conjecture, I incorporate the type of overseas experience, namely through *Returnee CEO (work)* and *Returnee CEO (study)* in Table 4.4. I use OLS and firm fixed effects regressions and incorporate the same set of control variables. The results show that the underperformance is driven by the returnee CEOs with overseas work experience. The higher cost induced by a longer time aboard further supports the network hypothesis.

[Insert Table 4.4]

4.4.3 Social Capital and Returnee CEOs

Firms and returnee CEOs have different levels of social capital. For example, SOEs establish political connections through their state-controlled shareholders rather than relying on CEOs to gain this resource. Returnee CEOs who have previously worked in the government or are sitting on the boards of other firms do not share the typical weaknesses. I therefore predict that the negative association between returnee CEOs and firm performance disappear for resource-affluent firms and CEOs.

To test such prediction, I replicate the baseline test using split samples based on whether the resources are in place. Specifically, I partition the sample according to whether the firm is an SOE, whether the CEO has political connections and whether the CEO has business networks. SOE status is obtained from the CCER (China Center for Economic Research), and is constructed based on whether the ultimate controlling shareholder is the government. CEOs are classified as politically connected if they have experience working in government (Fan et al., 2007). *CEO Network* is a dummy variable based on whether a CEO sits on the boards of other

listed firms. The resources are in place for SOEs, for CEOs with political connections and for CEOs with social networks.

Panel A of Table 4.5 presents the results for the split samples of SOEs and non-SOEs. It shows that the negative relation between a returnee CEO (work) on ROA, ROS and MTB is only pronounced in non-SOEs. In other words, SOEs with returnee CEOs do not have inferior performance. When I consider CEO-level resources in Panels B and C, I find that the negative association of returnee CEOs is concentrated among the samples of CEOs with no political connections and those with no business networks. Politically connected returnee CEOs and those sitting on the boards of other listed firms are not associated with underperformance. The findings from the three panels further support the network hypothesis by attributing the underperformance to the lack of a local social network.

[Insert Table 4.5]

4.4.4 Regional Institutions and Returnee CEOs

Although country-level institutions in China are weak in general, the quality of regional institutions vary across cities. In regions where the rule of law and legal enforcement are relatively strong and corruption is relatively low, firms face less expropriation from governments and enjoy better protection from well-functioning courts. In these regions, social capital should be less vital for mitigating the poor institutions. For example, returnee CEOs do not need to use bribery or establish relationships with government officials to avoid the excess burden of taxation or to gain access to loans. I therefore predict that the relation between returnee CEOs and performance is more positive (or less negative) for firms located in regions with strong institutions.

I test the prediction above by replicating the test based on samples partitioned by the level of regional institutions, as measured by risk of expropriation and rule of law from a World Bank (2006) report on the governance and investment climate in 120 cities in China. Although the survey was conducted in 2005, institutions tend to endure over decades. Risk of expropriation is measured by the number of days a company spends with government departments, including tax administration, public security, environmental protection, and labor and social security. Expropriation does not necessarily imply an immediate risk of nationalization but does indicate possible rent seeking and the occupying of time and firm resources due to government intervention. I obtain city-level data and use the cross-sectional median level to classify firms into two sets: those headquartered in cities with high and low expropriation risk. Some cities are not covered in the World Bank report, but city-level data are still more suitable than province-level because of the institutional disparity within provinces.

Rule of law is measured by the protection of producers' legal rights, recorded in Fan, Wang and Wu (2010). A high value indicates strong protection of producer's legal rights. I use the median value across all provinces in each year to classify all firms into those located in provinces with strong or weak rule of law, according to the province-year level index.

Panels D and E in Table 4.5 show that the negative relation between returnee CEOs and performance is mainly concentrated within the subsample of firms located in cities with high expropriation risk or weak rule of law. In untabulated tests, I also proxy institutions by using an index of corruption based on whether firms need to make informal payments to get loans, as recorded in the World Bank report. As I

expect, the negative relation is seen most in firms located in more corrupt cities. These results further support the network hypothesis and highlight the importance of legal institutions in shifting the needs of firms toward social capital.

4.4.5 International Business and Returnee CEOs

The need for returnees' international expertise varies across firms. For example, the international scope and experience of CEOs will be more valuable for multinational firms than for locally operated ones. This is one possible reason why the benefits documented in Carpenter et al. (2001) regarding international assignment experience are based on the CEOs of multinational firms in the US. In other words, a globalization strategy will exaggerate the benefits of a CEO with knowledge of foreign markets and institutions, and with foreign networks on which to draw. By contrast, local networks are more important for locally operated firms that largely depend on the local business community as their main suppliers and clients. Their reliance on local government is also heavier, because they are more sensitive to local policies. I therefore predict that the effects of returnee CEOs are more positive (or less negative) when firms demand international expertise.

To test such prediction, I divide the firms into those that engage in international business and those that do not, using foreign sales, and expect to observe that the negative relation between returnee CEOs and firm performance is concentrated among firms without international business. Foreign sales data are taken from WIND and CSMAR. Panel F shows that the coefficients on *Returnee CEOs* are only significantly negative for firms with no foreign sales. The results confirm my prediction and suggest that the weaknesses of returnee CEOs are offset by the demand for their international expertise in firms that engage in international business.

To sum up, the results in Table 4.5 help to establish that the negative relation between returnee CEOs and performance documented in the baseline regressions is due to the lack of local social capital and weak legal institutions, as I argued.

4.5 Identification Strategies

4.5.1 Unobserved CEO heterogeneity

Identification is a common challenge in interpreting the results of studies of CEO characteristics. One concern is that the overseas experience might be correlated with omitted variables at the CEO level, which would bias the findings. For example, the overseas experience may capture a CEO's innate talents. It is possible that Chinese firms fail to attract the most capable overseas Chinese executives, and only attract mediocre ones. Or, it might be that CEOs that move abroad and then come back to their home country are less talented than those who never left the country. This alternative hypothesis implies a spurious or a biased effect.

In Table 4.3, I have already controlled for CEO age, MBA, CEO education and gender in baseline regressions. To further address the concern, I incorporate more proxies for CEO talent and background by assuming that executives with prestigious overseas education experience and with overseas experience in more developed countries are more likely to grow into talented executives. I classify the characteristics according to the following perspectives: (1) the quality, subject and level of their overseas education, and (2) the development level of their host countries. To perform the analyses, I regress these characteristics on the performance measures (ROA, ROS and MTB) based on the subsample of 247 firms that appointed

returnee CEOs. The summary statistics of returnee CEO classification are shown in the appendix.

The results reported in Table 4.6 show that whether CEOs studied in one of the top 100 universities in the *Academic Ranking of World Universities*,[12] whether they majored in science or technology, and whether they obtained their first degrees in China from elite universities of the "985 project" does not influence their association with firm performance. Their experience in any of the 34 OECD (the Organization for Economic Cooperation and Development) developed countries, in English-speaking countries, and in Hong Kong, Macao or Taiwan does not make a difference. The results suggest that the alternative interpretation is not plausible.

A similar concern is that people who choose to study abroad are different from others. For example, perhaps they went abroad because they had fewer opportunities in China, due to a lack of local connections. In this case, their lack of social network is not because of the opportunity cost of social capital associated with overseas experience. This argument, however, is not supported by the earlier results that the length of overseas experience exaggerates the negative relation between returnee CEO and firm performance. If the lack of social capital were an inherent characteristic, the relation would not be affected by how long they stay abroad. Overall, the battery of tests alleviates the concern over the omitted variables at CEO level.

[12] I use the Academic Ranking of World Universities (ARWU) 2012 to identify prestigious universities. The criteria used by the Center for World-Class Universities of Shanghai Jiaotong University to construct the ranking include the number of alumni and staff winning Nobel Prizes and Fields Medals, the number of highly cited scientists, and the number of publications in *Nature* and *Science* and a number of publications in SCI and SSCI. ARWU takes a century's performance into account for these two indicators in order to avoid short-term fluctuations. The ranking is regarded as stable and transparent. See http://www.shanghairanking.com/.

[Insert Table 4.6]

4.5.2 Propensity Score Matching

Another important concern is the endogeneity in the assignment of CEOs to firms. Although I rely on within-firm variation and include firm fixed effects, the baseline models can address the matching problem only if the matching is based on time-invariant unobservable factors. Under this assumption, the estimates of returnee CEOs can be interpreted as casual effects.

In Table 4.2, I show that firm age and board characteristics are different for firms with and without returnee CEOs. To alleviate the concern that returnee CEOs and firms are endogenously matched based on these time-variant characteristics, I apply a nearest-neighbor matching estimator (Abadie et al., 2004; Shipman et al., 2017), which allows us to match certain observable characteristics. To convincingly draw a causal inference, ideally I should compare the performance of a firm that appoints a returnee CEOs with the same firm's performance had it appointed a non-returnee CEO. Since the counterfactual setting is not available, I construct a matching sample using observable firm and CEO characteristics linked to CEO selection. Custodio et al. (2013) and Custodio and Metzger (2014) argue that the selection decision mostly relies on public information. Although I incorporate factors that are likely to influence the appointment decision, the baseline model may suffer from functional form misspecification. Shipman et al. (2017) show the benefits of the PSM technique in alleviating the functional form misspecification concern for the baseline model.

Panel A of Table 4.7 estimates a first-stage probit regression on the likelihood of a firm appointing a returnee CEO. It is important to note that the coefficients of prior performance are insignificant, suggesting that it is not plausible to interpret my results as showing that returnee CEOs are disproportionally hired by firms with financial problems. Younger firms, firms with more active boards, indicated by meeting frequency, and firms that are located in regions that offer preferential education opportunities for returnees' children are found to be positively related to hiring returnee CEOs. I then apply PSM with no replacement to match each of the 247 firms (treatment group) that appointed a returnee CEO with an otherwise identical firm that would have been just as likely to appoint a returnee CEO but in fact appointed a non-returnee CEO (control group). Panel B of Table 4.7 shows that the difference in the matching characteristics is insignificant between the treatment firms and their matched counterparts. Panel C of Table 4.7 shows that the coefficients of *Returnee CEO* remain significantly negative for *ROA*, *ROS* and *MTB*. The negative relation is concentrated on these with work experience who stayed overseas longer. The findings based on the matched sample are in line with the resource hypothesis.

Since the propensity score matched-pair research design may be sensitive to the choice of matching variables, it is useful to examine the sensitivity of my results to different choices of econometric approach. In the sensitivity analyses, I use the following two sets of matching covariates to generate new propensity score samples to replicate the tests: 1) firm characteristics, region, year and two-digit GICS code; and 2) by discretionary accruals (DACC) based on the modified Jones model (Dechow et al., 1995), in addition to the current matching variables. Untabulated

results show that my findings are robust to different matching covariates, suggesting that my results are not likely to be driven by the observable sample selection bias.

The limitation of the propensity score matching method is the unobservable omitted variable issue, or "hidden bias". I use the bounding approach developed by Rosenbaum (2002) to assess the impact of unobservable omitted variables and endogenous match between firms and CEOs. Following the argument of Rosenbaum (2002), the propensity score matching process is based on the assumption that matched observations have an equal probability (defined as $\Gamma=1$) of receiving treatment conditional on hiring returnee CEOs, i.e. two observations with identical observable covariates have an identical probability of receiving treatment. If Γ is not equal to one, each observation in a matched pair has an unequal probability of receiving treatment. Rosenbaum (2002) shows that relaxing the assumption of $\Gamma = 1$ can be used to test whether the results are sensitive to hidden bias. I calculate Γ when the difference of outcomes between treatment and control groups is significant at the 10% level. The tests show that although the differences of ROA, ROS and MTB between firms with and without returnee CEOs are statistically significant at 1%, 5%, and 5%, respectively, estimates of $\Gamma =1$ for ROA, $\Gamma =1$ for ROS and $\Gamma =1.095$ for MTB would result in significance at 10% level. This finding suggests that these results are sensitive to hidden bias and should be interpreted with caution.

[Insert Table 4.7]

4.5.3 Switch in the Type of CEOs

The endogenous matching suggests that returnee CEOs tend to be hired by poorly performing firms, while the resource hypothesis suggests that CEOs influence

firm performance. The literature on CEOs' experience points out that the endogenous matching between firms and CEOs and my imprinting interpretation are not mutually exclusive, because CEO-firm matching occurs largely because the firm believes that the CEO can imprint his or her personal style on the firm to meet its challenges (Benmelech and Frydman, 2015; Sunder, Sunder and Zhang, 2017).

To ideally identify the effect of returnee CEOs on firm performance, I would need a sample in which local CEOs are exogenously replaced by returnee ones (or vice versa). If there is a change in firm performance, I could conclude that firm performance is correlated with the type of CEO rather than firm unobservable characteristics. Unfortunately, such a setting is not available. The closest experiment in practice is a switch of CEO type. Although most CEO departures are not random (Fee, Hadlock and Pierce, 2013), the timing is not likely to be optimal (Custodio and Metzger, 2014).

I then examine the impact of a switch in the type of CEO on the change in operating performance. The change in ROA is calculated as the difference between the post-one-year ROA and the mean of the prior two years' ROA. The change in ROS is defined as the difference between the post-one-year ROS and the mean of the prior two years' ROS. In the subsample of predecessors as non-returnees (work), *Other to Returnee (work)* is set to one if the successor is a returnee (work), and 0 otherwise. In the subsample of predecessors as returnees (work), *Returnee (work) to Other* equals one if the successor is a non-returnee (work), and zero otherwise. Table 4.8 reports the results. The coefficients of *Other to Returnee (work)* are significantly negative, while the coefficients of *Returnee (work) to Other* are significantly positive for the regressions of the change in ROA and the change in ROS. The results indicate

that firms that switch to returnee CEOs are associated with inferior performance, but switching to local CEOs results in improved performance. This is further evidence supporting the network hypothesis, although I cannot completely rule out the possibility of endogenous matching between CEOs and firms.

[Insert Table 4.8]

I further examine the market reaction to the switch in type of returnee CEO. I obtain CEO appointment announcement dates and daily stock returns from CSMAR and estimate the abnormal return as the difference between the daily stock return adjusted by dividends and the value-weighted market return including distributions. I focus on the subsample of firms in which the previous CEOs were non-returnees (work) and then compare the cumulative abnormal returns (CARs) for appointing returnee (work) vs non-returnee (work) successors. Table 4.9 presents the regressions results for the CARs for various event windows. Panel A is based on the original sample. The coefficients of *Other to Returnee (work)* are significantly negative after controlling for firm characteristics, governance characteristics and CEO characteristics, further supporting the network hypothesis. Although the public media in China hold a positive view of returnees, it seems that investors are aware of their weaknesses in the capital market. Because other factors may influence investors' reactions to the hiring of returnee CEOs, I replicate the event based on the propensity score matching sample and report the results in Panel B. The market reaction remains more positive for hiring non-returnee successors, but the difference in CARs between the two groups becomes smaller. Figure 4.4 shows that although the replacement of non-returnee CEOs (work) leads to a positive market reaction in general, the CARs is substantially more positive (4.4% vs 1.4%) when the incoming CEO is a non-

returnee (work) than a returnee (work). The positive CAR for the switch to returnee CEOs suggests that investors do not perceive return CEOs very negatively.

[Insert Figure 4.4 and Table 4.9]

4.5.4 Instrumental Variable Approach

I still cannot completely rule out the possibility that certain time-variant unobserved omitted factors explain my finding. For example, two matched firms with similar matching covariates may have different growth potential and challenges. To address the concern that my OLS estimates might be biased by unobserved firm characteristics that are correlated both returnee CEOs and firm performance, I use the exogenous provincial polices that increase the supply of potential CEOs with foreign experience. The policies are introduced by different government departments at different times in different provinces. Because the listed firms' prospects do not fall into the scope of many of the provincial departments, such as the Department of Education, Personnel Department and Public Security Department, the variation in the timing of the policies is not likely to be related to firms' prospects or demand for returnee CEOs. In fact, none of the returnee policies explicitly target listed firms and their CEOs. This increases my confidence in the exogenous nature of the policies.

Since the median age of the returnee CEOs in my sample is 43 years old, and they generally have school-aged children, the provincial policies that alleviate their education concerns arguably lead to an exogenous increase in the supply of qualified returnee candidates for CEO positions.[13] Education opportunities play an important

[13] Giannetti, Liao and Yu (2015) show that the first provincial policy, regardless of the content, helps to increase the proportion of directors with foreign experience in the province. I find that it does not significantly increase the hiring of returnee CEOs. It is possible that the first policies are often very

role in family relocation decisions in Chinese culture, in turn lowering the cost of hiring returnee CEOs and influencing the hiring decision.[14] Table 4.1 show that the policies increase the hiring of returnee CEOs in the province following their introduction.

I construct two instrumental variables for returnee CEOs using two policy-related dummies. I set *Local School* to one if the provincial policies offer specific schooling benefits to returnees' children, and zero otherwise. I set *International School* to one if the province approves the opening an international school, and zero otherwise. If both IVs are valid, they estimate a local average treatment effect for compliers, i.e. firms which appoint returnee CEOs as a result of the instruments. They do not estimate an effect for "always takers" that appoint returnee CEOs anyway, or for "never takers" that would never appoint returnee CEOs regardless of the policies (Atanasov and Black, 2016).

Both IVs are plausible in that I believe there are no contextual shocks that independently affect the firms in the province introducing the policies. As discussed earlier, it is unlikely that a provincial department will issue a policy that does not target listed firms at the same time as listed firms increase their demand for returnee CEOs. The asymmetric shocks are not a big concern between firms that eventually hire returnee CEOs and firms do not. This is because the staggered introduction of

---

vague and the offered benefits are often trivial in the relocation decisions of wealthy high-end professionals like returnee CEO candidates.

[14] To stress the importance of education opportunities in the family relocation decision, Chinese people often refers to an idiomatic allusion about the Chinese philosopher Mencius (Mengzi, 372-289 BC). It refers to the legend that Mencius's mother moved houses three times before finding a location that provided a good environment for the child's education and upbringing.

the policies means the control sample includes not only firms with local CEOs but also firms that eventually hire or have already hired returnee CEOs.[15]

Even the supply shock of emigrant talents was a good predictor for hiring returnee CEOs, it would be still difficult to convincingly claim that it meets the exclusion restriction. The policies might be able to influence firm performance through the channel of human capital. Apart from returnee CEO candidates, the policies could also attract more capable employees and directors with overseas experience who may enhance firm performance. However, given the value of overseas experience documented in the literature (Giannetti et al., 2015; Wang et al., 2014), such a channel, if it exists, should bias against finding evidence consistent with the network hypothesis.

Table 4.10 shows that both *Local School* and *International School* significantly predict the likelihood of a firm appointing a returnee CEO in the first-stage models. Following the introduction of the education policies (opening of international schools), firms in the affected province are 2.30% (4.12%) more likely to hire returnee CEOs. For each regression, I estimate an F-statistic as prescribed in Stock and Yogo (2005) to check for weak instruments. The F-statistics (10.56) is above the rule of thumb (10), which indicates that the instruments satisfy the relevance condition.

The results in the second stage with fixed effects show that the predicted *Return CEOs* significantly reduces the subsequent *ROA* and *ROS*, broadly consistent with my baseline results. The finding further supports the network hypothesis about the cost of returnee CEOs and highlights the importance of social capital. Overall,

[15] See Giannetti et al. (2015) for a similar argument.

the results are not driven by the endogenous matching between CEOs and firms. A caveat is that the instrumental variable estimates are larger than the baseline estimates. One possible reason for the difference is that the instruments may have some other direct or indirect effect on the outcome (Atanasov and Black, 2016).

I perform additional analyses to mitigate the concern of possible shocks concurrent with the policies. First, I replicate the analyses based on a sub-sample of firms by excluding firms that have never hired returnee CEOs during the sample period and find consistent results. The treatment group remains firms that responded to the policies, but the control group becomes those that hired returnee CEOs at different points in the sample period. The firms in the restricted control sample are likely to be subject to shocks similar to those faced by firms that hire returnee CEOs after the policy changes. Second, the results are robust to the inclusion of industry-year, region-year fixed effects or region-specific time trend to control for time-varying industry and regional traits. I also use industry-province-median-adjusted ROA and ROS to control for industry- and province-specific shocks. The results remain consistent. Third, since the first stage results show that firm age is related to the hiring decision, I partition the sample based on the ex-ante median firm age.[16] Following the new polices, younger firms are more likely to hire returnee CEOs than older listed firms from the same province. In the second stage regression of the industry-province-median-adjusted performance, the coefficients of predicted returnee CEOs are significantly positive in the sample of younger firms.

[Insert Table 4.10]

[16] I do not use the interaction-based IV based on firm age and returnee policies because of the endogeneity between lagged and contemporaneous firm age (Atanasov and Black, 2016).

4.6 Additional Tests

4.6.1 Returnee CEOs and Regulatory Conditions

In addition to firm performance, I explore the regulatory environment faced by returnee CEOs. Allen et al. (2005), Correia (2014) and Hou and Moore (2010) suggest that social capital brings about favorable regulatory conditions for firms. For example, laws and regulations are not enforced effectively for politically connected firms. Therefore, I predict that the appointment of returnee CEOs leads to more severe inspections from the regulator, and thus a higher incidence of regulatory enforcement.

I collect regulatory enforcement actions against fraud from the CCER. *Regulatory Enforcement* is equal to one for firms that experienced regulatory enforcement against fraud in the year in question, and zero otherwise. Based on the propensity score matching sample, I perform the test to examine the impact of returnee CEOs on enforcement against fraud. Table 4.11 shows that the coefficients of *Returnee CEO*, *Returnee CEO (work)* and *Returnee CEO (study)* are significantly positive, indicating that returnee CEOs could not avoid government intervention and fail to create a fair legal environment for their firms.

[Insert Table 4.11]

To confirm that the negative impact is not due to negative earnings management (EM) that returnee CEOs may engage in to blame their predecessor for the company's problems, I test whether returnee CEOs tend to manipulate earnings. Earnings management is measured by modified Jones model-based discretionary accruals (DACC) (Dechow, Sloan and Sweeney, 1995). I find that returnee CEOs do

not have a significant impact on subsequent earnings management. In addition, I also test the earnings management prior to the appointment to exclude the possibility that the underperformance is due to the predecessor's earnings management in the year prior to the turnover. Again, I find that the prior earnings management is not significantly different for firms that appoint returnee CEOs and those that appoint local CEOs. The results suggest that it is not plausible to attribute the negative impact to hidden problems that manifest soon after returnee CEOs take office.

4.6.2 Returnee CEOs and the Appointment of Executives

I next explore the personnel strategies of returnee CEOs in terms of the composition of their management teams. Because executives with heterogeneous knowledge and expertise can complement each other, returnee CEOs should appoint those who are able to bring local social capital to complement their weaknesses. I collect information on the executives' backgrounds from the RESSET database. To perform the test, I review the biographies of newly appointed executives and construct the following variables: (1) the ratio of China's Communist Party members among executives appointed in the year following the CEO's appointment, to proxy for political connections; (2) the ratio of accounting, auditing or law professionals among the executives appointed in the year following the CEO's appointment; (3) the ratio of executives with a Master's degree or higher among the executives appointed in the year following the CEO's appointment; and (4) the ratio of female executives among the executives appointed in the year following the CEO's appointment.

I regress the dummy variables *Returnee CEO* on the variables related to executive appointments. The results reported in Table 4.12 show that returnee CEOs

are reluctant to appoint executives with political connections. Their preference is presumably because politically connected executive members may undermine their leadership, and they may also feel more comfortable working with people with similar experience. The results help to explain returnee CEOs' underperformance.

[Insert Table 4.12]

4.6.3 Returnee CEOs and Corporate Strategy

Finally, I explore the corporate finance strategies of returnee CEOs by examining their influence on corporate decisions of corporate diversification, investment, R&D expenditure and cash holdings. Since returnee CEOs in China are regarded as an elite social group, they may exhibit overconfidence by overestimating their ability in choosing positive NPV (net present value) projects in various sectors and may pursue corporate diversification, which in turn could destroy firm value (Lang and Stulz, 1994). They may also have a greater sensitivity of corporate investment to cash flow due to overestimating returns on projects and viewing external funds as unduly costly (Malmendier and Tate, 2005), and may increase risk-taking, as reflected by R&D expenditure and cash holdings (Kim and Lu, 2011; Opler et al., 1999).

To test my predictions, I use the number of business segments multiplied by the number of geographic segments to proxy for the firm's diversification, following Markarian and Parbonetti (2007). The corporate investment policy is measured by the ratio of capital expenditure to cash flow, following Malmendier and Tate (2005). I obtain data on business segments and geographic segments from CSMAR (2003-2010) and WIND (2001-2002), capital expenditure and earnings from CSMAR, and depreciation from CSMAR (2003-2010) and GAOTIME (2001-2002). I regress

Returnee CEO on diversification, the sensitivity of investment to cash flow, R&D expenditure and cash holdings, using the original sample, and the results are reported in Table 4.13. The results show that returnee CEOs tend to pursue firm diversification but are not significantly different from local CEOs in terms of their other corporate strategies. Firm diversification serves as one of the possible reasons for the inferior performance of returnee CEOs.

[Insert Table 4.13]

4.7 Conclusion

As the leading country of origin for international students, China's incoming returnees increased more than tenfold from 2001 to 2010. Despite the dramatically expanded talent pool, the number of returnee CEO appointments only increased by 29.41% in this period. I show that the benefits of CEOs' international experience are less clear-cut in transition economies like China, in that international expertise can only be acquired at the opportunity cost of local connections. The setting of Chinese returnee CEOs enables us to test whether international expertise or local social capital is more important for firms operating in a country with weak legal institutions.

I find that the appointment of returnee CEOs leads to less positive market reaction and inferior firm performance compared to local CEOs. The results support the network hypothesis and indicate that weak legal institutions shift the demand for resources of listed firms. Social capital can create a favorable business environment and reduce the dependence of firms on adverse environment, but returnee CEOs lack the resources needed to maneuver around bad institutions and therefore are associated with underperformance.

Furthermore, I confirm that the underperformance is indeed due to a lack of social resources and weak institutions, in that performance is no longer inferior for either resource-affluent returnee CEOs or returnee CEOs working for firms located in areas with stronger regional institutions. The effect of returnee CEOs also depends on the firm's need for international expertise. For firms engaging in international business, the underperformance of returnee CEOs is not documented. My results are robust to the control of omitted variables issue at CEO level and the endogenous matching between firms and CEOs. Finally, I explore the channel through which returnee CEOs underperform local CEOs. I find that returnee CEOs are less likely to appoint executives with political resources to complement their disadvantages, but are instead more likely to appoint executives with a good educational background, limiting the heterogeneity of their management team. Returnee CEOs also exhibit overconfidence by engaging in business diversification. I argue that the mismatch of CEOs' international expertise with the demand for local social capital impedes returnees from flourishing in the Chinese CEO labor market. Overall, I show that measurable CEO characteristics regarding international experience significantly determine firm performance and provide direct evidence of the importance of local social capital versus international experience in transition economies. In the context of the globalization of human capital, my findings suggest that the development of legal institutions, which reduce expropriation risks and enhance rule of law, will help transition economies like China to fully enjoy the benefits of introducing global talent. With regard to CEOs, my findings suggest a corporate governance question that has not been identified in prior literature: To what extent does international experience influence the leadership, entrenchment and remuneration arrangements of

returnee CEOs? For example, it would be interesting to know whether returnee CEOs possess more power in exercising their decision rights due to their international experience and knowledge, or less power due to their lack of local networks. Although I document that returnee CEOs bring little economic value to shareholders, it is important to explore the societal value, such as the patents, culture and social responsibility, that they may bring. I consider this an important area for future research.

References

Abadie, A., Drukker, D., Leber Herr, J., & Imbens, G.W. (2004). Implementing matching estimators for average treatment effects in Stata. *Stata Journal*, 4, 290-311.

Adams, R. B., Almeida, H., & Ferreira, D. (2005). Powerful CEOs and their impact on corporate performance. *Review of Financial Studies*, 18, 1403-1432.

Allen, F., Qian, J. & Qian, M., (2005). Law, finance, and economic growth in China. *Journal of Financial Economics*, 77, 57-116.

Atanasov, V. & Black, B., (2016). Shock-Based causal inference in corporate finance and accounting research. *Critical Finance Review*, 5, 207-304.

Benmelech, E. & Frydman, C. (2015). Military CEOs. *Journal of Financial Economics*, 117, 43-59.

Bernile, G., Bhagwat, V., & Rau, P. R. (2017). What doesn't kill you will only make you more risk-loving: early-Life disasters and CEO behavior. *Journal of Finance*, 72(1), 167-206.

Bertrand, M. & Schoar, A. (2003). Managing with style: the effect of managers on firm policies. *Quarterly Journal of Economics*, 118, 1169-1208.

Bloom, N. & Van Reenen, J. (2007). Measuring and explaining management practices across firms and countries. *Quarterly Journal of Economics*, 122 (4), 1351-1408.

Bloom, N., Genakos, C., Sadun, R. & Van Reenen, J. (2012). Management practices across firms and countries. *Academy of Management Perspectives*, 26 (1), 12-33.

Carpenter, M.A., Sanders, W.G., & Gregersen, H.B. (2001). Bundling human capital with organizational context: the impact of international assignment experience on multinational firm performance and CEO pay. *Academy of Management Journal*, 44, 493-511.

Chevalier, J. & Ellison, G. (1999). Are some mutual fund managers better than others? Cross-sectional patterns in behaviour and performance. *Journal of Finance*, 54, 875-899.

Correia, M.M. (2014). Political connections and SEC enforcement. *Journal of Accounting and Economics*, 57(2), pp.241-262.

Custódio, C., Ferreira, M.A., & Matos, P. (2013). Generalists versus specialists: lifetime work experience and chief executive officer pay. *Journal of Financial Economics*, 108, 471-492.

Custódio, C. & Metzger, D. (2014). Financial expert CEOs: CEO's work experience and firm's financial policies. *Journal of Financial Economics*, 114, 125-154.

Daily, C.M. & Johnson, J.K. (1997). Sources of CEO power and firm financial performance: a longitudinal assessment. *Journal of Management*, 23, 97-117.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting* Review, 70, 193-225.

El-Khatib, R., Fogel, K., & Jandik, T. (2015). CEO network centrality and merger performance. *Journal of Financial Economics*, 116, 349-382.

Engelberg, J., Gao, P., & Parsons, C.A. (2012). Friends with money. *Journal of Financial Economics*, 103, 169-188.

Faccio, M. (2006). Politically connected firms. *American Economic Review*, 96, 369-386.

Faccio, M. & Parsley, D.C. (2009). Sudden deaths: taking stock of geographic ties. *Journal of Financial and Quantitative Analysis*, 44, 683-718.

Falato, A., Li, D., & Milbourn, T.T. (2015). Which skills matter in the market for CEOs? Evidence from pay for CEO credentials. *Management Science*, 61, 2845-2869.

Fan, J., Wong, T.J., & Zhang, T. (2007). Politically connected CEOs, corporate governance, and post-IPO performance of China's newly partially privatized firms. *Journal of Financial Economics*, 84, 330-357.

Fee, C.E., Hadlock, C.J., & Pierce, J.R. (2013). Managers with and without style: Evidence using exogenous variation. *Review of Financial Studies*, 26(3), pp.567-601.

Giannetti, M., Liao, G., & Yu, X. (2015). The brain gain of corporate boards: evidence from China. *Journal of Finance*, 70, 1629-1682.

Gottesman, A.A. & Morey, M.R. (2006). Manager education and mutual fund performance. *Journal of Empirical Finance*, 13, 145-182.

Guiso, L., Sapienza, P., & Zingales, L. (2004). The Role of social capital in financial development. *American Economic Review*, 94, 526-556.

Hou, W. & Moore, G. (2010). Player and referee roles held jointly: the effect of state ownership on China's regulatory enforcement against fraud. *Journal of Business Ethics*, 95, 317-335.

Jian, M. & Lee, K.W. (2011). Does CEO reputation matter for capital investments? *Journal of Corporate Finance*, 17, 929-946.

Kaplan, S.N., Klebanov, M.M., & Sorensen, M. (2012). Which CEO characteristics and abilities matter? *Journal of Finance*, 67, 971-1005.

Kim, E.H. & Lu, Y. (2011). CEO ownership, external governance, and risk-taking. *Journal of Financial Economics*, 102, 272-292.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy*, 106, 1113-1155.

Lang, L.H.P., Stulz, R.M. (1994). Tobin's q, diversification and firm performance. *Journal of Political Economy*, 102, 1248-1280.

Li, H., Meng, L., Wang, Q., & Zhou, L. (2008). Political connections, financing and firm performance: evidence from Chinese private firms. *Journal of Development Economics*, 87, 283-299.

Malmendier, U. & Tate, G. (2005). CEO overconfidence and corporate investment. *Journal of Finance*, 60, 2661-2700.

Malmendier, U. & Tate, G. (2009). Superstar CEOs. *Quarterly Journal of Economics*, 124, 1593-1638.

Markarian, G., Parbonetti, A., 2007. Firm complexity and board director composition. *Corporate Governance: An International Review*, 15, 1224-1243.

Masulis, R.W., Wang, C., & Xie, F. (2012). Globalizing the boardroom—the effects of foreign directors on corporate governance and firm performance. *Journal of Accounting and Economics*, 53, 527-554.

Mironov, M. (2014). Should one hire a corrupt CEO in a corrupt country? *Journal of Financial Economics*, 117, 29-42

Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. (1999). The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, 52, 3-46.

Park, S.H. & Luo, Y. (2001). Guanxi and organizational dynamics: organizational networking in Chinese firms. *Strategic Management Journal*, 22, 455-477.

Portes, A. (2000). Social capital: Its origins and applications in modern sociology. Lesser, Eric L. Knowledge and Social Capital. *Boston: Butterworth-Heinemann*, 43-67.

Shipman, J. E., Swanquist, Q. T., & Whited, R. L. (2017). Propensity score matching in accounting research. *Accounting Review*, 92(1), 213-244

Wang, H., Duan, T., & Hou, W. (2014). Returnees' influences on China: a business perspective (1850s to 1940s). *Unpublished Working Paper*. University of Edinburgh.

Wang, H. & Lu, J. (2012). Annual Report on Chinese Returnee Entrepreneurship. Social Sciences Academic Press (China), Beijing.

World Bank. (2006). China Governance, Investment Climate, and Harmonious Society: Competitiveness Enhancements for 120 cities in China. *Report No. 37759-CN*, October 8, 2006.

Figure 4.1 Growth Rates of New Returnees and New Returnee CEOs

This figure presents the growth rates of incoming returnees and returnee CEO appointments relative to their initial levels in 2001.

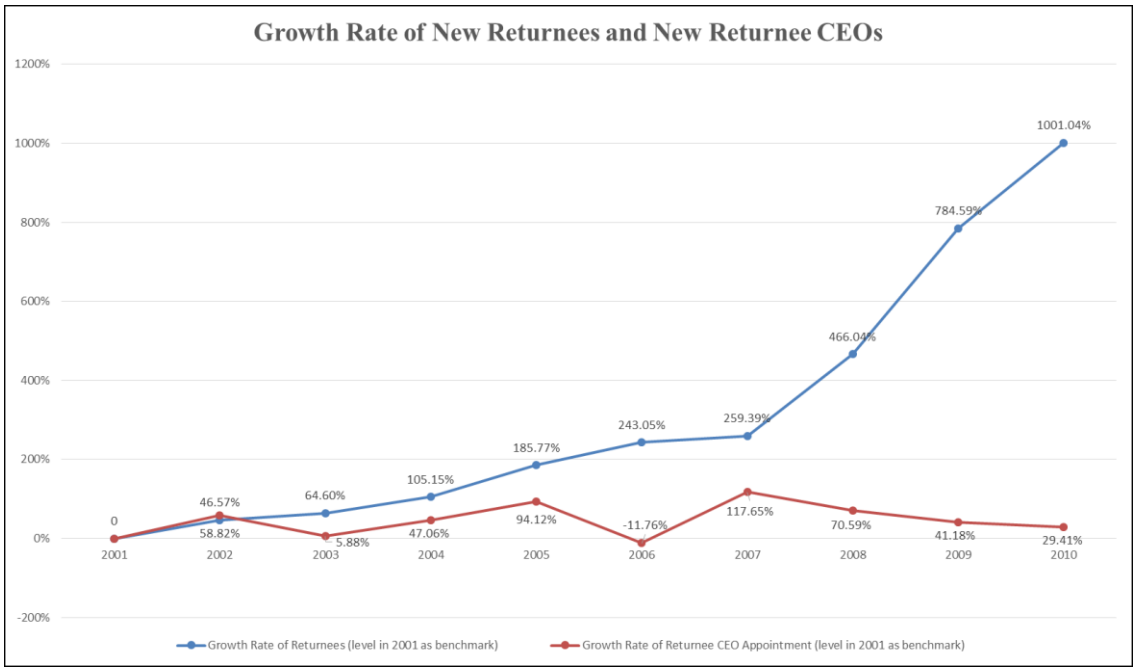

Figure 4.2. Returnee CEOs Appointment Frequency

This figure presents the number of appointments of returnee CEOs, returnee CEOs (with work experience) and returnee CEOs (with study experience) from 2001 to 2010 in Chinese A-share listed firms.

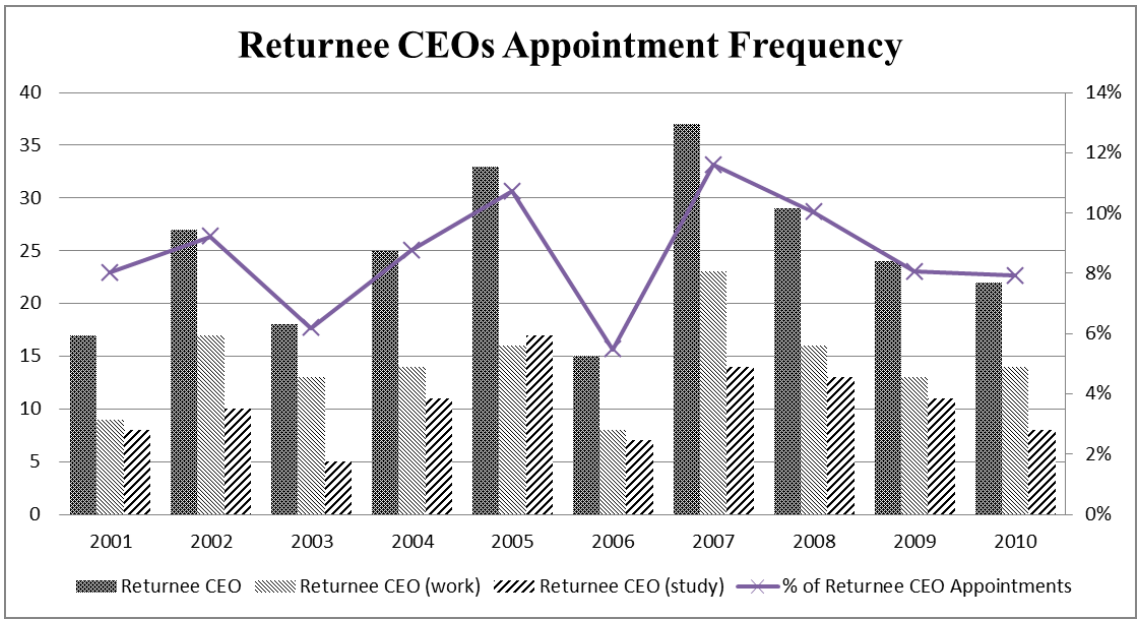

Figure 4.3 Returnee CEOs Appointments by Industry

This figure presents the number of appointments of returnee CEOs, returnee CEOs (with work experience) and returnee CEOs (with study experience), as well as the proportion of appointments of returnee CEOs, broken down into ten industries (by two-digit GICS code), from 2001 to 2010 in Chinese A-share listed firms.

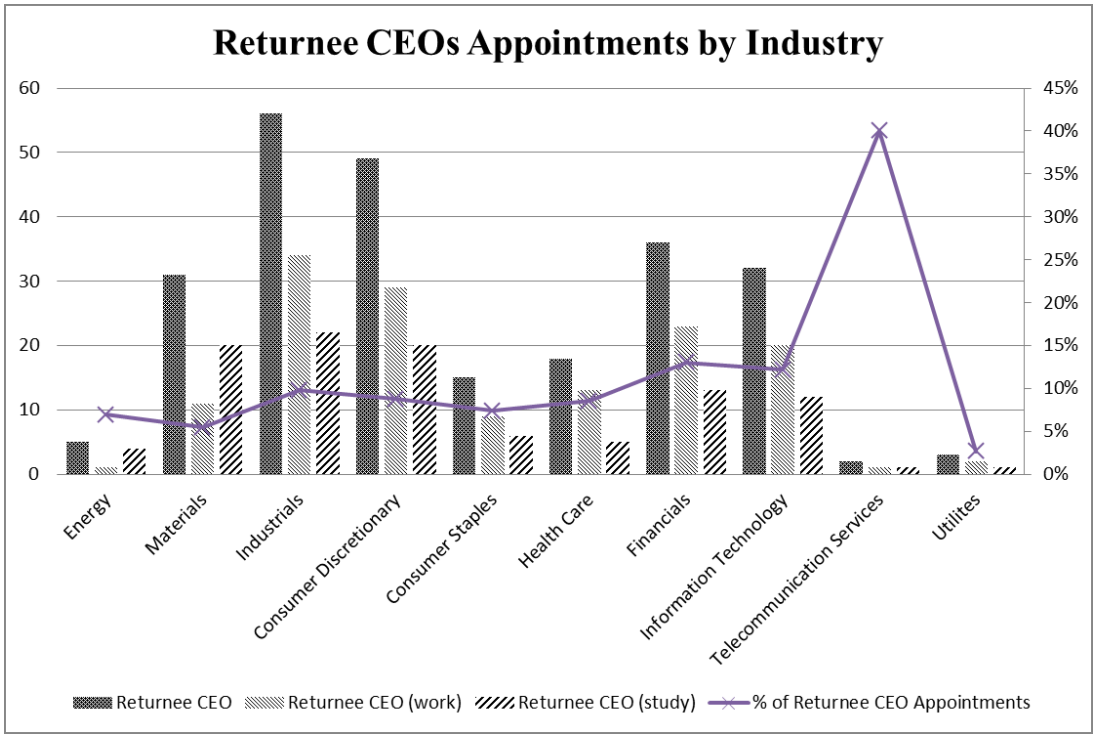

Figure 4.4 Mean CARs around Changes of CEOs

Mean cumulative market-adjusted compound stock returns (CARs) around changes of CEOs based on the PSM sample, between 7 trading days prior to and 60 trading days post the CEO announcements during 2001-2010 under the propensity score sample, sorted by whether non-returnee CEOs (work) are succeeded by non-returnee CEOs (work) or returnee CEOs (work).

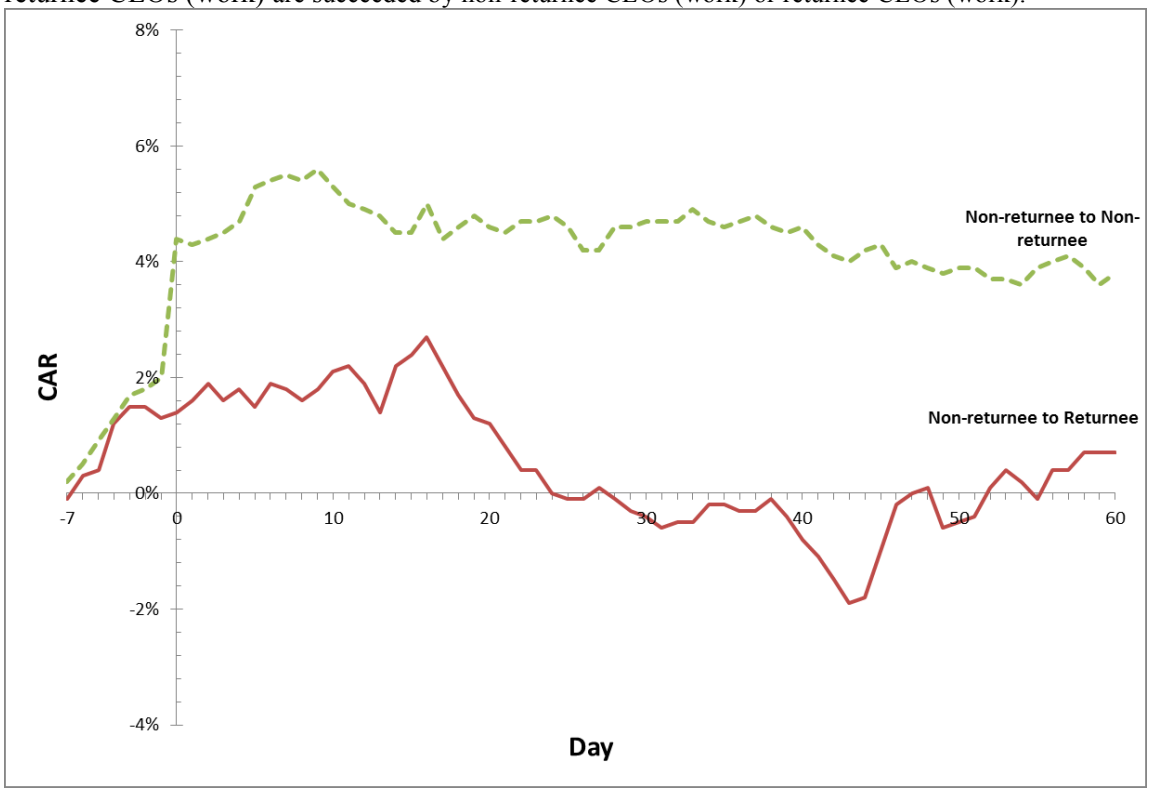

Table 4.1 International Schools and Returnee Policies to Attract Returnee CEOs

This table reports the issuing year of the first provincial policy benefiting returnees' children' schooling and opening year of the first international school in each province. The sample period is 2000-2010. CEO # denotes the observation of CEO appointments in each province. Returnee CEO% denotes the proportion of returnee CEOs hired in each province. "After" corresponds to observations after and during the issuing or opening year. "Before" corresponds to observations before the issuing or opening year.

Province		Returnee Policy					International School				
		CEO #			Returnee CEO %		CEO #			Returnee CEO %	
	CEO #.	Year	Before	After	Before	After	Year	Before	After	Before	After
Anhui	84	2006	33	51	3.03	9.8	N/A	N/A	N/A	N/A	N/A
Beijing	166	2000	0	166	0	17.47	1996	0	166	0	17.47
Chongqing	80	2005	29	51	13.79	7.84	2001	0	80	0	10
Fujian	84	1992	0	84	0	19.05	1997	0	84	0	19.05
Gansu	45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Guangdong	301	1999	0	301	0	14.29	1995	0	301	0	14.29
Guangxi	47	2005	16	31	6.25	9.68	N/A	N/A	N/A	N/A	N/A
Guizhou	26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hainan	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hebei	60	2009	48	12	4.17	0	2002	5	55	0	3.64
Heilongjiang	67	2002	5	62	0	3.23	N/A	N/A	N/A	N/A	N/A
Henan	78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hubei	129	2002	9	120	0	5.83	2004	37	92	5.41	5.43
Hunan	108	2001	0	108	0	6.48	2010	99	9	5.05	22.22
Inner Mongolia	45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jiangsu	152	1999	0	152	0	7.89	1995	0	152	0	7.89
Jiangxi	47	2003	7	40	0	2.5	N/A	N/A	N/A	N/A	N/A
Jilin	73	2001	0	73	0	8.22	1998	0	73	0	8.22
Liaoning	115	1999	0	115	0	8.7	2000	0	115	0	8.7
Ningxia	30	2003	5	25	0	8	N/A	N/A	N/A	N/A	N/A
Qinghai	23	N/A	N/A	N/A	N/A	N/A	2000	0	23	0	0
Shaanxi	58	1995	0	58	0	8.62	1999	0	58	0	8.62
Shandong	150	1998	0	150	0	2.67	1996	0	150	0	2.67
Shanghai	310	1997	0	310	0	11.94	1995	0	310	0	11.94

Shanxi	42	2007	22	20	0	5	N/A	N/A	N/A	N/A	N/A
Sichuan	156	2005	68	88	0	5.68	2009	128	28	3.13	3.57
Tianjin	52	2001	0	52	0	15.38	1998	0	52	0	15.38
Xinjiang	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xizang	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Yunna	55	2001	0	55	0	14.55	2003	11	44	18.18	13.64
Zhejiang	157	2001	0	157	0	8.92	2004	36	121	8.33	9.09

Table 4.2 Descriptive Statistics

This table presents the descriptive statistics for the full sample and the subsamples with and without returnee CEOs. The variable *Returnee CEOs* equals one if a returnee CEO (with any type of experience) is appointed, and zero otherwise. The other variables are defined in the appendix. The sample period covers 2001 to 2010. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	Panel A				Panel B				Panel C				Panel D
	Full				Returnee CEO				Non-Returnee CEO				Panel B - Panel C
	Obs	Mean	Median	Std. Dev	Obs	Mean	Median	Std. Dev	Obs	Mean	Median	Std. Dev	Mean Difference
Returnee CEO	2847	0.0868	0	0.2815	247	1	1	0	2600	0	0	0	N/A
Returnee CEO (work)	2847	0.0502	0	0.2185	247	0.5789	1	0.4947	2600	0	0	0	N/A
Returnee CEO (study)	2847	0.0365	0	0.1876	247	0.4211	0	0.4947	2600	0	0	0	N/A
Size	2847	20.4395	20.4425	1.5711	247	20.4722	20.4963	1.6614	2600	20.4364	20.4387	1.5625	0.036
MTB	2847	4.0960	3.0459	6.0155	247	3.7948	3.3174	5.7611	2600	4.1246	2.9935	6.0394	-0.330
Leverage	2847	0.5691	0.5235	0.3833	247	0.5506	0.5164	0.3544	2600	0.5708	0.5237	0.3859	-0.020
Firm Age	2847	7.8226	8	4.0070	247	7.2955	7	4.2481	2600	7.8727	8	3.9806	-0.577**
Board Size	2847	9.2655	9	2.0282	247	9.1093	9	2.0680	2600	9.2804	9	2.0242	-0.171
Board Independence	2847	0.3225	0.3333	0.1001	247	0.3305	0.3333	0.0979	2600	0.3217	0.3333	0.1002	0.009
Block Ownership	2847	38.89	36.1	16.3730	247	39.2517	36.03	16.8325	2600	38.8557	36.115	16.3316	0.396
Supervisory Size	2847	4.0376	3	1.3591	247	3.7773	3	1.3109	2600	4.0623	3	1.3612	-0.285***
Bmeetf	2847	9.1124	9	3.2451	247	9.8097	9	3.5315	2600	9.0462	8	3.2094	0.764***
Smeetf	2847	4.4292	4	1.7671	247	4.6437	4	1.9134	2600	4.4088	4	1.7516	0.235**
CEO Age	2847	43.7418	43	6.4111	247	43.0081	43	6.9017	2600	43.8115	43	6.3595	-0.803*
MBA	2847	0.1282	0	0.3344	247	0.3603	0	0.4811	2600	0.1062	0	0.3081	0.254***
CEO Gender	2847	0.9519	1	0.2141	247	0.9393	1	0.2393	2600	0.9531	1	0.2115	-0.014
CEO Education	2847	1.3576	1	0.7966	247	1.7166	2	0.6931	2600	1.3235	1	0.7975	0.393***
Prior ROA	2847	0.0003	0.0220	0.0985	247	0.0046	0.0268	0.1029	2600	-0.0001	0.0214	0.0981	0.005
Prior ROS	2847	-0.1002	0.0386	0.6473	247	-0.1027	0.0489	0.7209	2600	-0.1000	0.0377	0.6400	-0.003
Prior MTB	2831	4.3306	3.2260	4.7099	242	4.0287	3.5609	4.4464	2589	4.3588	3.2139	4.7336	0.330
ROA (t+1)	2847	0.0094	0.0243	0.1207	247	-0.0040	0.0217	0.1575	2600	0.0106	0.0246	0.1166	-0.015*
ROS (t+1)	2847	-0.0465	0.0451	0.7094	247	-0.1122	0.0475	0.9400	2600	-0.0402	0.0445	0.6834	-0.072
MTB (t+1)	2846	4.1682	2.8144	6.7370	247	3.1715	2.7829	5.1169	2599	4.2629	2.8197	6.8644	-1.091**

Table 4.3 Returnee CEOs and Firm Performance

This table reports the results for the relation between returnee CEOs and firm performance. The dependent variables are return on assets (*ROA*) in (1) - (2), return on sales (*ROS*) in (3) - (4) and market-to-book ratio (*MTB*) in (5) - (6) in the year t+1. *Returnee CEOs* equals one if a returnee CEO (with any type of experience) is appointed, and zero otherwise. All variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	ROA		ROS		MTB	
Returnee CEO	-0.0251**	-0.0250**	-0.1345**	-0.1568**	-0.8764***	-0.8076
	(-2.57)	(-2.11)	(-2.25)	(-2.23)	(-2.65)	(-1.19)
Prior ROA	0.2961***	0.1698***				
	(5.15)	(3.76)				
Prior ROS			0.2185***	0.0806**		
			(3.07)	(2.10)		
Prior MTB					0.5509***	0.2319***
					(8.27)	(5.52)
MTB	0.0006	0.0006	-0.0036	-0.0048		
	(0.78)	(1.04)	(-0.78)	(-1.46)		
Size	0.0049**	-0.0055	0.0188	-0.0269	-0.3251***	-0.5157**
	(2.19)	(-1.24)	(1.35)	(-0.99)	(-2.88)	(-2.11)
Leverage	0.0035	0.0804***	-0.0542	0.4041***	-0.4660	-2.0617***
	(0.24)	(5.80)	(-0.59)	(5.11)	(-0.79)	(-2.96)
Firm Age	-0.0019***	-0.0124	-0.0064*	-0.0312	0.0573*	1.6882
	(-2.99)	(-0.52)	(-1.78)	(-0.22)	(1.67)	(1.15)
Board Size	0.0009	0.0028	0.0131**	0.0146	0.0816*	0.0067
	(0.75)	(1.23)	(1.97)	(1.08)	(1.65)	(0.05)
Board Independence	0.0736*	0.1341**	0.5377	0.7599**	-1.3540	-0.0283
	(1.68)	(2.37)	(1.62)	(2.26)	(-0.65)	(-0.01)
Block Ownership	0.0005***	0.0014***	0.0031***	0.0084***	0.0032	0.0032
	(4.08)	(4.03)	(4.13)	(4.17)	(0.50)	(0.16)
Supervisory Size	-0.0006	-0.0045	-0.0028	-0.0169	0.1684**	0.0735
	(-0.43)	(-0.98)	(-0.33)	(-0.62)	(2.22)	(0.28)
Bmeetf	-0.0011	-0.0012	-0.0009	-0.0025	0.0304	0.0146
	(-1.61)	(-1.03)	(-0.25)	(-0.36)	(0.71)	(0.21)
Smeetf	0.0022	0.0036*	0.0154**	0.0189	-0.0671	-0.1153
	(1.53)	(1.68)	(1.99)	(1.47)	(-0.93)	(-0.93)
CEO Age	-0.0003	-0.0006	-0.0012	-0.0020	0.0262	0.0299
	(-0.80)	(-1.27)	(-0.53)	(-0.68)	(1.20)	(1.04)
MBA	0.0187***	0.0212**	0.1173***	0.1129*	0.6954	0.4499
	(3.44)	(2.19)	(3.64)	(1.96)	(1.56)	(0.81)
CEO Gender	-0.0018	0.0101	-0.0225	0.1037	0.1024	0.3367
	(-0.16)	(0.71)	(-0.33)	(1.23)	(0.18)	(0.41)
CEO Education	0.0027	0.0032	0.0213	0.0499**	0.1277	0.2745
	(0.92)	(0.75)	(1.24)	(1.98)	(0.84)	(1.13)
Constant	-0.0821*	0.1446	-0.6818**	-0.0396	4.1157	-7.2406
	(-1.83)	(0.47)	(-2.19)	(-0.02)	(1.56)	(-0.39)
Year dummies	YES	YES	YES	YES	YES	YES
Industry dummies	YES	NO	YES	NO	YES	NO
Regional dummies	YES	YES	YES	YES	YES	YES
Firm fixed effects	NO	YES	NO	YES	NO	YES
R^2	0.141	0.5277	0.119	0.5160	0.229	0.5018
No. of Obs	2847	2847	2847	2847	2830	2830

Table 4.4 Returnee CEOs with Foreign Working Experience and Firm Performance

This table reports the results on the effect of appointing returnee CEOs on firm performance. The dependent variables are return on assets (*ROA*) in (1) - (2), return on sales (*ROS*) in (3) - (4) and market-to-book ratio (*MTB*) in (5) - (6) in the year t+1. Returnee (work) equals one for those with overseas work experience or combined work and study experience abroad, and zero otherwise. Returnee CEO (study) equals one for those with overseas study experience only, and zero otherwise. All variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	ROA		ROS		MTB	
Returnee CEO (work)	-0.0343**	-0.0274*	-0.1957**	-0.1970**	-0.9904***	-1.3210
	(-2.48)	(-1.92)	(-2.33)	(-2.33)	(-3.32)	(-1.61)
Returnee CEO (study)	-0.0116	-0.0207	-0.0452	-0.0864	-0.7070	0.0905
	(-1.03)	(-1.14)	(-0.65)	(-0.80)	(-1.08)	(0.09)
Prior ROA	0.2958***	0.1703***				
	(5.15)	(3.77)				
Prior ROS			0.2186***	0.0823**		
			(3.08)	(2.14)		
Prior MTB					0.5509***	0.2317***
					(8.28)	(5.51)
MTB	0.0006	0.0006	-0.0036	-0.0048		
	(0.79)	(1.04)	(-0.77)	(-1.47)		
Size	0.0049**	-0.0055	0.0192	-0.0267	-0.3246***	-0.5075**
	(2.23)	(-1.23)	(1.39)	(-0.98)	(-2.88)	(-2.07)
Leverage	0.0037	0.0805***	-0.0527	0.4054***	-0.4642	-2.0591***
	(0.25)	(5.80)	(-0.57)	(5.12)	(-0.78)	(-2.96)
Firm Age	-0.0018***	-0.0123	-0.0064*	-0.0293	0.0574*	1.7206
	(-2.99)	(-0.51)	(-1.76)	(-0.20)	(1.66)	(1.17)
Board Size	0.0009	0.0028	0.0131**	0.0143	0.0815*	0.0025
	(0.74)	(1.22)	(1.97)	(1.06)	(1.65)	(0.02)
Board Independence	0.0729*	0.1338**	0.5332	0.7555**	-1.3654	-0.0873
	(1.67)	(2.36)	(1.61)	(2.24)	(-0.65)	(-0.03)
Block Ownership	0.0005***	0.0014***	0.0031***	0.0084***	0.0032	0.0027
	(4.07)	(4.02)	(4.12)	(4.15)	(0.50)	(0.14)
Supervisory Size	-0.0006	-0.0045	-0.0026	-0.0165	0.1687**	0.0773
	(-0.41)	(-0.97)	(-0.31)	(-0.60)	(2.22)	(0.29)
Bmeetf	-0.0011	-0.0012	-0.0010	-0.0025	0.0303	0.0152
	(-1.63)	(-1.03)	(-0.28)	(-0.35)	(0.71)	(0.22)
Smeetf	0.0022	0.0036*	0.0153**	0.0187	-0.0672	-0.1181
	(1.52)	(1.67)	(1.97)	(1.45)	(-0.93)	(-0.95)
CEO Age	-0.0003	-0.0006	-0.0011	-0.0019	0.0265	0.0310
	(-0.73)	(-1.25)	(-0.45)	(-0.65)	(1.21)	(1.08)
MBA	0.0174***	0.0209**	0.1089***	0.1081*	0.6788	0.3883
	(3.18)	(2.15)	(3.36)	(1.86)	(1.53)	(0.69)
CEO Gender	-0.0018	0.0100	-0.0225	0.1017	0.1025	0.3127
	(-0.16)	(0.70)	(-0.33)	(1.20)	(0.18)	(0.38)
CEO Education	0.0028	0.0032	0.0218	0.0500**	0.1285	0.2762
	(0.94)	(0.75)	(1.27)	(1.98)	(0.84)	(1.13)
Constant	-0.0849*	0.1430	-0.6996**	-0.0636	4.0862	-7.7499
	(-1.90)	(0.47)	(-2.25)	(-0.03)	(1.55)	(-0.42)
Year dummies	YES	YES	YES	YES	YES	YES
Industry dummies	YES	NO	YES	NO	YES	NO
Regional dummies	YES	YES	YES	YES	YES	YES
Firm fixed effects	NO	YES	NO	YES	NO	YES

R^2	0.142	0.5277	0.120	0.5162	0.229	0.5022
No. of Obs	2847	2847	2847	2847	2830	2830

Table 4.5 Effect of Local Resources, Institutions and Firm Demands

This table reports the estimates of ordinary least squares (OLS) based on partitioned samples. Panel A presents the results for the sample split between SOEs and non-SOEs. Panel B presents the results for the sample split between those with politically connected CEOs and those without politically connected CEOs. Panel C presents the results for the sample split between networked CEOs and non-networked CEOs. Panel D presents the results for the sample split between firms headquartered in cities with high expropriation risk and those in cities with low expropriation risk. Panel E presents the results for the sample split between firms headquartered in cities with a strong rule of law and in cities with a weak rule of law. Panel F presents the sample split between firms conducting international business and those not doing so. The dependent variables are return on assets (*ROA*), return on sales (*ROS*) and market-to-book ratio (*MTB*) in the year t+1. The independent variables are *Returnee CEO (work)* and *Returnee CEO (study)*. The regressions for *ROA*, *ROS* and *MTB* include control variables that are consistent with the control variables for *ROA*, *ROS* and *MTB* in Table 4.3, respectively. The full tables are provided in the unpublished appendix. The regressions include year, industry and regional dummies in Panels A, B, C and F, along with a constant. The regressions include year and industry in Panels D and E, along with a constant. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Panel A: SOEs vs Non-SOEs

Variables	ROA		ROS		MTB	
	SOEs	Non-SOEs	SOEs	Non-SOEs	SOEs	Non-SOEs
Returnee CEO (work)	-0.0043	-0.0715***	0.0212	-0.4250***	-0.3389	-2.2240***
	(-0.43)	(-2.96)	(0.63)	(-2.79)	(-1.35)	(-3.45)
Returnee CEO (study)	0.0087	-0.0437**	0.0731	-0.2314	0.3431	-1.8961**
	(0.83)	(-2.00)	(1.45)	(-1.58)	(0.35)	(-2.10)
Controls	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES
R^2	0.160	0.188	0.113	0.177	0.248	0.233
No. of Obs	1867	980	1867	980	1858	972

Panel B: Politically connected CEOs vs Non-politically connected CEOs

Variables	ROA		ROS		MTB	
	Politically Connected	Non-Politically Connected	Politically Connected	Non-Politically Connected	Politically Connected	Non-Politically Connected
Returnee CEO (work)	0.0136	-0.0448***	0.0494	-0.2680***	-0.3633	-1.0141***
	(1.36)	(-2.68)	(0.75)	(-2.61)	(-0.49)	(-2.98)
Returnee CEO (study)	0.0043	-0.0158	0.1658	-0.0652	0.8555	-0.9560**
	(0.16)	(-1.26)	(0.96)	(-0.85)	(0.24)	(-2.05)
Controls	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES
R^2	0.192	0.140	0.240	0.102	0.258	0.236
No. of Obs	560	2287	560	2287	558	2272

Panel C: Network CEOs vs Non-network CEOs

Variables	ROA		ROS		MTB	
	Network	Non-Network	Network	Non-Network	Network	Non-Network
Returnee CEO (work)	-0.0270	-0.0397**	-0.1149	-0.2262**	-1.1355*	-0.9743***
	(-1.33)	(-2.24)	(-1.12)	(-2.05)	(-1.73)	(-2.63)
Returnee CEO (study)	0.0091	-0.0157	0.1122	-0.0810	-0.8896	-0.4505
	(0.66)	(-1.11)	(0.93)	(-0.95)	(-1.25)	(-0.55)
Controls	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES
R^2	0.190	0.151	0.247	0.119	0.228	0.250
No. of Obs	662	2185	662	2185	658	2172

Panel D: Low Expropriation Risk vs High Expropriation Risk

Variables	ROA		ROS		MTB	
	Lower	Higher	Lower	Higher	Lower	Higher
Returnee CEO (work)	-0.0068	-0.0437**	0.0171	-0.2606**	-1.2013	-0.8361***
	(-0.69)	(-2.32)	(0.33)	(-2.30)	(-1.61)	(-2.61)
Returnee CEO (study)	0.0027	-0.0028	0.0420	0.0297	1.1591	-1.3614**
	(0.23)	(-0.27)	(0.50)	(0.55)	(0.63)	(-2.16)
Controls	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES
R^2	0.206	0.146	0.206	0.116	0.168	0.322
No. of Obs	668	1713	668	1713	663	1701

Panel E: Strong Rule of Law vs Weak Rule of Law

Variables	ROA		ROS		MTB	
	Strong	Weak	Strong	Weak	Strong	Weak
Returnee CEO (work)	-0.0191	-0.1126**	-0.0856	-0.7550**	-1.0522***	-1.2389*
	(-1.53)	(-2.36)	(-1.30)	(-2.32)	(-3.06)	(-1.81)
Returnee CEO (study)	-0.0125	-0.0081	-0.0292	-0.0547	-0.8355	-0.1665
	(-0.94)	(-0.48)	(-0.35)	(-0.67)	(-1.11)	(-0.28)
Controls	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES
R^2	0.151	0.181	0.137	0.160	0.195	0.351
No. of Obs	1984	863	1984	863	1970	860

Panel F: Foreign business vs Non-Foreign business

Variables	ROA		ROS		MTB	
	Foreign Business	Non-Foreign Business	Foreign Business	Non-Foreign Business	Foreign Business	Non-Foreign Business
Returnee CEO (work)	-0.0159	-0.0404**	-0.0156	-0.2414**	-0.6181	-1.1070***
	(-1.09)	(-2.32)	(-0.51)	(-2.24)	(-1.14)	(-3.09)
Returnee CEO (study)	-0.0142	-0.0133	-0.0417	-0.0541	-1.3044	-0.2955
	(-1.19)	(-0.85)	(-1.11)	(-0.54)	(-1.54)	(-0.34)
Controls	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES
R^2	0.219	0.153	0.176	0.137	0.223	0.250
No. of Obs	729	2118	729	2118	724	2106

Table 4.6 CEO Innate Characteristics and Firm Performance

This table reports the results of the effect of returnee CEOs' education quality on firm performance in Panel A, and the effect of returnee CEOs' overseas destination on firm performance in Panel B, among the sample of returnee CEOs. The dependent variables are return on assets (*ROA*), return on sales (*ROS*) and market-to-book ratio (*MTB*) in the year after firms appoint a returnee CEO. The independent variables are *Foreign Top 100* and *China 985*. *Foreign Top 100* is a dummy variable that is equal to one if a returnee CEO has studied in one of the world's top 100 universities in a foreign country, and zero otherwise. *China 985* is a dummy variable that is equal to one if a returnee CEO obtained their bachelor's degree from one of the Chinese "985 universities", and zero otherwise. *OECD* is a dummy variable that is equal to one if a returnee CEO has overseas work or study experience in one of the OECD countries, and zero otherwise. *English-Speaking Country* is a dummy variable that is equal to one if a returnee CEO has overseas work or study experience in an English-speaking country (the US, the UK, Australia, Canada or New Zealand, in my sample of destinations), and zero otherwise. *HK&Macau&Taiwan* is a dummy variable that is equal to one if a returnee CEO has overseas work or study experience in Hong Kong, Macao or Taiwan, and zero otherwise. The full tables are provided in the unpublished appendix. The regressions include year, industry and regional dummies, along with a constant. The regressions apply year, industry and region fixed effects. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Panel A: Education Quality and Firm Performance

	ROA	ROS	MTB	ROA	ROS	MTB
Foreign Top 100	0.0083	0.0181	-0.2457			
	(0.33)	(0.14)	(-0.37)			
China 985				0.0430	0.2936*	-0.0752
				(1.54)	(1.87)	(-0.09)
Controls	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES
R^2	0.356	0.332	0.287	0.363	0.342	0.287
No. of Obs	247	247	242	247	247	242

Panel B: Overseas Destination and Firm Performance

	ROA	ROS	MTB	ROA	ROS	MTB	ROA	ROS	MTB
OECD	0.0194	0.0577	-0.1558						
	(0.91)	(0.51)	(-0.29)						
English-Speaking Country				0.0020	-0.0748	-0.1627			
				(0.10)	(-0.67)	(-0.22)			
HK & Macau &Taiwan							0.0009	-0.0292	-0.2580
							(0.04)	(-0.24)	(-0.48)
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES
R^2	0.358	0.332	0.288	0.355	0.333	0.288	0.355	0.332	0.288
No. of Obs	247	247	242	247	247	242	247	247	242

Table 4.7 Propensity Score Matching

This table reports the determinants of returnee CEO hire, difference in mean tests for the PSM sample and the estimates of the effect of returnee CEOs on firm performance. Panel A reports the determinants of returnee CEO hire, Panel B reports the difference in mean tests for the PSM sample. Panel C reports results for the effect of returnee CEOs on firm performance. The dependent variables are return on assets (*ROA*), return on sales (*ROS*) and market-to-book ratio (*MTB*) in the year t+1. I use the 1-to-1 nearest-neighbor estimator. I use all observable factors, including firm variables, CEO variables, regulatory reform and institutional factor (in Table 4.8 Panel A) to obtain the propensity score for matching to test the impact of returnee CEOs on ROA and ROS. For MTB, I use all the factors in Table 4.2 plus regulatory reform and Protection of Legal Rights to obtain the propensity score for matching. Furthermore, I consider the industry, year and regional effects in the matching process. All variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Panel A: Determinants of Returnee CEO Appointments

Variables	Returnee CEO
Prior ROA	-0.0971
	(-0.15)
Prior ROS	-0.0079
	(-0.09)
MTB	-0.0107
	(-1.50)
Size	-0.0063
	(-0.21)
Leverage	-0.1077
	(-0.95)
Firm Age	-0.0355***
	(-3.29)
Board Size	-0.0050
	(-0.24)
Board Independence	0.3166
	(0.50)
Block Ownership	0.0003
	(0.11)
Supervisory Size	-0.0559*
	(-1.78)
Bmmetf	0.0266**
	(2.20)
Smeetf	0.0285
	(1.25)
CEO Age	-0.0008
	(-0.12)
MBA	0.6883***
	(7.77)
CEO Gender	-0.1118
	(-0.71)
CEO Education	0.2075***
	(4.15)
International School	0.2789**
	(2.57)
Local School	0.3066**
	(2.30)
Protection of Legal Rights	-0.0089
	(-0.37)
Constant	-2.5275***

	(-3.24)
Year Dummies	YES
Industry Dummies	YES
Regional Dummies	YES
Pseudo R^2	0.1293
No. of Observations	2847

Panel B: Differences in Mean Tests in PSM Sample

Variables	Returnee CEO (R)	Non-Returnee CEO (N)	R-N	
	Mean	Mean	Mean in Difference	P-value
Prior ROA	0.0046	0.0041	0.0004	0.9623
Prior ROS	-0.1027	-0.1204	0.0177	0.7872
MTB	3.7948	4.1236	-0.3288	0.5367
Size	20.4722	20.4709	0.0014	0.9928
Leverage	0.5506	0.5288	0.0218	0.4742
Firm Age	7.2955	7.2470	0.0486	0.8952
Board Size	9.1093	9.1457	-0.0364	0.8383
Board Independence	0.3305	0.3227	0.0078	0.3886
Block Ownership	39.2517	39.8254	-0.5738	0.6971
Supervisory Size	3.7773	3.7571	0.0202	0.8566
Bmeetf	9.8097	9.8178	-0.0081	0.9787
Smeetf	4.6437	4.7530	-0.1093	0.5025
CEO Age	43.0081	42.8138	0.1943	0.7435
MBA	0.3603	0.3401	0.0202	0.6380
CEO Gender	0.9393	0.9474	-0.0081	0.6979
CEO Education	1.7166	1.7490	-0.0324	0.6040
International School	0.8300	0.8462	-0.0162	0.6260
Local School	0.9190	0.9312	-0.0121	0.6090
Protection of Producer's Legal Rights	5.7151	5.7014	0.0137	0.9428

Panel C: Returnee CEOs and Performance in PSM sample

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	ROA		ROS		MTB	
Returnee CEO	-0.0307***		-0.1561**		-1.2092**	
	(-2.88)		(-2.44)		(-2.34)	
Returnee CEO (work)		-0.0437***		-0.2369**		-1.3862**
		(-2.76)		(-2.46)		(-2.58)
Returnee CEO (study)		-0.0128		-0.0450		-0.9622
		(-1.14)		(-0.71)		(-1.32)
Controls	NO	NO	NO	NO	NO	NO
Constant	0.0267***	0.0267***	0.0439*	0.0439*	4.3725***	4.3725***
	(7.48)	(7.47)	(1.92)	(1.92)	(11.07)	(11.06)
R^2	0.017	0.025	0.012	0.021	0.011	0.012
No. of Obs	494	494	494	494	484	484

Table 4.8 Switches of CEO Type and Change in Firm Performance

This table reports the effect of switching CEO types on the change in firm performance. The dependent variables are *Change ROA,* which is the difference between post-one-year ROA and the mean of the prior two years' ROAs, and *Change ROS,* which is the difference between post-one-year ROS and the mean of the prior two years' ROSs. The independent variables are *Other to Returnee (work)* and *Returnee (work) to Other*. *Other to Returnee (work)* is a dummy variable that is equal to one if a returnee CEO (work) replaces a non-returnee CEO (work), and equal to zero if a non-returnee CEO (work) replaces a non-returnee CEO (work). *Returnee (work) to Other* is a dummy variable that is equal to one if a non-returnee CEO (work) replaces a returnee CEO (work), and equal to zero if a returnee CEO (work) replaces a returnee CEO (work). All variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	Panel A		Panel C	
	Change ROA	Change ROS	Change ROA	Change ROS
Other to Returnee (work)	-0.0375*	-0.2471*		
	(-1.78)	(-1.78)		
Returnee (work) to Other			0.1701**	0.7809*
			(2.54)	(1.83)
MTB	-0.0000	-0.0081	-0.0022	-0.0258
	(-0.02)	(-1.42)	(-0.79)	(-0.83)
Size	-0.0110***	-0.1194***	-0.0096	-0.0574
	(-3.99)	(-5.07)	(-0.92)	(-0.83)
Leverage	0.1130***	0.5988***	0.0794	0.6916**
	(7.02)	(5.65)	(1.55)	(2.10)
Firm Age	-0.0014	-0.0070	-0.0004	-0.0154
	(-1.22)	(-1.01)	(-0.10)	(-0.64)
Board Size	0.0023	0.0219*	-0.0044	0.0242
	(1.24)	(1.67)	(-0.36)	(0.47)
Board Independence	0.1724**	1.1309*	0.1780	0.1739
	(2.23)	(1.72)	(0.35)	(0.06)
Block Ownership	0.0003*	0.0045***	0.0004	0.0010
	(1.84)	(3.16)	(0.43)	(0.22)
Supervisory Size	0.0021	0.0119	0.0212*	0.0515
	(0.86)	(0.78)	(1.78)	(0.64)
Bmeetf	-0.0015	-0.0061	0.0065	0.0144
	(-1.47)	(-1.04)	(1.04)	(0.48)
Smeetf	0.0044**	0.0199*	-0.0393**	-0.2245**
	(2.17)	(1.69)	(-2.23)	(-2.52)
CEO Age	-0.0000	0.0032	0.0023	0.0074
	(-0.01)	(0.80)	(1.20)	(0.66)
MBA	0.0242***	0.1687***	0.0385	0.2266
	(2.96)	(2.80)	(1.03)	(0.94)
CEO Gender	0.0067	-0.0270	0.0384	-0.4594
	(0.43)	(-0.25)	(0.31)	(-0.53)
CEO Education	0.0026	0.0086	0.0136	0.0466
	(0.58)	(0.29)	(0.39)	(0.21)
Constant	0.2228***	2.0164***	-0.0899	0.4851
	(3.02)	(3.96)	(-0.35)	(0.30)
Year dummies	YES	YES	YES	YES
Industry dummies	YES	YES	YES	YES
Regional dummies	YES	YES	YES	YES
R^2	0.196	0.180	0.480	0.545
No. of Obs	1606	1606	95	95

Table 4.9 Market Reaction to Switch in Type of CEO

This table reports the regression results of the market reaction to a switch in the type of CEO. Panel A reports the results from the original sample. Panel B reports the results in the PSM sample. *Other to Returnee (work)* is a dummy variable that is equal to one if a returnee CEO (work) replaces a non-returnee CEO (work), and equal to zero if a non-returnee CEO (work) replaces a non-returnee CEO (work). The dependent variables are cumulative abnormal returns (calculation method shown below) over different windows, given by *CAR(-1,1)*, *CAR(-3,3)*, *CAR(-5,5), CAR(-7,20), CAR(-7,40)* and *CAR(-7,60).* All variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Panel A: Market Reaction to Switch in type of CEOs using original sample

Variables	CAR(-1,1)		CAR(-3,3)		CAR(-5,5)		CAR(-7,20)		CAR(-7,40)		CAR(-7,60)	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Other to Returnee (work)	-0.0446**	-0.0538**	-0.0465**	-0.0557**	-0.0446**	-0.0537*	-0.0587**	-0.0666**	-0.0791***	-0.0888***	-0.0676**	-0.0814**
	(-2.35)	(-2.12)	(-2.28)	(-2.08)	(-2.08)	(-1.94)	(-2.26)	(-2.12)	(-2.80)	(-2.65)	(-2.33)	(-2.39)
Constant	0.0456***	0.1416	0.0505***	0.1459	0.0562***	0.1347	0.0711***	-0.0486	0.0707***	-0.1112	0.0741***	-0.1259
	(2.61)	(1.03)	(2.87)	(1.00)	(3.21)	(0.92)	(3.93)	(-0.25)	(3.83)	(-0.55)	(4.00)	(-0.61)
Controls	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES
Adj-R^2	0.000	0.009	0.000	0.010	0.000	0.010	0.000	0.016	0.000	0.017	0.000	0.020
No. of Obs	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599	1599

Panel B: Market Reaction to Switch in type of CEOs using PSM sample

Variables	(1)	(2)	(3)	(5)	(6)	(7)
	CAR(-1,1)	CAR(-3,3)	CAR(-5,5)	CAR(-7,20)	CAR(-7,40)	CAR(-7,60)
Other to Returnee (work)	-0.0238	-0.0278	-0.0363*	-0.0336	-0.0545*	-0.0312
	(-1.39)	(-1.40)	(-1.68)	(-1.25)	(-1.76)	(-1.00)
Constant	0.0248	0.0318*	0.0479***	0.0460**	0.0461**	0.0377*
	(1.61)	(1.89)	(2.71)	(2.40)	(2.07)	(1.74)
Controls	NO	NO	NO	NO	NO	NO
Adj-R^2	0.004	0.004	0.006	0.004	0.008	0.003
No. of Obs.	248	248	248	248	248	248

Table 4.10 Instrumental Variable (IV)

This table reports instrumental variables results. The table reports the results of two-stage least squares (2SLS) regression analyses for the effect of returnee CEOs on firm performance. The instrumental variables are based on the policy changes related to education opportunities for returnees' children. *Local School* is a dummy variable equal to one if the headquartered province has promulgated provincial returnee policies that offer preferential treatment to returnees' children in entering local key schools or universities, and zero otherwise. *International School* is a dummy variable equal to one if the Ministry of Education has approved opening an international school in the headquartered province, and zero otherwise. *Returnee CEO* is the fitted value predicted by the first stage model. Firm characteristics are controlled. I also include the year, industry and regional dummies in my analyses. All variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variable	(1) 1st stage	(2) 2nd stage	(3) 1st stage	(4) 2nd stage	(5) 1st stage	(5) 2nd stage
	Returnee CEO	ROA (t+1)	Returnee CEO	ROS (t+1)	Returnee CEO	MTB (t+1)
Returnee CEO		-0.2327**		-1.1923*		-6.1693
		(-1.96)		(-1.74)		(-0.97)
Firm Size	0.0021	0.0057**	0.0026	0.0242*	0.0005	-0.2937***
	(0.46)	(2.35)	(0.57)	(1.70)	(0.12)	(-2.67)
Leverage	-0.0146	0.0010	-0.0170	-0.0709	-0.0125	-0.5299
	(-0.92)	(0.07)	(-1.07)	(-0.77)	(-0.97)	(-0.88)
Firm Age	-0.0068***	-0.0034***	-0.0067***	-0.0143**	-0.0060***	0.0238
	(-3.75)	(-3.04)	(-3.75)	(-2.40)	(-3.37)	(0.45)
Board size	-0.0012	0.0006	-0.0012	0.0120*	-0.0014	0.0784
	(-0.42)	(0.48)	(-0.41)	(1.65)	(-0.49)	(1.54)
Indr	0.0345	0.0848*	0.0336	0.5908*	0.0121	-1.2639
	(0.33)	(1.78)	(0.33)	(1.72)	(0.12)	(-0.58)
Block Ownership	-0.0001	0.0005***	-0.0001	0.0029***	-0.0001	0.0022
	(-0.29)	(3.23)	(-0.31)	(3.45)	(-0.42)	(0.32)
Supervisory Size	-0.0085**	-0.0026	-0.0085**	-0.0132	-0.0085**	0.1191
	(-2.04)	(-1.32)	(-2.05)	(-1.14)	(-2.04)	(1.27)
Bmeetf	0.0040*	-0.0001	0.0041**	0.0043	0.0044**	0.0568
	(1.94)	(-0.11)	(1.96)	(0.80)	(2.07)	(1.11)
Smeetf	0.0038	0.0030*	0.0037	0.0195**	0.0038	-0.0427
	(1.06)	(1.79)	(1.05)	(2.19)	(1.06)	(-0.54)
MTB	-0.0012	0.0003	-0.0012	-0.0048		
	(-1.34)	(0.44)	(-1.32)	(-1.02)		
Prior ROA	-0.0186	0.2940***				
	(-0.24)	(4.99)				
Prior ROS			-0.0062	0.2115***		
			(-0.51)	(3.00)		
Prior MTB					-0.0019*	0.5419***
					(-1.65)	(8.11)
International School	0.0412***		0.0410***		0.0390***	
	(2.96)		(2.95)		(2.81)	
Local School	0.0230*		0.0228*		0.0238*	
	(1.69)		(1.67)		(1.74)	
Constant	0.0354	-0.0089	0.0724	-0.4984	0.3855*	6.5162*
	(0.34)	(-0.12)	(0.65)	(-1.43)	(1.72)	(1.68)
Regional effects	YES	YES	YES	YES	YES	YES
Industry effects	YES	YES	YES	YES	YES	YES
Year effects	YES	YES	YES	YES	YES	YES
F-statistic	10.56		10.51		9.94	
No. of Obs.	2847	2847	2847	2847	2830	2830

Table 4.11 Returnee CEOs and Regulatory Environment

This table reports the results of probit regression analyses for the effect of appointing returnee CEOs on the subsequent year's regulatory enforcements against fraud, for a 1-to-1 propensity score matched (nearest-neighbor matching without replacement) regulatory enforcement against fraud sample, from 2001 to 2010. The propensity score matching sample is the same as the sample in Column 1 of Table 4.8 Panel C. The dependent variable equals one if the firm was subject to regulatory enforcement against disclosed fraud, and zero otherwise. The independent variables are *Returnee CEO*, *Returnee CEO (work)* and *Returnee CEO (study)*. All the independent variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	Regulatory Enforcement Against Fraud	
	(1)	(2)
Returnee CEO	0.4511**	
	(2.23)	
Returnee CEO (work)		0.4295*
		(1.89)
Returnee CEO (study)		0.4797**
		(1.97)
Constant	-1.9058***	-1.9058***
	(-11.70)	(-11.70)
Controls	NO	NO
Pseudo R^2	0.0266	0.0268
No. of Obs.	494	494

Table 4.12 The Effect of Returnee CEOs on Executive Appointments

This table presents the results of OLS regression analyses for the effect of returnee CEOs on the subsequent appointment of executives. *CCPM* is the ratio of members of China's Communist Party among the executives appointed in the year following the CEO's appointment. *Professional Background* is the ratio of executives certified as accountants, auditors or lawyers among the executives appointed in the year following the CEO's appointment. *Postgraduate Education* is the ratio of executives possessing a Master's degree or higher among the subsequently appointed executives. *Female Executives* is the ratio of female executives among the subsequently appointed executives. The dependent variable is *Returnee CEO*, which is a dummy variable equal to one if the CEO has overseas work or study experience, and zero otherwise. Other control variables are defined in the appendix. Industry and year effects are also included. The sample period covers 2001 to 2010. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	CCPM	Professional Background	Postgraduate Education	Female Executives
Returnee CEO	-0.0367*	0.0173	0.0259	-0.0191
	(-1.85)	(0.94)	(1.09)	(-1.14)
Prior ROA	0.0182	-0.1836***	-0.0591	0.0012
	(0.23)	(-2.65)	(-0.77)	(0.02)
MTB	0.0022**	0.0003	0.0018**	0.0004
	(2.44)	(0.43)	(2.13)	(0.42)
Size	0.0155***	-0.0022	0.0154***	-0.0131***
	(3.28)	(-0.56)	(2.96)	(-3.14)
Leverage	0.0177	-0.0163	-0.0151	-0.0085
	(1.04)	(-1.09)	(-0.87)	(-0.49)
Firm Age	0.0012	-0.0013	-0.0014	-0.0012
	(0.67)	(-1.00)	(-0.77)	(-0.84)
Board Size	0.0057	-0.0014	0.0096***	0.0012
	(1.60)	(-0.49)	(2.93)	(0.47)
Board Independence	-0.2137**	0.0049	0.0812	0.0517
	(-2.16)	(0.07)	(0.76)	(0.71)
Block Ownership	0.0007	-0.0001	0.0001	0.0000
	(1.56)	(-0.30)	(0.22)	(0.08)
Supervisory Size	0.0129**	0.0033	-0.0078	-0.0027
	(2.35)	(0.84)	(-1.59)	(-0.71)
Bmeetf	0.0006	0.0015	0.0012	0.0034**
	(0.30)	(0.97)	(0.60)	(2.02)
Smeetf	-0.0024	0.0015	0.0062	-0.0009
	(-0.58)	(0.48)	(1.55)	(-0.28)
CEO Age	0.0018*	-0.0011	0.0012	-0.0002
	(1.80)	(-1.53)	(1.19)	(-0.31)
MBA	-0.0172	-0.0062	0.0044	-0.0103
	(-0.89)	(-0.39)	(0.21)	(-0.65)
CEO Gender	-0.0083	-0.0515*	0.0239	-0.0316
	(-0.30)	(-1.93)	(0.97)	(-1.19)
CEO Education	0.0046	0.0075	0.0338***	0.0076
	(0.52)	(1.10)	(4.16)	(1.17)
Constant	-0.3396***	0.2273**	-0.4882***	0.3378***
	(-2.80)	(2.18)	(-3.95)	(3.39)
Year Dummy	YES	YES	YES	YES
Industry Dummy	YES	YES	YES	YES
R^2	0.037	0.016	0.035	0.021
No. of Obs	2847	2847	2847	2847

Table 4.13 The Effect of Returnee CEOs on Corporate Strategy

This table reports the OLS regression analyses results for the effect of returnee CEOs on corporate strategy. The dependent variables are *Firm Diversification*, *Investment to Cash Flow Sensitivity*, *R&D* and *Cash Holding*. *Firm Diversification* is calculated as the number of business segments multiplied by the number of geographic segments. *Investment to Cash Flow Sensitivity* is the ratio of capital expenditure to cash flow (earnings before extraordinary terms plus depreciation). *R&D* is the natural log of one plus the R&D expenditure from 2007 to 2010. *Cash Holdings* is the ratio of cash and marketable securities to net assets computed as total assets minus cash and marketable securities, from 2007 to 2010. The independent variable is *Returnee CEO*. The regressions control other factors, along with year and industry effects. All variables in the table are defined in the appendix. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	Firm Diversification	Investment to Cash Flow Sensitivity	R&D	Cash Holdings
Returnee CEO	1.7624*	0.0339	-0.0492	0.0020
	(1.82)	(0.64)	(-0.12)	(1.02)
Prior ROA	1.5970	1.0771***	3.8362***	0.0054
	(0.54)	(4.79)	(3.26)	(0.82)
MTB	-0.0379	-0.0006	0.0368**	0.0001**
	(-1.24)	(-0.22)	(2.17)	(2.29)
Size	1.3636***	-0.0350***	0.1259	0.0009**
	(7.07)	(-2.88)	(1.52)	(2.22)
Leverage	0.1640	0.0151	0.2874	0.0016
	(0.24)	(0.30)	(1.25)	(1.62)
Firm Age	0.0872	-0.0162***	-0.0007	-0.0002*
	(1.24)	(-3.92)	(-0.02)	(-1.94)
Board Size	0.0478	0.0067	0.0085	0.0005
	(0.39)	(0.92)	(0.11)	(1.54)
Board Independence	-0.0152	-0.1584	1.4445	0.0060
	(-0.00)	(-0.70)	(0.59)	(0.87)
Block Ownership	-0.0601***	-0.0025***	-0.0041	-0.0001***
	(-4.09)	(-2.93)	(-0.54)	(-3.26)
Supervisory Size	0.1541	-0.0041	0.0084	0.0008
	(0.79)	(-0.44)	(0.10)	(1.60)
Bmeetf	0.4143***	-0.0022	0.0129	-0.0001
	(4.52)	(-0.41)	(0.36)	(-0.68)
Smeetf	-0.2670*	0.0271***	0.1455**	0.0001
	(-1.71)	(2.65)	(2.09)	(0.48)
CEO Age	-0.0369	-0.0026	-0.0001	0.0001
	(-0.97)	(-1.11)	(-0.01)	(1.48)
MBA	-0.7412	-0.0041	0.0278	-0.0036***
	(-0.96)	(-0.09)	(0.07)	(-3.57)
CEO Gender	1.1603	0.1074*	0.3324	0.0027***
	(1.13)	(1.69)	(0.80)	(3.03)
CEO Education	0.2342	0.0067	0.3815***	0.0015**
	(0.71)	(0.37)	(2.70)	(2.13)
Constant	-25.8891***	1.1475***	-6.5579***	-0.0357***
	(-5.75)	(4.41)	(-2.78)	(-2.73)
Year Dummy	YES	YES	YES	YES
Industry Dummy	YES	YES	YES	YES
R^2	0.059	0.047	0.064	0.075
No. of Obs	2793	2793	1453	1453

Appendix

Table A4.1 Variable Definitions

Variables	Definitions
Returnee CEO	Dummy variable equal to 1 if the CEO has had overseas experience, either studying at university, training or working, and 0 otherwise.
Returnee CEO (work)	Dummy variable equal to 1 if the CEO has had overseas work experience or combined work and study experience, and 0 otherwise.
Returnee CEO (study)	Dummy variable equal to 1 if the CEO has had overseas experience studying at a university, or overseas training experience, and 0 otherwise.
Other to Returnee (work)	Dummy variable that is equal to 1 if a returnee CEO (with work experience abroad) replaces a non-returnee CEO, and equal to 0 if a non-returnee CEO replaces a non-returnee CEO.
Returnee (work) to Other	Dummy variable equal to 1 if a non-returnee CEO replaces a returnee CEO (with work experience abroad), and equal to 0 if a returnee CEO (with work experience abroad) replaces a returnee CEO (with work experience abroad).
Local School	Dummy variable equal to 1 if the government of the headquartered province has promulgated returnee policies to offer returnees' children favorable treatment in entering local key schools or universities, and 0 otherwise.
International School	Dummy variable equal to 1 if the province has approved opening an international school in the headquartered province, and 0 otherwise.
ROA	Net income over total assets at the end of the year.
ROS	Net income over total sales at the end of the year.
MTB	Market price per share over book value per ordinary share.
Change in ROA	The one-year-post ROA minus the average of one-year-prior ROA and the announcement-year ROA.
Change in ROS	The one-year-post ROS minus the average of the one-year-prior ROS and the announcement-year ROS.
Regulatory Enforcement	Dummy variable equal to 1 if the firm is subject to regulatory enforcement against disclosed fraud, and 0 otherwise.
CCPM	The ratio of members of China's Communist Party among the executives appointed in the year following the CEO's appointment.
Professional Background	The ratio of executives certified as accountants, auditors or lawyers among the executives appointed in the year following the CEO's appointment.
Postgraduate Education	The ratio of executives possessing a Master's degree or higher among the executives appointed in the year following the CEO's appointment.
Female Executives	The ratio of female executives among the executives appointed in the year following the CEO's appointment.
Firm Diversification	The number of business segments multiplied by the number of geographic segments.
Investment to Cash Flow Sensitivity	The ratio of capital expenditure to cash flow (earnings before extraordinary terms plus depreciation).
R&D Expenditure	The natural logarithm of one plus the R&D expenditure from 2007 to 2010.
Cash Holdings	The ratio of cash and marketable securities to net assets computed as total assets minus cash and marketable securities, from 2007 to 2010.
Prior ROA	The average of the one-year-prior ROA and the announcement-year ROA.
Prior ROS	The average of the one-year-prior ROS and the announcement-year ROS.
Prior MTB	The average of the one-year-prior MTB and the announcement-year MTB.
Firm Size	The natural logarithm of firm sales at the end of the year.
Leverage	Total debt over sales at the end of the year.

Firm Age	The number of years since the firm's IPO year.
Block Ownership	The ownership of the largest shareholder.
SOE	Dummy variable equal to 1 if the firm is a state-owned enterprise, and 0 otherwise.
Foreign sales	Dummy variable equal to 1 if the firm has foreign sales, and 0 otherwise.
CEO Age	The age of the CEO in the year they were appointed.
MBA	Dummy variable equal to 1 if the CEO possesses an MBA or EMBA degree, and 0 otherwise.
CEO Gender	Dummy variable equal to 1 if the CEO is male, and 0 otherwise.
CEO Education	The average score for the education level of the CEO when appointed. The score ranges between 0 and 3: If a CEO does not hold a bachelor's degree, the value is 0; if they have a bachelor's degree, the value is 1; if they have a Master's degree (including MBAs and EMBAs), the value is 2; if they have a doctoral degree, the value is 3.
CEO Political Connections	Dummy variable equal to 1 if the CEO was or still is an officer of the central government, local government or the military, and 0 otherwise.
CEO Network	Dummy variable equal to 1 if the CEO sits on the board of other firms at the end of the year, and 0 otherwise.
Board Size	The total number of directors on the board at the end of the year.
Supervisory Size	The total number of supervisors on the board at the end of the year.
Bmeetf	The total number of directors' board meetings in one year.
Smeetf	The total number of supervisory board meetings per year.
Board Independence	The proportion of outside directors among the board directors.
Risk of Expropriation	Dummy variable equal to 1 if the firm is headquartered in a city with lower bureaucratic interactions, and 0 otherwise.
Rule of Law	Dummy variable equal to 1 if the firm is headquartered in a city with higher protection of producers' legal rights, and 0 otherwise.
Protection of Legal Rights	A high value indicates better protection of producers' legal rights in the province.
Industry	The first two digits of the Global Industry Classification Standard (GICS) are utilized to construct the industry dummy variables. Some industry dummy variables may be automatically omitted in different regressions.
Region	The location of the firm is classified into a city with a stock exchange, the coastal area, the inland area or the northwest area.

Table A4.2 Returnee CEOs and Long-run Performance

This table reports the effect of appointing returnee CEOs on firm performance two and three years after the appointment. The PSM sample only includes the survived returnee and local CEOs (i.e. these do not experience turnover). The dependent variables are return on assets (*ROA*), return on sales (*ROS*) and market-to-book ratio (*MTB*) two and three years after the CEO appointment. The regressions apply year, industry and region fixed effects. All variables in the table are defined in Table A4.1. T-values are in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.

Variables	Year t+2			Year t+3		
	ROA	ROS	MTB	ROA	ROS	MTB
Returnee CEOs	0.0073	0.0284	-0.6015*	0.0091	0.0951***	-0.3636
	(1.13)	(0.56)	(-1.81)	(0.99)	(2.85)	(-1.57)
Prior ROA	0.2628***			0.1431**		
	(4.07)			(2.03)		
Prior ROS		0.5037***			0.1280	
		(3.65)			(1.55)	
Prior MTB			0.2366***			0.1396
			(3.07)			(1.46)
MTB	-0.0004	-0.0047		0.0005	0.0027	
	(-0.51)	(-0.67)		(0.64)	(0.69)	
Size	0.0044**	0.0067	-0.2926**	0.0010	0.0084	-0.7885***
	(2.08)	(0.47)	(-2.57)	(0.40)	(0.79)	(-5.32)
Leverage	-0.0095	0.1192	-0.5444	-0.0104	-0.0601	1.1143
	(-0.50)	(0.94)	(-0.67)	(-0.52)	(-0.60)	(1.02)
Firm Age	0.0001	0.0004	0.0494	-0.0001	0.0013	0.1146***
	(0.11)	(0.13)	(1.64)	(-0.19)	(0.42)	(3.41)
Board Size	-0.0001	0.0073	0.0210	0.0008	0.0117*	0.0264
	(-0.05)	(1.05)	(0.39)	(0.59)	(1.83)	(0.39)
Board Independence	0.0469	0.6393	2.9965	0.0331	0.2763	0.7155
	(1.13)	(1.53)	(1.26)	(0.74)	(1.09)	(0.37)
Block Ownership	0.0004***	0.0022*	0.0002	0.0003*	0.0007	0.0001
	(2.68)	(1.89)	(0.03)	(1.93)	(0.76)	(0.02)
Supervisory Size	-0.0018	0.0032	-0.1167*	0.0015	-0.0005	0.0363
	(-1.05)	(0.29)	(-1.69)	(0.82)	(-0.06)	(0.41)
Bmeetf	-0.0014*	0.0075	-0.0557	-0.0001	0.0041	-0.0534
	(-1.72)	(1.45)	(-1.53)	(-0.12)	(1.23)	(-1.35)
Smeetf	0.0020	-0.0079	-0.0227	0.0021	0.0029	0.0462
	(1.46)	(-0.82)	(-0.35)	(1.41)	(0.33)	(0.64)
CEO Age	0.0001	-0.0005	0.0013	0.0000	-0.0009	-0.0012
	(0.21)	(-0.18)	(0.07)	(0.01)	(-0.36)	(-0.05)
MBA	0.0107*	0.0807**	0.0816	-0.0010	-0.0052	0.3659
	(1.82)	(2.10)	(0.22)	(-0.17)	(-0.16)	(1.03)
CEO Gender	-0.0157	-0.0258	-0.1818	-0.0049	-0.0409	-0.2205
	(-1.41)	(-0.22)	(-0.40)	(-0.32)	(-0.50)	(-0.31)
CEO Education	-0.0073**	-0.0260	0.3368**	-0.0070*	-0.0443**	0.1360
	(-2.23)	(-1.10)	(2.24)	(-1.95)	(-2.22)	(0.70)
Constant	0.0003	-0.2559	7.5687***	-0.0340	-0.4268	16.0265***
	(0.00)	(-0.89)	(2.91)	(-0.59)	(-1.34)	(4.64)
Year Dummy	YES	YES	YES	YES	YES	YES
Industry Dummy	YES	YES	YES	YES	YES	YES
Regional Dummy	YES	YES	YES	YES	YES	YES

R^2	0.141	0.142	0.134	0.074	0.083	0.156
No. of Obs	1960	1954	1836	1521	1522	1423

Table A4.3 Summary Statistics of Returnee CEO Classification

This table presents the descriptive statistics for the background of returnee CEOs. F*oreign Top 100* is a dummy variable that is equal to one if a returnee CEO has studied in one of the world's top 100 universities in a foreign country, and zero otherwise. *China 985* is a dummy variable that is equal to one if a returnee CEO obtained their bachelor's degree from one the Chinese "985 universities", and zero otherwise. The 985 universities refer to 39 universities included in "Project 985", which is a national project to promote the development and reputation of the Chinese higher education system by founding world-class universities in the 21st century. *OECD* is a dummy variable that is equal to one if a returnee CEO has overseas work or study experience in an OECD country, and zero otherwise. *English-Speaking Country* is a dummy variable that is equal to one if a returnee CEO has overseas work or study experience in an English-speaking country (the US, the UK, Australia, Canada or New Zealand), and zero otherwise. *HK&Macau&Taiwan* is a dummy variable that is equal to one if a returnee CEO has overseas work or study experience in Hong Kong, Macao or Taiwan, and zero otherwise.

	Obs	Mean	Median	Std.Dev
Foreign Top 100	247	0.0526	0	0.2238
China 985	247	0.1377	0	0.3452
OECD	247	0.5547	1	0.4980
English-Speaking Country	247	0.3684	0	0.4834
HK&Macao&Taiwan	247	0.3806	0	0.4865

Chapter 5 Legal Enforcements and Institutional Transition of Chinese Entrepreneurial Firms: Evidence from Returnee CEOs

Abstract

I study the effect of CEOs' tacit knowledge of advanced legal institutions in enhancing firm performance in the context of institutional transitions. Going public marks the formalized transformation of firms as required by regulators. I argue that such knowledge can facilitate the transition. The results based on entrepreneurial firms listed on the Chinese start-up board confirm my predictions. Returnee CEOs, especially those returned from countries with more advanced legal institutions, are associated with superior post-IPO performance. In addition, foreign venture capitalists (VCs) are found to strengthen the positive impact of returnee CEOs, especially when both VCs and CEOs are from countries with advanced institutions.

5.1 Introduction

The impact of cross-border differences in legal institutions on corporate strategies and performance is an important issue in strategic and international management literature (Ghemawat, 2001; Chan *et al.*, 2008). Focusing on the differences between host and home countries, the literature explores the impact of institutional differences on market entry strategies (Estrin *et al.*, 2009; Meyer *et al.*, 2009) and foreign capital market choice (Moore *et al.*, 2012). The institutional context of host countries could also shape the behavior of foreign companies after they enter the market (Glynn and Abzug, 2002). Also, Kwok and Tadesse (2006) point out that multinational companies could influence the institutional environment of corruption of host countries over time. Whether legal institution distance influences firms through individuals remains under-researched.

In the context of globalization of human capital, international human capital mobility has become prevalent, especially regarding the brain gain phenomenon in emerging markets. Chief Executive Officers (CEOs) with international experience are viewed as having inimitable knowledge, worldviews, and professional ties (Athanassiou and Nigh, 1999; Lublin, 1996, Maruca, 1994), which have a positive impact on income growth in companies with high levels of international interdependence in surveyed medium-sized firms (Roth, 1995), on firm performance in multinational firms (Carpenter *et al.*, 2001), and on financial performance in Fortune 500 firms (Daily *et al.*, 2000). Yet, the literature ignores the importance of CEOs' experience with cross-border legal institutions. For example, the behavior of individuals from countries with high

corruption would be changed in host countries with advanced legal systems and enforcement actions (Fisman and Miguel, 2007). Individuals from countries with weak legal institutions could internalize the advanced legal institutions as tacit knowledge, which could be an important contributing factor to their firm's performance and sustained competitive advantage (Barney, 1992; Grant, 1996). This chapter focuses on Chinese CEOs with international experience, known as returnee CEOs, and explores their role in the institutional transitions of entrepreneurial firms following Initial Public Offerings (IPOs).

Entrepreneurial firms face formalization challenges when their strategy changes. The Initial Public Offering (IPO) is viewed as a critical stage of development that is often referred to as "the 're-birth' or 're-start' of organizations" (Finkle, 1998:6). IPOs represent a significant shift in the strategic choices open to the firm (Certo *et al.*, 2001). The recently launched Chinese start-up board for innovative enterprises and growing start-ups, known as ChiNext, provides a unique setting to test the impact of tacit knowledge of foreign legal institutions on entrepreneurial transitions. Hybels (1995) argues that the legitimacy status of firms reflects the external environmental characteristics. Entrepreneurial firms become more formalized to improve legitimacy and ensure regulatory compliance, which is important in predicting how the IPO will perform (Deeds *et al.*, 2004). Due to the regulatory environment change caused by going public,[28] in inner workings of the institution become more complex. For example, listed

[28] Regulatory refers to China Securities Regulatory Commission and *Shenzhen Stock Exchange ChiNext Listed Companies Standardize Operational Guidelines*.

firms are required to have at least one third of their board members be independent directors. Listed firms are required to disclose accounting and non-accounting information in a timely manner. Therefore, CEOs have to adapt to the new environment and operate under a substantially formalized internal institution and strict external regulatory requirements.

The literature shows that CEOs affect firm performance (Hambrick and Finkelstein, 1987; Peterson *et al.*, 2003), and such impact depends on setting (Crossland and Hambrick, 2007, 2011). For example, CEOs' adaption to regulatory change is important to firm performance. Since the CEO's demographic background shapes their understanding of internal organization and external environment (Boeker, 1997; Wiersema and Bantel, 1992), returnees' knowledge and experience influence their ability to manage firms with more complex internal institutions and a stricter external regulatory environment. With weak legal institutions in China, I predict that returnee CEOs of entrepreneurial firms have advantages over local ones in terms of their tacit knowledge about more advanced legal institutions, such as a better sense of legal enforcement and democracy, which contributes their improved ability to manage firms under stricter regulatory environment in IPOs. As a result, returnee CEOs better overcome the formalization challenges in transition, and imprint their tacit knowledge on firms to promote competitive advantage and firm performance.

To test my predictions, I examine all the 355 newly public entrepreneurial firms in the ChiNext board market between 2009 and 2012, and find that returnee CEOs are positively associated with firm performance. To further establish that the positive impact

is due to their tacit knowledge about more advanced legal institutions, I identify the overseas host countries of returnee CEOs and test whether CEOs returned from countries with stronger legal systems have a more positive impact on firm performance. Since CEOs are not randomly appointed, I take propensity score matching (PSM) and instrumental variables approaches to control the endogeneity issue. The results remain consistent and confirm that the tacit knowledge of returnee CEOs is imprinted in the organization.

Trust and share values are important during the imprinting process (Dhanaraj *et al.*, 2004). As important and influential strategic investors, VC (venture capital) funds, with their expertise and voting power, largely affect a firm's internal environment and corporate strategies. A good match of expertise between VCs and portfolio firms contributes to firm performance when portfolio firms go public (Lungeanu and Zajac, 2016). I posit that foreign VCs also have tacit knowledge about advanced foreign social institutions, which makes someone trust for the strategy and support of implementation of strategies. As predicted, I find that returnee CEOs perform better when their firms are backed by foreign venture capital from countries with stronger institutions. The results are more pronounced when both returnee CEOs and foreign VCs are from countries with strong institutions.

This chapter makes four major contributions to the current literature. First, it adds to the literature on the relationship between cross-border institutional differences and financial markets in strategic management studies. The literature largely focuses on the impact of institutional differences on the implementation of corporate strategies

(Estrin *et al.*, 2009; Meyer *et al.*, 2009; Moore *et al.*, 2012). My study finds that the tacit knowledge of advanced legal institutions obtained from the overseas living experience in countries with more advanced legal institutions imprint the entrepreneurial firms during the transition period and thus enhance firm performance. To the best of my knowledge, this chapter is the first to provide evidence that the cross-border difference in legal institutions between host countries and home countries plays an important role in firms of home countries through international human capital movement.

Second, this chapter extends the literature on CEO international experience. Mahoney and Kor (2015) stress that future empirical studies on firm-specific human capital should focus on the key constituent of tacit knowledge. The existing literature focuses on CEO international experience in the U.S., and provides evidence that CEO international experience plays a role in international interdependence (Roth, 1995) and operating firm performance (Carpenter *et al.*, 2001; Certo *et al.*, 2000). We, however, extend the focus to tacit knowledge of foreign legal systems held by CEOs with international experience, and I argue that individuals not only obtain inimitable knowledge, worldviews, and professional ties (Athanassiou and Nigh, 1999; Lublin, 1996, Maruca, 1994) but also tacit knowledge of advanced legal institutions. The unique setting of entrepreneurial firms in the transition stage in China enables us to explore how this tacit knowledge imprints on firms and helps firms overcome the challenges surrounding formalization.

Third, this chapter contributes to the literature on the matching of strategic investors and executives. Lungeanu and Zajac (2016) argue that a good match of

expertise between VC and portfolio companies (PC) has a positive impact on the PC's post-IPO performance. They emphasize that the fit between the expertise of VC partners and portfolio firms' top executives is an important issue to explore in future research. I advance the literature by proposing indicators for a good match, such as their shared knowledge of and experience with advanced institutions.

Finally, this chapter contributes to the development of empirical approaches in strategic management studies. Bettis *et al.* (2014) suggest that strategy researchers use various empirical approaches, such as instrumental variables, matching techniques, and difference-in-difference, to address potential endogeneity issues such as reverse causality, simultaneity, and nonrandom sample selection. Previous studies on CEOs with international experience do not address the potential endogeneity issue (Carpenter *et al.*, 2001; Certo *et al.*, 2000; Roth, 1995). I use both propensity score matching and instrument variable approaches to rule out major alternative interpretations of my findings.

5.2 Institutional Background

5.2.1 Returnees and Legal Institutions

China is the leading country of origin of international students. From 1978 to 2013, the total number of Chinese overseas students reached 3.05 million,[29] and 1.44 million have since returned to China.[30] The most popular overseas destinations for

[29] See the website in Chinese: http://www.eol.cn/html/lx/2014baogao/content.html.

[30] http://www.ey.com/Publication/vwLUAssets/EY-china-overseas-study-market-analysis-report-2014-cn/$FILE/EY-China-Overseas-Study-Market-Analysis-Report-2014-cn.pdf

Chinese students are the U.S., the U.K., Australia, Canada, and Japan, which accounted for 50%, 15%, 11%, 6%, and 4% of all international students, respectively, in 2013.[31] In the not-so-distant past, China was very underdeveloped in research and innovation, and Chinese students had to go abroad to gain access to a high-quality education and learn advanced technologies. Returnees tend to have accumulated explicit knowledge of technology, which is found to bring about advantages in terms of high-tech firm innovation, high-tech industry development, and exportation and entrepreneurial decisions (Liu *et al.*, 2010; Filatotchev *et al.*, 2009; Filatotchev *et al.*, 2011; Kenney *et al.*, 2013; Lin *et al.*, 2016). In recent years, China has made substantial progress. In terms of R&D (research and development), the total number of China's patents exceeded those of the U.S. by the end of 2013.[32] Chinese academic research output (i.e., publications in SCI journals) was ranked 2nd worldwide in 2014.[33] The Chinese Academy of Sciences was ranked first worldwide by Nature Index since 2013.[34] According to the *Academic Ranking of World Universities*,[35] 32 Chinese universities were included in the top 500 universities in the world in 2015, an increase from nine in 2003. Most students were in social science than science and technology.[36] It seems the advantages of studying abroad have been reduced by China's dramatic progress. Still, this chapter asks: What benefits do returnees bring back with them when they return to China?

---

[31] http://www.ey.com/Publication/vwLUAssets/EY-china-overseas-study-market-analysis-report-2014-cn/$FILE/EY-China-Overseas-Study-Market-Analysis-Report-2014-cn.pdf
[32] See the following Chinese website: http://ip-science.thomsonreuters.com.cn/press/press20141029/.
[33] See the following Chinese website: http://news.sciencenet.cn/htmlnews/2015/10/329164.shtm
[34] http://www.nature.com/nature/journal/v515/n7526_supp/fig_tab/515S98a_T2.html
[35] See http://www.shanghairanking.cn/.
[36] See the following Chinese website: http://www.eol.cn/html/lx/2014baogao/content.html.

I argue that returnees learn advanced legal institutions while they are abroad. Compared with foreign developed countries and many developing countries, China's legal institutions remain very weak (Allen *et al.*, 2005; La Porta *et al.*, 1998). China ranks 71st in the world, next to Tanzania and Zambia, according to the Rule of Law Index by the World Justice Project.[37] Returnees get used to advanced institutions and quickly obtain relevant tacit knowledge of the advanced legal institutions in which they live and work, which plays an important role in their lives and work when they come back to China. For example, compared with the U.S. legal system, China's legal system has weak protection of intellectual property. Individuals can download pirated music or films with little risk of being punished. However, this behavior is likely to be punished by up to five years in prison in the U.S. Therefore, returnee CEOs get used to foreign advanced legal institutions during their overseas experience, and will adapt to a working environment with strict regulations.

5.2.2 ChiNext and Challenges in the Transition Period

To provide financing opportunities for innovative enterprises and growing start-ups, ChiNext, China's Growth Enterprise Market (GEM), was launched in the Shenzhen Stock Exchange in 2009. The listing requirements of the ChiNext board are substantially more flexible than those of the main board market. ChiNext requires that an IPO firm must have been profitable in the two most recent consecutive years, with accumulated profits of no less than RMB 10 million, while the SZSE main board requires that an IPO

[37] World Justice Project calculated the Rule of Law Index in 2015. See the report here: http://worldjusticeproject.org/sites/default/files/roli_2015_0.pdf

firm must have been profitable in the last three consecutive years, with net profits of no less than RMB 30 million.[38] The ChiNext board provides a new platform for the financing of entrepreneurial firms and offers great opportunities to returnees. There were 355 entrepreneurial firms listed in ChiNext between 2009 and 2012. After the first round of IPOs on the ChiNext board in October 2009, more than 30 returnees became billionaires.[39]

The transition from private to public is a crucial milestone for entrepreneurial firms, and the IPO is also viewed as a "re-start" or "re-birth" for firms. The dramatic development during the transition period poses management challenges for CEOs. After raising equity capital from the market, new public firms often expand in their organizational structure in order to engage in new projects. For example, in terms of newly listed ChiNext firms between 2009 and 2012, the average number of employees increased by 41.92% from 428 to 671 in the IPO year. The total assets increased by 241.25% from 287 to 943 million RMB. The increase for IPO firms on main boards in the same period was only 10.6% (from 3,690 to 4,715) for number of employees and 77.37% (from 3.2 to 7 billion RMB) for total assets.

The regulatory environment also changes in the transition period. Newly listed entrepreneurial firms are subject to new regulatory corporate governance requirements imposed by the CSRC and the *Shenzhen Stock Exchange ChiNext Listed Companies Standardize Operational Guidelines* (the Guidelines hereafter), designed to protect the

[38] Listing Requirements of the Main Board and ChiNext: http://www.szse.cn/main/en/ListingatSZSE/ListingRequirements/
[39] Source: http://finance.sina.com.cn/focus/cybfh/

rights of investors. The mandatory part of the Guidelines refers to the operation of the board and supervisory board, as well as extent of information disclosure. The operating guidelines for the board and supervisory board state that firms must have regular meetings, and are required to have at least three committees (i.e. compensation committee, nomination committee, and audit committee), and are required to have boards where at least one third of the directors are independent. For information disclosure, firms are required to disclose both accounting and non-accounting information, such as quarterly earnings, M&A activities, shares issuing, shares repurchase, incentive plans, and information about operations, in a timely manner.

5.3 Theory and Hypotheses

5.3.1 Tacit Knowledge of Legal Institutions

Resource-based theory (RBT) argues that valuable, rare, and inimitable resources could contribute to a firm's sustainable growth (Penrose, 1959) and competitive advantage (Wernerfelt, 1984, 1995). The literature on resources has increasingly focused on intangible resources of human capital, such as knowledge, as important contributing factors to a firm's performance and sustained competitive advantage (Barney, 1992; Grant, 1996). With the knowledge, firms deal with the change of the environment and properly choose the strategies (Cohen and Levinthal, 1990). Tacit knowledge is an important type of knowledge acquired from experience (Nonaka, 1994). The acquiring of tacit knowledge is slow, costly, and unpredictably transferred between people (Kogut and Zander, 1992). For example, acquiring skills for tasting wine, riding a bicycle, or playing a guitar are well-known examples of tacit knowledge. Nonaka and Takeuchi

(1995) show that individuals' tacit knowledge is highly valued for technological innovation and organizational learning. Although legal institutions are an important type of tacit knowledge, the impact of CEOs' tacit knowledge of legal institutions has not been studied in the literature. I intend to examine the effect of CEOs' tacit knowledge of advanced legal institutions on newly public entrepreneurial firms to fill this gap in the literature.

Legal institutions, including legal frameworks and their enforcement, are a fundamental determinant of the development of financial markets (La Porta *et al.*, 1997, 1998, 2000). Institutions, at a macro level, are the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction (North, 1990). These devised constraints include both what individuals are prohibited from doing and, sometimes, under what conditions some individuals are permitted to undertake certain activities. More specifically, legal systems are an essential element of corporate governance and finance, and a better legal environment, such as contract law and enforcement of property rights, can protect outsiders, such as shareholders and creditors, from expropriation by insiders (La Porta *et al.*, 1997, 1998, 2000). A lack of adequate legal protection increases uncertainty with respect to property rights and legitimate returns (Delios and Henisz, 2000).

When people live in a foreign country, the legal institutions that could influence social norms influence their behavior. For example, Fisman and Miguel (2007) show that UN diplomats from highly corrupt countries accumulated significantly more unpaid parking violations in New York until 2002, but the number sharply drops after 2002

when diplomats could no longer avoid paying parking fines. As people's behavior is shaped by legal institutions, people could gradually adapt to the legal institutions of host countries as tacit knowledge from overseas experience.

Given the legal institutions in China (Allen *et al.*, 2005) such as contract law and enforcement of property rights is weak, Chinese returnees have experienced more advanced legal institutions in developed foreign countries. Chinese people have to adapt to advanced legal frameworks and enforcement that is stricter than in China. As a result, the legal institutions in developed foreign countries shape the behavior of Chinese individuals overseas, which, in turn, becomes tacit knowledge.

I argue that the knowledge of legal institutions that overseas Chinese acquire in developed countries represents important tacit knowledge when they return to China. The "brain gain" phenomenon refers not only to advanced technologies but also to knowledge from lived experience. Wang and Miao (2013), using 913 completed questionnaires by returnees, show that 53.8% of returnees do not conform to the environment in China because of the different institutions that they have experienced. This evidence implies that listed firms with more complex internal institutions and formalized organizations would provide a suitable working environment for returnees. Although returnees cannot change the macro-level legal institutions in China, their tacit knowledge could still influence firms facing a change in regulatory requirements.

5.3.2 Tacit Knowledge and Firm Transitions

Going public is a transformational organizational event and often marks the start of the formal evolution of a firm under the framework of regulators and the Stock

Exchange. As a consequence of going public, firms become more complex in terms of corporate structure, and the strategic needs of entrepreneurial firms evolve along with the ongoing public process. The irregularity prior to IPO may not affect a firm's growth and profitability, as long as the firm possesses certain technological advantages or secures a few major clients. Due to the legitimate risk of start-ups in China, irregularity becomes a main challenge for newly public firms. They confront several new challenges, such as adapting to enhanced scrutiny of their business, financing, and investment decisions from potential investors, regulators, analysts, and the business press (Jain and Kini, 2008).

CEOs with overseas living experience become better able to adapt to institutional transitions. As discussed above, the legal institutions in Western developed countries are stronger than the legal institutions in China. The tacit knowledge of strict legal institutions (i.e. strong rule of law and enforcement) gained by returnee CEOs brings them advantages in adapting to the change in regulatory requirements. Therefore, returnee CEOs can better meet firm needs during transition to ensure that transformed entrepreneurial firms function well and perform better after IPOs.

To establish that the positive influence of returnee CEOs on post-IPO performance is attributed to their tacit knowledge of advanced legal institutions, I need to observe whether or not returnee CEOs from countries with varying legal institutions impact performance in different ways. Legal institutions vary across countries, even within the group of developed countries where overseas Chinese tend to settle. For example, English common law countries such as the U.K., the U.S., and Australia are

associated with better legal institutions than civil law countries such as Germany and France (La Porta *et al.*, 1998). CEOs returned from different host countries possess tacit knowledge about different legal institutions. CEOs returned from host countries with more advanced legal institutions should be more capable of adapting to the strict monitoring environment in firm transitions and enhancing firm performance.

I predict, based on the above discussion, that the tacit knowledge of adaptability to stricter legal institutions can help returnee CEOs to operate within a working environment with stricter regulatory requirements in entrepreneurial firms during the transition period and, subsequently, improve firm performance. Furthermore, CEOs returned from host countries with more advanced legal institutions are especially helpful. I therefore propose Hypotheses 1 and 2, as follows:

Hypothesis 1: Returnee CEOs are positively associated with post-IPO performance of entrepreneurial firms.

Hypothesis 2: H1 is more pronounced when CEOs return from host countries with stronger legal institutions.

5.3.3 The Match of Tacit Knowledge on Legal Institutions

Tacit knowledge of strict legal institutions becomes a strategic resource after going public. Although returnee CEOs could adapt to a working environment with strict regulatory requirements, implementation of the strategy of returnee CEOs depends on the support that they receive. Lungeanu and Zajac (2016) emphasize the importance of fit between the expertise of VC partners and that of portfolio firms' top executives. For

entrepreneurial firms, VCs support executives with their business networks, professional expertise, and investment experience (Arthurs and Busenitz, 2006; Li and Zahra, 2012; Li *et al.*, 2014). Lungeanu and Zajac (2016) note that with the evolving strategic needs of entrepreneurial firms stemming from going public, the latent resource provided by venture capital could be transferred to a manifest resource-in-use. Lungeau and Zajac also note that the internal organizational environment created by venture capital investors provides firm contingent expertise to facilitate their success, due to the change in strategic needs during the transition from a private to a public firm. Foreign VCs from countries with more advanced institutions better understand the importance of management skills (e.g. adaption to a working environment with strict monitoring) and in turn provide more support to returnee CEOs in management and strategies.

The match in tacit knowledge between VCs and CEOs could influence how strongly VCs support CEOs. The strength of the match presumes that both CEOs and VCs are from countries with advanced institutions. They are better matched because of their shared tacit knowledge and tend to have a shared vision; such VCs could better understand CEOs with experience working in a strict regulatory environment during the transition period. The shared knowledge and values also help avoid potential ideological conflicts and enhance the leadership of returnee CEOs (Tsui *et al.*, 2006). When they share knowledge and values with VCs, returnee CEOs can better manage the transition period while making strategic decisions. I hereby propose Hypotheses 3 and 4, as follows:

Hypothesis 3: VCs from countries with advanced institutions strengthen the positive impact of returnee CEOs on post-IPO performance.

Hypothesis 4: H3 is more pronounced when both returnee CEOs and foreign VCs have experience in countries with advanced legal institutions.

5.4 Data and Research Method

5.4.1 Data

I include all 355 newly public entrepreneurial firms from the ChiNext board market from 2009 to 2012. My sample starts in 2009 because this is the year ChiNext was launched. To identify returnee CEOs, I reviewed CEOs' biographies in the section introducing board members, executives, and supervisory board members section of all IPO prospectuses downloaded from *cninfo.com.cn.* I also hand-collected information on strategic investors (VCs), and their risk factors, firm characteristics, governance characteristics, and individual characteristics from all IPO prospectuses. Forty-seven out of 355 newly public entrepreneurial firms are managed by returnee CEOs; 221 are backed by at least one VC firm. I obtained the post-IPO financial data from the China Stock Market and Accounting Research (CSMAR) database. The data for legal institutions were obtained from La Porta *et al.* (1998) and Allen *et al.* (2005).

5.4.2 Dependent Variables

I measure post-IPO accounting performance using return on assets (*ROA)* and return on sales (*ROS)*.[40] *ROA* is estimated as the ratio of net earnings over total assets in the financial year following the IPO, which indicates the profitability of firms by using its assets. *ROS* is the ratio of net earnings over sales in the following financial year, which indicates the operational efficiency of firms. I use Tobin's Q to measure post-IPO market performance. Estimated as the ratio of the aggregate of market valuation over total assets in the financial year following the IPO, Tobin's Q indicates the market's assessment of future growth opportunities.

5.4.3 Returnee CEOs, VCs, and Institutions

Returnee CEO is a dummy variable equal to one if the CEO has overseas work experience, overseas study experience, overseas permanent residence, or acquired foreign citizenship (excluding the Greater China Region), and zero otherwise. I then identify the host country of returnee CEOs and match the country with the legal enforcement scores in La Porta *et al.* (1998) and Allen *et al.* (2005). La Porta *et al.* (1998) classify legal enforcement into four dimensions, including rule of law, level of corruption, efficiency of the judicial system, and risk of expropriation, and construct an index of 49 countries, not including China. Allen *et al.* (2005) construct the same index for China. I use the various dimensions of legal enforcement to measure CEOs' tacit knowledge of foreign legal institutions.

[40] I do not use regulatory enforcement against fraud and modified audit opinion to infer the effect of CEO tacit knowledge on overcoming formalization challenges, because newly public firms rarely violate compliance.

Rule of law refers to the assessment of the law and order tradition in the country produced by the country's risk rating agency International Country Risk (ICR). Corruption refers to ICR's assessment of the corruption in government. Low scores indicate that government officials are more likely to demand special payments and that illegal payments are generally expected throughout lower levels of government in the form of bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans. Efficiency of judicial system refers to the assessment of the efficiency and integrity of the legal environment as it affects business, particularly foreign firms, produced by the Business International Corp country risk rating agency. Risk of expropriation refers to ICR's assessment of the risk of outright confiscation or forced nationalization.

Allen *et al.* (2005) do not construct the value of judicial system efficiency and risk of expropriation for China due to data availability. I therefore rely on the ranking rather than the index value. Table 1A shows that the overseas destinations for returnee CEOs only include developed countries, namely the U.S., the U.K., Australia, Canada, New Zealand, Singapore, Germany, Japan, and France. Following the discussion of Allen *et al.* (2005), I assume that China ranks lower than France, the foreign country with the lowest judicial system efficiency in the sample. According to the report of the report of Credendo Group in 2015, China's expropriation risk is higher than that of the

other countries in the sample.[41] I therefore rank China as the lowest country for these two measures in my sample.

"Insert Table 1A Here"

To ensure that the impact of returnee CEOs is not driven by the economic effect of foreign markets, I also incorporate the natural logarithm of foreign market capitalization of CEOs' host countries, which controls for the development level of foreign capital markets.

VCs are identified as foreign VCs if they are not from mainland China. I construct VC legal institution variables, including *VC low corruption*, *VC rule of law*, *VC efficiency of judicial system rank*, and *VC low risk of expropriation rank*, with the same strategy as when constructing the variables for returnee CEOs legal institutions. In addition, I use the same method to construct *VC origin-market capitalization* variable for the same purpose.

5.4.4 Control Variables

Following the previous IPO literature, I control for firm-level effects, including firm size, firm age, venture capital (VC) ownership, high technology industry, and risk. *Firm size* is measured by the natural logarithm of total assets in the financial year prior to the IPO. *Firm age* is measured as the difference in years between the IPO firm's founding date and the date of the IPO (Daily *et al.*, 2003). *VC ownership* is measured as

[41] Country-level expropriation risk is reported by the Credendo Group in 2015. See: http://riskreporter.credendogroup.com/category/countries/.

the percentage of equity held by the VCs in the post-IPO firm. Following Certo *et al.* (2001), the *High Tech* dummy is equal to one for firms that are operating in high technology industry sectors, including computer hardware, computer software, semiconductors and printed circuits, biotechnology, telecommunications, and pharmaceuticals. High-tech IPOs in China are hand collected by using the China Listed Company Industry Classification. Following Certo *et al.* (2001), I control for entrepreneurial firm risk using the number of risk factors reported in the IPO prospectus. Industry effect is controlled by coding from CSRC industry classification.

To control for corporate governance, I incorporate board size and board independence. Previous studies show that board size is positively associated with firm performance (Certo *et al.*, 2001). I measure *board size* as the number of board directors prior to the IPO. *Board independence* is measured by the percentage of independent directors on the board prior to the IPO.

I also control for founder CEO and CEO ownership. Founder CEO is controlled for because CEO founder status has an impact on IPO valuation and is perceived as uncertain (Certo *et al.*, 2001). *Founder CEO* is a dummy variable equal to one if the CEO is the founder, and zero otherwise. I also control for *CEO ownership,* calculated as the percentage of equity held by the CEO in post-IPO firms. Descriptive statistics of the variables used in my regression models are reported in Table 1B.

"Insert Table 1B Here"

5.5 Results

5.5.1 Baseline Regression

To test H1 on the effect of returnee CEOs' tacit knowledge on post-IPO performance, I regress *Returnee CEO* on the post-IPO performance (*ROA*, *ROS*, and *Tobin's Q*) of the subsequent year by using OLS regression analysis. The results are shown in Table 2, Panel A. The coefficients of *Returnee CEO* are significantly positive, showing that returnee CEOs help to increase ROA (0.0105, t-value=2.04), ROS (0.0452, t-value=2.25), and Tobin's Q (0.2269, t-value=1.81) from the year after IPO. For a typical entrepreneurial firm with median-level ROA, ROS, and Tobin's Q, returnee CEOs can increase performance by 17.5%, 30.87%, and 14.85%, respectively. The results support H1, suggesting that returnee CEOs' tacit knowledge of strict legal institutions contributes to the person-organization fit during the transition of entrepreneurial firms and enhances performance.

"Insert Table 2 Here"

5.5.2 Endogeneity Issue

Bettis *et al.* (2014) encourage the rigorous thought in the strategic management research, and improve the plausibility of a causal explanation by using various identification strategy to address the potential reverse causality issue. In my study, there are at least two ways to interpret my results because of the measurement errors and endogenous match of CEOs and firms.

Measurement errors

First, due to the measurement errors, the tacit knowledge of returnee CEOs might be correlated to network resources or innate ability. It is possible that returned CEOs with a superior, prestigious education are likely to have superior foreign network resources. Or it might be that only individuals with a superior innate ability go abroad. This may lead to the confounding effect on firm performance. To address the issue, I trace the overseas education of returnee CEOs to classify whether they graduated from prestigious universities (defined as those in the top 100 of the *Academic Ranking of World Universities*). The domestic education of returnee CEOs is capture to classify whether returnee CEOs graduate from key national universities. Then, I examine the effect of returnee CEOs graduating from world top 100 universities on firm performance, which helps to address the concern that returnee CEOs are likely to have superior foreign network resources. I also examine the effect of returnee CEOs holding undergraduate degrees from China's key universities, which helps rule out the alternative interpretation that only individuals with superior innate ability go abroad. The untabulated results show that returnee CEOs graduating from world top 100 universities or national key universities has no impact on firm performance, measured by *ROA*, *ROS*, and *Tobin's Q*, suggesting that the alternative interpretation is not plausible.

Instrumental variable regression

Second, the results might be subject to sample selection bias because of the endogenous matching of firms and CEOs. One possible alternative explanation for my finding is that entrepreneurial firms with good performance tend to appoint returnee CEOs before going public because they can afford higher remuneration packages. The

China Securities Regulatory Commission's (CSRC) regulation is not in favor of such explanation: According to the *Interim Measures on Administration of Initial Public Offering and Listing on Growth Enterprise Board,* major changes in the senior management team are not allowed within two years prior to the IPO. Although this interpretation could help us to partially address the concern, I still use instrumental variable (IV) approach to address the potential sample selection bias and to rule out this possible alternative explanation.

To address the potential unobservable sample selection bias, I rely on an instrumental variable that predicts the likelihood of a firm having a returnee CEO; however, this does not directly influence post-IPO performance, except through the channel of a returnee CEO. Since the typical age of returnee CEOs in my sample is 45, they normally have school-aged children, which is an important factor in their relocation decisions. In China, international schools use foreign education curriculums, follow foreign education systems, and create a foreign education environment for students. Students in international schools prepare for A-level or SAT exams and target foreign universities. The traditional education system in China is known for its exam-oriented and cramming method of teaching, and fierce competition to get into internationally recognized Chinese universities. Returnees therefore tend to send their kids to international schools.[42]

[42] See the following site for more information: http://edu.people.com.cn/n/2013/0905/c1053-22811561.html and http://edu.people.com.cn/n/2013/0905/c1053-22811561.html.

I use the number of international schools in the headquarter city of firms in the year prior to the IPO as the instrumental variable. Returnees are more likely to join firms headquartered in cities with international schools. By the end of 2012, 116 international schools across 31 major cities had been officially approved by the Ministry of Education in the People's Republic of China. The establishment of international schools does not correspond to the city's economic development level. The first international school in China was launched in Nanjing, not Beijing, Shanghai, or Shenzhen, in 1996. The establishment of international schools brings an exogenous change in the supply of returnees who may become CEOs, and firms headquartered in provinces with international schools take advantage of this fact to hire returnee CEOs.

These results are reported in Table 2, Panel B. In the first stage, the international school coefficient is significantly positive (0.0076, t-value=2.47). In the second stage, I regress the predicted returnee CEOs on various performance measures. In Columns 5 and 6, the coefficients of instrumental returnee CEOs remain significantly positive for ROA and ROS, suggesting that the results are unlikely to be subject to the possibility of sample selection bias caused by unobservable characteristics.

Propensity-Score matching method

I further address the potential observable sample selection bias with a one-to-one nearest neighbor PSM approach (Rosenbaum and Rubin, 1983). I first sort the sample randomly and subsequently use a probit regression model with the same set of explanatory variables as in Model 1 of Table 2 Panel A to estimate how likely they are

to have a returnee CEO. Based on the closest propensity score without replacement, each of the 47 firms managed by a returnee CEO is matched with another otherwise identical firm managed by a non-returnee CEO.

Panel A of Table 3 shows that the difference of observable explanatory variables between the treatment group (firms with returnee CEOs) and the control group (firms with local CEOs) is not significant after the matching procedure. In Panel B, I conduct the difference in mean test for post-IPO performance. I find that ROA, ROS, and Tobin's Q for returnee-CEO-managed firms are all significantly higher than for non-returnee-CEO-managed firms. The results provide evidence to rule out the potential observable sample selection bias.

"Insert Table 3 Here"

5.5.3 Tacit knowledge of Returnee CEOs

To test H2, I regress the legal institutions of a CEO's host country against performance measures, based on the PSM matched sample. Table 4 of Panel A shows that the coefficients of four measures of the legal institutions of CEO destinations, namely low corruption, rule of law, efficiency of the judicial system, and risk of expropriation, are significantly positive for the regressions of subsequent *ROA*, *ROS,* and *Tobin's Q*. The results are also economically significant. For example, a one unit standard deviation increase of *low corruption* will lead to an increase of 0.0067, 0.0347, and 0.1428 in ROA, ROS, and Tobin's Q, respectively. For a typical firm with median performance, this accounts for 11.06%, 23.63%, and 9.56% for *ROA*, *ROS*, and *Tobin's Q*, respectively. The results support H2, suggesting that CEOs' tacit knowledge of more

advanced institutions leads to higher post-IPO performance. In addition, the positive effect might be interpreted by CEOs' connections in foreign capital markets. To rule out the alternative interpretation, I also incorporate the market capitalization of CEOs' host countries to control for their connections in foreign capital markets, and find their coefficients do not significantly influence firm performance. Overall, the results in Table 4 further show that the positive impact of returnee CEOs on post-IPO performance is due to their tacit knowledge of strict legal institutions.

"Insert Table 4 Here"

The *Evaluation of Corporate Governance for Small and Medium Sized Board and ChiNext Board* in 2013 issued by the Chinese Academy of Social Sciences Corporate Governance Research also confirms that newly public firms in ChiNext are similar in terms of corporate governance. The evidence also supports the view that returnee CEOs influence firm performance through tacit knowledge as well as other channels.

5.5.4 The Match of Tacit Knowledge

H4 asserts that the positive impact of returnee CEOs is strengthened by VCs from countries with more advanced institutions. Since VCs do not randomly choose entrepreneurial firms to invest in, I also need to rely on a PSM approach to construct a matched sample to mitigate the selection bias issue. I first randomly rank all the observations and obtain the propensity score from the probit regression model with the same set of explanatory variables as in Model 1 of Table 2 (excluding VC ownership). By using a nearest neighbor matching method, I match each non-VC-backed firm with a

VC-backed firm. Finally, I obtain a matched sample of 218 firms. I then compare the means of all matching covariates between VC-backed firms and non-VC-backed firms and find no significant differences.

To test H4, I use regression performance measures on returnee CEOs, legal institutions of VC origins, and their interaction term, based on the PSM sample. The results are reported in Table 5. Although the coefficients of *Returnee CEO* and *Legal institutions of VC origins* are not significant, the coefficients of their interaction terms are significantly positive. In terms of the size of the effect, for example, a one unit standard deviation increase of the interaction term of *Returnee CEO*VCC* will lead to a 0.0184, 0.0387, and 0.8908 increase in ROA, ROS, and Tobin's Q, respectively. For the typical firm, this accounts for 30.38%, 26.35%, and 59.64% for ROA, ROS, and Tobin's Q, respectively. The results support H4 and suggest that the VCs from more advanced institutions are supportive of the implementation of strategies of returnee CEOs.

"Insert Table 5 Here"

To test H5 on the match of returnee CEOs and VCs in terms of shared tacit knowledge of working in an environment with strict monitoring, I regress firm performance on the legal institutions of CEO destinations, legal institutions of VC origins, and their interaction terms. Table 6 reports the results. The coefficients of the legal institutions of CEO destinations and VC origins are not significant. The coefficients of their interaction terms are significantly positive in general, especially the regressions based on corruption and risk of expropriation as the measures for legal

institutions. The results support H6 and confirm the importance of CEOs and VCs being well-matched in their tacit knowledge.

"Insert Table 6 Here"

5.6 Discussion

Although the above results show that foreign advanced legal institutions play a role in Chinese entrepreneurial firms during the transition period, one may still argue that the national culture may influence the tacit knowledge of returnee CEOs. For example, Chinese people going to host countries with a highly individualistic culture would experience culture shock and be affected by the individualistic culture. However, there is no obvious evidence that national culture influences legal enforcement across countries. Nevertheless, I still control for the individualism index (Hofstede, 2001) of host countries in the regression model when I test the effect of differences in legal institutions between home and host countries on firm performance. The untabulated results broadly hold, which helps to alleviate the concern.

This chapter offered theory and evidence contributing to the literature on cross-border legal institutional differences in financial markets (Estrin *et al.*, 2009; Meyer *et al.*, 2009; Moore *et al.*, 2012; Kwok and Tadesse, 2006). I conjectured that returnee CEOs experience advanced legal environments that feature a strong rule of law and enforcement, and this experience becomes tacit knowledge of advanced legal institutions. Their tacit knowledge facilitates adaption to a changed working environment with strict monitoring during transition, and enhances firm performance. The results confirm my

predictions. Returnee CEOs have a positive effect on the performance of newly public entrepreneurial firms, and this positive effect is more pronounced when CEOs return from countries with stronger legal institutions. In addition, I find that the match of CEOs and VCs in terms of their shared knowledge of the difference in legal institutions between host and home countries provides more support for the implementation of returnee CEOs' strategies and further strengthens the positive impact of returnee CEOs on firm performance. Encouraged by Bettis *et al.* (2014), I think critically about potential alternative explanations of the quantitative results that stem from the endogeneity issue, and I use propensity score matching and instrument variables to address these.

Clearly, returnee CEOs bring a brain gain to their home country. My evidence contributes to the literature on cross-border differences of legal institutions. Foreign legal institutions play a role through CEOs' tacit knowledge of strict institutions, which helps them adapt to a new working environment and, in turn, create better post-IPO performance. I do not find evidence associated with a connection resource transfer explanation of the results; for example, there is scant evidence that returning from a foreign market with larger market capitalization has any relationship to performance. The strategic benefit of tacit knowledge appears to have a much stronger and more tangible benefit to executives of newly listed companies and their investors.

My findings have implications for policy makers and practitioners. China is known for its weak legal institutions (Allen *et al.*, 2005), which could affect the development of the economy and the financial market (North, 1990; La Porta *et al.*,

1998). I provide original evidence that firms in home countries with weak legal institutions could benefit from CEOs who have experienced strong legal institutions in host countries during time abroad. This suggests that policy makers should continue to encourage attracting overseas Chinese talent and support them to run business and implement their tacit knowledge. My findings also suggest policy makers should pay attention when matching CEOs and VCs and, in particular, encourage foreign venture capital investment in entrepreneurial firms led by returnees, because they improve corporate value.

5.7 Conclusion

Many studies in the literature show that cross-border legal institution differences significantly affect the investment activities of cross-border investors, such as VC and MNCs. The impact of significant differences between host countries and home countries on firms in home countries is under-researched. In the context of China, I show that returnee CEOs obtain experience adapting to legal institutions featuring a strong rule of law and enforcement; this tacit knowledge helps them subsequently adapt to a changed working environment with strict monitoring during transition. In addition, the positive impact of returnee CEOs is more pronounced when foreign VC tacit knowledge about social institutions matches the tacit knowledge of returnee CEOs. My insights benefit from analyzing the role of CEOs with international experience under the tacit knowledge framework.

References

Allen, F., Qian, J., & Qian, M. (2005). Law, finance, and economic growth in China. *Journal of Financial Economics*, 77(1), 57-116.

Arthurs, J. D., & Busenitz, L. W. (2006). Dynamic capabilities and venture performance: The effects of venture capitalists. *Journal of Business Venturing*, 21(2), 195-215.

Athanassiou, N., & Nigh, D. (1999). The impact of US company internationalization on top management team advice networks: A tacit knowledge perspective. *Strategic Management Journal*, 20, 83-92.

Barney, J. B. (1992). Integrating organizational behavior and strategy formulation research: A resource based analysis. *Advances in Strategic Management*, 8(1), 39-61.

Bettis, R., Gambardella, A., Helfat, C., & Mitchell, W. (2014). Quantitative empirical analysis in strategic management. *Strategic Management Journal*, 35(7), 949-953.

Boeker, W. (1997). Strategic change: The influence of managerial characteristics and organizational growth. *Academy of Management Journal*, 40(1), 152-170.

Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling human capital with organizational context: The impact of international assignment experience on multinational firm performance and CEO pay. *Academy of Management Journal*, 44(3), 493-511.

Certo, S.T., Covin, J.G., Daily, C.M., & Dalton, D.R. (2001). Wealth and effects of founder management among IPO stage new ventures. Strategic Management Journal, 22, 641-658.

Chan, C. M., Isobe, T., & Makino, S. (2008). Which country matters? Institutional development and foreign affiliate performance. *Strategic Management Journal*, 29(11), 1179-1205.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.

Crossland, C., & Hambrick, D. C. (2007). How national systems differ in their constraints on corporate executives: A study of CEO effects in three countries. *Strategic Management Journal*, 28(8), 767-789.

Crossland, C., & Hambrick, D. C. (2011). Differences in managerial discretion across countries: how nation level institutions affect the degree to which CEOs matter. *Strategic Management Journal*, 32(8), 797-819.

Daily, C. M., Certo, S. T., & Dalton, D. R. (2000). International experience in the executive suite: the path to prosperity?. *Strategic Management Journal*, 21(4), 515-523.

Daily, C.M., Certo, S.T., Dalton, D.R., & Roengpitya, R. (2003). IPO underpricing: A met-analysis and research synthesis. *Entrepreneurship Theory and Practice*, 27, 271-295.

Deeds, D. L., Mang, P. Y., & Frandsen, M. L. (2004). The influence of firms' and industries' legitimacy on the flow of capital into high-technology ventures. *Strategic Organization*, 2(1), 9-34.

Delios, A. and Henisz, W.I., 2000. Japanese firms' investment strategies in emerging economies. *Academy of Management Journal*, 43(3), pp.305-323.

Dhanaraj, C., Lyles, M. A., Steensma, H. K., & Tihanyi, L. (2004). Managing tacit and explicit knowledge transfer in IJVs: the role of relational embeddedness and the impact on performance. *Journal of International Business Studies*, 35, 428-442.

Estrin, S., Baghdasaryan, D., & Meyer, K. E. (2009). The impact of institutional and human resource distance on international entry strategies. *Journal of Management Studies*, 46(7), 1171-1196.

Filatotchev, I., Liu, X., Buck, T., & Wright, M. (2009). The export orientation and export performance of high-technology SMEs in emerging markets: The effects of knowledge transfer by returnee entrepreneurs. *Journal of International Business Studies*, 40(6), 1005-1021.

Filatotchev, I., Liu, X., Lu, J., & Wright, M. (2011). Knowledge spillovers through human mobility across national borders: Evidence from Zhongguancun Science Park in China. *Research Policy*, 40(3), 453-462.

Finkle, T. A. (1998). The relationship between boards of directors and initial public offerings in the biotechnology industry. *Entrepreneurship Theory and Practice*, 22(3), 5-29.

Fisman, R., & Miguel, E. (2007). Corruption, norms, and legal enforcement: Evidence from diplomatic parking tickets. *Journal of Political Economy*, 115(6), 1020-1048.

Ghemawat, P. (2001). Distance still matters. *Harvard business review*, 79(8), 137-147.

Glynn, M. A., & Abzug, R. (2002). Institutionalizing identity: Symbolic isomorphism and organizational names. *Academy of Management Journal*, 45(1), 267-280.

Grant, R. M. (1996). Toward a Knowledge‐Based Theory of the firm. *Strategic Management Journal*, 17(S2), 109-122.

Hambrick DC, Finkelstein S. (1987). Managerial discretion: a bridge between polar views of organizational studies. *Research in Organizational Behavior*, 9, 369–406.

Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions and organizations across nations. Sage.

Hybels, R. C. (1995). 'On legitimacy, legitimation, and organizations: A critical review and integrative theoretical model'. In D. P. Moore (ed.), *Academy of Management Best Papers Proceedings*, pp. 241–245.

Jain, B. A., & Kini, O. (2008). The Impact of Strategic Investment Choices on Post‐Issue Operating Performance and Survival of US IPO Firms. *Journal of Business Finance and Accounting*, 35(3-4), 459-490.

Kenney, M., Breznitz, D., & Murphree, M. (2013). Coming back home after the sun rises: Returnee entrepreneurs and growth of high tech industries. *Research Policy*, 42(2), 391-407.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 383-397.

Kwok, C. C., & Tadesse, S. (2006). The MNC as an agent of change for host-country institutions: FDI and corruption. *Journal of International Business Studies*, 37, 767-785.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, 58(1), 3-27.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *Journal of Finance*, 52, 1131-1150.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and Finance. *Journal of Political Economy*, 106(6), 1113-1155.

Li, Y. & Zahra, S., (2012). Formal institutions, culture, and venture capital activity: A cross-country analysis. *Journal of Business Venturing*, 27, 95-111.

Li, Y., Vertinsky, I., & Li. J., 2014. National distances, international experience, and venture capital investment performance. *Journal of Business Venturing*, 29, 471-489.

Lin, D., Lu, J., Liu, X., & Zhang, X. (2016). International knowledge brokerage and returnees' entrepreneurial decisions. *Journal of International Business Studies*, 47, 295-318.

Liu, X., Lu, J., Filatotchev, I., Buck, T., & Wright, M. (2010). Returnee entrepreneurs, knowledge spillovers and innovation in high-tech firms in emerging economies. *Journal of International Business Studies*, 41(7), 1183-1197.

Lublin , J. (1996). An overseas stint can be a ticket to the top. *Wall Street Journal*, January 29: B1.

Lungeanu, R., & Zajac, E. J. (2016). Venture Capital Ownership as a Contingent Resource: How Owner–Firm Fit Influences IPO Outcomes. *Academy of Management Journal*, 59(3), 930-955.

Mahoney, J., & Kor, Y. (2015). Advancing the human capital perspective on value creation by joining capabilities and governance approaches. *Academy of Management Perspectives*, 29(3), 296-308.

Maruca, R. F. (1994). The right way to go global: An interview with Whirlpool CEO David Whitwam. *Harvard Business Review*, 72(2), 135-146.

Meyer, K. E., Estrin, S., Bhaumik, S. K., & Peng, M. W. (2009). Institutions, resources, and entry strategies in emerging economies. *Strategic Management Journal*, 30(1), 61-80.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14-37.

Nonaka, I., & Takeuchi, H. (1995). The knowledge-creating company: How Japanese companies create the dynamics of innovation. Oxford university press.

North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge university press.

Penrose, E. T. (1959). The Theory of the Growth of the Firm. New York: John Wiley

Peterson, S. J., Walumbwa, F. O., Byron, K., & Myrowitz, J. (2009). CEO positive psychological traits, transformational leadership, and firm performance in high-technology start-up and established firms. *Journal of Management*, 35(2), 348-368.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.

Roth, K. (1995). Managing international interdependence: CEO characteristics in a resource-based framework. *Academy of Management Journal*, 38(1), 200-231.

Tsui, A. S., Zhang, Z. X., Wang, H., Xin, K. R., & Wu, J. B. (2006). Unpacking the relationship between CEO leadership behavior and organizational culture. *Leadership Quarterly*, 17(2), 113-137.

Wang, H., & Miao, L. (2013). Annual report on the development of Chinese returnees. Social Science and Academic Press.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180

Wernerfelt, B. (1995). The resource-based view of the firm: Ten years after. *Strategic Management Journal*, 16 (3), 171-174

Wiersema, M. F., & Bantel, K. A. (1992). Top management team demography and corporate strategic change. *Academy of Management josurnal*, 35(1), 91-121.

Table 5.1A Returnee CEOs' Host Countries and Legal Institutions

This panel reports the institutions of the overseas destinations of returnee CEOs and China.

Country	Number of Returnee CEOs	Efficiency of Judicial System	Rule of Law	Corruption	Risk of Expropriation
Australia	4	10.00	10.00	8.52	9.27
Canada	12	9.25	10.00	10.00	9.67
France	1	8.00	8.98	9.05	9.65
Germany	2	9.00	9.23	8.93	9.90
Japan	2	10.00	8.98	8.52	9.67
New Zealand	2	10.00	10.00	10.00	9.69
Singapore	3	10.00	8.57	8.22	9.30
United Kingdom	2	10.00	8.57	9.10	9.71
United States	19	10.00	10.00	8.63	9.98
China	308	N/A	5	2	N/a

Table 5.1B Summary Statistics

This panel reports the summary statistics of variables in this chapter. All variables are defined in the Appendix. The sample includes IPOs of Chinese firms listed in the ChiNext market from 2009 to 2012.

Variables	Obs	Mean	SD	Median
Returnee CEO	355	0.1324	0.3394	0
CEO Ownership	355	0.2004	0.1657	0.1710
Founder CEO	355	0.5408	0.4990	1
Total Assets	355	19.4685	0.5708	19.4444
Board Size	355	8.3803	1.3958	9
Board Independence	355	0.3705	0.0514	0.3333
VC Ownership	355	0.0875	0.1045	0.0588
High Tech	355	0.3634	0.4817	0
Firm Age	355	8.3103	4.6076	8.4575
Risk Factor	355	12.8648	4.0837	13
ROA	355	0.0610	0.0304	0.0600
ROS	355	0.1724	0.1111	0.1464
Tobin's Q	355	1.7451	0.5945	1.5279

Table 5.2 The Effect of a Returnee CEO on Post-IPO One-year Operating Performance by OLS and Instrument Variable

This table reports the OLS regression analyses between *Returnee CEO* and post one-year IPO operating performance. All the variables are defined in the Appendix. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Variables	Panel A: Full Sample			Panel B: Instrument Variable (IV)			
	1	2	3	4. 1st stage	5. 2nd Stage	6. 2nd Stage	7. 2nd Stage
	ROA	ROS	Tobin's Q	Returnee CEO	ROA	ROS	Tobin's Q
Returnee CEO	0.0105**	0.0452**	0.2269*		0.0759**	0.3618**	1.0574
	(2.04)	(2.25)	(1.81)		(1.96)	(2.12)	(1.48)
International School				0.0076**			
				(2.47)			
Total Assets	-0.0083**	-0.0410***	-0.2179***	-0.0128	-0.0070*	-0.0347**	-0.2014***
	(-2.48)	(-3.30)	(-3.74)	(-0.36)	(-1.91)	(-2.21)	(-3.39)
Board Size	-0.0024	0.0023	-0.0279	0.0231	-0.0039**	-0.0047	-0.0463
	(-1.58)	(0.39)	(-0.83)	(1.19)	(-2.00)	(-0.52)	(-1.40)
Board Independence	-0.0321	0.0939	-0.5091	-0.1152	-0.0249	0.1288	-0.4175
	(-0.73)	(0.56)	(-0.68)	(-0.28)	(-0.53)	(0.66)	(-0.55)
VC Ownership	-0.0409**	-0.0518	0.3389	0.4297*	-0.0696**	-0.1906	-0.0252
	(-2.24)	(-0.79)	(1.02)	(1.77)	(-2.34)	(-1.47)	(-0.05)
High Tech	0.0026	0.0092	0.1505**	-0.0609	0.0053	0.0223	0.1847**
	(0.67)	(0.64)	(2.04)	(-1.38)	(1.12)	(1.13)	(2.13)
Firm Age	0.0005	-0.0002	0.0045	0.0022	0.0003	-0.0013	0.0017
	(1.41)	(-0.16)	(0.70)	(0.50)	(0.64)	(-0.65)	(0.23)
Risk Factor	0.0000	0.0008	0.0269***	-0.0015	0.0001	0.0011	0.0277***
	(0.02)	(0.44)	(2.94)	(-0.27)	(0.13)	(0.48)	(3.02)
Founder CEO	-0.0060	-0.0104	-0.1064	0.0214	-0.0069	-0.0146	-0.1174
	(-1.45)	(-0.71)	(-1.46)	(0.51)	(-1.47)	(-0.77)	(-1.51)
CEO Ownership	-0.0051	0.0170	-0.0726	0.0502	-0.0103	-0.0082	-0.1388
	(-0.40)	(0.39)	(-0.35)	(0.38)	(-0.71)	(-0.14)	(-0.61)
Constant	0.2289***	0.8139***	5.8121***	0.1019	0.2474***	0.7790**	5.4704***
	(3.19)	(2.93)	(5.03)	(0.14)	(3.45)	(2.50)	(4.93)
Industry Effect	YES	YES	YES	YES	YES	YES	YES
R2	0.176	0.152	0.239	.	.	.	.
N	355	355	355	355	355	355	355

Table 5.3 Returnee CEO and Post-IPO One-year Operating Performance in Propensity-matched Sample by OLS

This table reports the mean in difference between returnee CEO and non-returnee CEO by determinants and post-IPO one-year operating performance in a propensity- matched sample. All the variables are defined in the Appendix. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	Returnee CEOs (R)	Predicted Returnee CEOs (P)	R-P	
Panel A: Determinants				
	Mean	Mean	Mean in Diff	P-value
Total Assets	19.5032	19.5129	-0.0097	0.6545
Board Size	8.6383	8.6809	-0.0425	0.8815
Board Independence	0.3628	0.3605	0.0024	0.8024
VC Ownership	0.1303	0.1434	-0.0131	0.6485
High Tech	0.3404	0.4255	-0.0851	0.4015
Firm Age	9.1093	9.3036	-0.1943	0.8427
Risk Factor	12.8511	12.2340	-0.6170	0.4891
Founder CEO	0.5532	0.5319	0.0213	0.8381
CEO Ownership	0.1564	0.1715	-0.0151	0.6678
#Observations	47	47		
Panel B: Post-IPO one-year performance				
	Mean	Mean	Mean in Diff	P-value
ROA	0.0672	0.0530	0.0142**	0.0128
ROS	0.2072	0.1374	0.0698***	0.0027
Tobin's Q	1.9390	1.6492	0.2898**	0.0484
#Observations	47	47		

Table 5.4 Returnee CEO Origin, Legal Institution, and National Culture in Propensity-matched Sample

This table reports the effect of the rule of law and national culture on post one-year IPO operating performance by classifying the origin of returnee CEOs in a propensity-match sample. All the variables are defined in the Appendix. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Variables	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q
Returnee Host Country-Low Corruption	0.0019**	0.0096***	0.0397*									
	(2.40)	(3.08)	(1.97)									
Returnee Host Country-Rule of Law				0.0028**	0.0144***	0.0551*						
				(2.43)	(3.07)	(1.86)						
Returnee Host Country-Efficiency of Judicial System Rank							0.0034**	0.0177***	0.0716*			
							(2.17)	(2.91)	(1.81)			
Returnee Host Country-Low Risk of Expropriation Rank										0.0016*	0.0099***	0.0331
										(1.86)	(2.75)	(1.47)
Returnee Host Country-Market Capitalization	0.0026	0.0277*	-0.0065	0.0019	0.0240*	-0.0211	0.0017	0.0232*	-0.0247	-0.0003	0.0119	-0.0807
	(0.76)	(1.97)	(-0.08)	(0.56)	(1.75)	(-0.25)	(0.51)	(1.71)	(-0.29)	(-0.08)	(0.91)	(-0.84)
R2	0.065	0.137	0.040	0.064	0.136	0.035	0.058	0.128	0.035	0.043	0.111	0.039
N	94	94	94	94	94	94	94	94	94	94	94	94

Table 5.5 Returnee CEO and VC Origin Match

This table reports the effect of the Returnee CEO and VC origin match on post one-year IPO operating performance in a propensity-score match sample by VC backed. All the variables are defined in the Appendix. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Variables	Corruption			Rule of Law			Efficiency of Judicial System Rank			Risk of Expropriation Rank		
	1	2	3	4	5	6	7	8	9	10	11	12
	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q
Returnee CEO*VCC	0.0069**	0.0145	0.3341***									
	(2.09)	(1.49)	(7.30)									
Returnee CEO*VCL				0.0127***	0.0263**	0.5727***						
				(3.23)	(2.09)	(9.25)						
Returnee CEO*VCJR							0.0407**	0.0844	1.9840***			
							(1.97)	(1.40)	(6.90)			
Returnee CEO*VCR										0.0433***	0.0879***	1.9115***
										(6.80)	(3.17)	(12.03)
VC low corruption (VCC)	-0.0008	-0.0030	-0.0350									
	(-0.26)	(-0.34)	(-0.91)									
VC rule of law (VCL)				-0.0022	-0.0069	-0.0634						
				(-0.59)	(-0.67)	(-1.55)						
VC efficiency of judicial system rank (VCJR)							-0.0044	-0.0170	-0.2193			
							(-0.22)	(-0.31)	(-0.90)			
VC risk of expropriation rank (VCR)										-0.0070	-0.0204	-0.1468***
										(-1.56)	(-1.44)	(-3.51)
Returnee CEO	-0.0066	-0.0078	0.0338	-0.0066	-0.0078	0.0341	-0.0066	-0.0078	0.0341	-0.0066	-0.0079	0.0338
	(-0.67)	(-0.23)	(0.15)	(-0.67)	(-0.23)	(0.15)	(-0.66)	(-0.23)	(0.15)	(-0.67)	(-0.23)	(0.15)
VC origin-market capitalization	-0.0002	0.0004	0.0065	0.0001	0.0014	0.0151*	-0.0001	0.0008	0.0116	-0.0000	0.0009	0.0092***
(VCMC)	(-0.73)	(0.46)	(1.58)	(0.18)	(0.72)	(1.88)	(-0.15)	(0.38)	(1.27)	(-0.04)	(1.20)	(2.66)
Returnee	0.0003	0.0002	-0.0143	-0.0014*	-0.0033	-0.0899***	-0.0006	-0.0017	-0.0596***	-0.0007	-0.0019	-0.0572***

CEO*VCMC												
	(0.67)	(0.10)	(-1.24)	(-1.68)	(-1.08)	(-5.13)	(-0.71)	(-0.59)	(-3.67)	(-1.39)	(-0.83)	(-4.14)
R2	0.034	0.009	0.091	0.035	0.008	0.064	0.035	0.009	0.073	0.040	0.009	0.068
N	218	218	218	218	218	218	218	218	218	218	218	218

Table 5.6 Returnee CEO Origin and VC Origin Match

This table reports the effect of the returnee CEO origin and VC origin match on post one-year IPO operating performance in a propensity-score match sample by VC back. All the variables are defined in the Appendix. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	Corruption			Rule of Law			Efficiency of Judicial System			Risk of Expropriation		
	1	2	3	4	5	6	7	8	9	10	11	12
	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q	ROA	ROS	Tobin's Q
RC*VCC	0.0010***	0.0017	0.0310***									
	(2.61)	(1.26)	(2.88)									
RL*VC L				0.0009*	0.0014	0.0136						
				(1.97)	(0.71)	(0.79)						
RJ*VCJ							0.0062**	0.0093	0.1380			
							(2.37)	(0.94)	(1.41)			
RR*VCR										0.0040***	0.0080*	0.0965*
										(3.14)	(1.82)	(1.77)
Returnee origin-low corruption (RC)	0.0002	0.0010	0.0024									
	(0.18)	(0.25)	(0.08)									
Returnee origin-rule of law (RL)				-0.0007	0.0001	0.0262						
				(-0.37)	(0.02)	(0.39)						
Returnee origin-efficiency of judicial system rank (RJ)							-0.0011	-0.0009	-0.0130			
							(-0.45)	(-0.10)	(-0.16)			
Returnee origin-low risk of expropriation rank (RR)										-0.0013	-0.0031	-0.0139
										(-0.98)	(-0.71)	(-0.33)
VC low corruption (VCC)	-0.0030	-0.0059	-0.0718									
	(-0.80)	(-0.56)	(-1.34)									
VC rule of law (VCL)				-0.0053	-0.0102	-0.0440						
				(-1.16)	(-0.68)	(-0.42)						
VC efficiency of judicial system (VCJ)							-0.0019	-0.0072	0.1145			
							(-0.11)	(-0.15)	(0.37)			
VC low risk of expropriation										-0.0069	-0.0199	-0.0927

(VCR)										(-1.50)	(-1.39)	(-1.20)
Returnee origin-market capitalization (RMC)	0.0080 (1.23)	0.0206 (0.98)	0.1228 (1.38)	0.0063 (0.98)	0.0180 (0.85)	0.1572 (1.32)	0.0062 (1.03)	0.0167 (0.87)	0.0998 (0.99)	0.0057 (0.96)	0.0134 (0.74)	0.0959 (1.37)
VC origin-market capitalization (VCMC)	0.0113 (1.39)	0.0272 (0.85)	0.1504 (0.78)	0.0103 (1.21)	0.0266 (0.81)	0.2063 (0.99)	0.0111 (1.41)	0.0265 (0.84)	0.1713 (0.84)	0.0149* (1.86)	0.0312 (1.01)	0.2945* (1.67)
RMC*VCMC	-0.0004 (-1.41)	-0.0009 (-0.84)	-0.0051 (-0.76)	-0.0004 (-1.24)	-0.0009 (-0.79)	-0.0071 (-1.00)	-0.0004 (-1.43)	-0.0009 (-0.83)	-0.0059 (-0.85)	-0.0005* (-1.87)	-0.0010 (-0.98)	-0.0099 (-1.64)
R2	0.035	0.009	0.090	0.033	0.009	0.054	0.037	0.009	0.068	0.036	0.010	0.069
N	218	218	218	218	218	218	218	218	218	218	218	218

Appendix

Table A5.1

Variables	Definition
Returnee CEO	Dummy variable equal to 1 if the CEO has overseas work experience, overseas study experience, overseas permanent residence, or holds a foreign citizenship, and zero otherwise.
Returnee Host Country-Low corruption	The corruption index value of host countries for returnee CEOs and the value of China for local CEOs. Higher value indicates lower corruption. Source: La Porta *et al.* (1998) and Allen *et al.* (2005).
Returnee Host Country-Rule of law	The rule of law index value of host countries for returnee CEOs and the value of China for local CEOs. Higher value indicates stronger rule of law. Source: La Porta *et al.* (1998) and Allen *et al.* (2005).
Returnee Host Country-Efficiency of judicial system rank	The rank of host countries of returnee CEOs by the efficiency of judicial system index from La Porta *et al.* (1998). Higher rank indicates higher efficiency of the judicial system. I use rank rather than value because China is not included in the index. I assume that China ranks lower than other developed countries in the sample.
Returnee Host Country-Low risk of expropriation rank	The rank of host countries of returnee CEOs by the risk of expropriation index from La Porta *et al.* (1998). Higher rank indicates lower risk of expropriation. I use rank rather than value because China is not included in the index. I assume that China ranks lower than other developed countries in the sample.
Returnee Host Country-Market capitalization	The natural logarithm of market capitalization of host countries for returnee CEOs and the value of China for local CEOs. Data source: World Bank.
VC low corruption	The corruption index value of overseas destinations for overseas VCs and the value of China for domestic VCs. Higher value indicates lower corruption. The variable is equal to 0 for non-VC-backed companies. Source: La Porta *et al.* (1998) and Allen *et al.* (2005).
VC rule of law	The rule of law index value of overseas destinations for overseas VCs and the value of China for domestic VCs. Higher value indicates stronger rule of law. The variable is equal to 0 for non-VC backed companies. Source: La Porta *et al.* (1998) and Allen *et al.* (2005).
VC efficiency of judicial system rank	The rank of foreign destination of overseas VCs by the efficiency of judicial system index from La Porta *et al.* (1998). Higher rank indicates higher efficiency of the judicial system. I use rank rather than value because China is not included in the index. I assume that China ranks lower than other developed countries in the sample. The variable is equal to 0 for non-VC-backed companies.
VC low risk of expropriation rank	The rank of foreign destination of overseas venture capital by the risk of expropriation index from La Porta *et al.* (1998). A high value indicates a low risk of expropriation. I use rank rather than value because China is not included in the index. I assume that China ranks lower than other developed countries in the sample. The variable is equal to 0 for non-VC-backed companies.
VC origin market capitalization	The natural logarithm of market capitalization of overseas destinations for overseas VCs and the value of China for domestic VCs. The variable is equal to zero for non-VC-backed companies. Data source: World Bank.
CEO ownership	The percentage of beneficial ownership in the post-IPO firm held by the CEO.
Total assets	The natural logarithm of total assets in the latest fiscal year before the IPO.
Board size	The number of directors on the board at the time of the IPO.
Board independence	The percentage of independent directors on the board at the time of the IPO.
VC ownership	The percentage of beneficial ownership in the post-IPO firm held by VCs.
High tech	Dummy variable equal to 1 if the firm is classified as a high-tech firm according to Certo *et al.* (2001), and 0 otherwise.

Firm age	The age of the firm at the time of the IPO.
Risk factor	The total number of risk factors listed in the IPO prospectus.
Founder CEO	Dummy variable equal to 1 if the CEO is the founder at the time of the IPO, and 0 otherwise.
ROA	Return on assets one year after the IPO.
ROS	Return on sales one year after the IPO.
Tobin's Q	Tobin's Q one year after the IPO.
International school	The number of international schools in the city of the firm's headquarters in the year prior to the IPO.

Chapter 6 Does Overseas Experience of CEOs Determine the Listing Location of Chinese Entrepreneurial Firms?

Abstract

This chapter examines listing location as a managerial decision. Using a sample of IPOs of Chinese entrepreneurial firms in mainland China, the US and HK, I show that Chinese entrepreneurial firms with returnee CEOs, especially those operating in high-tech industries, are likely to undertake foreign IPOs. However, the credibility crisis for Chinese firms impedes the decision to undertake foreign IPOs of entrepreneurial firms with returnee CEOs. The results are consistent on returnee CFOs and other senior executives. Overall, my findings emphasize the important role of returnee CEOs in the internationalization of Chinese entrepreneurial firms.

6.1 Introduction

The human capital of the management team is important to the development of entrepreneurial firms (Haber and Reichel, 2007; Zimmerman, 2008), and various individual traits, such as leadership, expertise, experience, gender, and personality, are found to affect firm outcomes in entrepreneurship studies (Shrader and Siegel, 2007; Carter et al., 2007; Engelen et al., 2014; Zona, 2016). Overseas work or study experience is receiving increasing attention from practitioners and policymakers. No country sends more students overseas than China does every year, growing from 144,500 in 2007 to 413,900 in 2013.[43] Wilson et al. (2007) and Zhao et al. (2010) suggest that background or past experience may affect both personal effectiveness and future employment options; hence, international experience may not only be beneficial to returnees' career development but may also contribute to the development of their employers' business. The role of Chinese returnees in science part start-ups has been studied by Wright et al. (2008), Filatotchev et al. (2009), Liu et al. (2010a), Liu et al. (2010b), Filatotchev et al. (2011), Lin et al. (2016). However, the impact of returnees on the internationalization of entrepreneurial firms in under-researched. In this study, I examine the role of returnee CEOs' international experience in foreign IPOs of entrepreneurial firms.

Going public in a developed foreign capital equity market is an important strategic decision for entrepreneurial firms, and foreign IPOs could help entrepreneurial

[43]See: http://www.eol.cn/html/lx/2014baogao/content.html

firms improve their corporate governance (Bell et al., 2014; Moore et al., 2012) and firm valuation (Cumming et al., 2016). Because of institutional differences and information asymmetry, entrepreneurial firms, especially those in emerging markets, have to face the costs of the liability of foreignness and the liability of newness when undertaking foreign IPOs in developed capital markets. Existing literature in entrepreneurship studies shows that several factors could help entrepreneurial firms overcome barriers and help them to list in foreign capital markets, such as venture capital investment (Hursti and Maula, 2007; Cheng and Schwienbacher, 2016; Zhang and Yu, 2016), technology orientation (Hursti and Maula, 2007), and top management team foreign experience (Hursti and Maula, 2007). However, few researchers have studied the impact of CEOs with international experience on undertaking foreign IPOs in entrepreneurial firms.

This study focuses on CEOs because they play a key role in corporate decision-making. Returnee CEOs could reduce the information asymmetry, bring networks resources, provide knowledge of foreign institutions. More specifically, the overall perception of a CEO reduce information asymmetry through the presentations in IPO roadshows, which is positively associated with IPO outcome (Blankespoor et al., 2016). In addition, returnee CEOs possess the foreign networks resources and the tacit knowledge of advanced foreign institution (Cumming et al., 2017) that could facilitate the firms to access to foreign markets. I expect that returnee CEOs help overcome barriers of foreignness and newness that Chinese entrepreneurial firms face when getting listed abroad, and in turn affect the decision of undertake foreign listing.

In order to test the impact of returnee CEOs on entrepreneurial firms, I focus on IPOs in Growth Enterprise Markets (GEM) because GEM provide financial opportunities with flexible listing requirements. Using a hand-collected sample of 355 IPOs in the ChiNext board market, 33 IPOs in the NASDAQ market, and 23 IPOs in the HK Growth Enterprise Market between 2009 and 2012, I find that entrepreneurial firms with returnee CEOs tend to list on the US or HK markets rather than on the ChiNext market. Furthermore, the possibility of undertaking foreign IPOs for Chinese entrepreneurial firms with returnee CEOs is more pronounced when the entrepreneurial firms operate in high-tech industries. However, this preference does not survive the press reports of financial fraud of US-listed Chinese firms after 2011. I also find that entrepreneurial firms with returnee CEOs are negatively associated with IPO underpricing until 2011 in the US market. The results imply that firms with returnee CEOs is associated with higher IPO pricing, and subsequently have the lower first day return. This suggests that returnee CEOs reduce the information asymmetry in foreign IPOs until the Muddy Water disclosed the fraud of Chinese firms, which started the market level credibility crisis for Chinese firms in the US. The credibility crisis also spread to Chinese firms listed in the HK market, where returnee CEOs are not significantly associated with IPO underpricing after 2011.[44] I also conduct robustness checks to address the reverse causality issue that stems from the appointment of returnee CEOs before IPOs for window-dressing purposes. To address this concern, I replicate my baseline test in the subsample, which is less likely to be subject to the reverse

[44] There is no Chinese entrepreneurial firm listed on the HK GEM (Growth Enterprise Market) board in 2009 and 2010 in my sample.

causality issue. Finally, since the characteristics of the top management team has an impact on the IPO decision (Hursti and Mauls, 2007) and their performance (Zimmerman, 2008), I also test the impact of other senior executives with international experience on foreign IPOs. The results are consistent.

This chapter makes three main contributions to the entrepreneurship literature. First, this is the first study of the role of Chinese returnees in the foreign IPO choice of entrepreneurial firms. The literature mainly focuses on the impact of returnee entrepreneurs in early-stage entrepreneurial firms (Wright et al., 2008; Filatotchev et al., 2009; Liu et al., 2010a; Liu et al., 2010b; Filatotchev et al., 2011; Lin et al., 2016). The role of returnee CEOs of entrepreneurial firms in undertaking foreign IPOs, however, has not been previously examined. Second, this chapter is related to studies on the impact of top management team member characteristics on IPOs (Hursti and Mauls, 2007; Zimmerman, 2008). Hursti and Mauls (2007) argue that the international experience of the top management team reduces the home bias of companies in choosing IPO markets, but they do not specifically focus on CEOs. Zimmeman (2008) finds that top management team heterogeneity, for example in terms of the functional background or educational background, is associated with greater capital accumulation. I contribute to this strand of the literature by finding that the international experience of the CEO, chair, CFO, and other senior executives has an impact on undertaking foreign IPOs. Third, this chapter is related to empirical studies exploring the factors that could affect the foreign IPOs of entrepreneurial firms (Cheng and Schwienbacher, 2016; Zhang and Yu, 2016).

The chapter proceeds as follows. Section 2 introduces the institutional background. Section 3 discusses the theory and hypotheses development. Section 4 presents the research method. Section 5 reports results. Section 6 discusses the policy and practical implications and limitations, and the final section concludes.

6.2 Institutional Background

6.2.1 Policies for Returnees

The Chinese government started paying attention to attracting the graduates to come back to China by encouraging large state-owned enterprises (SOEs), banks, insurance companies, and securities companies to employ Chinese candidates with overseas experience, giving them high positions and salaries. For example, 34 Academies of Science and 53 Special Economic Zones provided favorable treatment for returnee entrepreneurs. More specifically, Shanghai promised that the application process for running a business would take just five days. Beijing Zhongguancun, known as the Chinese Silicon Valley (Filatotchev et al., 2009), even established an office in the U.S. Silicon Valley to recruit talented staff. In the 1990s, the number of Chinese returnees increased, most of whom ran their own businesses.

In the final stage, the Chinese government began to strengthen incentives to attract the overseas elite back to China. The 'Cheung Kong Scholars Program' was implemented in 1998 by the Ministry of Education; it aimed to create 300-500 positions for distinguished professors in national key development disciplines within three to five years. These professors would receive 100,000 RMB per year. The 'Recruitment

Program of Global Experts', launched by the Organization Department of the Communist Party of the China Central Committee in 2008, intended to recruit approximately 2,000 experts (including university professors, corporate top executives, and other technology- or innovation-oriented talents) with overseas Ph.D. degrees within five to ten years. The Chinese government also provided favorable treatment in terms of registered residences (*hukou*), residence permits (for foreigners), premium medical service, social security for spouses and children, and even permission to buy real estate despite an otherwise restricted policy. Most importantly, the employed experts would receive 1,000,000 RMB in a one-off grant from the central and local government. By September 2011, 1,510 experts had been accepted onto the 'Recruitment Program of Global Experts'.[45] In addition to the central government's policy focus on returnees, local governments have also issued a variety of policies aimed at attracting and supporting returnees.

6.2.2 ChiNext Board Market

Although privately owned companies are the cornerstone of Chinese economic growth (Allen et al., 2005), these private entrepreneurial firms often face financial constraints (Poncet et al., 2010; Ding et al., 2013). In developed countries, second board capital markets are normally in place to facilitate equity financing of entrepreneurial firms. For example, growth enterprise markets (GEMs) have been widely established for the development of innovative entrepreneurial enterprises, including NASDAQ in the US, the Alternative Investment Market (AIM) in the UK, and Catalist in Singapore. In

[45] Source: *People's Daily,* 13 September 2011.

October 2009, ChiNext, China's GEM, was launched in the Shenzhen Stock Exchange to 'promote the development of innovative enterprises and other growing start-ups,'[46] and 355 entrepreneurial firms were listed by the end of 2012. The listing requirements of the ChiNext board are substantially more flexible than those of the main board market. For example, one of the requirements of the ChiNext board is that accumulated profits cannot be less than RMB 10 million (approximate 1.6 million USD) and must represent continued growth in the last two years, while the SZSE main board requirement is that net profits cannot be lower than RMB 30 million (approximate 4.8 million USD) in aggregate in the last three consecutive years.[47] The ChiNext board provides a new platform for the financing of all types of entrepreneurial firms, and offers significant opportunities to returnees. For example, more than 30 returnees became billionaires after the first round of IPOs on the ChiNext board in October 2009.[48]

6.2.3 Foreign Listing Requirements

Entrepreneurial firms listing on NASDAQ and HK GEM face the flexible financial requirements. Although the financial requirement of listing on the ChiNext board is more flexible than that of the main board in China, the requirements of listing on foreign GEM are still flexible than the ChiNext. More specifically, the main differences in financial requirement could be classified into two veins: profit or income, and firm size. First, the ChiNext board requires entrepreneurial firm have to accumulative profit no less than 10 million RMB (approximate 1.6 million USD) for two

[46] http://www.szse.cn/main/en/ListingatSZSE/ListingQA/
[47] http://www.szse.cn/main/en/ListingatSZSE/ListingRequirements/
[48] http://finance.sina.com.cn/focus/cybfh/

consecutive years. However, both NASDAQ and HK GEM have no requirements on profit for issuers. Nevertheless, the HK GEM requires issuers to have at least 20 million HK dollar (approximate 2.7 million USD). Second, the ChiNext board requires the market capitalization after IPO should be more than 30 million RMB (approximate 4.8 million USD), and the HK GEM requires the market capitalization at the time of IPO should be higher than 100 million HK dollar (approximate 14 million USD). The NASDAQ does not have requirements on market capitalization, but requires the stockholders' equity is higher than 4 million USD.

6.3 Theory and Hypotheses Development

6.3.1 IPO Markets Selection

Private firms, especially start-ups, often face financial constraints in China (Poncet et al., 2010; Ding et al., 2013). In developed countries, growth enterprise markets (GEMs) are normally in place to facilitate equity financing of entrepreneurial firms. In 2009, China launched the ChiNext board, the so-called Chinese NASDAQ, in the Shenzhen Stock Exchange. The aim of the ChiNext board is to 'promote the development of innovative enterprises and other growing start-ups'. Along with the launch of the ChiNext board in 2009, Chinese firms have opportunities to choose to access the GEMs in China and GEMs in other countries. Although GEMs in both China and overseas countries provide good opportunities to access external capital, firms seeking IPOs in the foreign capital market are motivated to improve the corporate governance (Moore et al., 2012; Bell et al., 2012; Bell et al., 2014) or a better information environment (Baker et al., 2002). In particular, firms from countries with

relatively low investor protection enjoy long-term growth by conducting IPOs in foreign countries with strong investor protection (Doidge et al., 2004). However, entrepreneurial firms from emerging markets face challenges to access and raise funds from the foreign developed equity capital market. In addition to language, culture, and distance obstacles, issuer companies from emerging markets primarily suffer from the cost of the liability of foreignness (Zaheer and Mosakowski, 1997). Apart from the cost of the liability of foreignness, the cost of the liability of newness (Certo, 2003) is an additional barrier for entrepreneurial firms aiming to raise funds from the foreign equity capital market, because firms often have a short operating history and little publicly available information. The compounded cost of both the liability of foreignness and newness are very challenging for entrepreneurs from emerging economies trying to access developed equity capital markets.

There might be two reasons for the costs. First, the pricing of the entrepreneurial firm is undervalued by the strong information asymmetry between the issuer from the emerging economy and the prospective investors from the developed countries. For instance, prospective investors in foreign developed countries may be concerned about the institutional development and legitimacy of emerging economies (Bell et al., 2015), because they often lack important institutional mechanisms to effectively govern business activities (Peng et al., 2008). Foreign investors may fail to fully recognize the success of privately owned firms from emerging countries. Due to the differences in institutional context, the outcome of foreign IPOs could be influenced by a lack of familiarity with the institutions of the "host market" (Moore et al., 2010), such as its

legal, market, and regulatory systems. Therefore, the pricing of the entrepreneurial firm from emerging economies may suffer lower valuation in the equity capital market of development countries.

Second, entrepreneurial firm issuers lack both the foreign network resources and the foreign institutional expertise in the IPO market of foreign developed countries. The IPO process relies on several financial service institutions, such as underwriters, lawyers, and auditors. Without a connection to foreign financial service institutions, such as underwriters, auditors, venture capitalists alliance partners, which shape IPO outcomes (Pollock et al., 2004), entrepreneurial firms are less likely to successfully identify and choose appropriate financial service institutions to conduct IPOs in foreign markets.

I argue that the international experience of returnee CEOs could help Chinese entrepreneurial firms effectively reduce the cost of both the liability of foreignness and newness when listing on foreign equity capital markets by reducing information asymmetry and providing social network resources and expertise. First, perceptions of a CEO, as observed in during IPO roadshow presentations, are positively related to IPO pricing (Blankespoor et al., 2016), which implies that CEOs could help reduce information asymmetry. According to signal theory (Certo, 2003; Certo, Daily, & Dalton, 2001a), returnee CEOs are a good signal that entrepreneurial firms can alleviate the legitimacy issue, because returnees could apply their expertise in entrepreneurial companies, such as foreign companies' management. The signal could help to alleviate informational asymmetry. Second, Chinese returnees obtain social network resources and foreign institutional expertise from international professional, academic, and general

life experience. Returnee CEOs also have the ability to help entrepreneurial firm issuers effectively communicate with financial institutions. I therefore expect that Chinese entrepreneurial firms with returnee CEOs are more likely to go public in developed foreign capital markets compared with those without returnee CEOs.

> **Hypothesis 1:** Chinese entrepreneurial firms with returnee CEOs are more likely to undertake IPOs in developed foreign markets.

6.3.2 Moderating Effects for High-tech Industries

Entrepreneurial firms with a technological orientation may be a proxy for investors' perceptions of riskiness (Daily, Certo, & Dalton, 2005), and entrepreneurial firms operating in high-tech industries could reflect this risk. Due to the difficulty of analyzing information about high-tech companies, entrepreneurial firms largely benefit from the lowering cost of information. Hursti and Maula (2007) argue that high-tech firms seek overseas investors because they are more likely to understand the associated risks. Accordingly, Pagano et al. (2002) and Hursti and Maula (2007) find that R&D intensive firms and high-tech firms are more likely to seek foreign IPOs. In addition, since foreign VC industries are more developed than China, the market would have better perception about the riskiness of technological oriented firms. Thus, I hypothesize that entrepreneurial firms with returnee CEOs are more likely to undertake foreign IPOs if the firm operates in a high-tech industry.

> **Hypothesis 2:** The marginal benefit of a foreign IPO to a high-tech entrepreneurial firm is greater when the firm has a returnee CEO, due to the signal value and commensurate reduction in information asymmetry.

6.3.3 Moderating Effects for the Credibility Crisis

Muddy Waters (MW) LLC is an investment research firm that not only conducts business research for the public but also undertakes short selling. Its research relates to business fraud, accounting fraud, and other fundamental business problems. MW's business model is to combine equity research and short selling, which conducts short selling before issuing the equity research that discloses the detected fraud. MW came to fame by successfully revealing several fraudulent Chinese companies listed on US markets. The stock price of these companies reduced sharply after the disclosure of the fraud. For example, MW reported in the Orient Paper[49], a U.S.-listed Chinese firm, greatly overstated their revenues on 28 June 2010, and the stock price of the company reduced by about 55.9% in the following 220 trading days.

A series of disclosures of fraudulent Chinese companies by MW subsequently triggered a number of fraud investigations of Chinese firms listed on the US market, and further create the credibility crisis in the market level.[50] Darrough et al. (2012) and Jindra et al. (2012) document that Chinese firms listed on the US market are becoming increasingly subject to investigations and securities class actions since 2010; this has led to a decrease in firm value. Consequently, US-listed Chinese firms tend to face an adverse environment, which has discouraged IPO activities by Chinese firms in the US market. Consequently, the number of IPOs of Chinese firms in the NASDAQ market has dropped substantially since 2011. Because of their overseas network resources and

[49] http://www.muddywatersresearch.com/research/orient-paper-inc/initiating-coverage-onp/
[50] The companies include NASDAQ:RINO, AMEX:NEP, NASDAQ:CSKI, NASDAQ:CHBT, AMEX:CMFO, NYSE:CEU, MEX:ONP.

institutional expertise in foreign markets, returnee CEOs could better perceive this adverse environment, and then make correct decisions that avoid conducting IPOs in the US market. Although returnee CEOs are viewed as the signal of trust and transparency of entrepreneurial firms, they still cannot reverse the credibility crisis in the market level. Thus, I expect returnee CEOs to avoid the US market after 2011.

> **Hypothesis 3:** Chinese entrepreneurial firms with returnee CEOs are more likely to avoid undertaking IPOs in the US market after 2011.

6.4 Research Method

6.4.1 Sample and Data Collection Procedure

To test my hypotheses, I identify 355 IPOs of entrepreneurial firms from the Shenzhen ChiNext board market, 33 IPOs of entrepreneurial firms from the NASDAQ market, and 23 IPOs of entrepreneurial firms from the Hong Kong second board market from the China Stock Market and Accounting Research (CSMAR) database.[51] I mainly rely on CSMAR and cross check with media coverage to obtain IPOs in the NASDAQ market. IPOs in the NASDAQ market include issuing common shares and issuing American Depositary Receipts (ADR) shares. In addition, my sample excludes IPOs that transfer from the OTC board to NASDAQ, as the information on these entrepreneurial firms is made available to public investors before listing on the NASDAQ market. In my research, I only focus on the first time the entrepreneurial firm transitions from a privately owned firm to a publicly owned firm.

[51] Companies going public through reverse mergers are not included in the sample.

The prospectuses are downloaded from *cninfo.com.cn* (Shenzhen ChiNext board market), hkexnews.hk (Hong Kong second board market), and EDGAR (NASDAQ market). I hand-collect information on returnee CEOs by reviewing the short biographies in the IPO prospectuses. In addition, firm characteristics, governance characteristics, and personal characteristics prior to the IPO are manually collected from the IPO prospectuses.

6.4.2 Dependent Variables

Choice of Market. In order to explore whether an entrepreneurial firm with a returnee CEO or chair chooses a domestic or foreign market, I use three variables measuring the choice of market when entrepreneurial firms go public. *China vs US&HK* is a dummy variable equal to one if the entrepreneurial firm chooses to list on the domestic market (Shenzhen ChiNext board market), and equal to zero if the entrepreneurial firm chooses to list on a foreign market (Hong Kong second board market or NASDAQ market). *China vs US* is a dummy variable equal to one if the entrepreneurial firm chooses to list on the domestic market (Shenzhen ChiNext board market), and equal to zero if the entrepreneurial firm chooses to list on the US market (NASDAQ market).

IPO Underpricing. I use *IPO first day return* to measure the IPO underpricing. *IPO first day return* is measured as the percentage difference between the offer price and the closing price on the first trading day (Certo et al., 2001a; Bruton et al., 2009).

6.4.3 Independent Variables

Returnee CEO. CEOs are identified as returnees if they have had overseas work experience, overseas study experience, overseas permanent residence rights, or foreign nationality. CEOs are not identified as returnees if they worked, studied, or lived in Hong Kong, Macau, or Taiwan.

Returnee Chair. Board chairs are identified as returnees if they have had overseas work experience, overseas study experience, overseas permanent residence, or foreign nationality. Board chairs are not identified as returnees if they work, study, or live in Hong Kong, Macau, or Taiwan.

Returnee CFO. CFOs are identified as returnees if they have had overseas work experience, overseas study experience, overseas permanent residence, or foreign nationality. CFOs are not identified as returnees if they work, study, or live in Hong Kong, Macau, or Taiwan.

Other Returnee Senior Executives. Other senior executives, including vice-presidents, executive directors, vice-chair, and board secretaries, are identified as returnees if they have had overseas work experience, overseas study experience, overseas permanent residence, or foreign nationality. They are not identified as returnees if they work, study, or live in Hong Kong, Macau, or Taiwan.

6.4.4 Control Variables

Following the previous IPO literature (e.g., Ritter, 2015), I control for firm-level effects, including firm size, firm age, venture capital (VC) back, high-technology

industry. Firm size is measured by the natural logarithms of total sales in the financial year prior to the IPO. Firm age is measured as the difference in years between the IPO firm's founding date and the date of the IPO (Daily et al., 2003). VC back is a dummy variable if the IPO is backed by venture capitals, and 0 otherwise. Following Certo et al. (2001b), the high-tech dummy is equal to one if firms operate in the high-technology industry sectors (two-digit SIC codes) including computer hardware (SIC 35), computer software (SIC 73), semiconductors and printed circuits (SIC 36), biotechnology (SIC 28), telecommunications (SIC 48), and pharmaceuticals (SIC 28). China Listed Company Industry Classification Guidelines and Global Industry Classification Standard keep track of manage IPOs for high-tech companies, respectively.

To reflect differences in corporate governance I control for board size and board independence. Previous studies show that board size is positively associated with firm performance (Certo et al., 2001b; Dalton et al., 1999) and related to environmental resources (Certo et al., 2001a). I measure board size as the number of board directors prior to the IPO. Daily et al. (2005) argue that a board of predominantly independent directors is a signal that effective monitoring and control systems are in place. Board independence is measured by the percentage of independent directors on the board prior to the IPO.

I also control for founder CEO, CEO duality, and CEO age. Founder CEO is controlled for as the CEO founder status has an impact on IPO valuation (Certo et al., 2001b). Founder CEO is a dummy variable equal to one if the CEO is the founder, and zero otherwise. I also control for whether the CEO is the chair of the board. CEO age is

measured by the CEO's age prior to the IPO. Descriptive statistics and the correlations between all variables used in my regression models are reported in Tables 6.1 and 6.2.

Year effects and industry effects are included in all regressions. The year ranges from 2009 to 2012. Industry effect variables are constructed by the first two digits of the Global Industry Classification Standard (GICS). Some year and industry effect variables may be automatically omitted in different regressions.

[Insert Table 6.1]

6.5 Results

6.5.1 Market Selection

To test H1 regarding the impact of returnee CEOs on market selection, I regress *Returnee CEO* on *China vs US&HK*, *China vs US* using probit regression models. The results are shown in Table 6.2. All coefficients reported are the average marginal effects. In column 1, the coefficient of returnee CEO (0.0924, z=4.01) shows that entrepreneurial firms led by returnee CEOs are 9.24% more likely to choose to list on the US and HK markets over the mainland China market, at the 1% level, which implies that the results are not only statistically but also economically significant. To show that my results are not driven by any specific developed equity capital market, I partition the sample of firms listed in HK and US markets to conduct the test separately. In column 2, the coefficient of returnee CEOs (0.0517, z=3.48) indicates that entrepreneurial firms led by returnee CEOs are 5.17 % more likely to choose to list on the US market rather than the mainland China market, at the 1% level, which implies that the results are not only

statistically but also economically significant. In column 3, the coefficient of returnee CEOs (0.1030, z=2.6) indicates that entrepreneurial firms led by returnee CEOs are 10.30 % more likely to choose to list on the HK market rather than the mainland China market, at the 1% level, which implies that the results are not only statistically but also economically significant. The results support Hypothesis 1, that entrepreneurial firms led by returnee CEOs prefer listing on more developed overseas markets.

[Insert Table 6.2]

6.5.2 Moderating Effects for High-tech Industry and Muddy Water Research

To test Hypothesis 2, I further incorporate the interaction term between *Returnee CEO* and *high-tech* in column 1 of Table 6.2. All coefficients reported are the average marginal effects. I regress the interaction term of *Returnee CEO* and *high-tech* on *China vs US* by using probit regression analysis, and show the results in Panel A of Table 6.3. The coefficient (0.0870, z=1.70) of the interaction term indicates that entrepreneurial firms with returnee CEOs are more likely to undertake IPOs in the US and HK markets when they operate in high-tech industries. The results support my Hypothesis 2.

To test Hypothesis 3, I incorporate *Post2011* (dummy variable defined in Appendix) and the interaction term between *Returnee CEO* and *Post2011* in column 2 of Table 6.2. All coefficients reported are the average marginal effects. I regress the interaction term of *Returnee CEO* and *Post2011* on *China vs US* by using probit regression analysis, and present the results in Panel B of Table 6.3. The coefficient (-

0.0554, z=-2.13) of the interaction term (*Returnee CEO*Post2011*) indicates that entrepreneurial firms led by returnee CEOs are less likely to be listed in the US NASDAQ market than the ChiNext board market after 2011, which supports my prediction.

[Insert Table 6.3]

6.5.3 IPO Underpricing

According to signaling theory (Certo, 2003; Certo, Daily, & Dalton, 2001a) and the study of Blankespoor et al. (2016), if CEOs reduce information asymmetry, then firms could be able to get higher IPO pricing. To further explore complementary evidence to explain why returnee CEOs are associated with a higher likelihood of listing on US and HK markets, I test whether entrepreneurial firms with returnee CEOs are negatively related to IPO pricing in foreign IPOs. IPO underpricing, which is measured by the IPO first day return, is an indicator of information asymmetry. If returnee CEOs could facilitate foreign IPOs by reducing information asymmetry, firms with returnee CEOs should have higher IPO pricing, and then the first day return would be lower. Furthermore, the Muddy Water effect could also affect IPO pricing in the US market. Therefore, I predict that entrepreneurial firms with returnee CEOs are negatively associated with IPO underpricing in the US market before 2011, and the negative relation disappears after the credibility crisis. Entrepreneurial firms with returnee CEOs are negatively associated with IPO underpricing in the HK market after 2011, because the credibility crisis did not affect the HK market. To test my prediction, I regress

Returnee CEO, US Market, and the interaction term of *Returnee CEO* and *US Market* on *IPO first day return*. The results are shown in Panel A of Table 6.4. Firm characteristics, CEO characteristics, year effects, and industry effect are included in the regression. In column 1 of Table 6.4, Panel A, the coefficient (-0.3882 , t=-2.07) of *Returnee CEO*US Market* indicates that entrepreneurial firms with returnee CEOs are negatively related to IPO underpricing in US markets before 2011, at the 5% significance level. In column 2 of Table 6.4, Panel A, the coefficient (0.2199, t=1.39) of *Returnee CEO*US Market* indicates that entrepreneurial firms with returnee CEOs are not related to IPO underpricing in US markets after 2011, due to the credibility crisis in the market level. In addition, I also test whether the credibility crisis influences the valuation of returnee CEOs in the HK market. The results are shown in Panel B of Table 6.4. The coefficient (-0.1440, t=-1.34) of *Returnee CEO* HK Market* indicates that entrepreneurial firms with returnee CEOs are not significantly associated with lower IPO underpricing in the HK market after 2011. The results provide complementary evidence that returnee CEOs send a good signal and could reduce information asymmetry, which is in line with Blankespoor et al. (2016).

[Insert Table 6.4]

6.5.4 Endogeneity Issue: Reverse Causality

The major concern of endogeneity in this study is reverse causality. An alternative interpretation of my results could be that an entrepreneurial firm may appoint a returnee as the CEO before the IPO for window-dressing purposes. To address the

concern, I replicate my baseline test in the subsample, which is less likely to be subject to reverse causality.

I address the reverse causality by using three subsamples. First, I examine the subsample in which CEOs are also founders. Since founders are in charge of the firm daily operation from the establishment of the firm persistently, they less likely to be appointed as CEOs before IPOs for window dressing. I split my sample into two groups by founder CEOs, and examine whether entrepreneurial firms with returnee CEOs is positively related to foreign IPOs in the subgroup of founder CEOs. Second, I examine the subsample in which CEOs are also board chairs. In entrepreneurial firms, CEOs that serve as chairs are often ultimate controllers, and manage firms for a long time prior to IPO proposal. I split the sample by whether CEOs also serve as chair, and test the role of returnee CEOs in foreign IPOs in the subsample of chairman CEOs. Third, I examine the subsample in which CEOs are also both board chairs and founder. I show the replicate results of base line results among the founder CEO subsample, chairman CEO subsample, and both founder and chairman CEO subsample in Table 6.5. All columns replicate the regression analysis of column1 of Table 6.2, and all coefficients reported are the average marginal effects. In column 1, the coefficient of *Returnee CEO* (0.1040, z=2.86) indicates that the results hold for founder CEO subsample. In column 2, the coefficient of *Returnee CEO* (0.1017, z=3.48) indicates that the results hold for chairman CEO sample. In column 3, the coefficient of *Returnee* CEO (0.1612, z=3.49) indicates that the results hold for both founder and chairman CEO subsample. Thus, my results are less likely to be subject to reverse causality.

[Insert Table 6.5]

6.5.5 Other Top Management Team Members

Since the literature shows that the top management team has an impact on IPO decisions (Hursti and Mauls, 2007) and the performance of IPOs (Zimmeman, 2008), I also test the impact of other top management team members with international experience on IPO market selection. To conduct the test, I identify the returnee identity of board chairmen, CFOs, and other senior executives (e.g. vice-president, executive directors, vice-chairman, and board secretaries) by reading their short biographies. Then, I test whether other top management team members with international experience affect foreign IPOs, and report the probit regression results in Table 6.6. All coefficients reported are the average marginal effects. In column 1, the coefficient of *Returnee Chairman* (0.0605, z=2.69) shows that entrepreneurial firms led by returnee chairmen are 6.05% more likely to choose to listed on the UK and HK markets than the mainland China market at 1% level. In column 2, the coefficient of *returnee CFOs* (0.1811, z=5.75) shows that entrepreneurial firms led by returnee CFOs are 18.11% more likely to choose to list on the US and HK markets than the mainland China market, at the 1% level. In column 3, the coefficient of other returnee senior executives (0.1071, z=4.64) shows that entrepreneurial firms led by other returnee senior executives are 10.71% more likely to choose to list on the US and HK markets than the mainland China market, at the 1% level.

[Insert Table 6.6]

6.6 Discussion

The primary goal of this study is to explore the role of returnee CEOs in IPO market selection. My research finds that entrepreneurial firms with returnee CEOs prefer to list on US or Hong Kong capital markets rather than in mainland China, especially entrepreneurial firms operating in high-tech industries. However, they are less likely to choose the US market after the credibility crisis of 2011. I also find further evidence to support that returnee CEOs represent good signals that entrepreneurial firms with returnee CEOs are associated with lower IPO underpricing by listing on foreign markets.

6.6.1 Contribution to Chinese returnee studies

Returning overseas graduates have contributed greatly to the social and economic development of modern China, but the effect of returnees on the internationalization of entrepreneurial firms deserves more attention in entrepreneurship studies. Previous research has studied the role of returnee entrepreneurs in the growth and innovation of early-stage entrepreneurial firms (Wright et al., 2008; Filatotchev et al., 2009; Liu et al., 2010a; Liu et al., 2010b; Filatotchev et al., 2011; Lin et al., 2016). More specifically, Wright et al. (2008) analyze high-tech Small- and Medium-sized Enterprises (SMEs) and find that returnee entrepreneurs have a positive effect on employment growth in SMEs located in certain types of science parks. Returnee entrepreneurs are positively associated with entrepreneurial decision (Lin et al., 2016), firm innovation (Filatotchev et al., 2011), innovative performance, and multinational enterprises' employee mobility (Liu et al., 2010a, 2010b). In terms of internationalization, only the work of Filatotchev et al. (2009) focuses on exportation

and finds that returnee entrepreneurs have a positive impact on export orientation and performance because of their foreign social networks. Because I consider foreign social networks and foreign institutional experience to be advantages, I use IPOs of Chinese firms to study the relationship between entrepreneurial firms with returnee CEOs and foreign IPOs. To the best of my knowledge, this is the first study that identifies returnees as a determinant of foreign IPOs in the internationalization of entrepreneurial firms.

6.6.2 Contribution to TMT characteristics and IPOs

This study contributes to the literature on the impact of top management team member characteristics on IPO decisions (Hursti and Mauls, 2007) and IPO performance (Zimmerman, 2008). Hursti and Mauls (2007) argue that international experience of the top management team reduces the home bias of companies in choosing IPO markets, but they do not specifically focus on CEOs. Zimmerman (2008) finds that top management team heterogeneity, in terms of functional background or educational background, is associated with greater capital accumulation. However, the literature focuses on the impact of the TMT but does not look at each member of the TMT individually. I contribute to the literature by mainly looking at the impact of CEO international experience on IPO market selection, and the impact of CEO international experience on IPO underpricing. In addition, I also test the impact of other TMT members with international experience on IPO market selection separately to provide additional evidence to show the importance of international experience in IPOs.

6.6.3 Contribution to IPO Market Selection Studies

I contribute to empirical studies exploring the determinants of foreign IPOs of entrepreneurial firms (Hursti and Mauls, 2007), especially for emerging markets (Cheng and Schwienbacher, 2016; Zhang and Yu, 2016). Previous studies provide evidence that the likelihood of foreign IPOs is influenced by top management team international experience in European markets (Hursti and Mauls, 2007). I provide comparable robust evidence from emerging markets by studying Chinese returnee CEOs. The evidence also extends studies on the determinants of foreign IPOs of Chinese firms from a VC perspective (Cheng and Schwienbacher, 2016; Zhang and Yu, 2016) to a CEO perspective.

6.6.4 Policy and Practical Implications

My findings have implications for policymakers and practitioners. The Chinese government has made great efforts to attract overseas Chinese professionals to return and contribute to the development of the Chinese economy. In addition to previous studies which confirm the positive effect of returnees on early stage and listed firms (Wright et al., 2008; Filatotchev et al., 2009; Liu et al., 2010a; Liu et al., 2010b; Filatotchev et al., 2011; Lin et al., 2016), I add new evidence to support the positive role of returnee CEOs on the process of firm internationalization. This suggests that policymakers should continue to encourage firms listed on the ChiNext market to appoint returnees. The novel findings of my study suggest the important role of returnee CEOs in the internationalization of Chinese entrepreneurial firms. Thus, my research

suggests that practitioners should pay attention to international experience when appointing CEOs.

6.6.5 Limitations and Future Studies

Although this chapter provides a comprehensive analysis of the effect of returnee CEOs on entrepreneurial firms and finds robust and reliable results, the study has limitations that open avenues for future research. First, I do not have the data to identify what connections returnee CEOs do have, and what the quality of these connections is. Second, prospectuses do not disclose detailed information of any venture capital background, and I were unable to identify the nationality of venture capital investors. Future studies could, therefore, usefully explore the impact of returnees' connection types and quality on foreign IPOs and IPO performance, and investigate the impact of local versus foreign venture capital. In addition, generalized evidence from other emerging economies could be explored by future studies.

6.7 Conclusion

Many studies have investigated whether returnees are better than locals in contributing to the value of entrepreneurial firms (Wright et al., 2008; Filatotchev et al., 2009; Liu et al., 2010a; Liu et al., 2010b; Filatotchev et al., 2011; Lin et al., 2016). My study extends this analysis by examining whether returnee CEOs affect IPO market selection and IPO underpricing. I find that entrepreneurial firms led by returnee CEOs tend to choose to list on foreign capital markets, especially those operating in high-tech industries. However, Chinese entrepreneurial firms with returnee CEOs avoid listing on

the US NASDAQ market after 2011, due to the credibility crisis. The credibility crisis did not spread to the Hong Kong market, and entrepreneurial firms with returnee CEOs are negatively associated with IPO underpricing. To sum up, this chapter extends the current research into the effect of returnees on IPO market selection and contributes to the literature on foreign IPOs. My insights benefit from the foreign network resources and the institutional expertise perspectives for analyzing the role of returnees. Although my study has limitations, the findings have significant implications for policymakers and practitioners.

References

Allen, F., Qian, J., & Qian, M. (2005). Law, finance, and economic growth in China. *Journal of Financial Economics*, 77(1), 57-116.

Baker, H. K., Nofsinger, J. R., & Weaver, D. G. (2002). International cross-listing and visibility. *Journal of Financial and Quantitative Analysis*, 37(3), 495-521.

Bell, R. G., Filatotchev, I., & Aguilera, R. V. (2014). Corporate governance and investors' perceptions of foreign IPO value: An institutional perspective. *Academy of Management Journal*, 57(1), 301-320.

Bell, R. G., Moore, C. B., & Al-Shammari, H. A. (2008). Country of origin and foreign IPO legitimacy: Understanding the role of geographic scope and insider ownership. *Entrepreneurship Theory and Practice*, 32(1), 185-202.

Bell, R.G., Moore, C.B. & Filatochev, I. (2012). Strategic and institutional effects on foreign IPO performance: Examining the impact of country of origin, corporate governance, and host country effects. *Journal of Business Venturing*, 27, 197-216.

Blankespoor, E., Hendricks, B.E., & Miller, G.S. (2016). Perceptions and price: Evidence from CEO presentations at IPO roadshows. *Working Paper*. Stanford University.

Bruton, G. D., Chahine, S., & Filatotchev, I. (2009). Founders, private equity investors, and underpricing in entrepreneurial IPOs. *Entrepreneurship Theory and Practice*, 33(4), 909-928.

Carter, S., Shaw, E., Lam, W., & Wilson, F. (2007). Gender, entrepreneurship, and bank lending: the criteria and processes used by bank loan officers in assessing applications. *Entrepreneurship Theory and Practice*, 31(3), 427-444.

Certo, S. T. (2003). Influencing initial public offering investors with prestige: Signaling with board structures. *Academy of Management Review*, 28(3), 432-446.

Certo, S. T., Daily, C. M., & Dalton, D. R. (2001a). Signaling firm value through board structure: An investigation of initial public offerings. *Entrepreneurship Theory and Practice*, 26(2), 33-50.

Certo, S.T., Covin, J.G., Daily, C.M., & Dalton, D.R. (2001b). Wealth and effects of founder management among IPO stage new ventures. *Strategic Management Journal*, 22, 641-658.

Cheng, C., & Schwienbacher, A. (2016). Venture capital investors and foreign listing choices of Chinese companies. *Emerging Markets Review*, forthcoming.

Daily, C. M., Certo, S. T., & Dalton, D. R. (2005). Investment bankers and IPO pricing: does prospectus information matter? *Journal of Business Venturing*, 20(1), 93-111.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42(6), 674-686.

Darrough, M. N., Huang, R., & Zhao, S. (2012). The Spillover Effect of Chinese Reverse Merger Frauds: Chinese or Reverse Merger? *Working Paper*, Available at SSRN 2144483.

Ding, S., Guariglia, A., & Knight, J. (2013). Investment and financing constraints in China: does working capital management make a difference? *Journal of Banking & Finance*, 37(5), 1490-1507.

Ding, Y., Nowak, E., & Zhang, H. (2010). Foreign vs. domestic listing: An entrepreneurial decision. *Journal of Business Venturing*, 25, 175-191.

Doidge, C., Karolyi, G. A., & Stulz, R. M. (2004). Why are foreign firms listed in the US worth more?. *Journal of Financial Economics*, 71(2), 205-238.

Duan, T., Hou, W., & Wang, H. (2014). Returnees' Influences on China: A Business Perspective (1840s to 1940s). *Unpublished working paper*, University of Edinburgh.

Engelen, A., Neumann, C., & Schwens, C. (2014). "Of Course I Can": The Effect of CEO Overconfidence on Entrepreneurially Oriented Firms. *Entrepreneurship Theory and Practice*, forthcoming.

Filatotchev, I., Liu, X., Buck, T., & Wright, M. (2009). The export orientation and export performance of high-technology SMEs in emerging markets: The effects of

knowledge transfer by returnee entrepreneurs. *Journal of International Business Studies*, 40(6), 1005-1021.

Filatotchev, I., Liu, X., Lu, J., & Wright, M. (2011). Knowledge spillovers through human mobility across national borders: Evidence from Zhongguancun Science Park in China. *Research Policy*, 40(3), 453-462.

Haber, S., & Reichel, A. (2007). The cumulative nature of the entrepreneurial process: The contribution of human capital, planning and environment resources to small venture performance. *Journal of Business Venturing*, 22(1), 119-145.

Hursti, J., & Maula, M. V. (2007). Acquiring financial resources from foreign equity capital markets: An examination of factors influencing foreign initial public offerings. *Journal of Business Venturing*, 22(6), 833-851.

Jindra, J., Voetmann, T., & Walkling, R. A. (2012). Reverse Mergers: The Chinese Experience. *Fisher College of Business Working Paper* No. 2012-03-018.

Lin, D., Lu, J., Liu, X., & Zhang, X. (2016). International knowledge brokerage and returnees' entrepreneurial decisions. *Journal of International Business Studies*, 47(3), 295-318.

Liu, X., Lu, J., Filatotchev, I., Buck, T., & Wright, M. (2010a). Returnee entrepreneurs, knowledge spillovers and innovation in high-tech firms in emerging economies. *Journal of International Business Studies*, 41(7), 1183-1197.

Liu, X., Wright, M., Filatotchev, I., Dai, O., & Lu, J. (2010b). Human mobility and international knowledge spillovers: evidence from high-tech small and medium enterprises in an emerging market. *Strategic Entrepreneurship Journal*, 4(4), 340-355.

Moore, C. B., Bell, R. G., & Filatotchev, I. (2010). Institutions and foreign IPO firms: The effects of "home" and "host" country institutions on performance. *Entrepreneurship Theory and Practice*, 34(3), 469-490.

Moore, C. B., Bell, R. G., Filatotchev, I., & Rasheed, A. A. (2012). Foreign IPO capital market choice: Understanding the institutional fit of corporate governance. *Strategic Management Journal*, 33(8), 914-937.

Pagano, M., Ailsa A.R., and Josef Z. (2002). The geography of equity listing: why do companies list abroad?. *Journal of Finance*, 57(6), 2651-2694.

Peng, M. W., Wang, D. Y., & Jiang, Y. (2008). An institution-based view of international business strategy: A focus on emerging economies. *Journal of international business studies*, 39(5), 920-936.

Pollock, T. G., Porac, J. F., & Wade, J. B. (2004). Constructing deal networks: Brokers as network "architects" in the US IPO market and other examples. *Academy of Management Review*, 29(1), 50-72.

Poncet, S., Steingress, W., & Vandenbussche, H. (2010). Financial constraints in China: firm-level evidence. *China Economic Review*, 21(3), 411-422.

Shrader, R., & Siegel, D. S. (2007). Assessing the Relationship between Human Capital and Firm Performance: Evidence from Technology-Based New Ventures. *Entrepreneurship Theory and Practice*, 31(6), 893-908.

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education. *Entrepreneurship Theory and Practice*, 31(3), 387-406.

Wright, M., Liu, X., Buck, T., & Filatotchev, I. (2008). Returnee entrepreneurs, science park location choice and performance: An analysis of high-technology SMEs in China. *Entrepreneurship Theory and Practice*, 32(1), 131-155.

Zaheer, S., & Mosakowski, E. (1997). The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic Management Journal*, 18(6), 439-463.

Zhang, J., & Yu, H. (2016). Venture capitalists' experience and foreign IPOs: Evidence from China. *Entrepreneurship Theory and Practice*, forthcoming.

Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381-404.

Zimmerman, M. A. (2008). The influence of top management team heterogeneity on the capital raised through an initial public offering. *Entrepreneurship Theory and Practice*, 32(3), 391-414.

Zona, F. (2016). CEO leadership and board decision processes in family-controlled firms: comparing family and non-family CEOs. *Small Business Economics*, 47(3), 735-753.

Figure 6.1 Distribution of Foreign IPOs over Time

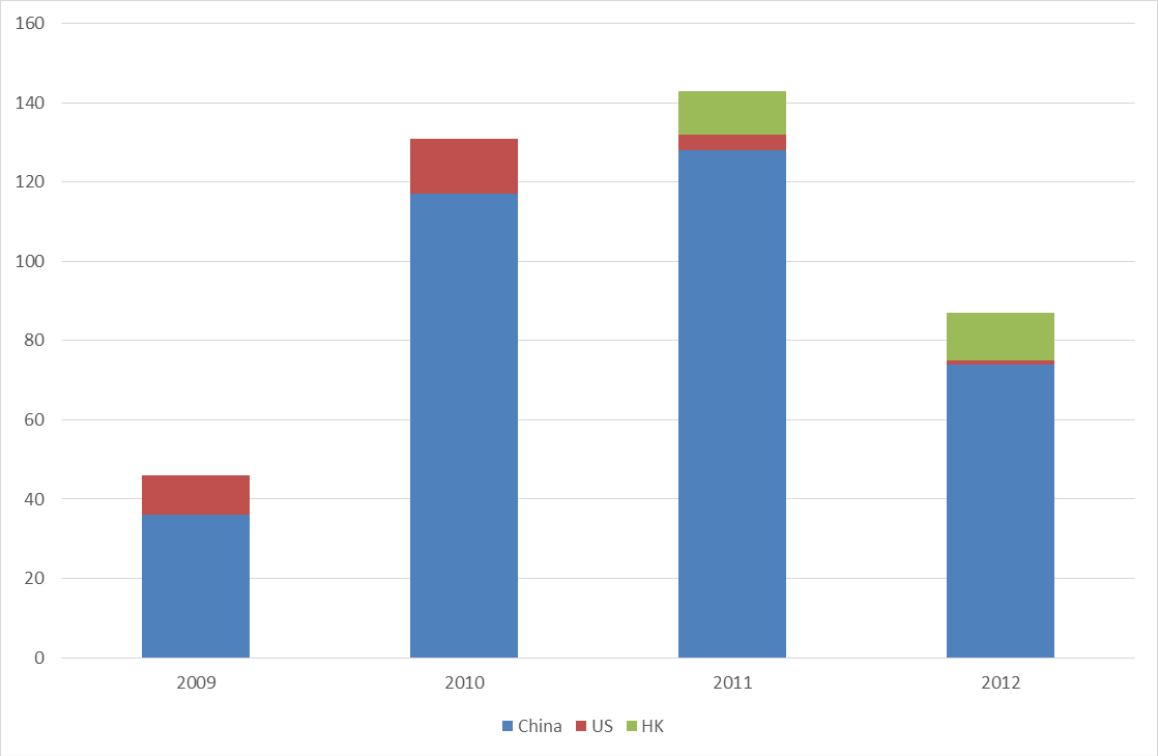

Table 6.1 Summary Statistics

This table reports the summary statistics of variables in this chapter. All variables are defined in Appendix. The sample includes IPOs of Chinese firms listed in the ChiNext market, NASDAQ market, and HKEX market from 2009 to 2012.

Variables	China Mainland				US				HK				China — US	China — HK	US — HK
	Obs	Mean	SD	Median	Obs	Mean	SD	Median	Obs	Mean	SD	Median	Mean in Diff	Mean in Diff	Mean in Diff
Returnee CEO	355	0.13	0.34	0	33	0.30	0.47	0	23	0.43	0.51	0	-0.17**	-0.3024***	-0.1317
CEO Age	355	45.16	5.62	45	33	44.39	6.66	43	23	47.91	9.98	43	0.77	-2.7525	-3.5191
Founder CEO	355	0.54	0.50	1	33	0.76	0.44	1	23	0.52	0.51	1	-0.22***	0.0191	0.2358*
CEO Duality	355	0.53	0.50	1	33	0.61	0.50	1	23	0.39	0.50	1	-0.08	0.1383	0.2148
Firm Size	355	19.31	0.63	19.25	33	19.61	1.07	19.66	23	18.32	0.87	18.28	-0.30**	0.9929***	1.2935***
Board Size	355	8.38	1.40	9	33	6.21	1.69	6	23	6.57	1.47	6	2.17***	1.8151***	-0.3531
Board Independence	355	0.37	0.05	0.33	33	0.48	0.15	0.5	23	0.50	0.13	0.5	-0.11***	-0.1307***	-0.0168
VC Back	355	0.09	0.10	0.06	33	0.68	0.47	1	23	0.26	0.45	0	-0.08	0. 4180***	0.1343***
High-Tech	355	0.36	0.48	0	33	0.64	0.49	1	23	0.13	0.34	1	-0.27***	0.2329***	0.5059***
Firm Age	355	8.31	4.61	8.46	33	8.61	2.860	9	23	11.96	6.55	9	-0.30	-3.6462**	-3.3505**
IPO Underpricing	355	0.34	0.36	0.25	33	0.10	0.36	-0.01	23	0.18	0.28	0.08	0.24***	0.1562**	-0.0853

Table 6.2 Returnee CEOs and Foreign IPOs (China Mainland, US or HK)

This table reports the probit regression analyses between Returnee CEO and listed market selection. All the variables are defined in Appendix. The coefficients reported are average marginal effects. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Variables	China vs US&HK	China vs US	China vs HK
Returnee CEO	0.0924***	0.0517***	0.1030***
	(4.01)	(3.48)	(2.60)
Firm Size	0.0178	0.0298***	-0.0553***
	(1.19)	(3.19)	(-4.23)
Board Size	-0.0406***	-0. 0240***	0.0141**
	(-4.71)	(-4.29)	(2.03)
Board Independence	0.6533***	0.3262***	1.0499***
	(4.75)	(3.53)	(4.02)
VC Back	0.0245	0.0411***	-0.04122*
	(1.13)	(2.90)	(-1.79)
High Tech	0.08974***	0.0643***	-0.0028
	(3.14)	(3.33)	(-0.10)
Frim Age	0.0076***	0.0051**	0.0023*
	(3.28)	(2.23)	(1.80)
Founder CEO	0.0314	0.0427***	-0.0116
	(1.33)	(2.75)	(-0.45)
CEO Duality	-0.0690**	-0.0461**	-0.1371***
	(-2.42)	(-2.53)	(-3.41)
CEO Age	-0.0027*	-0.0016	0.0002
	(-1.66)	(-1.32)	(0.09)
CEO Ownership	0.1449**	0.1017**	0.2395**
	(2.00)	(2.14)	(2.26)
MBA	0.0189	0.0052	0.0755***
	(0.69)	(0.24)	(2.65)
Year effects	YES	YES	YES
Industry effects	YES	YES	YES
Pseudo R^2	0.5984	0.7112	0.7538
N	411	388	378

Table 6.3 Returnee CEOs and Foreign IPOs: Moderating Effects by High-tech Industry and Muddy Water Research

This table reports the probit regression analyses between Returnee CEO and listed market selection, by moderating effects of high-tech industries and Muddy Water research. All the variables are defined in Appendix. The coefficients reported are average marginal effects. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Variables	Panel A	Panel B
	China vs US&HK	China vs US&HK [52]
Returnee CEO	0.0454	0.0733***
	(1.33)	(4.04)
High-tech	0.0633**	0.0600***
	(2.03)	(3.12)
Returnee CEO*High-tech	0.0870*	
	(1.70)	
Post2011		-0.0623**
		(-2.10)
Returnee CEO*Post 2011		-0.0554**
		(-2.13)
Firm Size	0.0151	0.0285**
	(1.01)	(3.11)
Board Size	-0.0417***	-0.0229***
	(-4.91)	(-4.13)
Board Independence	0.6138***	0.3453 ***
	(4.76)	(3.70)
Firm Age	0.0076***	0.0053**
	(3.36)	(2.38)
VC Back	0.0293	0.0501***
	(1.41)	(3.33)
Founder CEO	0.0394*	0.0420***
	(1.72)	(2.77)
CEO Duality	-0.0674**	-0.0473**
	(-2.45)	(-2.71)
CEO Ownership	0.1347*	0.1003**
	(1.87)	(2.14)
CEO Age	-0.0030*	-0.0018
	(-1.85)	(-1.55)
MBA	0.0185	0.0058

[52] I exclude observations that list on Hong Kong second board market because there is no IPOs of Chinese firm in 2009 and 2010 naturally. Including IPOs of Chinese firms in Hong Kong may induce the selection bias.

	(0.70)	(0.28)
R^2	0.6071	0.7185
N	411	388

Table 6.4 Returnee CEOs and Foreign IPO Underpricing

This table reports the OLS regression analyses between Foreign IPOs with returnee CEOs and IPO underpricing, by split sample. All the variables are defined in Appendix. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Variables	Panel A		Panel B
	IPO Underpricing	IPO Underpricing	IPO Underpricing
	Before 2011	After 2011	After 2011[53]
Returnee CEO	0.1529*	0.0363	0.0317
	(1.70)	(0.58)	(0.50)
US Market	-0.3924***	-0.1200	
	(-2.73)	(-1.35)	
Returnee CEO*US Market	-0.3882**	0.2199	
	(-2.07)	(1.39)	
HK Market			-0.1529
			(-1.48)
Returnee CEO*HK Market			-0.1440
			(-1.34)
Firm Size	-0.0370	-0.1027***	-0.1065***
	(-0.91)	(-3.10)	(-3.43)
High-tech	-0.0834	-0.0343	-0.0435
	(-1.12)	(-0.60)	(-0.78)
Board Size	-0.0305*	-0.0371*	-0.0322
	(-1.73)	(-1.88)	(-1.59)
Board Independence	0.0921	-0.8539**	-0.6079
	(0.26)	(-2.01)	(-1.50)
Firm Age	0.0059	0.0079*	0.0060
	(1.04)	(1.78)	(1.43)
VC Back	0.1121**	-0.0475	-0.0534
	(2.07)	(-1.12)	(-1.35)
Founder CEO	0.0090	-0.0095	-0.0197
	(0.16)	(-0.20)	(-0.42)
CEO Duality	-0.0279	-0.0349	-0.0365
	(-0.45)	(-0.53)	(-0.59)
CEO Ownership	-0.2992*	0.1644	0.1655
	(-1.68)	(0.90)	(0.97)
CEO Age	0.0008	0.0026	0.0018
	(0.18)	(0.72)	(0.53)
MBA	0.0309	0.0711	0.0503
	(0.37)	(1.09)	(0.78)
Constant	1.3197	2.5387***	2.8393***
	(1.45)	(3.59)	(4.24)
Year effects	YES	YES	YES
Industry effects	YES	YES	YES
R2	0.455	0.158	0.164
N	181	207	225

[53] I do not test the IPO underpricing in Hong Kong second board market before 2011 because there is no IPOs of Chinese firm in 2009 and 2010 naturally.

Table 6.5 Returnee CEOs and Foreign IPOs: Subsample tests by Founder CEOs, Chairman CEOs, and both Founder and Chairman CEOs.

This table reports the probit regression analyses between Returnee CEO and listed market selection by subsamples. All the variables are defined in Appendix. The coefficients reported are average marginal effects. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Variables	Panel A	Panel B	Panel C
	China vs US&HK	China vs US&HK	China vs US&HK
Returnee CEO	0.1040***	0.1017***	0.1612***
	(2.86)	(3.48)	(3.49)
Firm Size	0.0272	0.0156	0.0194
	(1.16)	(0.80)	(0.83)
High-tech	0.1161***	0.0674*	0.0653
	(2.87)	(1.71)	(1.20)
Board size	-0.0502***	-0.0616***	-0.0871***
	(-4.51)	(-4.77)	(-4.59)
Board Independence	0.6917***	0.2927	0.4345*
	(3.43)	(1.53)	(1.84)
Firm Age	0.0136***	0.116***	0.0174***
	(3.18)	(3.17)	(2.90)
VC Back	0.0712**	0.0265	0.0408
	(1.96)	(0.88)	(1.13)
CEO Ownership	0.1903*	0.0741	-0.0008
	(1.85)	(1.11)	(-0.01)
CEO Age	-0.0046	-0.0014	-0.0068
	(-1.11)	(-0.46)	(-1.49)
MBA	0.0057	0.1987	0.0318
	(0.13)	(0.37)	(0.79)
CEO Duality	-0.6099		
	(-1.18)		
Founder CEO		0.0883**	
		(2.17)	
Year effects	YES	TES	YES
Industry effects	YES	YES	YES
Pseudo R^2	0.6048	0.7138	0.7087
N	229	217	171

Table 6.6 Chairman, CFO, Other Senior Executives and Foreign IPOs

This table reports the probit regression analyses between Returnee Chairman, Returnee CFO, and Other Returnee Senior Executives and listed market selection. All the variables are defined in Appendix 6.1. The coefficients reported are average marginal effects. T-values are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Variables	China vs US&HK	China vs US&HK	China vs US&HK
Returnee Chairman	0.0605***		
	(2.69)		
Returnee CFO		0.1811***	
		(5.75)	
Other Returnee Senior Executives			0.1071***
			(4.64)
Firm Size	0.0223	0.0139	0.0188
	(1.31)	(1.26)	(1.17)
Board Size	-0.0381***	-0.0233***	-0.0385***
	(-3.82)	(-3.06)	(-4.59)
Board Independence	0.6823***	0.7786***	0.7459***
	(4.24)	(5.72)	(5.41)
VC Back	0.0350**	0.0217	0.0218
	(2.52)	(1.04)	(1.00)
High-Tech	0.0912***	0.0768***	0.0949***
	(3.46)	(3.15)	(3.30)
Firm Age	0.0085***	0.0054***	0.0077***
	(3.83)	(2.76)	(3.98)
Founder CEO	0.0451*	0.0268	0.0345
	(1.75)	(1.36)	(1.53)
CEO Duality	-0.0552**	-0.0323	-0.0505**
	(-2.13)	(-1.64)	(-2.17)
Year effects	YES	YES	YES
Industry effects	YES	YES	YES
Pseudo R^2	0.5648	0.7174	0.6127
N	411	411	411

Appendix

Table A6.1

Variables	Definition
Returnee CEO	Dummy variable equal to one if the CEO has overseas work experience, overseas study experience, overseas permanent residence, or holds a foreign nationality, and zero otherwise.
CEO Age	The age of the CEO at the time of the IPO.
Firm Size	The natural logarithm of total sales in the latest fiscal year before the time of the IPO.
Board Size	The number of directors on the board at the time of the IPO.
Board Independence	The percentage of independent directors on the board at the time of the IPO.
VC Back	Dummy variable equal to one if the firm is backed by VC at the time of the IPO, and zero otherwise.
High-Tech	Dummy variable equal to one if the firm is classified as a high-tech firm, and zero otherwise.
Firm Age	The age of the firm at the time of the IPO.
Founder CEO	Dummy variable equal to one if the CEO is the founder at the time of the IPO, and zero otherwise.
CEO Duality	Dummy variable equal to one if the CEO is the chairman at the time of the IPO, and zero otherwise.
IPO Underpricing	The percentage difference between the offer price and the closing price on the first trading day.
China vs US&HK	Dummy variable equal to one if the firm is listed on the NASDAQ or HKEX markets, and zero otherwise.
China vs US	Dummy variable equal to one if the firm is listed on the NASDAQ market, and zero if the firm is listed on the ChiNext market.
Post2011	Dummy variable equal to one if the IPO year is 2011 or 2012, and zero otherwise.
US Market	Dummy variable equal to one if the firm is listed on the NASDAQ market, and zero if the firm is listed on the ChiNext market.
HK Market	Dummy variable equal to one if the firm is listed on the HKEX market, and zero if the firm is listed on the ChiNext market.
Year effects	The year ranges from 2009 to 2012. Some year effect variables may be automatically omitted in different regressions.
Industry effects	Constructed by the first two digits of the Global Industry Classification Standard (GICS). Some industry effect variables may be automatically omitted in different regressions.
Returnee Chairman	Dummy variable equal to one if the board chairman has overseas work experience, overseas study experience, overseas permanent residence, or foreign nationality, and zero otherwise.
Returnee CFO	Dummy variable equal to one if the CFO has overseas work experience, overseas study experience, overseas permanent residence, or foreign nationality, and zero otherwise.
Other Returnee Senior Executives	Dummy variable equal to one if the other senior executives have overseas work experience, overseas study experience, overseas permanent residence, or hold foreign nationality, and zero otherwise.

Chapter 7 Conclusion

This thesis examines the role of Chinese returnee CEOs in Chinese capital markets. First, by exploiting 2847 returnee CEO hire event in A-share main board markets, I find that Chinese returnee CEOs are associated with inferior performance, lower market reactions to appointment announcements and an adverse regulatory environment. The negative effect disappears when social capital is acquired, regional legal institutions are strong or returnees' international expertise is in demand. The evidence supports the argument that the CEOs' international expertise is acquired at the opportunity cost of local social capital, which is more important than expertise in countries with weak legal institutions. The results hold after controlling the endogeneity issue.

Second, I study the impact of returnee CEOs on the newly public entrepreneurial firms that are in transition period. With the help of the tacit knowledge of foreign advanced legal institutions, returnee CEOs could overcome the formalization challenge in newly public entrepreneurial firms. I find that returnee CEOs are positively associated with post-IPO performance that is proxied by ROA, ROS and Tobin's Q, especially those returned from host countries with stronger legal institutions. In addition, the positive impact is more pronounced when foreign VCs back firms, especially when both VCs and CEOs are from countries with advanced institutions.

Finally, I study the impact of returnee CEOs on the listing decision of GEMs. By using the IPOs on ChiNext Board, NASDAQ, and HK GEM, I find that entrepreneurial firms with returnee CEOs are more likely to get listed on NASDAQ

and HK GEM rather than ChiNext Board, especially for firms in high-tech industry. However, the credibility crisis of US-listed Chinese firms that was triggered by Muddy Water Research in 2011 impedes the firms with returnee CEOs to list in NASDAQ and HK GEM.

The findings of this thesis have implications for policymakers and practitioners. First, the evidence shows that mature firms need take external resources into consideration in the appointment of CEOs, besides their expertise, and firms listed on the ChiNext market need to appoint returnees. Second, policy makers need create a more suitable environment in which returnee CEOs can exercise their expertise. Third, the evidence suggests that policy makers should continue to encourage attracting overseas Chinese talents and support them to run business and implement their tacit knowledge. My findings also suggest policy makers should pay attention when matching CEOs and VCs and, in particular, encourage foreign venture capital investment in entrepreneurial firms led by returnees, because they enchance corporate value.

This thesis remains a fruitful area for the future research since the data on CEOs with international experience is only focus on Chinese market, and the data cannot reflect the length of the international experience. Future research could rely on detailed data to examine the quality of returnee CEOs on firm policies, capital structure or even international mergers and acquisitions. In addition, future research can also study the effect of CEOs with international experience through cross-country evidence. My thesis studies the role of CEOs with international evidence in the country with weak legal institutions. It would be interest to look at the role of CEOs with international experience across countries with different legal origins.