THE UNIVERSITY OF HULL

Three Essays on Determinants of FDI, MNCs' Innovation, and Ownership Performance: Evidence from a Panel Study of EU Firms' Investment in China

Being a thesis submitted in fulfilment of the requirements
for the degree of Doctor of Philosophy
in the University of Hull, UK

By

Huifen Cai

BA in Financial Accounting (Hons/1st, China)
BA in International Business & Economics (Hons/1st, China)
Postgraduate Diploma in Economics (Distinction, China)
MBA in Financial Management, Hull University, UK

2012

ABSTACT

This thesis consists of three empirical studies. The aim of the thesis is to examine the determinants of European Union (EU) foreign direct investment (FDI), EU subsidiaries' innovation performance and EU subsidiaries' ownership performance in China. As two of the largest, mutually complementary markets in the world, EU and the People's Republic of China (China or PRC), which represents the largest FDI recipient and a region with a substantial share of foreign ownership, have been largely overlooked in terms of a comprehensive economic analysis on determinants and performance of FDI inflows into China at firm level. This gap in extant literature drives this research. The research contains a number of important and original aspects that potentially contribute to the literature on several grounds.

The first study investigates the determinants of EU FDI in the Chinese market using a unique dataset comprising 680 EU firms for the period of 1998-2007 from the State Statistical Bureau of China. The theoretical framework of the study builds on Dunning's ownership–location–internalization (OLI) paradigm, incorporating host country institutional factors to test international production by EU firms in an emerging market. It finds that FDI is positively related to policy liberalisation. However, some other factors such as firm technology, personal share, profitability, wages and rule of law reveal unexpected results. In addition, the results imply that the association of FDI with firm size and research and development intensity is non-linear. The findings have important implications for practitioners and policymaking.

The second study explores the spatial determinants of 680 EU MNC subsidiaries' innovation in China, over the period of 1998-2007, using unbalanced panel data

analysis. It bridges three theoretical approaches and streams of research: the Resource Based View (RBV), the Transaction Cost Theory (TCT) and Institutional Based Theory and applies econometric analysis techniques to investigate innovation performance and to test the presence of agglomeration effect of past innovation activities. The results show MNC subsidiaries' innovation is positively related to firm size and export intensity. However, some other factors such as labour training and collective share reveal unexpected results. This study contributes to the literature on the evolution of multinational enterprises by exploring determinants of developed foreign subsidiaries' innovation activities in emerging markets.

The third study adopts a multi-theoretic approach to investigate a phenomenon previously unexplored in extant literature, namely, the differential impact of foreign resource, ownership type and institutions on EU subsidiary performance in China, using newly available official data on 329 wholly owned subsidiary (WOS) and 351 joint venture (JV) EU manufacturing subsidiaries drawn from the State Statistical Bureau of China over a 10-year period (1998-2007). The study seeks to increase knowledge of foreign ownership performance by focusing on the relationship between subsidiary specific resources, equity share, and host institutional environment. The conceptual framework integrates the tenets of the Resource Based View, Agency theory (AT), and Institutional Based View, reflecting EU firm FDI strategic ownership choices between JV and WOS) and host country institutional environment. This study offers an analysis of the relationship between ownership structure and FDI performance of market - seeking FDI EU firms in Chinese transitional economies. The results show significant differences in performance and ownership structure among China's state-owned enterprises (SOEs), collectives, corporate, private enterprises, Hong Kong, Macau and Taiwan-funded (HKMT) firms, and wholly EU invested firms. Additionally,

asset turnover, asset tangibility, and Chinese economic and social institutions factors have significant negative relationships with subsidiary performance. These result point to important complementarities, but also potential conflicts between policy reforms and the interest/ benefit of multinational subsidiaries.

Key Words: FDI determinants, MNCs' innovation, Ownership performance, Institutions OLI, Resource based theory, Transaction cost theory, Institutional theory, Agency theory, EU Firms, China , wholly owned subsidiary (WOS); Joint Venture (JV)

ACKNOWLEDGEMENTS

This thesis has involved more than my desire to learn and to earn a valued degree; it involved many people who have helped me to travel down this road. Here, I would like to take the opportunity to express my gratitude to the following people who made the completion of this thesis possible.

My deep and sincere gratitude has to go to my supervisors, Dr. Yilmaz Guney and Prof. Aydin Ozkan for their support, guidance and advice throughout my PhD journey. Without their steady encouragement this thesis could not have seen the light. I thank them for devoting their time, for their valuable suggestions and inspiring comments, and for their patience and kindness during the difficulties I faced.

Especially, great thanks to Professor Jean Chen for her thoughtful, sharp ideas and helpful feedback that greatly improved this work.

I gratefully acknowledge two anonymous organisations for generously offering me two Datasets for this research and the financial support. I am also sincerely grateful to Professor Alan M Rugman, Peter Buckley, Roger Strange and Associate Professor Jean Ruey-Jer for their early insightful comments on my chapter 2 received at the 2010 AIB-UKI Conference and the 2011 3rd John H. Dunning IB Conference , which helped me to progress in my work. I would like to extend my deepest gratitude to Professor Roger Strange, Ammon Salter, and Dr. Elif Bascavusoglu-Moreau for valuable comments and suggestions on my chapter 3 at the 2012 UK—Innovation Research Centre Early Career Research Workshop and the 2012 AIB-UKI Conference . Genuine appreciation and deep gratitude are extended to Professor Wei Bu and Associate

Professor Xiaoyun Tang for their unwavering support, assistance and encouragement, and for enjoyable and intellectually fruitful discussion on my research.

This endeavour would not have been possible without the unfaltering support of my family for their encouragement and challenges to be where I am now, their love and unwavering support through easy times and hard, and my daughter, Sihan Chen, who was patient, understanding, and whose love is constant. Both my family and my daughter have let me write when they thought I should be spending some time with them, either on holiday or in their good company throughout my study.

I would like to extend very special thanks to all my friends who supported me through all these years of study, particularly all people at the Graduate School, the Research Office of Business School, and Brynmawr Jones Library of Hull University for providing me with genuine love, care and faith in my ability to reach my destination.

Finally, I owe more than I can express to my mother, who for the last four years has taken care of my daughter to enable me to study in the UK. Without her sacrifices and devotion, I could never have reached this point.

Many thanks to everybody who ever gave me help and support.

Once again, thank you all!

Huifen Cai

Hull, 2012

DEDICATION

To my dear Mother, for her immense inner strength and endless unconditional love, sacrifices and support... I cannot thank you enough.

To my beloved and brilliant daughter, Sihan Chen, I am truly blessed with my great kid. I hope she achieves her life goals.

In memory of my beloved father, who departed peacefully during my study in UK, and who will never be forgotten.

DECLARATION

PUBLICATIONS (Since 2008)

1. **Refereed Full Papers**

- Cai, Huifen. 2012. Empirical Analysis on China's Use of FDI and the Relationship between FDI and the Foreign Trade (with W. Bu and Y.Xiong). *Journal of Central University of Finance & Economics*, forthcoming.
- Cai, Huifen. 2011. Empirical Research on the Effect of Value-added Tax Transition on China's Equipment Manufacturing R&D Investment (with W. Bu and W.J. Qiao). *Journal of Beijing Jiaotong University* (Social Sciences Edition). 2011（4）：17-20.ISSN1672-8106 CN11-5224/C
- Cai, Huifen 2011. Analysis on China's Equipment Manufacturing Security Issues Based on Industrial Control (with W. Bu and H. Xie). *Journal of Central University of Finance & Economics*, No.3, pp62-66, 91.ISSN1000-1549 CN11-3846/F.

2. Refereed Conference Proceedings

- Cai, Huifen. 2012. Innovation Capability in MNC Subsidiaries: Evidence from a Panel Study in Transition Economies. Academy of International Business Annual Meetings, UK & Ireland Chapter. 29-31 March 2012, Liverpool.
- Cai, Huifen. 2011. Foreign Advantage, Ownership Structure and Host Country Institutional Environment: Evidence from EU MNCs' Innovation in China. 6th European Conference on Innovation and

Entreneurship. 15-16 September 2011, Robert Gordon University, Aberdeen, Scotland, UK

- Cai, Huifen. 2011. Foreign Ownership Structure and Firm Performance: Evidence from a Large Emerging Market. Academy of International Business Annual Meetings, UK & Ireland Chapter 38th Conference on International Business: New challenge, new forms, and new practice, 14-16 April 2011, University of Edinburgh Business School.
- Cai, Huifen and Guney, Yilmaz. 2010**.** European Union Foreign Direct Investment in China: Evidence from a Panel Study of EU Manufacturing Firm. 15th Cambridge International Manufacturing Symposium, Innovation in Global manufacturing –New models for sustainable value capture, 23-24 September 2010, Cambridge University
- Cai, Huifen. 2010. Determinants of EU Foreign Direct Investment in China: A Firm-level Panel Study, 1998-2007. Academy of International Business Annual Meetings, UK & Ireland Chapter. 8-10 April 2010, Dublin.

3. Conference Abstract

- Cai, Huifen. Determinants of European Union Firms' Foreign Direct Investment in China: Static and Dynamic Approaches to Complement the Eclectic Paradigm. 3rd John H. Dunning International Business Conference. 11-12 April 2011, Henley Business School, University of Reading.

4. Conference Presentations

- Cai, Huifen. 2012. Ownership Structure and Firm Performance: Evidence from EU subsidiary Panel Study in China. Strategic

Management Society –SMS Special Conference, China, Competing and Cooperating In and For China. Dec 12-14, 2012 in GuangZhou , China.

- Cai, Huifen. 2012. Firm capabilities, Joint Ventures and Host Institutions: Evidence of MNCs' Innovation in China. Second-IRC Career Researcher Workshop: New Frontiers in Innovation. 24-25 September 2012, UK - Innovation Research Centre (IRC), University of Cambridge
- Cai, Huifen and Tang, XiaoYun. 2012. Innovation in Small Middle Enterprises, Beyond the National Innovation System in China: Evidence on the Policies of SMEs during 1997-2008. BAM 2012, 11-13 Sept. 2012, Cardiff University
- Cai, Huifen, 2010. Foreign Ownership and Firm Performance: Evidence from a Panel Study of EU Firms in China. BAM 2010, 14-16 Sept. 2010, the University of Sheffield.
- Cai, Huifen. 2008. EU- China Investment Relations: Case Study of the Information and Communication Technologies Sector. NARTI 4th Annual Doctoral Colloquium on 16-17 July, Durham Business School, UK

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AT	Agency Theory
CJV	Contractual Joint Venture
COE	Collective Owned Enterprises
EJV	Equity Joint Venture
EU	European Union
FDI	Foreign Direct Investment
FE	Fixed Effects
FIE	Foreign Invested Enterprises
FOE	Foreign Owned Enterprises
GDP	Gross Domestic Product
GDP P C	Gross Domestic Product Per Capita
HMT	Hong Kong, Macao and Taiwan
IB	International Business
IBV	Institution Based View
IJV	International Joint Ventures
IMF	International Monetary Fund
I-OLI	Institutional OLI Eclectic Paradigm
IPs	Individual Persons
IPR	Intellectual property right
IT	Institutional Theory
JV	Joint Venture
LME	Large and Middle-Sized Enterprises
LPs	Legal Persons
ME	Mixed Enterprises
MNC	Multinational Corporation
MNEs	Multinational Enterprises
MOFTEC	Ministry of Foreign Trade and Economic Cooperation of the People's Republic of China
MOST	Ministry of Science and Technology of China
NBS	National Bureau of Statistics
NIS	National Innovation System
NIE	New Institutional Economics
OECD	Organisation for Economic Co-operation and Development
OLI	Ownership-Location-Internalization
OLS	Ordinary Least Squares
POE	Private Owned Enterprises
POLS	Pooled Ordinary Least Squares
PRC	People's Republic of China

PRS	Political Risk Services
R&D	Research and Development
RBV	Resource Based View
RE	Random Effect
ROA	Return on Assets
ROS	Return on Sales
S&T	Science and Technology
SEZs	Special Economic Zones
SOEs	State Owned Enterprises
TCT	Transaction Cost Theory
TVEs	Township and Village Enterprises
UNCTAD	United Nations Conference On Trade and Development
US	United States
VIF	Variance Inflation Factor
VRIN	Valuable, Rare, Inimitable, and Non-substitutable
WFOE	Wholly Foreign-Owned Enterprises
WOS	Wholly Owned Subsidiary
WTO	World Trade Organisation

CHAPTER 1: INTRODUCTION

1.1 Research Background of the Importance of EU FDI in China

The People's Republic of China [1](China or PRC) has become the top Foreign Direct Investment (FDI) destination among all developing countries and remained host to the world's largest share of FDI receipts since its accession to the World Trade Organisation (WTO) in 2001 (OECD, 2003). FDI developments were characterized by the following policy trends: entry modes[2], ideological breakthroughs, governing laws, and Special Economic Zones (SEZs)[3] with 'special policies' and 'flexible measures'[4]. During the period 1983-2008[5], both the contractual value and the realised value of FDI in China increased by more than 112 times and 117 times respectively from US$1,732 million to US$ 193,727 million and from US$ 636 million to US$ 74, 767.89 million (MOFTEC, 2010)[6]. For details see Figure 1.1. Not only have the economic reforms of the last three decades brought significant FDI, but China's economic growth and development have also been impressive, averaging almost 10% per annum, and even higher since Deng's announcement in 1992 of China's economic opening. Given such a notable economic growth performance, China's quest for sustainable growth continues to stimulate much discussion and vigorous debates among academics, providing a tempting opportunity to study the determinants and performance of MNEs inward FDI in China (Bulcke et al., 2003; Yao & Wei, 2007).

---

[1] Unless otherwise stated, 'China' refers to Mainland China, which does not cover Hong Kong, Macau and Taiwan, where different economic and legal systems are in operation, despite the fact that they are

[2] China promulgated the Chinese-Foreign Equity Joint Venture Law (EJVL) in 1979, WFOEs in 1986 and CJVs in 1988.

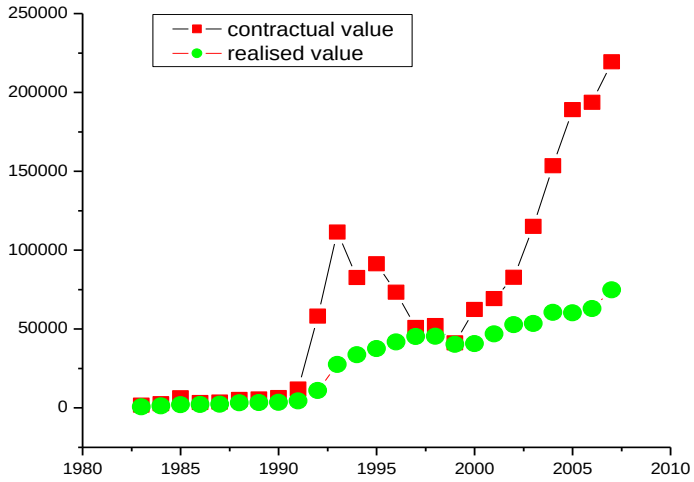
[3] The first four SEZs were Zhenzhen, Zhuhai, and Shantou in Guangdong Province and Xiamen in Fujian Province. In the 1990s, Hainan Province as a whole and Pudong New District in Shanghai were granted the same status, as were 21 cities along the Yangtze River and in the Northeast.

[4] The 'special policies' and 'flexible measures' can be interpreted as special privileges and treatment for foreigners investing in these zones, where they could carry out investment and trading activities that were not allowed in the rest of the country , or were allowed but with less favourable conditions.

[5] Though China began to receive FDI from 1979, official data on inward FDI by country of origin are available only from 1983 onwards.

[6] MOFTEC refers to the Ministry of Foreign Trade and Economic Cooperation in China,

Figure 1. 1 FDI in China 1983-2008 (Unit: US$10, 000)



Source: Compiled by the author according to FDI Statistics from Ministry of commerce of the PRC (MOFTEC)

The European Union[7] (the EU)[8] and China have everything to gain by strengthening their trade and investment ties since 1978 (details see Appendix 1: EU-China relations: Chronology). By 2009, EU-China trade had increased more than 74-fold and reached €296 billion (Eurostat, 2009)[9]. EU investment in China has increased more than 25-fold since 1986 and in 2000 the EU became the largest foreign investor in China (Figure 1.2: EU Investment in China 1986-2008). During the period 1986-2008, EU realised FDI in China increased from US$ 178.53 million to US$ 4994.51 million. The number of EU FDI projects rose from 1002 to 1844 (MOFTEC, 2010). (For details see Figure 1.2). This was motivated by a concern that Europe was missing the business opportunities in China. The EU realised that success in the Chinese market would not only generate growth, but was even more important for economies of scale and for large enterprises to

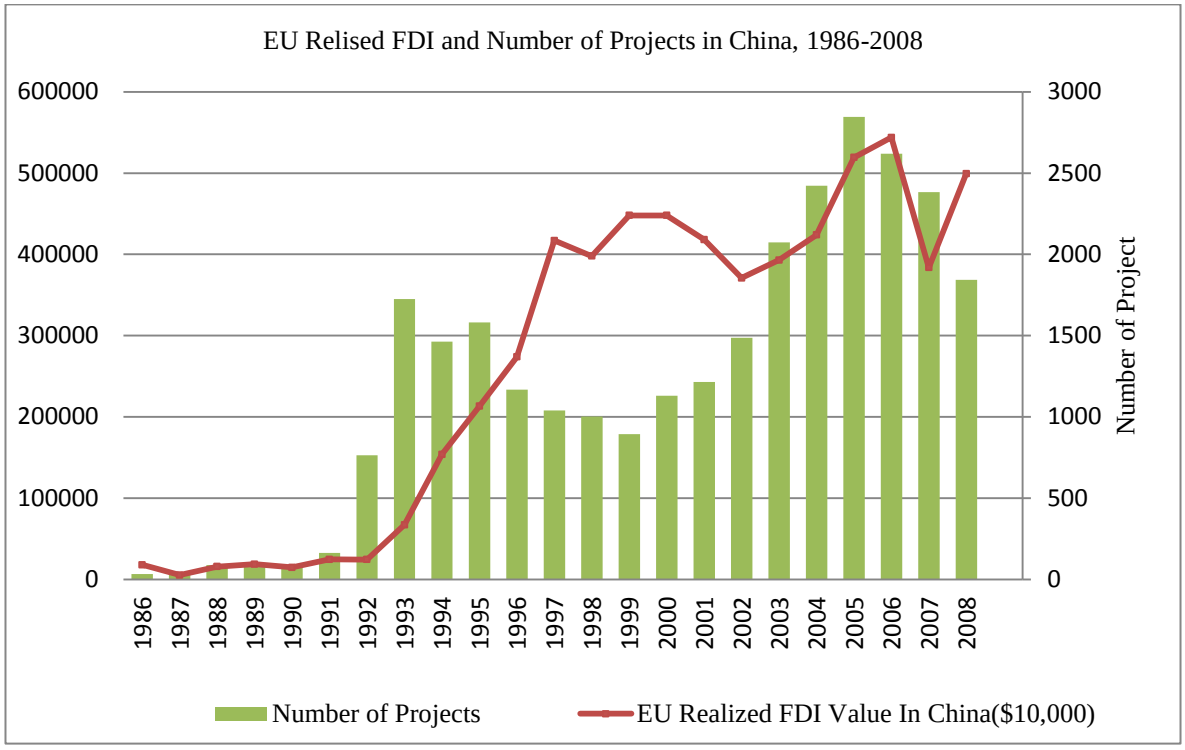
[7] In this study, we treat EU as an individual country because of the data source available.
[8] On 29 Jan 2007, the European Union realised its sixth enlargement and become a union of 27 member states, including 2 new member states.
[9] Since bilateral ties between the EU and China were established thirty five years ago, trade relations have expanded from €4 billion in 1978 to €296 billion in 2009. http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/462&type=HTML [Accessed 28 Nov . 2010]

protect their strategic position against their American and Japanese competitors. The EU showed a propensity for outward FDI, especially with regard to market- seeking and specialisation- related efficiency- seeking FDI activities by EU MNCs. EU published an official document entitled "EU Strategy towards China: Implementation of the 1998 communication and future steps for a more effective policy and launch of negotiations on a Partnership and Cooperation Agreement" in 2007. In 2000, the EU became the largest source of foreign investment in China, and during the period 1998-2008, overtook both the United States and Japan, which had previously led the FDI league table.

Compared with total realized FDI value in China in the period 1998- 2008, particularly FDI from the Triad (Japan, U.S. and EU), the realized value of EU, U.S. and Japan FDI fell from US$ 8.75 billion, US$8.58 billion and US$7.48 billion respectively to US$ 5.41billion, US$3.19 billion and US$3.95 billion. Nevertheless, the EU is still the number one out of the Triad (MOFTEC, 2010), Figure 1.3: EU, Japan and U.S. Realized FDI in China 1998-2008.

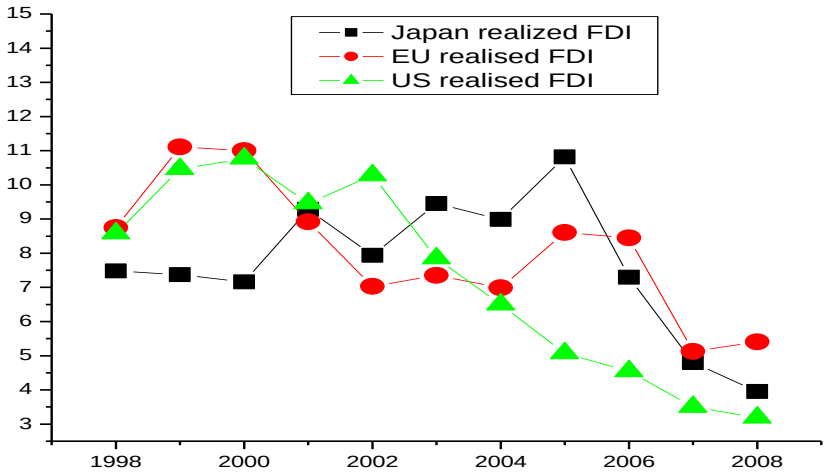
Comparing the characteristics of EU FDI with US and Japan in China. EU FDI typically falls into the category of high tech and capital–intensive investors, and was primarily motivated by marketing seeking. Moreover, it aimed to establish strategic positions in the key markets in view of anticipated market growth. European investors are more likely to set up large projects in scale intensive industries, and be located outside the (export –oriented) Special Economic Zones. Europeans are more likely to invest in majority ownership yet without full control; while the Japanese appear to insist on 100% ownership and North Americans are more willing to accept minority stakes (Bulcke, et al., 2004). These indicators point to a strengthening of the EU's role as an investor in China and highlight the timeliness of the study.

Figure 1. 2 EU Realized FDI & Number of Projects in China 1986-2008



Source: Compiled by the author according to FDI Statistics from MOFTEC

Figure 1. 3 EU, Japan and U.S. Realized FDI in China 1998-2008 (Unit: US$1,000,000, 000)



Source: Compiled by the author according to FDI Statistics from MOFTEC

1.2 Correlates of the Three Essays

This thesis presents a combination of three academic essays related to the correlates of determinants of FDI, MNCs' innovation investment performance, and foreign ownership structure performance, using a new and unified set of EU MNCs FDI experience in China during the period 1998-2007. The main theme that binds the three essays is that each paper investigates how EU FDI activities in China explain the variations of determinants of EU FDI, EU subsidiaries' product innovation performance, and performance of EU subsidiaries' ownership structure. Thus, although each paper can be read separately, they all address the common topic: how location determinants of FDI, the innovation of MNCs engaging in the FDI and the impact of different foreign/FDI ownership structure on the performance of EU MNCs are linked with EU FDI inflow to China. Our studies constitute three connected empirical works that are all associated with EU FDI inflow in China to form an integrated and coherent comprehensive study on EU firms' investment in China. Theoretically, all the three piece of work adopt a multi-theoretical approach, combining three interdisciplinary theories to develop a theoretical framework and hypotheses. All three sets of empirical tests employ panel analysis and provide empirical support for the arguments / hypotheses developed.

Previous literature contains various studies on the determinants and performance of FDI in China (e.g., Wei & Liu, 2001; Ng & Tuan, 2006; Yao & Wei, 2007). In addition to these studies, EU FDI determinants in China have been found to play a significant role in the development of EU-China investment relationship. However, only a few papers have linked EU FDI to subsidiaries' innovation. No papers, as of today, have linked ultimate EU WOS or JVs in China, very common forms of ownership structure around the world, to EU FDI inflows. We have yet to see academic papers that completely analyse EU FDI determinants and impact at firm level and host institutional level. There

are, however, development studies that examine EU-FDI in China on province level, legal framework, characteristics, challenges and perspectives and the role of technology in MNC investment, individually or separately (Chen and Reger, 2006; Bulcke et al., 2003; Shan, 2005; Wei and Andreosso-O'Callaghan, 2008). Our study contributes to fill in the gap currently existing in the literature of FDI from EU in China over the period 1998-2007 including three issues associated with EU FDI in China: determinants of EU FDI in China, EU subsidiaries' product innovation performance in China and performance of EU subsidiaries ownership structure in China.

Theoretically, these three studies used a multi – theoretical approach to develop a theoretical framework and hypotheses, contributing to FDI literature in the EU-China context. Methodologically, all empirical tests adopted panel analysis at firm level and country institutional environment level, with a new official firm-level dataset from the annual reports of industrial enterprise statistics compiled by the National Bureau of Statistics of China (NBS) and country – level dataset. Additionally, each study applies robustness checks for endogeneity issues. Empirically, the study found: (1) EU FDI in China is positively associated with Chinese institutions playing a significant role in the determinants and shape of EU FDI in China; (2) not only are firm-level factors significantly associated with EU FDI in China but also China's country and some institutional factors influence EU FDI innovation activities in China; (3) The ownership structure, resources available to EU firms investing in China and China's institutional environment are all determinants of EU FDI firm's performance in China. The findings have important implications for practitioners and policymaking.

Foreign direct investment is a complex issue, derived from a set of culture, economic growth and policy liberalisation factors. FDI development was influenced by China's dramatic institutional change. Formal and informal institutions, known as the "rules of

the game" (North, 2005) influence EU FDI flows into China, and significantly influence the strategy and performance of MNCs in emerging economies (Hoskisson et al., 2000; 2005). The three essays work together to demonstrate that EU FDI in China is an important correlate in many of the fundamental EU-China investment issues.

1.3 Research Motivation

Specifically, this study stems from the following three motivations:

Personal interest: the intellectual beginnings of this thesis lie in my personal interest in understanding the importance of FDI and EU FDI inflows in China. This interest was generated by various factors. Firstly, by my educational background, particularly the knowledge I gained during my BA and MBA study. Secondly it was encouraged by my industrial background working in the banking sector in China as manager in charge of International Business, giving lectures to academic institutions and banking clerks on trade and FDI in China, Management of Multinational Enterprises, FDI and financial and economic growth in China, comparing FDI from the Triad (Japan, U.S. and EU). I started thinking about how the EU had become the largest source of foreign investment in China in 2000, and during the period 1998-2008, overtook both the United States and Japan, which had previously led the FDI league table. Over the past three decades, the EU- China relationship in economic terms has developed with the growing significance to both sides of development of trade links and they have had much to gain by strengthening their investment ties since 1978. All these drove my strong motivation to research on EU firm FDI in China in terms of local determinants, innovation investment performance and EU subsidiaries' ownership performance.

Another motivation was the important role of EU FDI in China and gaps in the current literature on EU FDI in China. China's great success in attracting FDI under a series of

policies since 1978, which gives great benefits to foreign investing enterprises, makes it a good example for FDI research. The role of EU FDI in EU-China relations is becoming increasingly important, leading the EU- China relationship from constructive engagement to strategic partnership (for details, see section 1.1). Foreign direct investment is playing an important role in both sides' economic, trade, technology, and innovation development over the last three decades (see detailed discussion in section 1.1). Many, indeed most previous academic studies focused on FDI determinants and performance in China at the national or regional level, province level and sectoral level (for details, see section 2.1). There has been limited research so far on FDI determinants and performance by foreign investors on the firm-level. Perhaps the first and the most important problem is the quality of the data. The world's two largest, mutually complementary markets, EU and China, have been largely overlooked in terms of a comprehensive economic FDI related analysis, due to lack of data , especially at the firm level, so this is an interesting research area that has not drawn enough attention previously. Questions remain as to what determinants make EU firms invest in China. How can we understand EU subsidiary innovation investment and the impact of ownership structure on the performance of EU MNCs in China? And how do Chinese institutions influence EU FDI related activities? Addressing these two firm FDI issues (determinants and performance) fills a gap currently existing in the literature of FDI from EU in China over the period 1998-2007.

This study is also motivated by a wish to understand what attracts EU FDI inflow for development of EU-China trade and investment relations, because without accurate knowledge of FDI location determinants and performance, it is hard for policy makers to formulate the correct FDI promotion policies. The findings from this study will provide valuable information on foreign investors' decision making when they plan to

invest in China, as well as hence significant implications for policy makers regarding FDI.

1.4 Research Objective

The objective of this thesis is to identify and investigate several key issues associated with EU FDI in China. These issues are rarely examined in the existing literature. They include:

1. Firm- level determinants of EU FDI in China;
2. EU subsidiaries' product innovation performance in China; and
3. Performance of EU subsidiaries' ownership structure in China

Investigating these issues will help to understand the role of EU FDI, particularly the importance of determinants and performance in the Chinese market, given that there is no dedicated study on EU-China FDI in the period of 1998-2007. The research intends to fill the gap by exploring and critically evaluating the existing literature, with a view towards identifying the direction of future FDI development.

1.5 Outline of Chapters

The thesis contains four further chapters: three essays and a conclusion (see figure 1.4).

The first essay (Chapter Two) focuses on transition-specific determinants of EU firm FDI experience in China. This study develops an institutional OLI theoretical framework to complement Dunning's OLI paradigm by incorporating institution theory in the EU-China FDI context, filling a gap currently existing in the literature of FDI from EU in China with new official firm and country data sets by exploring the determining factors in FDI flows over the period 1998-2007. It first describes the development of FDI – related institutional change linkages with EU FDI in the Chinese

transitional environment. The study suggests that EU FDI is indeed distinctive in certain respects that have implications for theory, particularly the findings for personal share, profitability, technology and rule of law, but that familiar explanations of FDI are relevant.

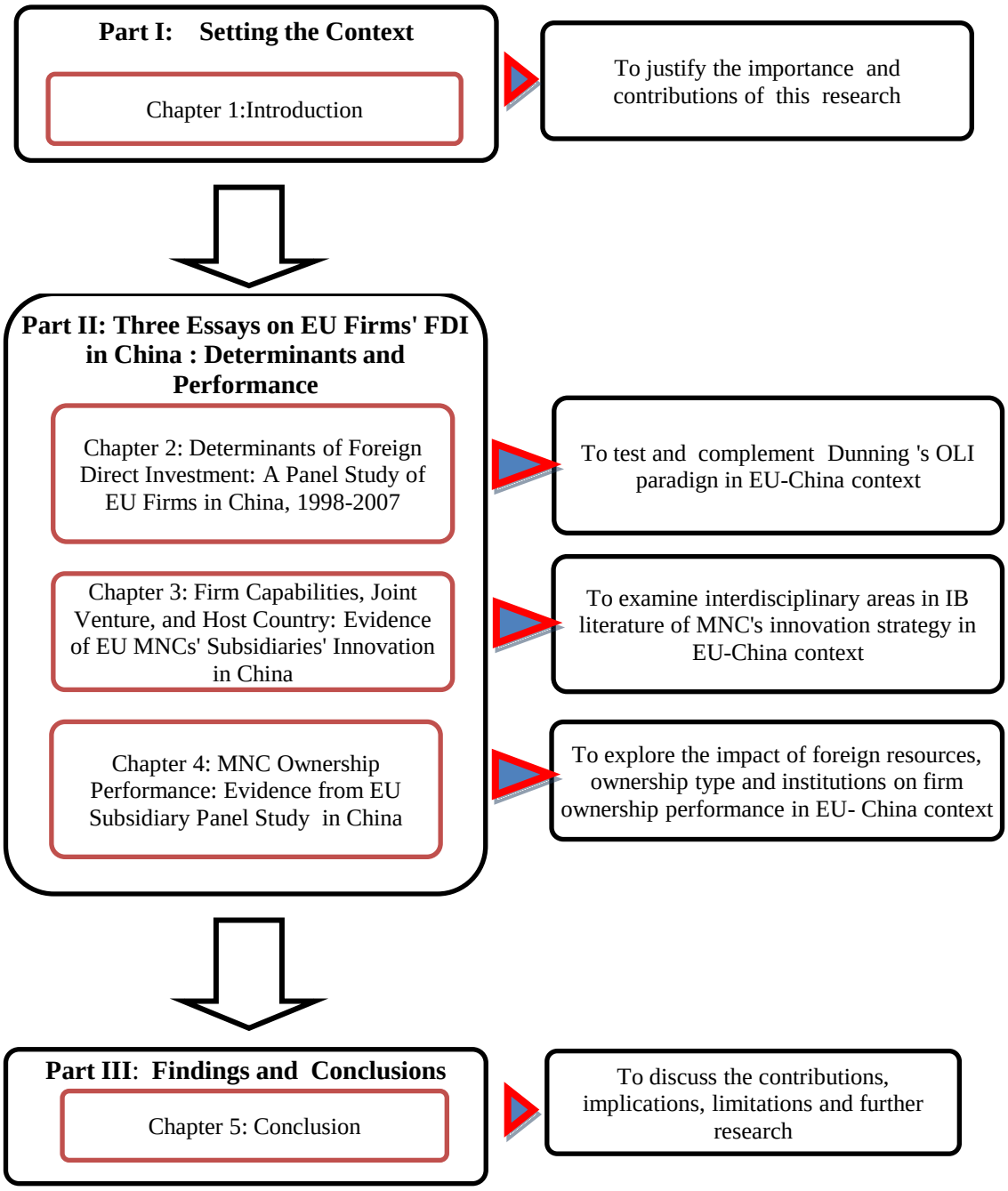
The second essay (Chapter Three) turns to the question of the spatial determinants of 680 EU subsidiaries' innovation performance in China. The study develops an integrated research framework that analyses determinants of subsidiary innovation in China with a focus on firm capabilities, JV with local Chinese partners and host innovation institutional environment. A review is provided of the FDI and innovation in China, given that the aim of opening up to FDI was to exchange markets for technology. This study contributes to filling the gap currently existing in the literature of EU MNCs' innovation in China with unique new comprehensive official firm data for EU large & middle sized manufacturing firms and China institutions country data by exploring the multiple-level innovation determining factors for MNC subsidiaries.

The third essay (Chapter Four) adopts a multi-theoretic approach to investigate a phenomenon previously unexplored in extant literature, presenting a model explaining the ownership-performance practices of the foreign activities of EU large & middle sized manufacturing subsidiaries with 329 WOS and 351 IJV firms based on FDI entry mode, differential ownership type and ownership reform in the China economy. It is one of the few studies that contribute to knowledge on how the combination of EU subsidiaries' various strategic choices, operations and performance can lead to success. The study seeks to increase knowledge of foreign ownership performance by focusing on the relationship between subsidiary-specific resources, equity share, and the host institutional environment. This study develops a comprehensive picture of the patterns and processes of EU ownership strategy over time, from 1998 to 2007. It highlights the

importance of further studying the "transitional problems" that control ownership structure, especially in emerging markets. Finally, in Chapter Five, the thesis concludes with a summary of the main findings, an assessment of the theoretical and practical implications of the study, an acknowledgement of the research limitations, and some concluding remarks.

The three studies in this thesis use rigorous economic analysis to contribute to the understanding of the determinants, innovation and ownership performance of EU MNCs in the Chinese market. The results presented in the following chapters challenge conventional thinking and highlight the importance of EU FDI strategy in China. The structure and content of the thesis is illustrated in Figure 1.4.

Figure 1. 4 Structure and content of the thesis



CHAPTER TWO: ESSAY 1: DETERMINANTS OF FOREIGN DIRECT INVESTMENT:

A PANEL STUDY OF EU FIRMS IN CHINA

2.1 Introduction

This study investigates why EU firms engage in foreign direct investment (FDI) in China by analysing FDI determinants at firm and country level, incorporating the Chinese institutional perspective over the period 1998-2007. China has experienced remarkable economic growth[10] and development with 'Open Door' policies in1979 and former leader Deng Xiaoping's speech in 1992 reaffirming China's continuous economic opening with relaxation of investment regulation, making China a popular FDI destination. European firms have sought to crack this potentially huge market. For example, European companies[11] invested €5.3 billion in China in 2009 (up from €4.7 billion in 2008) and this is about 2-3% of overall European foreign direct investment. Chinese companies invested €0.3 billion in Europe in 2009[12]. Almost half of EU foreign direct investment to China goes to manufacturing such as machinery & transport equipment and chemical products; and China remains the EU's biggest source of manufactured imports (Eurostat,)[13]. (For details, see Section1.1). Overall, after more than three decades of evolution, EU-China FDI relations reached a new milestone in recent years: China is now the EU's second largest trading partner behind the USA and

[10] Since China's economic reform in 1979, China has also experienced remarkable economic growth and development, achieving a high growth rate of almost 10% per annum, on average, and over 10% during the period after Deng's speech in 1992 reaffirming China's continuous economic opening.
[11] Detailed discussion of FDI by EU firms in China is in section 2.3.
[12]Quoted in Europa-Press Releases website: http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/352&type=HTML [Accessed 16 March 2012]
[13] Quoted in European Commission External Trade Website: http://ec.europa.eu/trade/issues/bilateral/countries/china/index_en.htm [Accessed 22 Nov.2011]. http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/352&type=HTML

the biggest source of imports. The EU is China's biggest trading partner and now China's largest export market. This has occurred due to the new significance of the Chinese market for European economic security and its increasing demand for FDI, complemented by EU's significance for China's economic security. China's fostering of relations with the EU is crucial both commercially and for obtaining advanced technology needed for China's modernisation. The growing economic dimension of the relationship increased the significance attached by both sides to development of trade links. China even articulated the strategic goal – 'EU becomes China's largest trading and investments partner' (China's EU policy paper, 2003), which resulted in the EU becoming China's biggest trading partner and largest export market now. China's successful accession to the WTO has significantly boosted, and will continue to catalyze both foreign and EU investment in China. The fascinating developments in the two largest markets[14] in the world, importantly through China's policies to attract foreign firm participation, provide the impetus to study the determinants of FDI (e.g., Ng & Tuan, 2001, 2003; Wei & Liu, 2006; Yao & Wei, 2007) and the role of the Chinese government in shaping the inward FDI direction in China (Du et al., 2008; Fan et al., 2009).

Development studies examine EU-FDI in China in terms of its legal framework in investment relations (e.g., Shan, 2005); trade and investment from the European experience (e.g., Strange et al., 1998); capital inflows into China using ordinary least squares (OLS) regression during 1996-2002 at province level (e.g., Wei and Andreosso-O'Callaghan, 2008); and EU FDI in China with a focus on characteristics, challenges and perspectives during 1979-1996 on the basis of both official statistics and special

[14] Chinese industry has become a global leader in labour intensive manufacturing based on a comparative advantage in cheap labour, while European operators, who rely on a highly educated workforce, are at a disadvantage in commoditised markets where price plays the most important role.

surveys/using an original survey, some official data[15] and aggregate statistical analysis of firm and location-specific factors. (e.g., Bulcke et al., 2003). The extant literature contains descriptive research using aggregate data on EU-FDI (e.g., European Commission, 2007; Oxelheim and Ghauri, 2008) coupled with in-depth case studies and surveys on a small number of high-profile EU multinational enterprises (MNEs) in China (e.g., Bennett et al., 2001; Chen and Reger, 2006). The reason for this could be the paucity or absence of sufficiently disaggregated firm-level data. Therefore, a analysis of the experience of EU-FDI in China, considering both company profiles and the institutional environment, is warranted.

There are various studies on the determinants of FDI in China (Cheng and Kwan, 2000; Coughlin and Segev, 2002; Dees 1998; Fung, Iizaka, Lee and Paker, 2000; Fung, Iizaka, Lin and Siu, 2002; Ng and Tuan, 2003; Sun, Tong and Yu, 2002; Tung and Cho, 2001; Zhang , 2000). Dunning's OLI (1992) model has been the most influential framework for empirical investigation of determinants of FDI for three decades (Buckley and Hashai, 2008; Cleeve, 2007; Narula, 2006; Piteil and Teece, 2010; Stefanović, 2008). However, institutions also have an influence on FDI (Bevan, Estrin, & Meyer, 2004; Dunning, 2006; Meyer & Jensen, 2005); and there is research on incorporating further insights from institutional and evolutionary theory to better explain the paradigm (Cantwell et al., 2008; Dunning & Lundan, 2008a; 2008b). FDI developments were influenced by China's dramatic institutional changes, the 'Open Door' policy, entry modes[16], ideological breakthroughs, governing laws, and establishment of special

[15] A database of foreign registered enterprises was established on the basis of information from MOFTEC 1983-1998. MOFTEC stopped the publication of this type of information in its statistical yearbook as of 1998 (Bulcke et al. 2003, p177)

[16] China promulgated the Chinese-foreign equity joint venture law (EJVL) in 1979, WFOEs (wholly foreign-owned enterprises) in 1986 and CJVs (contractual joint venture) in 1988.

economic zones (SEZs)[17] with 'special policies' and 'flexible measures'[18](For the details, see section 2.3). FDI-related developments were influenced by China's dramatic institutional changes. The formal (institutional involvement) and informal (personal networks) institutions, known as the "rule of the game" (North, 1990, 2005), influence FDI flows into China, and significantly shape the strategy and performance of firms in emerging economies (Hoskisson et al., 2000; Morrissey and Udomkerdmongkol, 2012; Wright et al., 2005). China's WTO accession marked a milestone in inward FDI in China; it enriches the potential to shape direct investment and trade flows between China and other countries with trade often serving as a precursor for FDI (Hong, 2008). To properly understand EU firm FDI in China, it is important that formal empirical analysis takes full account of the host country's changing institutional context and the idiosyncratic response by EU firms that it might engender.

Foreign direct investment theories are mainly based on the theoretical hypothesis of imperfect competition and increasing returns to scale. FDI flows may be classified into market-oriented, export-oriented, resource-oriented, efficiency-seeking, production-oriented, and trade-facilitating-oriented etc. This may be fully explained by Dunning's OLI eclectic paradigm (1977, 1988, 1993a, 1993b), which draws upon three strands of received economic literature, which are industrial organization, conventional trade and internalization theories and governance of enterprises. For details, see the literature review in section 2.2.1. Also FDI determinants are associated with investment environment, macroeconomic, and investment costs. China's strong growth, huge population, and increasing purchasing power provide the best economic prospects and a

[17] The first four SEZs were Zhenzhen, Zhuhai, and Shantou in Guangdong province and Xiamen in Fujian province. In the 1990s, Hainan Province as a whole and Pudong New
District in Shanghai were granted the same status, as were 21 cities along the Yangtze River and in the Northeast.
[18] The 'special policies' and 'flexible measures' can be interpreted as special privileges and treatment for foreigners investing in these zones, where they could carry out investment and trading activities that were not allowed in the rest of the country, or were allowed but with less favourable conditions.

vast potential market for FDI inflows since its "open policy" to the world, especially China's accession to the WTO and liberalization of investment. These features have strong attraction for FDI inflows. Hence, China was host to the world's largest share of FDI receipts in 2001 and FDI determinants flows into China soared to more than 117 times in 2010 compared to 1983. Successful examples are the FDI inflows from source countries such as the United States, European Union, Japan and other countries and regions. Various studies also identify a stage process to determinants of FDI linked to the United States (Fung, Iizaka, Lee and Paker , 2000; Fung, Iizaka, Lin and Siu , 2002;), Japan (Fung, Iizaka, Lee and Paker , 2000; Cassidy and Andreosso-O'Callaghan , 2006; Shiro Armstrong, 2009), Hong kong(Fung, Iizaka, Lin and Siu , 2002; Zhang , 2000). Studies have been conducted on the national level in an attempt to explain why foreign firms invest in China (Dees, 1998; Wei and Liu, 2001), at regional level, investigating why foreign firms choose a specific region within China (Ng and Tuan, 2003; Sun et al, 2000) and at sectoral level (Tung, 2001), including study of Taiwanese IT firms' investment in China (Lin, 2010) and of technology-based German firms in China (Chen and Reger, 2006).

Despite the above research on FDI determinants in China at national, regional, province and sectoral levels, the relationship between the EU and China, as two of the largest, mutually complementary markets in the world, which represent a major FDI recipient and a region with a substantial share of foreign ownership, has been largely overlooked in terms of a comprehensive economic analysis. As such, we have learned little about the factors that determine EU FDI in China, in particular, at firm level. The purpose of this study is to examine the location determinants of EU firm FDI in China. It aims to fill in the gap currently existing in the literature of FDI from EU into China with a new official firm-level dataset from the annual reports of industrial enterprise statistics

compiled by the National Bureau of Statistics of China (NBS) over the period 1998-2007. This analysis incorporates two major aspects of the investment behaviour of EU firms, namely: why EU firms choose to engage in international production in China, by examining the determinants of EU firms FDI inflows to China, and how important are the host country's institutions in affecting EU investment in China.

As we discussed previously, FDI developments were influenced by China's dramatic institutional changes, in particular, occurring with China's accession to WTO and liberalization of investment, which were strongly attractive for FDI inflows aiming at the host market. The Dunning OLI paradigm was established on the experience of MNEs from western countries and as such Chinese formal and informal institutions are almost invisible. On the contrary, the absence of formal market-based institutions is conspicuous in the case of China (Peng et al., 2008). With this context, the study focuses on examining comprehensively the determinant factors of EU FDI in China at firm and country level, incorporating an institutional perspective (North, 2005) into Dunning's ownership-location-internalization (OLI) paradigm (Dunning, 1993a; 1993b; Dunning & Lundan, 2008a; 2008b; 2009) to assess the importance of the host country's institutions in directing EU-FDI in China. The study will also test the impact of institutional change over time (impact of accession to the WTO) on attracting EU FDI, which has not previously been done. The theoretical framework of the study builds on the OLI paradigm, incorporating institutional determinants to test international production by EU firms in an emerging market.

The study offers three primary contributions. First, it attempts to critically evaluate the major International Business (IB) theories and combined institution theory to identify the variables affecting the EU FDI inflows to China. Second, the proposed framework integrates the Chinese intuitional context into the existing OLI configuration to extend

Dunning's OLI paradigm (1977, 1983, and 1993a). Third, given that WTO accession marked a milestone in inward FDI in China, it enriches the extant research by distinguishing institutional changes over time (i.e., pre – WTO, 1998-2001 and post-WTO, 2002–2007), exposing the different patterns of FDI determinants of EU firms for different time periods.

Several insights emerge from the study: FDI is positively related to institutional change and export intensity; policy liberalization appears to be an important option for attracting FDI. However, some other factors such as firm technology, private share, profitability, wage and rule of law reveal unexpected results. In addition, the statistical results imply that the association of FDI with firm size and R&D intensity is non-linear. Indeed, the sizeable advantage in higher value-added economic activities suggests EU companies are attracted by the absence of market access barriers to trade and investment in China, in order to seize the enormous opportunities created by the new trends in the Chinese market and favour the introduction of transparency and effectiveness in administration rather than low-cost, low-skilled labour and tax incentives.

The chapter is organised as follows. First, it reviews the traditional determinants of FDI and discusses the extent to which they hold for a transition economy like China. It discusses the EU FDI in China incorporating institution theory into the OLI paradigm for the transition-specific determinants and motives, modelling the institutional OLI paradigm for the research framework. Then, it describes a number of institutional factors and OLI variables proposed in the literature to have a significant impact on FDI flows and hypothesise on their ability to explain EU FDI patterns in China. It goes on to test the special model framework to complement Dunning's OLI paradigm. The study suggests that EU FDI is indeed distinctive in certain respects that have implications for theory, particularly the findings for personal share, profitability, technology and rule of

law, but that familiar explanations of FDI are relevant, too. The study concludes by recommending and commenting on future research directions.

2.2 Theoretical Framework: Institution OLI Paradigm

2.2.1 Traditional determinants of FDI

FDI theory is based on the foundation of structural and transaction cost imperfections, which arise due to existence of advantages (Buckley and Casson, 1976; Kalfadellis and Gray, 2002). Micro-oriented FDI is based on Hymer's (1960) market imperfection theory. Cave (1974) develops the oligopolistic power theory of Hymer by adding the concept of transaction costs. Hymer saw FDI as a means of transferring knowledge and other firm assets, both tangible and tacit, in order to organize production abroad. In a similar way, Vernon's (1966) product life cycle was developed from Hymer's thesis to add a dynamic dimension. Buckley and Casson (1976), Hennart (1986), and Rugman (1980) further elaborate the concept of transaction costs into internalization theory. The macro-oriented view is typically shown by the Heckscher-Ohilin model. The main elements of Aliber's (1970) macro-financial and exchange rate theory are based on a financial market imperfection identified by Hymer (1960). By integrating these two streams of theory, Dunning (1988, 1993a, and 1993b) developed an eclectic paradigm namely, the OLI paradigm. Also, later on, Dunning and Lundan expanded the paradigm to incorporate institutional theory (Dunning, 2005; Dunning and Lundan 2006, 2008a; 2008b; 2009). For details, see section 2.2.2.

The basic assumption of the eclectic paradigm can be explained by a set of three factors. "O" Ownership advantages refer to unique competitive advantages, e.g., technology, experience, patent, indicating who is going to produce abroad and for that matter, other forms of international activity (Dunning 1993a, 1993b). "L" localization advantages

arise from the assets that foreign markets supply, such as abundant natural resources, large market size, and cheap factors of production; these assets attract firms to produce abroad. The mainstream theory on the location issue identified four primary motivations for FDI, namely market-seeking, natural resource-seeking, efficiency-seeking and strategic asset-seeking (Dunning, 1993a). The location-specific advantages are relevant initially to showing that geographical location matters to economic outcomes. In more detail, a firm must possess ownership-specific advantages over rival firms in foreign markets. These can be taken into account as a target for exploitation of the supply and demand in foreign markets (Chen and Reger, 2006; Dunning and Lundan, 1998; Park and Park, 2005). "I" internalization advantages refer to the perceived advantage of hierarchical control of value -added activities to overcome market imperfections, addressing the question of why firms engage in FDI rather than license foreign firms to use their proprietary assets (Dunning 1993a, 1993b) While both ownership and internalization advantages are firm specific, location advantages are host country-specific.

OLI is context specific; its applicability is likely to depend on the motivations for FDI (Dunning, 2001, p. 176). To accommodate for this, this study clearly specifies the context and in setting the theoretical framework builds on Dunning's paradigm by incorporating an institution perspective into OLI to test EU firm FDI in China. In the next section, therefore, the Chinese institutional environment is discussed.

2.2.2. Institutional determinants of FDI

Traditional FDI theory was established on the experience of MNEs from Western countries where institutions are almost invisible. In contrast, the absence of formal market-based institutions is conspicuous in emerging countries (Peng et al., 2008),

which are characterized by highly visible state interference; this is even more important in the case of China. The question arises as to whether conventional FDI theories apply in emerging economies and especially in China, or whether in such contexts specific determinants need to be incorporated with the traditional determinants of FDI above.

Recently, Dunning and Lundan (2008a; 2008b; 2009) have examined the role of institutions in affecting both the determinants and effects of the activities of MNEs, hence, bringing an institution-based view into FDI theory (Dunning and Lundan, 2009, 2010). The study makes a contribution built on Dunning and Lundan's work by integrating the Chinese institutional context to test and extend further understanding of Institutions –OLI in the EU-China context.

Dunning (2004) looks at the role of institutional transformation as a location-specific competition –enhancing advantage that influences MNEs in their decision to invest in a particular country. The recent literature including the influential study of North (1994, 2005) highlights the importance of institutions in shaping incentives for investment and firm strategy because they affect transaction and production costs. In the words of North (2005), 'institutional change can result from change in the formal rules, the informal normal norm or the enforcement of either of these'. Policy reformers often claim that countries with good institutions attract more FDI. There is an emerging body of theoretical work that concerns the institution-based view of strategy, or institutional theory for short (Meyer and Nguyen, 2005; Peng, 2002). Prior empirical studies have confirmed that regulative institutions in host countries have a strong influence on FDI inflows and that institutions ''friendly'' towards FDI, such as stable economic policy, high quality rule of law and low levels of corruption, security of property rights, less ownership restriction, and non-corrupt bureaucracy, are conducive to attracting FDI from MNEs (Bevan et al., 2004; Grosse and Trevino, 2005; Pajunen, 2008).

However, economic behaviours cannot be explained without reference to the role of social and cultural factors, in particular, the missing and weak market-based institutions during the transition. In the case of China, the argument is that micro level, interpersonal relationships (called *guanxi* in Chinese) among managers are translated into a macro, interorganizational strategy of relying on networks and alliances to grow the firm, thus leading to a micro–macro link (Li, 2005; Peng and Luo, 2000;). Despite China's rapid development and increasing openness, the absence of transparency and institutional trust is widespread. The way traditional Chinese culture shapes the Chinese mentality in business and management has been explored in a number of writings (e.g., Child and Markóczy, 1993). Multinational firms have, one after another, set up special units to deal with government relationships as without using the networks of *guanxi* nothing significant can happen (Faure and Fang, 2008).

Such factors have the potential to help explain distinctiveness in the behaviour of EU firm FDI in China. The basic thrust of this contribution is that firms' strategy is shaped by the host institutional environment and progress in institutional reforms (rule of law corruption and policy liberalization, legal environment and property rights protection) is enforced by the Chinese government and influences investment.

2.3 Evolution of China's FDI and Institutional Changes

Institutional changes have significantly influenced MNEs' decisions and hence FDI inflows (Luo, 2002b). Key periods in the evolution of China's FDI approval process are presented in Table 2.1. Since 1978, the Chinese government has pursued enhancement for attracting and condoling FDI. In consequence, institutions have evolved that are influenced by the attitudes of all interested parties. The new era of absorbing FDI began in 1979 when the Chinese-foreign joint venture (JV) law was promulgated. Chinese FDI

trends can be distinguished according to changes in policy directions. Inward FDI underwent four phases of development: the experimental period (1979-1983); the gradual development period (1984-1991); the high-growth period (1992-2000); and the post-WTO period (2001- present). During the period 1983-2008, both the contractual value and the realized value of FDI in China increased by more than 112 times and 117 times, respectively as shown in Figure 1.1. The various policies that were designed to attract FDI appear to have paid off. The first major step of the liberalization process of inward FDI was the launching of four Special Economic Zones (SEZs) in 1980 in two coastal provinces. The specific administrative and fiscal regulations and the low labour cost were positive elements (Bulcke et al., 2003). The second phase (1984-1991) of FDI was the expansion of opened areas into the coastal area. China extended its open areas to another fourteen open coastal cities[19]. The opening up of these coastal cities provided market-seeking MNEs with new opportunities and more extensive markets. Another important policy initiative taken at this stage was the regulation for the implementation of law on Chinese-foreign equity joint ventures in 1983. In 1986, the Wholly Foreign-Owned Enterprises (WFOE) law set up the legitimacy of WFOEs, which extended the options of foreign investors in terms of investment entry modes. Chinese FDI policies have changed over time and differ from one region to another. Reflecting different stages of the economic reform process, these policies stimulate cooperation between multinational companies and local enterprises (Ng and Tuan, 2001; Oxelheim and Ghauri, 2008).

Subsequently, as Figure 1.1 shows, large volumes of foreign capital flowed into China after Deng Xiaoping's 1992 "Southern Journey" and "further openness to the world" in the third phase. The above institutions, together with the market size of China,

[19] The coastal cities including Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai.

undoubtedly attract foreign investors to establish their businesses in China. Moreover, the Chinese leaders made it explicit that China sought inward investment in knowledge-intense production in 2007. A survey by the United Nations Conference on Trade and Development (UNCTAD) for the time span 2005-2009 shows that the most attractive prospective Research and Development (R&D) location for these firms was China (61.8%) because of its low labour costs and large market potential. Moreover, in 2001, when China became a formal member of the WTO, the Chinese government formalized its FDI inflows strategy, providing incentives for more export-oriented FDI. The reforms include boosting transparency in the legal and administrative system, improving intellectual property rights protection (IPR), reducing tariffs and taxes and privatizing state-owned enterprises (SOEs). The liberalization of FDI regimes and creation of new institutions are significant determinants of FDI in China (Fu, 2000).

Table 2. 1 FDI-related institutional changes in China

Phases	Accessible locations	Industry orientation	Entry modes	Government law
1979 - 1983	4 SEZs		EJVs	The law of the people 's Republic of China on Chinese-Foreign Joint Ventures'(1 July, 1979)
1984 – 1988	14 open coastal cities	Provisions for the encouragement of foreign investment with (also known as the 22 article)	WFOEs	1. The law of the people 's Republic of China on Wholly Foreign Enterprises Operated Exclusively with foreign capital Chinese-Foreign Joint Ventures' (April 12, 1986) 2. Law on Provision of the state Council on the Encouragement of FDI (Oct. 11, 1986) 3. The Contractual Joint Venture law issued in 1988
	Yangtze River Delta, Pearl River Delta, Golden Triangle Areas Hainan island Liaodong and Shandong peninsulas	additional incentives for export, import substitution and high-tech project	CJVs	
1989 – 1991	Pudong New Area in Shanghai			1. Regulation Concerning Charging and Setting in foreign Currencies within the Territory (March 1. 1989). 2. Details Rules and Regulations for the implementation of the People's Republic of China Concerning joint Ventures with Chinese and Foreign Investment (Dec. 1990)
1992 – 1994	21 cities along the Yangtze River and in the Northeast	Open retailing sector and wholesaling , accounting and information consultancy, banking and decentralized	Umbrella companies	1992, Deng Xiaoping's Southern Journey
1995 – 1998		Orientation directory of industries Open banking sector	B share trading Built-Operation-transfer	1995, Provisions on guiding FDI 1.1999. Constitutional amendment: Private enterprises acknowledged
1999 – 2000	Inland provinces by "Go-west" strategy		M&As	2.The contractual joint venture law was amended in Oct, 2000 to comply with WTO commitment before WTO entrance
2001 onwards		1. Other service sectors 2.Tax neutral FDI policy; FDI through M&A strongly discouraged; FDI in real estate prohibited; FDI policy changed from export led growth to quality investment supporting domestic led growth (2009)		2001 Entry of WTO Revision of Equity Joint Venture Law (2001) Revision of regulation for the implementation of the law of the People's Republic of China on Chinese-foreign Equity Joint Ventures (2001) Rules for Implementation of WOS Law (2001) Provisions on Guiding Foreign Investment Direction (2002)

Source: Partly adapted from Bulcke et al. (2003).

2.4 Hypothesis Development

To better explain Institutional OLI, it is necessary to account for advantages and conditions that are specific to EU firms, and the related institutional factors. Even though the core explanation of the eclectic paradigm remains the same, an attempt is made to incorporate aspects of the host country institutional environment specifically related to EU firms. Accordingly, in this section, hypotheses are developed regarding the effect of EU FDI inflows in China.

2.4.1. The set of Institutional factors

Rule of law in China

'Rule of law' can be a proxy for the quality of the legal environment in China in the study. It reflects assessment of the degree to which agents trust in and adhere to the rules of society, especially as regards the quality of contract enforcement, property rights, policing and the judiciary, as well as the incidence of crime and violence. The scores range between -2 and 2, with higher values indicating a better law system, according to the World Governance Indicators of the World Bank. China is known for its lack of the rule of law and for its weak property rights institutions (Allen et al., 2005). However, China has become the world's number one destination for FDI (Fan et al., 2009). In discussion of the most essential institutions explaining FDI inflows within Chinese regions, the law and finance literature has overlooked the power of informal institutions such as guanxi (relationship) (Mailath and Samuelson, 2006). Additionally, the formal rule of law and institutional constraints on government are not always necessary for economic growth in a developing or transitional economy (Wang, et al., 2012). In the study, we assume the quality of institutions is likely to be an important

determinant of FDI activity, particularly for less-developed countries such as China for a variety of reasons (Blonigen, 2005). We expect that higher rule of law values should attract more FDI from the EU (e.g., Forssbaeck and Oxelheim, 2008). Thus, it is proposed that:

Hypothesis 2.1: The higher quality the rule of law in China, the more EU FDI flows into China.

WTO Institutional Changes in the Host Country

Institutional changes are fundamental changes in an economy that might affect the investment of foreign firms. China's accession to the WTO, incorporated in the model as a formal exogenous element of EU firm FDI regime, has significant implications for foreign trade and foreign investment in China and the global economy as well. Foreign investors are now allowed to enter some sectors (Hong, 2008). In order to comply with WTO rules, the Chinese government has had to accelerate legislative and institutional reforms, make policies stable and predictable, remove special protections for SOEs, create an impartial, competitive business environment and unify market regulations (Jiang, 2006). The above changes may significantly impact the location preference of foreign investors. Therefore, to investigate the role of institutional liberalization towards FDI, we introduce a dummy variable for 2001. Thus, it is proposed that:

Hypothesis 2.2: The major liberalization of Chinese FDI policy on China's WTO accession attracts higher EU FDI inflows.

Corruption

At the aggregate level, we have adopted the Worldwide Governance Indicators that capture the dimensions of governance: Control of Corruption for national government

efficiency and anti-corruption effort. In the study, we use detailed firm level data for China to examine the determinants of EU FDI flows. Specifically, we investigate whether FDI is attracted to China for reasons of good governance and a strong fight against corruption, constructing proxies for Chinese government efficiency and anti-corruption effort. Usually, a higher score represents lower corruption. The literature about FDI determinants has found that key determinants of FDI inflow include institutional quality and corruption (Alfaro et al., 2008; Stein and Daude, 2007; Wei, 2000a, 2000b). Whilst some earlier studies did not find a consistently negative correlation (e.g. Wheeler and Mody, 1992), recent studies (e.g. Smarzynska-Javorcik and Wei, 2005; Wei, 2000a, 2000b) have reported a statistically significant negative impact of corruption on FDI. Although China is relatively successful in attracting FDI, corruption is now recognized as an emerging challenge to China's economy and to its social reforms. To the extent that poor institutions lead to poor infrastructure (i.e., public goods), expected profitability falls as does FDI into a market (Blonigen, 2005).Thus, it is argued that:

Hypothesis 2.3: The lower the corruption in China, the more EU FDI flows into China.

2.4.2 The set of Ownership-specific advantages

Capital intensity

Capital intensity of firms is relevant in deciding FDI because the size of the resource commitments needed to engage in FDI can vary considerably between less capital-intensive and more capital-intensive firms (Lin, 2010). In previous studies, firms with greater capital intensity have been found to have a greater propensity to engage in FDI (Roberts and Tybout, 1997). Compared to developed countries, China has a less stable range of political, institutional, and legal environments. Foreign firms may move to

China and keep the old technology and pay lower abatement costs, or invest in cheaper technology and pay lower abatement costs. Thus, a direct link is expected between capital intensity and FDI. The study measures capital intensity by the natural logarithm of the ratio of fixed assets to the number of employees. We posit that:

Hypothesis 2.4 The higher the capital intensity of EU MNEs, the more that a EU firm engages in FDI in China.

Wage

Relative wage rates are frequently employed in studies that use Dunning's OLI framework. Lower wages (in host country) with higher FDI inflows tend to undermine the primary motivation for market-seeking FDI. Locations that have a lower cost of labour can attract more FDI flows (Sethi et al., 2003). Wang and Swain (1995), and Zhao and Zhu (2000) found this inverse link. The empirical evidence on whether lower wages in host country attract FDI is, however, mixed, such that the impact of wages on FDI ranges from a negative relationship (e.g. Culem, 1988) to no relationship (e.g., Edwards, 1990) and even a positive association (e.g. Lucas, 1993; Yang et al., 2000). A number of studies investigated whether wage rates influenced FDI inflow into China. Cheng and Kwan (2000) and Coughlin and Segev (2000) showed that wages and FDI inflows are negatively related whereas Chen (1996) found no significant relationship. Cassidy and Andreasso-O'Callaghan (2006) considered the spatial distribution of Japanese FDI into China's provinces and obtained positive but insignificant results. These findings clearly show the inconclusiveness of the wages-FDI inflow relationship. Wage is measured as the natural logarithm of real wages in our study. Thus,

Hypothesis 2.5: The lower the wages that EU- MNEs pay, the higher EU FDI flows into China.

Firm technology

Technological capability is positively related with FDI and this has received theoretical and empirical support (Dunning, 1993a; Grubaugh, 1987; Prugel, 1981). The increasing number and range of cross-border transactions and the important role played by technology (Johnson and Turner, 2003; p4). Under Dunning's ownership competitive advantage theory, if technology is information-intensive in a country, the exploitation of technologically intermediate goods across national boundaries is internalized by firms via FDI. In previous studies, it was found that foreign firms faced problems with technology –based investment in China because of the legal system, too rapid change in the market, insufficient quality and cultural differences (Bennet et al., 2001; Chen and Reger, 2006). The EU is a relatively open set of countries which results in a country catching up to the industrial leader (McGrattan and Prescott, 2009). The Chinese firms are protected, resource-based, labour-intensive, low-technology and inefficient firms (Rugman, 2008). With the dramatic development of the Chinese technology market, China is looking for high-tech foreign firms' investment in its market. We use the natural logarithm of intangible assets as a proxy for technology and predict that:

Hypothesis 2.6: The higher the technology capacity of EU MNEs, the more the EU-FDI flows into China.

Firm Profitability

Companies with high profitability should manage their activities more efficiently but also create the resources necessary for future expansion (Cantwell and Sanna-Randaccio, 1993). Therefore, one can expect that high profitability will increase the probability of internationalizing the market, which is empirically confirmed by Lien et al. (2005) and Luo et al. (2009). The argument, however, may work in the opposite direction (Stoian

and Filippaios, 2008): more profitable firms prefer less risk when investing abroad and hence might choose to invest in non-equity participation (Barbosa and Louri, 2002; Dimelis and Louri, 2002). In this study, we measure firm profitability as operating profits over total assets. It is hypothesized that:

Hypothesis 2.7: The higher the profitability of EU MNEs, the more the EU-FDI flows into China.

Firm Size

The size of a firm reflects its capability to engage in these FDI types of activities (Buckley and Casson, 1976). Further, the larger the firm grows relative to the domestic market, the less profitable it would be to increase its domestic share relative to expanding abroad. According to Dunning (1993a), size is a transaction cost minimizer. Much empirical evidence accentuates the impact of firm size on FDI as very positive (e.g., Culem, 1988; Grubaugh, 1987; Kimura, 1989). Blomstrom and Lipsey (1991), however, found no link between FDI and size. Pradhan (2004) argues that FDI and size may be linked non-monotonically due to monopolistic advantage such that FDI first increases with size but then decreases after the threshold point. Due to their large capacities, large firms should be more able to combine resources outside their national markets and may therefore pursue more than one objective at the same time. The study uses the natural logarithm of total assets as the measure of firm size. It argues that: *Hypothesis 2. 8: The larger an EU firm's size, the more its FDI in China.*

2.4.3 The set of Location-based advantages

Host country market size

The nature of host countries' locational advantages partly depends on the motivation for firm FDI strategy (Dunning, 1993a). Market size is often measured by GDP or GDP per capita. Rapid economic growth, achieving a high growth rate of 10% per annum since 1979 in China, may create large local markets and business opportunities for foreign investors to reach cost effectiveness and hence foster their confidence in investing in China. Recently, researchers (e.g., Jeon and Rhee, 2008) on international foreign investment explained the determinants of FDI by market size. The market size hypothesis argues that inward FDI is a function of the size of the host country market. It measures absolute and relative income of the Chinese economy by the natural logarithms of GDP and GDP per capita, respectively, during the 1998-2007 period. High demand, prospects of economies of scale, good economic health, and absorptive capacity are factors that give a "green light" to foreign investors. The OLI framework states that market size and openness of the host country are important FDI motivators. Thus,

Hypothesis 2.9: The bigger the Chinese economy the more EU-FDI flows into China.

Economic Openness

A greater degree of openness encourages a higher flow of FDI, primarily because most MNEs are export-oriented. Kravis and Lipsey (1982) report the positive impact of host countries' degree of openness on the location decisions of MNEs. Market openness has been found to be important for FDI flows in numerous studies (e.g., Kravis and Lipsey, 1982; Buch et al., 2005). EU market-seeking FDI is also related to the market openness of a host economy. Since we consider that the Chinese FDI is market driven, market

openness has to be considered alongside market size. The expected positive influence of openness on FDI inflow confirms a relatively new approach Empirical evidences (Jun and Singh, 1996) exist to back up the hypothesis that higher levels of exports lead to higher FDI inflows. The study therefore includes the ratio of exports plus imports over GDP in the model to examine the impact of openness on FDI. Market openness reflects the competitiveness and export orientation of an economy and is used as a variable to accommodate the market-seeking motive of EU investing firms. Thus,

Hypothesis 2.10: There is a positive relationship between EU FDI and the openness of the Chinese economy.

2.4.4 The set of Internalization advantages

JV with personal/private share

In the study, the private share means private firms. Internalization advantages enable firms to create value by internalizing the ownership-specific advantages, depending on various factors affecting transaction costs due to structural and transactional market imperfections (Buckley and Casson, 1976; Dunning, 1993a). Accompanying China's transition since the late 1970s has been the rise of firms with diverse ownership types (Jefferson et al., 2000; Peng, 2003; Tan, 2002). The private share in China is basically composed of small and medium sized enterprises. As recently as 1978, officially this form of enterprise did not exist. Ownership caps and legal restrictions have led many foreign investors to enter China through setting up forced JVs. Private ownership is usually small but nimble, poor in R&D but good at market orientation and increasingly important in the Chinese economy (Tan, 1996, 2001; Tan and Li, 1996). The contribution of domestic private enterprises to FDI inflow has increased significantly in

China because of privatization[20] of state-owned enterprises (SOEs) and the changing of foreign firms' operations and strategies (Bulcke et al., 2003; Peng et al., 2004). Lansbury et al. (1996) find that the private sector share has a positive effect on inward FDI in Central Europe. The study expects private ownership (i.e., personal capital divided by total capital), which has numerous development dimensions in transition economies, to have a positive impact on FDI:

Hypothesis 2.11: China's greater privatization is positively associated with more EU-FDI inflows in China.

R&D intensity

Buckley and Casson (1976) showed that MNEs that were active in R&D intensive industries had a higher degree of internalization. A significant factor in market-seeking internationalization is the level of innovation and R&D allowing a firm to exploit the ownership advantages connected to the accumulation of technological competence and expertise. The hypothesis of a positive link between R&D and the propensity to undertake FDI has been extensively tested and confirmed (e.g., Grubaugh, 1987; Lall, 1980; Lin, 2010; Lin and Yeh, 2005; Markusen, 1995). However, with regard to labour-seeking investments, the evidence generally suggests an inverse relationship. This is because firms whose competitive advantage is based primarily on innovation, in products and process are less likely to invest abroad with the aim of cutting labour cost. As regards resource-seeking investments, the empirical evidence seems to suggest a

[20] Privatization is the fourth of the last interrelated stages of China's enterprise reform with the formal conversion of ownership later on in the mid-1990s. The last stage of ownership change is the outright conversion of enterprises, usually from state or collective ownership to some other formal ownership classification; the outcome of the three preceding stages of reform (Jefferson and Su, 2006). In 1997, the Chinese Communist Party's 15th Party Congress made the shareholding system a centrepiece of China's enterprise restructuring. While formal privatization was ruled out for ideological reasons, the shareholding experiment was viewed widely as a covert mandate for privatization (Li et al. 2000).

negative link (Dunning, 1993a). This study considers these conflicting arguments and expects EU R&D intensity to have a positive impact on FDI inflows to the Chinese market and R&D is measured as the ratio of intangible assets to total assets.[21] Thus,

Hypothesis 2.12: The higher the R&D intensity of EU MNEs, the more the EU-FDI flows into China.

2.4.5 Control variables

In addition to examining the hypothesized effects, the study controls for six firm variables that may impact the EU FDI inflow in China. The study controls for *age* in terms of log of year since founding. A positive correlation has been reported between age and FDI by Lin et al. (2005), while an inverse link between age and FDI was found by Luo et al. (2009). The study controls for *export intensity* measured by export sales over total sales. The literature suggests FDI and export orientation are directly linked (Drake and Caves, 1992; Lin, 2010). To control the effects of intangible assets on firm FDI, the study uses *innovation* measured as the natural logarithm of output involving new product innovation (Girma et al., 2009) for technological assets, and *advertising* as measured as advertising expenditures to sales (Grubaugh, 1987) for marketing assets. To include the financing structure of MNEs, the study considers the factor *Leverage*, measured by the ratio of total non-equity liabilities to total assets (Forssbaeck and Oxelheim, 2008). In additionl, the host currency appreciation may well stimulate inward investment (Pain and Welsum, 2003). Hence, the *Exchange rate* between Euro and Chinese Yuan is included as a macroeconomic control factor. Since the study examines EU firm FDI during10 years, the study incorporates *year dummies* to control for possible effects of serial correlation. Using standard industrial classification (SIC)

[21] Due to incomplete data, we are unable to use the alternative definition of R&D expenditure over sales.

classes, the study also controls for industry effects. In the sample, EU firms were distributed across 9 industries, so we used 9 *industry dummy* variables (see Table 2.2).

Table 2. 2 Nine sub-sectors of manufacturing according to their main product

Group	Industry	SIC classes	Number
1	Food and beverages	10, 11	51
2	Textiles , wearing apparel and leather	13,14, 15	5
3	Wood and furniture	16, 31	8
4	Printing and paper products	17, 18	13
5	Basic metals and fabricated metal	24, 25	42
6	Electrical equipment and compute	26, 27	119
7	Chemical and basic pharmaceutical products	20, 21	143
8	Machinery and transport equipment	28, 30	232
9	Other*	19, 22, 23, 32	95

Notes: *Other includes 'rubber and plastics', 'coke and refined petroleum', 'other non-metallic mineral' and 'other manufacturing'.
Source: Compiled by the author according to SIC classes.

The hypotheses, their theoretical justification, variable definitions, the expected signs and data sources are detailed in Table 2.3. The distinctive nature of the factors influencing EU-FDI in China is expected to be captured by the collective significance in the variables that we have identified.

Table 2.3 The hypotheses, theoretical justification, definitions, the expected signs and data sources of variables

Variable name	Definition	Sign	Theoretical Justification	Data source
a. Dependent variables				
FDI 1	Natural logarithm of foreign capital			NBS
FDI 2	Foreign capital over total capital			NBS
b. Institutional variables				
H1. Rule of law	Rule of law in China	+	Institutional factor	ICRG
H2. Institutional change	WTO dummy, which is 1 for the 2002-2007 period; 0, for the 1998-2001 period	+	Institutional factor	WTOSD
H3. Corruption	Corruption index for China	-	Institutional factor	ICRG
c. Ownership advantages variables (O)				
H4. Capital intensity	Natural logarithm of fixed assets to number of employees	+	Ownership-specific	NBS
H5. Wage	Natural logarithm of real wages	-	Resource -seeking	NBS
H6. Technology	Natural logarithm of intangible assets	+	Ownership-specific	NBS
H7. Profitability	Operating profits over total assets	+	Ownership-specific	NBS
H8. Firm size	Natural logarithm of total assets	+	Ownership-specific	NBS
d. Location advantage variables (L)				
H9. Market size	Natural logarithm of GDP	+	Location-economic factor / Market-seeking	WBDI
H10. Openness	Exports plus imports over GDP in China	+	Location-economic factor / Market-seeking	WBDI
e. Internalization variables (I)				
H11.Personal share	Personal capital over total capital	+	Transaction Cost/Market-seeking	NBS
H12. R&D	Intangible assets to total assets	+	Transaction cost/Market-seeking	NBS
f. Control variables				
Firm age	Natural logarithm of years since EU firm's establishment in China	+	Location-advantage	NBS
Export intensity	Export sales over total sales	+	Market-seeking	NBS
Innovation	Natural logarithm of output involving new product innovation	+	Resource-seeking	NBS
Advertising	Advertising expenditures to total sales	+	Market-seeking	NBS
Leverage	Total non-equity liabilities over total assets	-	Location-economic factors / Market-seeking	NBS
Exchange rate	Exchange rate between Euro and Yuan	-	Location-economic factors / Market-seeking	WTOSD

Notes: All monetary values are in constant (2007) Chinese RMB Prices. NBS is national bureau of statistics of China. ICRG is the international country risk guide provided by the Political Risk Services (PRS) group. WTOSD is World Trade Organization statistics division. WBDI is the World Bank development indicator.H1 to H12 refer to the corresponding hypothesis for each factor.

2.5 Research Methodology

2.5.1 Data and sample

The study uses a new and comprehensive firm-level data set on the foreign activities of EU manufacturing firms drawing on the data sources from the Annual Reports of Industrial Enterprises Statistics compiled by the National Bureau of Statistics of China (NBS). The Annual Report covers the population of firms (both foreign and local) with annual turnover of over five million Renminbi (just above $600,000) inside China. It is estimated that the firms contained in the dataset account for about 85–90% of total output in most industries. The dataset includes information on firm ownership structure, industry affiliation, geographic location, establishment year, employment, gross output, sales, R&D, value added, net fixed assets, exports, R&D, and employee training expenditures. For the NBS the original dataset covers an unbalanced panel spanning the period 1998-2007. However, in view of the objective of this study, attention is confirmed to EU firms. As a result, the final dataset consists of an unbalanced panel of 2,932 observations from about 680 EU firms over the period 1998-2007 in China after standard data filtering. It follows criteria from the first Economic Census in classifying the EU firms into 30 sectors (for details see Table 2.4) in large & middle sized manufacturing industry and 9 industries according to SIC classes (details see Table 2.2). In China, all firms, local or foreign, are required by law to complete the census survey conducted by NBS. It includes data for 33 two-digit manufacturing industries and over 400 four-digit industries.

Table 2. 4 Distribution of EU foreign direct investments across sectors in China

Sector	percentage
Food processing	0.1503
Food production	3.9181
Beverage industry	1.4424
Textile industry	0.1730
Garments and other fiber products	0.0413
Timber processing	0.1270
Furniture manufacturing	0.0633
Papermaking and paper products	0.5289
Printing and record medium reproduction	0.0019
Cultural, educational and sports goods	0.1131
Petroleum refining and coking	0.9952
Raw chemical materials and chemical products	22.6524
Medical and pharmaceutical products	2.7999
Chemical fibre	0.1794
Rubber products	2.1367
Plastic products	0.3281
Non-metal mineral products	6.3840
Smelting and pressing of ferrous metals	1.4986
Smelting and pressing of non-ferrous metals	0.5736
Metal products	1.7130
Ordinary machinery	6.8320
Special purposes equipment	1.5700
Transport equipment	20.6354
Electric equipment and machinery	5.5193
Electronic and telecommunications, Other electronic equipment	13.4132
Instruments and meters	4.8706
Crafts and other products	0.0820
Waste of resources and waste material recycling	0.0347
Electricity, heat production and supply	0.0000
Gas production and supply	0.0129
Water production and supply	1.2133
Total	100

Source: Compiled by the author according to FDI Statistics from Ministry of Commerce of the PRC

The data set is suitable for studying EU firms' FDI in China for the following reasons. First, Pan, et al., (1999) have reported that census data are reliable and internally consistent for empirical studies. Studies using the data have been published in leading journals (Girma and Gong, 2008; Tan & Peng, 2003; Wei & Liu, 2006). Second, the NBS pays special attention to ensuring the quality of the data. Several logic tests are

performed to ensure the accuracy of the information in the report, identify and eliminate illogical data points and ensure the consistency of the reported figures. A notable feature of this data is that information disclosure by firms is compulsory, leading to a 100% response rate. While inaccurate data disclosure has been a feature of many transition economies, Chinese networks and the two–way interdependence of firms and the State make major inaccuracies less likely. Third, this dataset has at least two advantages: it covers a very recent period, and it allows us to control for observable and unobservable firm-level characteristics in order to mitigate aggregation bias. The multi-year census data enable us to employ a panel data structure to test our models. Thus we can investigate firms' foreign investment activities over time, and test the dynamic causal relationship, which is the main advantage over static cross-sectional data (Dunning 2009; Fitzmaurice, Laird, & Ware, 2004; Gao et al., 2010).

Another feature of the database is that EU firms are classified under five ownership categories: state-owned, collective-owned, corporate-owned, and private-owned and Hong Kong, Macro and Taiwan (HMT)-owned, while a continuous measure of other ownership composition is constructed from the database by looking at the fraction of capital paid in by other investors. This is the key variable as far as this study is concerned, since it identifies the level of treatment received by EU firms in China. This feature remains a unique enterprise identifier irrespective of the dynamics of ownership change. In this study, we focus on private-owned share variables in the set of internalization advantages; one is based on no previous empirical study, the other feature is the largest (dynamic) change among ownership structure under the more liberal Chinese FDI policy with respect to ownership. Accordingly, the study identified less than 0.9% personal share capital at the start of the sample (i.e., 1998), and by the

end of the sample period (2007), more than 18% of these firms were still under majority EU ownership.

2.5.2 FDI by EU firms in China's transitional economics.

Since the People's Republic of China was established in 1949, European investment in China has undergone dramatic change. Five phases may be identified in the development of EU FDI in China: nationalisation (1949-1957), exclusion (1958-1979), resumption (1980-1992), rapid increase (1993-1999) and further development in the new millennium (2000-).European investment had the dominant position in 1949; statistics show European enterprises' control of the principal mines and heavy industries with an investment of US$1734.1 million in 1936, which accounted for about half of total foreign investment in China[22]. However, they totally disappeared in the 1950s because the Chinese government redefined and eliminated foreign investment in China over the period from 1949-1957. China embarked on an 'opening-up' and economic reform policy[23] and signed a trade agreement with the EEC in 1978 after a 20 - year 'quiet' period in terms of foreign investment. EU investment resumed[24] and in the early 1990s it rapidly increased. Further development has taken place in the new millennium against the background of two of the biggest mutual markets, bilateral political relations and China's accession to the WTO (Bulcke, 2003; European Commission, 2007; Qiu, 1999; Shan, 2005). In recent years, EU companies have invested considerably in China (new annual flows of utilized FDI of around US$ 4 billion on average in the last 5

[22] T. N. Thompson, China's Nationalization of Foreign Firms: The Politics of Hostage Capitalism, 1949-57, University of Maryland Law School Occasional Paper / Reprints Series in Contemporary Asian Studies, No. 6-1979(27), at 3

[23] The decision was made during the Third Plenary Session of the 11th central Committee of Communist Parety of China in 1978. See Wang YongJun, Investment in China: A question and answer guide on how to do business.

[24] The June 4th events in 1898, however, caused the EU to freeze its relations with China. Nevertheless, relations were soon restored and China was reinstated on the list of countries eligible for co-operation commencing in 1992.

years), bringing stocks of EU FDI to over USD 35 billion[25].The rapid evolution of the EU's foreign direct investment relationship with China has taken the world by surprise. The EU firms are relatively more concentrated in capital and technology intensive sectors with sizeable advantage in higher value added economic activities and a high local –market orientation (Bulcke et.al. 2003; Meger, 2004; the National Bureau of Statistics of China, 1998-2007; Van den Bulcke and Zhang 1994, 1998;).

As regards the characteristics of EU firm in the Chinese manufacturing sector in the research period 1998-2007, the firms are middle - large sizes. Especially after China's open policy and accession to the WTO, EU FDI projects in China are considering the investment climate as stable and with no risk. According to the ownership degree and consistent with prior studies (Bulcke et al., 2003), ownership at the time of entry can be classified into minority-owned JVs (25- 49 per cent), equally owned JVs (50-50), majority-owned JVs (51-94 per cent) and WOFEs (95-100 per cent). The equity share held by the EU firms in China reached on average 60.9 per cent, a reflection of the dominant position in the ownership of their operations in China. SOEs accounted for 14.91 per cent of share capital in 1978, but only 9.2 per cent in 2007. Interestingly, private shares accounted for only 0.67 per cent in 1998, but increased to 2.16 per cent in 2007.The contribution of domestic private enterprises to EU FDI inflow has increased significantly because of the ownership reform and privatization of SOEs in China on the one hand, and the EU firms' operations and strategies on the other hand (Bulcke et al., 2003; Peng et al. 2004;).

Regarding the entry mode of EU firms in China in the database, the duration of equity Joint Venture (EJV), contractual Joint Venture (CJV) and Wholly Foreign-Owned

[25] European Commission External Trade Website, 2009, http://www.ceua.org/English/Business/1197529892d19226.html

Enterprises (WFOE) of European-invested enterprises rose significantly since the beginning of the 1990s. Majority and wholly owned firms were chosen more frequently. The number of EU WFOEs rose from 28 in 1998 up to 183 in 2007 as a result of the introduction of China's liberal ownership policy and the consequent changes in the strategic options of EU firms for their Chinese operations.

The sector distribution of EU firms in China changed somewhat over the period 1998-2007. Post –WTO (2002-2007) R&D based industries were more important compared to pre-2001(1998-2001). Intellectual property protection may also have a substantial impact on the entry path and on the type of resources committed by these firms. Trade barriers are often associated with other entry conditions (e.g. degree of foreign ownership, the sectoral and geographic requirement or incentives), which influence the investment decision (Bulcke et al, 2003). As already mentioned in section 2.3, FDI–related institutional change, probably reflected the positive perception of the political situation of foreign investors in high-tech and long-term oriented projects at that time. The larger EU presence is in a combination of high-technology and capital intensive sectors such as raw chemical materials & chemical products, transport equipment, electronic & telecommunications and other electronic equipment in the data set.

2.5.3 Model specification and method

On the basis of theory, the study developed the following multiple regression equation employed as the base specification for the empirical test to identify the major determinants of China's FDI inflows from EU firms:

$$FDI_{it} = \alpha + \sum_{k=1}^{n} \beta_k * I - OLI_{kit} + \sum_{k=1}^{m} \gamma_k * CF_{kit} + \varepsilon_{it} \quad (2.1)$$

where I-OLI and CF are institutional OLI and control factors, respectively, as shown in Table 2. 2; α (the intercept term), β and γ are estimable coefficients; ε is the error term; *i* and *t* stand for firm and time, respectively. FDI is either FDI 1 or FDI 2.

Equation (1) is used as a regression model for the pooled ordinary least squares (OLS), random effects (RE) and fixed effects (FE) estimation methods[26]. We report both RE and FE outputs for comparative purposes even if the Hausman test favours the latter.

To investigate heterogeneity within the data we employ a structural break framework. First, we investigate the impact of significant changes in policy liberalization regime dating from 2001 WTO accession. These changes might influence EU firms' investment decision-making of investors across all the variables. Therefore we divide the period into two phases: pre-WTO, 1998-2001; and post-WTO, 2002–2007.

2. 6. Results and Discussion

This section presents the summary statistics for our sample, reports the regression results, institution changes over time analysis and discusses the institutional OLI variables.

2.6.1 Statistics summary

Table 2.5 provides descriptive statistics for the institutional OLI variables and control variables. It further shows definition of the variables and their expected relation with FDI. With respect to the mean values of some of the explanatory variables, firm profitability is about 6.5%, which is not particularly high and it may imply EU firms' low profitability. The leverage ratio is around 51% and can be considered as relatively high. Furthermore, personal ownership of less than 1% seems to be low. The established age of EU firms is about 14 years, which may imply that relatively younger firms would

[26] Censored Tobit regressions were conducted as our dependent variable is limited not to take negative values. The Tobit results (not reported) are very similar to the OLS estimates.

seek opportunities in China to grow. Regarding the export intensity, about 17% of EU firms' sales are in the form of exports. The R&D intensity, on the other hand, is just over 3%.

Table 2.5 presents the correlation matrix between the variables. The dependent variable is the FDI in China made by EU MNEs, which is continuous. The study measures EU FDI in China in two ways: i) the natural logarithm of foreign capital (IMF, 1993; OECD, 1999), ii) the ratio of foreign capital to total capital. All the non-ratio variables in this study are inflation-adjusted. In what follows, the study discusses the potential FDI determinants at firm and country level. The signs of the coefficients based on the link between FDI 1 and OLI variables are generally consistent with predictions, except on profitability and personal share. Regarding the institutional factors, rule of law and corruption produce signs that contrast with the expectations. When examining the coefficient signs based on FDI 2, there are more factors with unexpected signs. Although these preliminary findings based on a univariate analysis give the author some insights, one needs to be cautious of the limitations of such an analysis.

Table 2. 5 Descriptive statistics and correlation matrix of EU firms FDI in China

	Mean	S.D.	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
1. FDI 1	10.22	3.027								
2. FDI 2	0.759	0.289	0.59**							
3. Rule of law	-0.409	0.046	-0.13**	-0.14**						
4. Corruption	1.655	0.441	-0.08**	-0.05*	-0.20**					
5. Capital intensity	10.59	2.020	0.46**	-0.02	-0.06**	0.02				
6. Wage	8.809	1.555	0.35**	-0.05*	-0.12**	0.03	0.66**			
7. Technology	4.877	4.498	0.16**	-0.08**	0.22**	0.27**	0.34**	0.18**		
8. Profitability	0.064	0.179	-0.10**	-0.03	-0.06**	-0.04*	-0.09**	0.06**	-0.11**	
9. Firm size	12.07	1.618	0.44**	-0.06**	-0.07**	0.01	0.74**	0.79**	0.27**	0.02
10. Market size	28.25	0.369	0.03	0.11**	-0.66**	0.17**	0.06**	0.19**	-0.24**	0.11**
11. Openness	0.585	0.127	-0.03	0.07**	-0.64**	0.31**	0.04*	0.17**	-0.15**	0.11**
12. Personal share	0.006	0.055	-0.11**	-0.13**	-0.03	0.03	-0.04*	-0.05*	0.01	0.01
13. R&D	0.031	0.055	0.05*	-0.02	0.15**	0.12**	0.04*	-0.10**	0.58**	-0.2**
14. Firm age	2.571	0.439	0.07**	-0.09**	0.08**	-0.11**	0.09**	0.26**	-0.01	0.05*
15. Export intensity	0.167	0.275	0.13**	0.20**	-0.14**	-0.04*	0.12**	0.11**	-0.04*	0.02
16. Innovation	1.855	4.379	0.11**	-0.17	-0.05*	-0.06**	0.17**	0.25**	0.06**	0.02
17. Advertising	1.228	2.656	0.05*	0.00	-0.17**	0.23**	0.16**	0.29**	0.08**	0.01
18. Leverage	0.512	0.261	0.01	0.05*	-0.01	0.04*	0.11**	0.16**	0.02	-0.4**
19. Exchange rate	9.624	1.216	-0.11**	-0.03	-0.37**	0.26**	0.03	0.14**	-0.25**	0.07**

	(9)	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*
10. Market size	0.11**									
11. Openness	0.09**	0.74**								
12. Personal share	-0.05*	0.03	0.04*							
13. R&D	-0.04*	-0.17**	-0.13**	0.05**						
14. Firm age	0.17**	-0.14**	-0.17**	-0.11**	-0.10**					
15. Export intensity	0.08**	0.07**	0.03	0.02	-0.07**	-0.04*				
16. Innovation	0.25**	-0.03	-0.06**	0.02	-0.02	0.11**	0.03			
17. Advertising	0.21**	0.37**	0.39**	-0.03	0.03	0.07**	-0.07**	0.05*		
18. Leverage	0.19**	0.02	0.02	-0.04*	-0.04*	-0.06**	0.03	0.03	0.06**	
19. Exchange rate	0.07**	0.67**	0.74**	0.03	-0.17**	-0.11**	-0.07**	-0.10**	0.30**	0.03

Notes: The asterisk * (**) indicates that the correlation coefficient is significant at the 0.05(0.01) level (two-tailed, Pearson). S.D. refers to standard deviation.

2.6.2 Institutional factors in China

Table 2.6 reports the regression results for the static model using OLS, FE and RE methods. One important finding of the study is that the regression results reveal a highly significant but, unexpectedly, negative relationship between the level of rule of law and inward FDI. It seems that improvements in rule of law deter EU FDI, which has a negative coefficient not consistent with hypothesis 1 and North (2005) but this supports Fan et al. (2009).

The literature generally suggests that the quality of institutions is likely to be an important determinant of FDI activity, particularly for less-developed countries such as China. However, our results indicate that market size and economic fundamentals are more important for the motivations of EU FDI inflows than in countries with a good legal system. In addition, the informal institutions such as Chinese culture, trust and depth of relationships are highly reciprocal, situational, dynamic and context-related. *guanxi* marketing is probably the most frequently discussed Chinese value in the literature. The interpersonal networks cultivated by managers in the society may serve as informal substitutes for formal institutional support, although fewer guanxi networks *fewer, of less* significance can happen, which reflect the changing business culture in China (Faure and Fang, 2008). Finally, since accession to the WTO, China has made recognizable progress in liberalizing sectors, introducing and amending laws and regulations and lowering tariffs in line with its accession commitments. However, despite China's efforts, enforcement remained problematic, with restrictive investment rules, local content requirements, complex technical standards for EU firms, subsidies and other forms of financial incentives for only Chinese companies, so the role of European enterprises in China's investment and trade regime is limited.

The institutional change variable, measured by the WTO dummy, has a positive and significant relation with FDI. This supports the argument regarding the impact of series of preferential policies and measures that encourage the absorption and inflow of a foreign investment, which occurred in 2001, the entry-year into the WTO. In order to comply with the WTO's rules, the Chinese government had to accelerate legislative and institutional reforms, harmonize policies, and abolish protectionism. Our interpretation is that institutional policy changes encouraged the technical development and innovation of FIEs. Secondly, the Chinese government encourages foreign businessmen to invest in central and western China. The impact of WTO accession in 2001 has significantly boosted, and will probably continue to catalyze foreign and EU investment in China. The coefficients on Corruption reveal that the level of corruption does not affect EU firms' FDI decisions, which is not in line with H3.

Table 2. 6 Institutional and OLI factors influencing FDI decisions: 1998-2007

	Pooled OLS	Random effects	Fixed effects
Institutional variables			
H1. Rule of law	-14.350 (1.748)***	-14.251 (1.653)***	-14.044 (1.784)***
H2. Institutional change	1.341 (0.244)***	1.356 (0.197)***	1.419 (0.210)***
H3. Corruption	0.087 (0.148)	0.142 (0.140)	0.215 (0.161)
Ownership variables (O)			
H4. Capital intensity	0.259 (0.062)***	0.225 (0.083)***	0.082 (0.136)
H5. Wage	0.092 (0.055)*	0.114 (0.067)*	0.128 (0.075)*
H6. Technology	-0.002 (0.020)	-0.013 (0.021)	-0.038 (0.018)**
H7. Profitability	-2.117 (0.316)***	-1.938 (0.350)***	-1.117 (0.428)***
H8. Firm size	0.783 (0.093)***	0.724 (0.106)***	1.154 (0.308)***
Firm size ^{2}	-0.012 (0.004)***	-0.009 (0.004)**	-0.045 (0.019)**
Location variables (L)			
H9. Market size	2.421 (0.429)***	2.281 (0.383)***	2.980 (0.557)***
H10. Openness	-11.717 (1.759)***	-11.499 (1.626)***	-10.379 (1.793)***
Internalization variables (I)			
H11. Personal share	-5.443 (1.581)***	-5.707 (1.775)***	-7.473 (2.251)***
H12. R&D	6.290 (2.512)***	6.044 (2.774)**	4.378 (2.186)**
$R\&D^2$	-13.629 (6.803)**	-12.317 (5.688)**	-7.125 (2.933)**
Control variables			
Firm age	-0.175 (0.102)*	-0.199 (0.108)*	-2.230 (1.127)**
Export intensity	0.466 (0.129)***	0.501 (0.173)***	0.482 (0.240)**
Innovation	-0.012 (0.011)	-0.003 (0.016)	0.033 (0.024)
Advertising	0.009 (0.024)	0.016 (0.028)	0.029 (0.038)
Leverage	-1.340 (0.218)***	-1.348 (0.266)***	-0.905 (0.440)**
Exchange rate	-0.455 (0.074)***	-0.479 (0.068)***	-0.550 (0.071)***
Constant	0.211 (0.843)	0.359 (0.783)	3.047 (1.731)*
Firms/observations	680 / 2932	680 / 2932	680 / 2932
Adjusted R^2	0.3086	0.4945	0.1535
F statistic	144.32***	1016.13***	7.74***

Notes: Dependent variable is FDI 1. Firm size^2 and $R\&D^2$ are the squared terms of Firm size and R&D, respectively. The standard errors robust to heteroscedasticity are reported in the parentheses. (*), (**) and (***) indicates that the coefficients are significant or the relevant null is rejected at the 10, 5 and 1 percent level, respectively.

2.6.3 OLI paradigm variables

Taking the set of OLI variables into consideration, the findings indicate that EU firms with higher capital intensity tend to invest more in China as the respective coefficient is positive across all methods and significant for OLS and RE methods, confirming Hypothesis 4. Our data show that EU investors typically fall in the category of high-tech and capital-intensive investors. This finding is consistent with Dunning (2000), and Roberts and Tybout (1997), among others. However, the significantly positive coefficient in local wage cost is not consistent with Hypothesis 5. Labour cost plays a *minor* role in overall costs, while capital plays a very important role in EU FDI in China. However, the variable for firm technology has a significantly negative coefficient not line with the theory, which contradicts Hypothesis 6 as it suggests that higher technological intensity actually lowers FDI. There are a number of possible reasons for this finding: first, China's aggressive drive to acquire foreign intellectual property, imprecise market information, a strong and negative intervention of local government and culture (Chen and Reger, 2006). Second, the Chinese government restricted the high or middle-tech sector JV such as autos to 50% share and promoted indigenous technical standards[27]. Third, although the SEZs had the power to grant investment incentives, problems with red tape, bureaucratic interference, and lack of basic infrastructure resulted in fewer high-technology projects than initially envisioned. Finally, technology transfer from EU firms in China focuses on production technology to adapt products to local needs. It reflects that the major motivation of EU firms' FDI in China is "market driven" instead of "technological driven" (Chen and Reger, 2006; Bennet et al., 2001). It may be that high-technology EU firms have firm-specific

[27] Following Eurostat (2004), it uses a fourfold division of technological capabilities: high-technology, medium high-technology, medium low-technology, and low-technology.

advantages that cannot easily be emulated; hence they would prefer to export rather than internalize production via FDI because of their quasi-monopolistic power (Giddy, 1978).

Surprisingly, profitability of EU firms in China was found to have a highly significant and negative impact on FDI inflow, which is against Hypothesis 7. MNEs are usually in a better financial position to raise capital. High profitability will increase the probability of expanding abroad, as confirmed by Trevino and Daniels (1994) for U.S. FDI. There may be a few reasons why EU FDI in China may not behave in the conventional manner. First, the theories about the determinants of FDI are derived from Dunning's OLI paradigm. This approach offers a valuable framework to determine, on the one hand, what a firm's ownership advantages are, and on the other, how these advantages can be enhanced by using specific location sites. EU FDI going to China is market-oriented; the cost of maintaining relationships (*guanxi*) and local leadership characteristics have an effect on FDI (Bulcke et al., 2003). So do government intervention, local content requirements and non-compliance with government project and WTO commitments, local protectionism, ownership restrictions on EU firms, lack of an independent regulator and technical standards. In particular, intellectual property rights (IPR) infringement remains a huge problem for European businesses in China. Seven out of ten European businesses operating in China say that they have been victims of IPR violations. In 2007, European manufacturers estimated that IPR theft cost them 20% of their potential revenues in China, while Chinese non-tariff barriers cost EU operators more than more than €21.4 billion a year in missed business opportunities (European Commission, 2007) (See Appendix 2: Market Access obstacles for European Companies in China, European Commission 'study on the Future opportunities and challenges in EU-China Trade and Investment Relations 2006-2010').

Regarding firm size and R&D, the study considered the possibility of the non-monotonic association of FDI with the factors R&D and size (Pradhan, 2004): The results confirm a non-linear association of FDI with R&D and size. Buckley and Casson (1976) argue that a firm's size reflects its capability to engage in these types of activities. The results in Table 2.4 reveal a reverse-U shape between FDI and size, suggesting that size and FDI are positively linked for smaller firms but the relation becomes inverse for larger companies. This finding is comparable to Pradhan's (2004) for Indian manufacturing firms. The study reports the same type of a non-linear correlation between FDI and R&D, which implies that higher R&D intensity improves FDI in China but after some point R&D and FDI move in opposite directions. These findings do not confirm Hypothesis 8 and Hypothesis12 in the sense that they assume linearity.

Meanwhile, another important finding against Hypothesis 11 is that the coefficient estimate on private ownership is strongly negative and significant, which is not consistent with other studies' suggestions (Lansbury et al., 1996; Peng et al. 2004). In general, privatization programmes tend to indicate a government's willingness to allow the private sector to play a larger role in the economy; the specific features of formal institutions shape the incentives faced by private ownership and influence the extent of FDI. One possible explanation is that the private and individual owned enterprise sector in China is basically composed of small and medium sized enterprises. As recently as 1978 officially this form of enterprise did not exist. Most POEs are family owned. Despite their increasing importance in the Chinese economy, private firms face significant institutional hurdles. POEs are natural persons (i.e. single individuals) and were not allowed to form JVs with foreign investors until recently. The other reason is that in transition economies such as China, ownership restrictions remain a huge problem for European business to cooperate with the private sector in China. Moreover,

ownership requirements are not affected by the WTO. Foreign companies can still not have more than two Chinese partners. The percentage of private sector share of EU firms increased during the period under study, but by 2007 the EU private share in China was only 2.16%., which did not affect FDI inflows, implying that privatization is not operationalized as strongly through the regulative pillar as it is through the cognitive and normative pillars.

It could be that EU firms gain much from location-based advantages. China has experienced remarkable economic growth, achieving a high growth rate of 10% per annum since 1979. 1993 marked a turning point with Deng Xiaoping's Southern Tour , while accession to the WTO-which sent a strong signal to the world of China's commitment to economic liberalization and "market-friendliness". Surprisingly, a major location-economic factor finding is that trade openness seems to deter FDI as the coefficients in all specifications are significantly negative, which is contrary to Hypothesis 10. A possible explanation for the lack of significance of host economy openness is the short history of economic liberalization in this emerging economy. Market obstacles and the institutional environment lead to trade restrictions. With regard to market size, as expected by Hypothesis 9, the significantly positive coefficient on market size implies that higher market size is directly linked to FDI, which confirms Forssbaeck and Oxelheim (2008), and Luo et al. (2009).

2.6.4 Control variables

We now discuss the results for our six control variables. We find that firm age and FDI are linearly but inversely linked. As expected, our findings also suggest that EU firms with higher export intensity tend to engage more in Chinese FDI. The significantly negative coefficient on leverage reveals that higher debt usage in EU firms' capital

structure reduces their FDI activity in China. The significantly negative coefficient on exchange rate implies that the depreciation of the Chinese Yuan against the Euro reduces EU FDI into China, which supports the capital gain hypothesis.[28] Finally, the estimated coefficients related to product innovation and advertising intensity imply that these factors do not significantly affect EU firms' decisions to invest in China. In short, we find no support for these two control variables.

Furthermore, our initial findings reveal that time and industry dummies are not statistically significant. This may be expected because all the firms in the sample are from the manufacturing 9 different industries sector, and some institutional factors already account for time effects. Hence, the study does not include in the models these dummy variables, noting that inclusion of these dummies does not change the quality of results.

2.6.5 Change over time

China's entry into the WTO induced additional liberalization. In order to investigate whether or not Chinese accession to the WTO changed the character of EU firms' FDI over the period in question, the data were divided into two time periods around 2001. The validity of this procedure is borne out by the results in Table 2.5, which contrast sharply. These indicate that different determinants and motivations apply over time and show the dynamic nature of EU FDI inflows in transition.

As the coefficient on the WTO dummy variable representing the period 2002-2007 in Table 2.5 is positive and very significant, there has been further liberalization with

[28] The results are robust to the multicollinearity problem as the variance inflation factors (VIFs) are between 1.02 and 6.49. Furthermore, replacing GDP by GDPPC or using alternative export intensity measures produces qualitatively the same results. As another robustness check, we dropped openness and kept GDP in the model (and vice-versa) because of the high correlation coefficient between them. Again, the results remain largely the same as when both variables are included in the same model.

regard to the ability of FIE to gain market access and to exercise trading and distribution rights as mandated by WTO. This may suggest that China's WTO accession has increased EU FDI in China. Oxelheim and Ghauri (2008) also discuss the relevance of WTO. Therefore, we next split the sample into 1998-2001 and 2002-2007 time periods as shown in Table 2. 7.

Regarding results for institutional variables, all are significant only for the post-WTO period, where the impact of the rule of law surprisingly changed from insignificant (pre-WTO) to significant. Coefficients for this period are consistent with the full sample results. Arguably, China has numerous laws and regulations and WTO members commended China's comprehensive efforts to revise over 2000 laws and regulations to comply with its WTO commitments. However, Chinese business culture and the market differ from most other markets because of the active role that the Chinese government plays in business. Nevertheless, enforcement remained problematic (WTO, 2006).

Another surprising finding is that the effect of corruption changed to be significantly negative for the post-WTO period, suggesting that Chinese firms tended to locate their overseas operations in economies with which China had a smaller difference in institutions directly regulating FDI activities. This result is at least partly due to the variable policy regime, and may be taken as a reflection of a positive change in China's regulative regime and less corruption directly related to FDI activities towards market-oriented direction in the new century, after China became a formal member of WTO in 2001. Wu (2006) finds that corruption is less of a barrier to investment for MNEs from more-corrupt countries than it is for those from less-corrupt countries, which is in line with our negative corruption coefficient.

The OLI variables Capital intensity, Size, Profitability, Personal share, Technology and Market Size generally produce results similar to Table 2. 5 and similar across the two periods. However, surprisingly the factors R&D, Wage and Openness seem to be sensitive to the time period. We find that Wage was an important determinant of EU FDI inflows in China for the pre-WTO period. Openness and R&D are significant determinants only for the latter period. The positive impact of openness may be because the Chinese government relaxed foreign trade policy for the manufacturing industry after WTO membership. After WTO/GATT membership, China's economy has continued to grow strongly. The Chinese government participates increasingly in multilateral agreements and administers treaties which have the potential to shift inward FDI in China from the earlier production-export orientation (1979-2006) to the new innovation and R&D orientation (2006-present), EU firms are capital- intensive and high-tech investors in our study, highly engaged in R&D with a focus on developing or adapting products to the local market. The non-linear relation between R&D and FDI in Table 2.5 is obtained only for the post-WTO period.

Table 2. 7 Institutional and OLI factors influencing FDI decisions: pre-WTO and post-WTO periods

	1998-2001 (pre-WTO)			2002-2007 (post-WTO)		
	OLS	RE	FE	OLS	RE	FE
Rule of law	0.001 (0.001)	0.183 (3.327)	0.001 (0.001)	-7.348 (2.005)***	-7.357 (1.762)***	-8.084 (1.924)***
Corruption	-0.078 (0.324)	-0.053 (0.29)	0.139 (0.335)	-2.715 (0.568)***	-2.679 (0.496)***	-2.323 (0.526)***
Capital intensity	0.440 (0.118)***	0.437 (0.135)***	-0.006 (0.413)	0.187 (0.070)***	0.154 (0.075)**	-0.024 (0.150)
Wage	0.279 (0.121)**	0.277 (0.120)**	0.163 (0.095)*	-0.030 (0.070)	-0.005 (0.075)	0.055 (0.115)
Technology	0.002 (0.027)	0.002 (0.03)	-0.054 (0.060)	0.020 (0.028)	0.017 (0.027)	0.005 (0.028)
Profitability	-2.125 (0.459)***	-2.090 (0.496)***	-0.758 (0.443)*	-2.093 (0.379)***	-1.947 (0.418)***	-0.720 (0.421)*
Firm size	0.810 (0.205)***	0.808 (0.231)***	1.875 (0.941)**	0.869 (0.107)***	0.823 (0.108)***	1.283 (0.299)***
Firm size ^{2}	-0.030 (0.009)***	-0.029 (0.009)***	-0.097 (0.048)**	-0.008 (0.004)**	-0.008 (0.004)**	-0.046 (0.018)***
Market size	-0.152 (2.827)	-0.004 (0.079)	1.399 (3.406)	-0.652 (0.543)	-0.702 (0.450)	0.311 (0.646)
Openness	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	15.051 (4.457)***	15.065 (3.806)***	13.553 (3.896)***
Personal share	-14.185 (2.682)***	-14.198 (2.922)***	-17.331 (3.014)***	-3.827 (1.701)**	-3.934 (1.873)**	-5.584 (2.705)**
R&D	2.966 (2.852)	2.979 (3.465)	1.044 (4.840)	7.660 (3.416)**	7.330 (3.292)**	3.387 (1.690)**
R&D^2	-4.154 (8.585)	-4.101 (10.536)	0.927 (10.569)	-16.308 (7.924)**	-15.146 (7.540)**	-8.178 (4.014)**
Firm age	-0.553 (0.276)**	-0.551 (0.233)**	-2.459 (1.054)**	-0.107 (0.129)	-0.112 (0.144)	-1.961 (1.380)
Export intensity	-0.037 (0.288)	-0.035 (0.348)	-0.024 (0.473)	0.407 (0.136)***	0.336 (0.159)**	-0.037 (0.567)
Innovation	0.005 (0.017)	0.006 (0.018)	0.006 (0.037)	-0.025 (0.012)**	-0.016 (0.019)	0.044 (0.032)
Advertising	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.013 (0.024)	0.010 (0.027)	0.011 (0.039)
Leverage	-1.263 (0.257)***	-1.251 (0.295)***	0.143 (1.102)	-1.363 (0.271)***	-1.323 (0.291)***	-0.629 (0.372)*
Exchange rate	0.040 (0.226)	0.046 (0.121)	-0.095 (0.213)	-0.957 (0.123)***	-0.966 (0.113)***	-0.995 (0.121)***
Constant	1.643 (1.010)*	1.640 (1.010)*	2.229 (2.591)	6.740 (1.248)***	6.601 (1.096)***	9.440 (2.504)***
Firms/observations	309/ 786	309/ 786	309/ 786	606/ 2146	606/ 2146	606/2146
Adjusted R^2	0.3707	0.5520	0.1757	0.3191	0.4856	0.1917
F (Wald) statistic	45.80***	404.1***	5.70***	122.16***	1056.3***	7.50***

Notes: Dependent variable is FDI 1. The standard errors robust to heteroscedasticity are reported in the parentheses. (*), (**) and (***) indicates that the coefficients are significant or the relevant null is rejected at the 10, 5 and 1 percent level, respectively.

2.7 Conclusion

This study is the first attempt to examine the determinants of EU firms FDI by adding an institutional-based view in theory formulation. The motivation is to complement Dunning‘s OLI paradigm by incorporating institutions theory in the EU-China FDI context. The study develops an institutional OLI theoretical framework based on the OLI paradigm allowing for both conventional and novel hypotheses to be tested. As suggested by the statistical analysis, EU firms with sizeable, high-tech and capital intensive advantage in higher value-added economic activities were lured to China because of the size of the Chinese market and its growth prospects, rather than for its low labour cost and its special investment incentives. However, EU firms face substantial market access obstacles in China’s market. While China has made good progress in implementing its WTO commitments by sharply and permanently reducing tariff and non-tariff barriers, there are still outstanding problems. EU firms suffer from missing or weak market- based institutions, particularly in terms of property rights, legal infrastructure, ownership restriction, government procurement, provincial trade barriers and local level protectionism, complex technical standards, *guanxi* marketing and subsidies and other forms of financial incentives for Chinese companies. All these cost EU firms in missed business opportunities.

The study finds that EU FDI in China has both a conventional and an idiosyncratic dimension. EU FDI in China is positively associated with host country institutions, which play a significant role in the determinants and direction of EU firm FDI in China. The study finds a conventional result for market size and economic growth, which attract EU firms with a market seeking strategy to invest in China. The effect of market size in this study emerges as significant while the effect of openness is highly negative

and significant. The study concludes that a large but not fully open economy is more attractive to foreign investors than a small but relatively open economy. The negative and statistically significant coefficient is reported on the real exchange rate, which indicates real depreciation makes goods in the host country. Finally, the impact of corruption is negative and statistically significant for attracting FDI after China's WTO accession.

Although China has made good progress in implementing its WTO commitments, China's liberalization reforms still leave very significant room for improvement. China needs to improve the quality of its institutional environment for foreign investment. The negative and statistically significant sign of relations on the rule of law, lack of IPR and substantial market access barriers lead to relatively low profitability, and less personal ownership for EU firms seeking opportunities to grow in China. Our analysis suggests that the firm-specific advantages of high technology, capital –intensive EU firms cannot easily be emulated in a rapidly changing economic and specifically dynamic institutional environment and the EU investors call for few barriers, and more IPR protection to boost investment. We find that EU FDI in China is positively associated with export intensity. However, there are various OLI factors that reduce FDI in China, for instance, firm profitability; technology and personal ownership inversely affect FDI levels. This study finds that FDI is linked significantly to R&D activities and firm size but in a non-linear way (reverse-U shape). Pooled OLS, fixed effects and random effects estimation methods indicate the robustness of the findings.

The findings have implications for our understanding of the FDI strategy of firms in emerging markets. The study of the EU FDI pattern in China offers the opportunity to examine how a host country institution fit with International Business (IB) theoretical work on the 'institution- based view of strategy'.

Firstly, high quality government attracts FDI. The most significant such qualities are respect for the "rules of the game" and a solid track record in overseeing strong and stable economic growth. However, China remains different from the other emerging economies in that much of its business culture and many MNCs remain in state hands. The Chinese market is distinctive because of the active role that the Chinese government plays in business, with the 11 five-year plans and national imperatives. This specific model is not suitable in a general way. Secondly, China should fully implement the spirit of its WTO commitments and support further liberalization of its economy. More specifically, the study recommends provision of added incentives for local governments in China to improve their business environments with a view to attracting more foreign investment. The regional nature of the Chinese market often leads to region - specific barriers. The lack of cross-regions co-operation between domestic firms and the presence of trade barriers among regional are the two major issues that have to be addressed in China's regional policy toward FDI. It would be useful to set by monitoring body to advise EU investors of possible risks and how to reduce them, especially for SME's that do not have the means to conduct risk assessment themselves. The third implication is that liberalisation is a very powerful instrument for emerging economies. This does not simply mean trade liberalisation, but includes the whole range of internal liberalisations possible for countries with a significant state sector or dominant (private or public) firms, or both. In summary, the study reveals that EU investment in China is not only determined by institutional variables but also influenced by OLI variables. The results could serve as a prescription for policy makers at the firm level in the formulation of employment and investment strategies, and could also provide guidance for investors wanting to invest in China.

Of course, this study has limitations. First, the study was limited by the lack of information on R&D; it has used intangible assets as a proxy for R&D intensity, and this prevents a more accurate assessment of the impact of R&D. Second, the study treats the EU as a single treated country in the Chinese context. With respect to further work, individual industry investigation as to whether or not and how EU investors are influenced in China is needed to reinforce confidence in the research.

CHAPTER THREE: ESSAY 2: FIRM CAPABILITIES, JOINT VENTURE AND HOST ENVIRONMENT: EVIDENCE OF EU MNCS' INNOVATION IN CHINA

3.1 Introduction

The literature on Multinational Corporations' (MNCs) subsidiaries and innovation has been growing steadily and has attracted attention on many different fronts. At a general level, the argument follows the wider principles articulated in various strands of extensive literature, which has long highlighted the strong interconnections between innovation and the multinational activities of firms (Cantwell, 1989; Cave, 1996; Castellani and Zanfei, 2006; Dunning, 1970; Hymer, 1960; Narula, 2003; Teece, 1977; Vernon, 1966), and MNC subsidiaries' innovation in emerging markets in particular (e.g., Cheng, 2007; Li and Atuahene-Gima, 2001; Motohashi, 2010; Motohashi and Yun, 2007); innovation has been identified as a main engine for this new growth model. Extant international business research has, for the most part, taken the foreign investor and innovation perspective to examine entry and technology transfer -related issues, leaving many after entry and technology transfer issues unaddressed, such as firm capabilities building, local partnerships collaboration, and institutional environment engagement. As a response to this void, the study examines one of the important issues facing strategic insiders – namely, MNC product innovation in emerging market-based international joint ventures (IJVs), with the first attempt for analyse EU subsidiary production innovation in the Chinese context.

Favourable outcomes of the Chinese economic reforms and the growth of China increased national innovation capability since the 1980s can be partly explained by the

policy of welcoming FDI (Liu and Wang, 2003; Buckley et al., 2002), and the Chinese government's launch of a national strategy to build an innovation-driven economy and society by 2020. China is to succeed in promoting innovation through a market-based approach (OECD, 2008)[29]. Aside from the rising importance of global innovation, MNCs need to invest in rapid technological changes in ways that maximize innovation and enhance their global competitiveness in China. Several scholars have argued that product innovation investment in overseas subsidiaries can help MNCs exploit their firm-specific resources and capabilities, improve their local responsiveness, and ensure sustainable competitive advantages globally (Ghoshal and Bartlett, 1988; Luo, 2002a). To understand local responsiveness, IJV can be an effective approach for MNC subsidiaries and indigenous firms in emerging economies to build up innovative capabilities (Lane et al., 2001; Mathews, 2002). In emerging markets as the new context of innovation, MNCs strategically choose to locate their innovation activities in emerging markets depending on the type of knowledge access and the innovation culture offered (Jones & Davis, 2000; Phene & Almeida, 2008); their experience in local settings (Luo & Peng, 1999); and restructuring ''the context of operations to provide a more hospitable environment for the advanced technology'' (Solo, 1966, p. 92). In transition economies such as China, the government plays the key role in developing innovation capabilities through direct intervention and its industrial and Science and Technology (S&T) policies(Choi, et al. 2011). The government does not apply different policies regarding different type of ownership. However, in transition economies such as China, the government plays a key role in the process of industrialisation and the government has designed a series of policies in S&T to stimulate learning and innovation activities for SOEs.

[29] For details, see www.oecd.org/sti/innovation/reviews/china

In the case of China, the government plays the key role in developing innovation capabilities through its industrial and innovation policy (Choi, et al. 2011). Subsidiary product innovation reflects foreign and domestic partners' collaboration in building new competence and in a response to a changing local environment (Birkinshaw, et al; 1998; Kougut & Zander, 1992; Luo, 2007). So, it is a crucial issue to link MNC subsidiaries' internal capabilities with external IJV partnership in the context of the host institutional environment to enhance its innovation activities.

Despite its significance, unfortunately, there is a lack of a comprehensive assessment of this linkage. Especially, there has been comparatively little interest in EU MNC subsidiaries in the past due to the emerging status of adaptive product innovation and data availability even though, with EU-China technology platforms (FP6), the Joint Technology Initiatives (FP7) and the proposed Chinese Ministry of Science and Technology of China (MOST) platform tools, science and technology (S&T) cooperation has achieved significant progresses since the EC-China S&T Cooperation Agreement was signed in 1998.

This study focuses on subsidiary firms' capacity, JV local ownership partners and host institutional environment as determinants of product innovation success. This study contributes to filling the gap currently existing in the literature of EU MNCs' innovation in China with a unique new date set comparing comprehensive EU large & middle sized manufacturing official firm data and China's institution. It explores the multiple-level innovation determining factors for MNC subsidiaries, using RBV, TCT and institutional theory, for the period 1998-2007. The analysis incorporates two major aspects of the innovation investment behaviour of EU firms, namely, why EU MNCs' subsidiaries innovate in the China market, by examining the determinants of product innovation and

the importance of the host country's institutions in directing the innovation ability of EU firms in China.

The contributions of the study are both theoretical and empirical. First, it focuses on MNC subsidiaries' innovation strategy, which fills an important gap in the international Business (IB) literature on MNCs' innovation. Second, by following North (1990, 2005) and Scott (2001), it presents an analysis that places as much emphasis on informal institutions (such as *guanxi* marketing and national culture) as it does on formal institutions (such as the rule of law, exchange rate and host openness and Intellectual Property Rights (IPR) standards as sources of uncertainty confronting firms. It contributes to the literature on institutional theory and MNCs, by extending the theory to MNC subsidiaries innovation strategy, individual firms and their institutional environment, and thereby offers an additional perspective on the drivers of foreign affiliate innovation. Third, importantly, the study incorporates three different theoretical approaches and streams of research, drawing from RBV, TCT and the Institution - Based view (IBV). The study presents an integrative framework combining firm-level adaptation and creativity by MNCs' subsidiaries and host institutional change at the macro level. Further, it investigates the determinants of MNC subsidiaries' innovation, which little research has addressed in emerging markets. This can provide unique and deeper insights on this specific market and business type. Finally, the study will be useful for practitioners, who might be particularly interested in the innovation strategy and organisational implications of the analysis. Policy makers will be particularly interested in analysis of firm factors, cross-national JVs and location environments.

The remainder of this chapter is organized as follows. Following this introduction, in the next section, it reviews RBV, TCT and institutional theory to formulate a series of hypotheses about factors that are expected to influence the likelihood of foreign firms'

converting their innovation performance in China in section 3. 3. Evolution FDI and innovation in China are discussed in section 3.4. The ensuing section 3.5 presents the research design and sample. Then, the hypotheses are tested against data gathered from 680 EU subsidiaries with innovation investment located in China, using Pooled Ordinary Least Squares (OLS), Fixed Effect (FE), and Random Effect (RE) regression analysis. A discussion of the results and an outline of their implications for theory and practice and suggestions for related future research conclude the chapter.

3.2 Literature Review

At present there is no 'general theory' of innovation. Innovation is an activity of more complexity than it appears. Researchers suggest that the innovative role of subsidiaries in MNCs has become significant in recent years, with relatively smaller yet increasing decentralization of the innovation function (Asakawa, 2001; Cheng and Bolon, 1993; Chiesa and Manzini, 1996; Hakanson and Zander, 1988; Mansfield and Romeo, 1980). A foreign affiliate's internal capabilities and external partnerships and host institutions contribute to its product innovation (Su, et al. 2009). To understand the determinants of MNC subsidiaries with IJV organization form in emerging markets, three theoretical lenses are particularly useful: (1) research on MNC subsidiaries' product innovation, primarily from the field of RBV; (2) research in TCT that provides insight into the ownership structure and related preference in innovation, (3) the literature on institution theory which indicates that the host country environment indirectly influences foreign subsidiaries' innovation. Because MNCs are created by the interactions and combinations of such numerous and varied factors, it is hard for a single theory to explain their existence and behaviours (Calvet, 1981).

3.2.1 Resource based view and subsidiary innovation

According to the RBV, a firm's competitive advantage is based on the possession of tangible and intangible resources, which must be valuable, rare, inimitable, and non-substitutable (VRIN) to sustain the firm's competitive advantage (Barney, 1991). The central tenets of the RBV are path dependence and firm heterogeneity (Lockett 2005; Lockett and Thompson 2001). Firm resources and capabilities that have been examined within the RBV are generally classified as tangible (financial or physical) or intangible (i.e., employees' knowledge, experiences and skills, firm's reputation, brand name, organizational procedures). The RBV requires minimal limiting assumptions about the nature of strategic behaviour, beginning with the assumption of resource heterogeneity and then consider which (if any) of a given collection of resources satisfy the VRIN conditions (Peteraf and Barney, 2003).

RBV theoretically predicts intangible resources as the important factors for firm success (Barney, 1991; Conner, 2002; Hall, 1993; Michalisin et al., 1997). For example, a high stock of qualified human capital with advanced technical skills, know-how in R&D projects, and risk taking propensity increase the probability of a firm carrying out innovative activities (Delcanto & Gonzalez 1999; Huiban & Bouhsina, 1998; Kessler & Chakrabarti, 1999; Song & Parry, 1997). Innovation is a driver of competitive advantage with a combination of resources that creates higher-order competencies that can be referred as capabilities. Innovation researchers who draw upon RBV have advocated creating a superior, unique and novel product to enjoy competitive advantage in the market and hence commercial success (Atuahene-Gima and Ko, 2001; Friar, 1995; Gatignon and Xuereb, 1997).

Some scholars have examined product innovation from a resource-based perspective. These studies consistently showed a positive impact of core capabilities on product innovation (Leonard- Barton, 1992; Dougherty, 1995; Tripsas, 1997; Tripsas and Gavetti, 2000). Since the notion of 'dynamic capabilities' (Teece, et al; 1997), debate focuses much more on how capabilities and resources evolve over time in changing environments (Danneels, 2002; Eisenhardt and Martin, 2000; Helfat, 2000). However, how EU subsidiary capabilities affect its innovation in China has not yet been addressed. The study focuses on four types of intangible and tangible resource, namely, R & D intensity, labour training, firm size and export intensity factors to critically determine the EU firm's capacity to innovate in China.

3.2.2 Transaction cost theory and Joint Ventures' innovation impact

TCT points out the imperfections of innovation activity, such as specificity, uncertainty and information asymmetries (Galende et al. 2003). According to the transaction cost paradigm developed by Williamson (1975, 1981), the main reason for JV is to reduce the high transaction costs that can arise from market imperfections. MNCs' choice of entry mode is designed to minimize cost, in terms of TCT. Williamson (1995) argued that JVs should sometimes be seen as temporary forms of organisation, which are more efficient in assembling and deploying resources to respond to environment change. Consistently, other authors have also argued that the low costs associated with JVs would render this mode of transacting the most efficient means of serving a foreign market (e.g., Beamish and Banks, 1987; Hennart, 1993; Kogut, 1988, Zhang et al. 2007). JV as external sources of innovation, therefore, have become an important complement to the firm's internal capabilities (Chesbrough, 2006, 2003)

In recent years, an extensive literature has emerged demonstrating the importance of inter-firm differences for innovativeness in manufacturing industries, with only a few studies linking these differences to foreign ownership (Belderbos et al., 2004; De Backer and Sleuwaegen, 2003). Recently, the ownership of these activities has been considered as important in studying innovativeness (Klomp and van Leeuwen, 2001). Product innovation can also be seen as an outcome of IJVs' combinative capabilities.

Some research has focused predominantly on product innovation by independent firms, the headquarters, or wholly owned subsidiaries (WOS) of MNCs (Danneels, 2002; Laursen & Salter, 2006; Nobel & Birkinshaw, 1998), While some recent studies examine differences between Chinese state-owned enterprises and collective and other non-state firms with respect to firm innovation (Keister and Hodson, 2009), the literature is somewhat fragmented, and the context of IJV is largely an unexplored area. There is a lack of comprehensive assessment of the relationship between IJV and innovative performance of firms in a transition economy such as EU subsidiary innovation in China. Further, in a broad sense, how macro level institutions affect transaction cost (North, 1990), e.g., how country-level legal and regulatory framework, influence transaction costs, has been relatively unexplored.

Pressure from host-country institutions may induce firms to trade their ownership for legitimacy in the local environment, and hence, JV with local partners is likely to be preferred (Yiu and Makino; 2002). Researchers have considered the influence of culture in recent years, for example, the importance of *guanxi* (i.e. connection in Chinese) and how the Chinese legal environment influences EU IJV partner selection criteria. In particular, some studies have emphasized the value of the institutional environment in complementing TCTs' insufficiencies in emerging economies (Brouthers, 2002; Kim and Gray, 2008; Meyer, 2001b; Puck et al., 2009).

3.2.3 Institution based view and host innovation climate

The national systems of innovation perspective highlights country-specific institutional factors in explaining national innovation performance (e.g., Edquist, 1997; Freeman and Soete, 1997; Lundvall, 1998; Nelson, 1993). Differences in institutional context explain innovation activity and performance across countries (Choi et al., 2011). This view follows Williamson's (2000) new institutional economics (NIE) approach, as it best incorporates North's (1990) ideas about the central role of the larger environment in constraining the optimality of a firm's actions, with the aim of shedding more light on the importance of institutions to MNC subsidiary innovation activities.

Institutional theory asserts that institutions define what is socially or legally appropriate in institutional settings, and consequently affect decision makers' perceptions and decisions (Meyer & Rowan, 1977; Scott, 2001), being a particularly important driver of strategic choices (Brouthers et al., 1998; Delios & Henisz, 2000; Peng, 2002, 2003). Of the various institutions that exist within the host-country institutional environment, rule of law, economy openness of host country and exchange rate appear to be particularly important elements in influencing the decisions and behaviours of MNCs.

Emerging economies display resource scarcities and a pervasive role of government institutions in economic activities (Austin, 1991; Wright et al., 2005). These institutional characteristics, coupled with economic liberalization, lead to firm-level changes in resources and capabilities that are different from those in industrialized economies. Thus, researchers have pointed out the need to study how firms adapt and learn in the face of environmental changes in emerging economies (Hoskisson et al., 2000; Wright et al., 2005). Policy reformers often claim that countries with good institutions attract more FDI and innovation. Policy environment in the host country,

such as the issue of Intellectual Property Rights (IPR) which is related directly to R&D intensity by MNCs; the role of trade policy regime which has less straightforward influence on MNCs' innovation and the role of different restrictions imposed by the host government, all have a bearing on innovation of foreign affiliates.

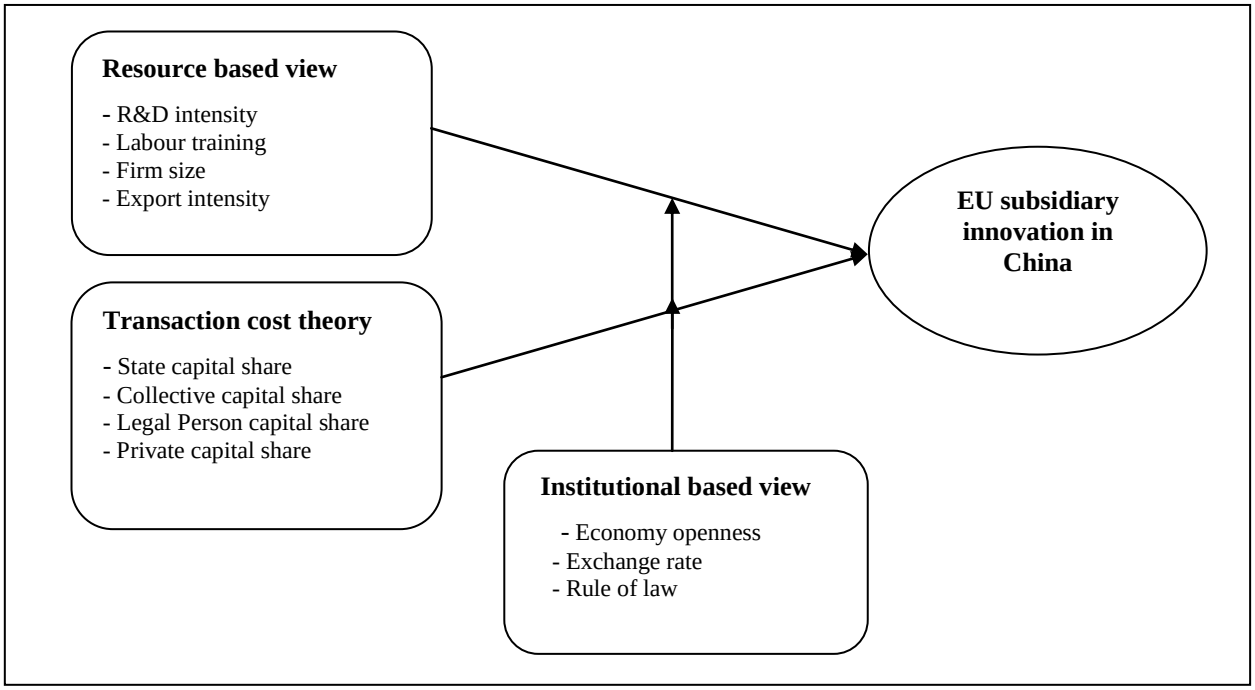
Clearly, research to date has demonstrated that the institutional context of the host country remains central to understanding the determinants of innovation of MNCs' subsidiaries. Governments play an important role in developing these activities (Amsden, 1989; Haggard, 1994; Johnson, 1982). However, EU subsidiary innovation in China has not been examined from an institutional perspective.

3.2.4 Multi-theoretic perspective

In view of the aforementioned inadequacies of a unitary perspective, this study adopts a multi-theoretic view by drawing on elements of resource-based, transaction cost view, and institutional theories to formulate a more holistic perspective for examining the determinants of subsidiary innovation activities in an emerging economy. Figure 3.1 presents this multi-theoretic approach by summarizing the key elements. The innovative roles of subsidiaries in MNCs' internal capabilities and external partnerships and host institutions contribute to their product innovation and have become significant recently (Su, et al. 2009). In this study, it is important, especially, to understand the determinants of MNC subsidiaries with IJV organization form in emerging markets. This interdisciplinary approach reveals the differing influences of various categories of factors on emerging economy innovation by MNCs. Broadly, from this perspective, innovation performance such as new product development innovation is determined not only by a firm's innovative capabilities, but also by linkage activities by the firm's ownership structure. In addition, determinants of innovation linkage activities include

the changing nature of China's national innovation institutions. The reinforcing effects are accentuated further when the resource-based and transaction –based characteristics of EU firms are embedded in emerging economy institutional settings. Hence, this combined theoretical framework could be more robust in explaining FDI innovation in the Chinese setting.

Figure 3. 1 Conceptual Framework of EU Subsidiary Innovation in China



Source: Compiled by the author according to the literature review

3.3 Evolution of FDI and Innovation in China

China has experienced remarkable economic growth and development with 'Open Door' policies in 1979 and Deng's speech in 1992 reaffirming China's continuous economic opening with relaxation of investment regulation. During the period 1983-2008[30], both the contractual value and the realised value of FDI in China increased by more than 112

[30] Though China began to receive FDI from 1979, official data on inward FDI by country of origin are available only from 1983 onwards.

times and 117 times respectively from US$1,732 million to US$ 193,727 million and from US$ 636 million to US$ 74, 767.89 million (MOFTEC, 2010). Moreover, the S&T system reform, which began in 1985, serves as the cornerstone of a departure from the Soviet model of innovation system; a major objective of China's opening up to FDI is to "exchange markets for technology." (Fu and Gong, 2011).

The host country National Innovation System (NIS) gives MNC-affiliates access to a wider range of solutions to technological problems to enhance their innovative capability (Bartholomew, 1997). MNCs can tap into local fields of expertise, and acquire new sources of technology that can be integrated into their global operations (Dunning & Narula,1995; Le Bas & Sierra, 2002; Rugman & Verbeke, 2001).Technology-intensive MNCs have explored China as a location for their innovation activities with implementation in local manufacturing JV since the 1990s, and especially 1995 with the introduction of a strategy of 'strengthening the nation through science, technology, and education' (*kejiao xingguo*) to launch China as a platform for new product development and indigenous innovation. In 2004, R&D spending by large and medium-sized foreign companies contributed about 11.5 %(about US$2.7 billion) of the total enterprise R&D spending in China, indicating foreign R&D in China is still in a nascent stage(Maximilian, et al., 2007). The shift was further strengthened in 2006 when the promotion of indigenous innovation was formally listed as one of the country's top priorities. In this process, the "input" for innovation is impressive. The total R&D expenditure in China grew from 7.4 billion RMB in 1987–35 billion RMB in 1995 and to 371 billion RMB in 2007, at an average annual growth rate of 25% (MOST, 2010). China's R&D expenditure increased to 1.5% of GDP in 2010 from 1.1% in 2002, and should reach 2.5% by 2020 (Gupta and Wang, 2011).

"Innovative activities" refers to the creation, adaptation and adoption of new or improved products, processes, or services (European Commission, 2000) and is highlighted in NIS theory (Freeman, 1987; Edquist, 1997). The Chinese definition of innovation is "innovation with Chinese Characteristics" and innovation performance is largely determined by industry and S&T organisation. The Chinese National innovation system is a transition from a plan-based to a market-drive system, a/and its technical content is that Chinese innovation policy has been established and executed by the Chinese central government. The NSI approach (Dodgson and Rothwell, 1994; Edquist, 1997; Freeman, 1987; Lundvall, 1992; Nelson, 1993;) addressed here highlight the impact of the policy on the relations between business enterprises and S&T organizations and on the way in which technology knowledge and skills are created, transferred and adopted. It is argued elsewhere that the national science base is influenced by the country's level of economic development and the composition of its economic and social activities. Such differences are likely to shape dissimilar innovation of MNC affiliates (Pavitt, 1998; Franco et al, 2011), since local technology inputs can vary substantially from country to country, due to institutional differences.

In fact, foreign investment in China has begun to shift away from primarily labour-intensive industries toward higher value- added manufacturing and high-tech industry sectors. Moreover, the source of foreign investment in China has shifted from mostly small- and medium-sized enterprises to larger-sized investments by MNCs, many of which provide technology-related offsets as part of these investments. China's MOST has identified 12 key technologies that comprised China's S&T focus during the period of the Tenth Five Year Plan (2001–2005). It is in these areas that China will make a push to achieve parity with (or surpass) the industrialized nations' technological capabilities. Foreign investment is intended to play a critical role in China's high-tech

development strategy, including increasing levels of investment in high-tech R&D. Because of the immaturity of its science-based industries and of its national research and educational spheres, the major ingredient of the Chinese NSI is the government's industrial policy (Andreosso-O'Callaghan and Qian, 1999). How these might influence the opportunities for local linkages of EU MNE affiliates innovation in China is discussed in the analysis section.

3.4. Hypothesis Development

3.4.1. The set of Resource-based variables

R& D intensity

The ability of firms to develop and exploit their innovative capabilities is widely recognized as a critical determinant of firm performance and competitive advantage (Helfat & Peteraf, 2003; Voss, 1994). In the study of established EU R&D investment with it innovation activities in China, the argument for a positive relationship between firm innovativeness and the level of investment in R&D has been generally validated in numerous studies (Acs & Audretsch, 1988, 1991a; Freeman & Soete, 1997; Kleinknecht, 1996; McMillan et al., 2003). However, Acs and Audretsch (1987, 1988) and Graves and Langowitz (1993) found that increasing R&D spending yields decreasing returns as measured by the number of new products. These researchers suggest that as R&D spending increases so do bureaucracy and inefficiency, thus reducing creativity and slowing efforts to introduce new products to market (Artz and Norman, 2010).

Recent research has emphasized the increasing internationalization of R&D activities and their importance to MNCs (e.g., Birkinshaw, 1997; Belderbos, 2003; Kuemmerle 1999). MNCs need to invest in R&D activities in ways that maximize innovation and enhance their global competitiveness. In this study, R&D is measured as the ratio of

intangible assets to total assets. Drawing from the above arguments, it is anticipated that R&D spending will increase new product innovation, although these returns will decrease with increased R&D. Thus,

*Hypothesis 3.1: T*he *EU subsidiary's R&D intensity is positively associated with EU firm's innovation activities in China.*

Labour training

EU MNC investors typically fall in the category of high-tech and high-skills and capital intensive investors in China, according to the existing dataset. Given shortage of skilled workers, a number of countries will be challenged to sustain their innovation activities (Bound, 2001). Access to human resources has become a more important driver than market access in China, adaptation of products for the Chinese market, or support of export oriented manufacturing operations (OECD, 2008). On the other hand, an often-made claim is that capital investments in less developed economies such as China are limited because the workforce is not sufficiently skilled.(Rosenstein-Rodan, 1943).

When firms develop innovation activities, they encounter relatively greater uncertainty and variability in the innovation process (Atuahene-Gima, 1996). Labour training can enhance an employee's development and is likely to contribute positively to organizational outcomes and innovation (Bartel, 1994; Knoke and Kalleberg, 1994; Laursen and Foss, 2003; Russell et al., 1985) and it plays a crucial role in nurturing the necessary conditions for catalyzing and channelling individuals towards the development of innovation activities (Scarbrough, 2003; Laursen and Foss, 2003; Michie and Sheehan, 1999). In the study, labour training is measured as training expenditure per employee. Thus,

Hypothesis 3.2: EU labour training practices in China are positively associated with EU innovation activities.

Subsidiary-Size

The size of the firm is what is most contrasted in the literature. All the EU subsidiaries are large & middle manufacturing firms. The studies of Schumpeter (1934, 1942) have already proposed the influence of size. With regard to its impact on innovation, arguments exist supporting a large size. Larger companies may have more slack resource, which is an important contributor to innovation (Damanpour, 1991). They enjoy resource advantage over small firms in that they can invest more heavily in their R&D or in renewing their knowledge pool in order to keep the lead in their markets.

Much has been written on the determinants of innovation activity and in particular the effect of firm size on innovation activity (e.g. Acs and Audretsch 1988, 1991b; Cohen, 1995; Hewitt-Dundas, N. 2006). Differences in innovation activity and growth rates between firms have frequently been examined from a RBV (e.g. Hadjimanolis, 1999). Capabilities and competencies are defined as 'dynamic capabilities' (Teece et al., 1997) or 'combinative capabilities' (Kogut and Zander, 1992).

Recent empirical studies have provided support for Schumpeterian thinking with evidence that small firms are significantly less likely to be innovating than large firms (Roper, 2001; Roper et al. 2004). The classification of firm-specific heterogeneous resources and capabilities builds on that proposed by Barney (1991, 1996) and later developed by Pride et al. (1993) and Dollinger (1995). The study uses the natural logarithm of total assets as the measure of firm size. Thus,

Hypothesis 3.3: The EU firm's size in China is positively associated with its innovation in China.

Export intensity

The relationship between export and innovation is most likely to be bidirectional. Over the last decade, many empirical studies, beginning with those of Wagner (1996), have observed a positive impact of innovation on exporting (Basile 2001; Cassiman and Martinez-Ros, 2007; Lachenmaier and Woessmann 2006). Research on the reverse causal relation (i.e. from export towards innovation) is very scant. Recent contributions by Liu and Buck (2007) and Salomon and Shaver (2005) find a positive causal effect of both export status and export volumes on innovation performance, while other contributions provide evidence of the existence of a positive association between export and innovation without aiming at identifying causal effects (Castellani and Zanfei, 2007; Gorodnichenko et al. 2008).

Currently, EU-China trade and FDI relations reached a new milestone. Chinese policy towards the trading of low-tech industrial goods has shifted maturely since July 2007 when was clearly indicated that FDI of this type is no longer favoured; the transformation of low-wage manufacturing sectors to innovation-based industries has been encouraged (Huang and Soete, 2008). Thus, the need to export could account, in part, for the decision made by firms to invest in R&D in order to generate new innovation (Grossman and Helpman, 1990; Krugman, 1979, 1991, 1995; Porter, 1990; Suarez-Villa and Fischer, 1995). In the study, EU export intensity is measured as export sales over total sales. So,

Hypothesis 3.4: The EU subsidiary's export intensity is positively associated with its innovation in China.

3.4.2 The set of Transaction cost variables

Accompanying China's transition since the late 1970s has been the rise of firms with diverse ownership types (Jefferson et al., 2000; Peng, 2003; Tan, 2002). The European Commission has played an active role in enhancing EU-China S&T cooperation since 1990s. China's state industrial policy actively encourages the transfer of foreign technology and foreign R& D investment. Access to Ownership caps and legal restrictions have led many foreign investors to enter China through setting up ''forced JVs''. Access to China's market is used as leverage to get JVs with Chinese local partnerships. For a JV, local Chinese partners can be categorized into four types: state-owned enterprises (SOEs), collectively owned enterprises (COEs), legal persons (LPs) and individual persons (IPs) (Thomas et al., 2008). EU subsidiaries are also likely to face different environmental constraints and organizational diversity, as JV with SOEs control have to continue to deal with the Chinese state, JV with IPs have to ensure their survival in the marketplace, and JV with COEs and LPs control need to take care of both local government regulations and market competition. Firms of the different ownership groups may adopt different competitive strategies in order to confront such challenges (e.g. Peng, 2000, 2004; Venkatraman and Prescott, 1990)

JV with State share

An EU-China bilateral S&T agreement entered into force in 1999 and a Joint EU-China office for promotion of research / innovation cooperation was set up in 2001. The large SOEs in China were the main technology users, but they had no incentive to master manufacturing technology in order to innovate; the disintegrated national innovation system is described by Liu and White (2001). Many SOEs are large and complex, and usually laden with various slack resources (Lu, 1996; Tan and Peng, 2003). Most SOEs

continue to rely on the state as their primary banker, supplier, and distributor, although vigorous measures are now being undertaken to push at least some of them to the market domain (Steinfeld, 1998). However, Chinese state-owned firms became actively involved in S&T outsourcing activities in the 1990s, contributing to an overall increase in innovation activities (Chang et al., 2006; Motohashi and Yun, 2007). Therefore, EU JV with SOEs is expected to have more resources, technological and manufacturing capabilities than firms with other control structures. Hence the hypothesis:

Hypothesis 3.5: EU JV with higher state share in China is positively related to the EU subsidiaries' Innovation.

JV with Collective share

JV with Collective share where the assets are owned collectively include urban and rural (township and village enterprises (TVEs). COEs have proved the most robust sector of the Chinese economy over the last 20 years and the TVEs the most dynamic of all. Labelled by Nee (1992) as 'collective hybrids', COEs display organizational attributes that fall somewhere between those of SOEs and POEs for innovation. Collective firms, especially TVEs pursue technology aggressively. Once TVEs become established and make a profit, they immediately start to upgrade technology and import EU equipment. Moreover, regionally the TVEs differ greatly in terms of the local Chinese government influence, whether there are joint ventures with EU capital etc. At this stage in COEs' existence it is likely there will be an abrupt move to more defined property rights, and the formation of shareholding companies (Clarke and Du, 1998). As a result, EU firms' JV with COEs may be viewed as adopting an *analyser* orientation according to Miles and Snow (1978), which falls between defenders and prospectors on the innovation strategy continuum. Hence,

Hypothesis 3.6: EU subsidiaries JV with higher collective share in China are positively related to the EU subsidiaries' innovation.

JV with Legal Person share

In EU JV with Legal Person share ownership is state equity held by Chinese domestic institutions or holding firms, which are principally autonomously, managed investment institutions that are primarily Chinese state-owned government agencies (Gul & Zhao, 2001; Xu &Wang, 1999). Therefore, the ownership structure is a form of pyramid of holdings, in this case, primarily by the state (Watanabe, 2002).

Despite the name, Chinese Legal Person forms of ownership play a positive role in the processes of industrialisation and Chinese economic development (Choi et al. 2011; Clarke & Du, 1998). The legal person system arose from the recent corporatization of Chinese enterprises, especially large SOEs. In essence, what legal persons represent are limited liability corporations and these firms usually have both ample resources and incentives for product and process innovation. (Thomas et al; 2008). All these national programmes increase economy and innovation. Hence the hypothesis:

Hypothesis 3.7: EU subsidiaries JV with higher Legal Person is positively related to the innovation performance of firms in China.

JV with Personal share

EU JVs with the private and individual owned enterprise sector in China are basically composed of SMEs. As recently as 1978, officially this form of enterprise did not exist. Relative to Chinese SOEs, personally- owned enterprises (POEs) represent the opposite, being usually small but nimble, poor in R&D but good at market orientation. Most POEs are family owned, and are clearly distinct in their social makeup from SOEs

(Chen, 2001). Yet, despite their increasing importance in the Chinese economy, private firms face significant institutional hurdles. Private firms typically do not have connections to governmental officials (Peng & Luo, 2000; Xin & Pearce, 1996), and can rarely benefit from information leakage. Start-up firms in China usually adopt a simple, flexible structure, and choose aggressive strategies (Tan, 1996, 2001b; Tan and Li, 1996). In other words, POEs are characterized by a focus on innovation and change and a flexible structure managed by younger and more entrepreneurial managers. EU JV POEs are natural persons (i.e. single individuals) and were not allowed to form JVs with foreign investors until recently. Resources committed by IPs, in fact, are relatively small. Accordingly, the following hypothesis is formulated:

Hypothesis 3.8: EU JV with higher personal share in China is negatively related to the EU subsidiaries innovation In China.

3.4.3. The set of Institutional variables

Economy Openness of China -H9

In the literature, the ratio of trade to GDP is often used as a measure of openness of a country and is also often interpreted as a measure of trade restrictions. China has stepped into the global economic limelight in recent years chiefly because of institutional factors. “Trade openness” signifies the extent to which a host country is open to international trade (Abiad and Mody, 2005).The general innovation theory stresses the relevance of technology push and market, or demand pull factors for the explanation of innovation activities (Hemmelskamp, 1999). Openness reflects whether EU investors are on equal footing with locals and domestic investors in China and openness to be influenced by the Chinese culture.

A greater degree of openness of China encourages a higher firm innovation EU subsidy, primarily because most MNCs are export-oriented. EU market-seeking innovation is also related to the market openness of a host economy. Market openness reflects the competitiveness and export orientation of an economy and is used as a variable to accommodate the market-seeking motive of EU subsidiary innovation. Thus,

Hypothesis 3.9: The openness of economy in China has a positive correlation to EU subsidiaries' innovation

Exchange rate of China

Political institutions include governments and the constraints that they impose on key actors. Investment regulations (Contractor, 1990; Djankov et al., 2002), restrictions on foreign ownership (Gomes-Casseres, 1990), government protection (Boddewyn and Brewer, 1994; Salorio, 1993), and foreign exchange controls (Casson, 1982) are important for EU innovation in China. The main empirical implication is that exchange rate variations affect firms' innovation strategy through their impact on market share, influencing innovative activity and thus cost and price, according to Brissimis and Kosma's (2005) model developed as a basis for econometric estimations.

The exchange rate has a most important link with Chinese economic policy and international competitiveness. Early on Aliber (1970) suggested that some FDI is motivated by imperfections in the foreign exchange markets. Kouvelis et al. (2001) analyse exchange rates and the choice of ownership structure both conceptually and using empirical data of firms from large number of countries. They demonstrate how exchange rates and switching costs would lead a firm to specify choice of either a JV or a WOFS. For instance, Chinese depreciated (i.e. a weak home currency) real exchange rates tend to favour a JV over a WOFS and an exporting strategy over both a WOFS and

a JV. There are complementary effects between exchange rate and IJV in term of impact on EU firms' innovation. Thus,

Hypothesis 3.10: EU Firms' innovation performance is negatively related to host currency appreciation by complementing IJV.

Rule of law of China

In China, political institutions set and enforce the rule of law (Rodriguez, et al., 2005) which is essential for MNCs innovation and R& D investment. For example, the lack of transparency of laws or their inadequate enforcement both result in the inadequate protection of intellectual property rights (Ostergard, 2000; Oxley, 1999); Poor protection of property rights discourages firms from pursuing innovation and thus from operating competitively (North, 1990). Chinese 'Rule of law' can be a proxy for the quality of the legal environment in China. Data for the 'Rule of law' is from World Governance Indicators by the World Bank Institute. The scores range between -2 and 2, with higher values indicating a better law system. It is well known that, by regulation, commissioning, or funding R&D activities, both national government and regional structure authorities may directly influence the level and structure of innovatory related activities (Dunning, 1994). The quality of Chinese institutions is likely to be an important determinant of EU innovation activities. It is expected that higher the rule of law values in China should attract more innovation from EU subsidiaries. Thus,

Hypothesis 3.11: A higher quality Rule of law in China is positively associated with EU subsidiary's innovation.

3.5. Methodology

3.5.1 Sample and Data

The study uses China, a leading emerging market, as the research setting. The article draws upon a unique database that contains information on the innovation practices of the foreign activities of EU large & middle sized manufacturing subsidiaries from the Annual Reports of Industrial Enterprises Statistics compiled by the National Bureau of Statistics of China (NBS). The Annual Report covers the population of firms (both foreign and local) with annual turnover of over five million Renminbi (US$0.7) inside China. It is estimated that the firms contained in the dataset account for about 85–90% of total output in most industries. The dataset includes variables such as firm ownership structure, industry affiliation, geographic location, establishment year, employment, gross output, sales, R&D, exports, and employee training expenditures. For the NBS the original dataset covers an unbalanced panel spanning the period 1998-2007. In China, all firms, local or foreign, are required by law to complete the census survey conducted by NBS. It includes data for 39 two-digit manufacturing industries and over 400 four-digit industries.

Another feature of the database is that EU subsidiaries are broadly classified into five ownership categories: (i) state-owned, (ii) collective-owned, (iii) private-owned, (iv) Hong Kong, Macao and Taiwan-owned and (v) Legal Persons (LPs), based on the fraction of Joint Venture capital held by local partners in the database. These are the key variables that identify the level of treatment received by EU subsidiaries in China and the study focuses on the collectively-owned share variable, on which there has been no previous study. Following Eurostat (2004), it uses a fourfold division of technological capabilities: high-technology, medium high-technology, medium low-technology, and

low-technology[31]. Details of industries in each category, the sectoral pattern of their FDI activities, and the sectoral pattern of their production innovation are reported in Table 3.1. There are 1011 subsidiary firms in the original dataset. After cleaning for missing observations, outliers, and non-responses, 680 firms were left in the study. It follows criteria from the first Economic Census in classifying the EU subsidiaries into 33 sectors in the industry and 9 industries according to standard industrial classification (SIC) classes.

[31]It follows the standard used in the Eurostat dataset which is based on the NACE Rev 1.1 Classification at 3-digit level, which is converted into the SIC 2-digit level classification

Table 3. 1 Sector pattern of product innovation of EU subsidiary innovation in China (1998-2007)

Two-digit industry classification	Fraction of innovation	% FDI
High-technology	**0.3349**	**22.3099**
40-Electronic and telecommunications, Other electronic equipment	0.1854	13.4132
41-Instruments and meters	0.1447	4.8706
27-Medical and pharmaceutical products	0.0048	2.7999
46- Water production and supply	0.0000	1.2133
44-Electricity, heat production and supply	0.0000	0
45-Gas production and supply	0.0000	0.0129
Medium-high technology	**0.6414**	**50.5565**
39-Electric equipment and machinery	0.0123	5.5193
37-Transport equipment	0.6245	20.6354
26-Raw chemical materials and chemical products	0.0029	22.6524
36-Special purposes equipment	0.0018	1.57
28-Chemical fibre	0.0000	0.1794
Medium-low technology	**0.0227**	**20.5723**
35-Ordinary machinery	0.0207	6.832
31-Non-metal mineral products	0.0009	6.384
34-Metal products	0.0008	1.713
29-Rubber products	0.0002	2.1367
24-Cultural, educational and sports goods	0.0000	0.1131
32-Smelting and pressing of ferrous metals	0.0000	1.4986
30-Plastic products	0.0000	0.3281
25-Petroleum refining and coking	0.0000	0.9952
33-Smelting and pressing of non-ferrous metals	0.0000	0.5736
Low Technology	**0.0010**	**6.5629**
15-Beverage industry	0.0009	1.4424
14-Food production	0.0000	3.9181
22-Papermaking and paper products	0.0000	0.5289
17-Textile industry	0.0000	0.173
18-Garments and other fiber products	0.0000	0.0413
20-Timber processing	0.0000	0.127
21-Furniture manufacturing	0.0000	0.0633
23-Printing and record medium reproduction	0.0000	0.0019
42- Crafts and other products	0.0000	0.082
13-Food processing	0.0000	0.1503
43-Waste of resources and waste material recycling	0.0000	0.0347

Source: Compiled by the author to the NACE Rev 1.1 Classification at 3-digit level, which is converted into the SIC 2-digit level classification

3.5.2 Measurement

Dependent Variables

There are various measurement methods for and numerous debates about innovation output indicators (Coombs, 1996). This study follows the OSLO manual (OECD, 1992). In the panel, data were available for two measures of production innovation (see Table 3.1), namely, (i) product innovation and (ii) innovation performance, to represent the economic significance of innovation. Product innovation is represented by the natural logarithm of output involving new product innovation (Díaz-díaz, et al., 2008). Innovation performance, which is the ratio of innovation to sales, is defined as the percentage of new product sales over total product sales.

Independent Variables

Reviewing the above literature, and summarizing from the discussion above, the central hypothesis of this study is based on the idea of the multi-theoretic perspective: Firm-Specific Capabilities Variables, Firm IJV Partnerships variables and Host Innovation Institutional Variables. For details see Table 3.2: The determinants of EU subsidiary innovation in China.

Among the RBV variables, ideally, a measure of R&D should be used to represent technological knowledge. The data used in this study have too many missing observations on R&D expenditure, but instead include the total value of intangible assets, which is used as a proxy for R&D intensity. It must be noted; however, that intangible assets are only a rough proxy for R&D since the term is usually defined to include unwritten off goodwill, issue expenses, trade-marks and the value of publication rights and brands, among others. It is clear that not all the items covered by intangible

assets directly contribute to the accumulation of revenue (see, for example, Liu et al., 2000).

Regarding organization forms, the available data offers two ways of indentifying the firm's ownership structure. The first is simple to use the classification under which the firm was registed. The second approach is to identify the ownership structure indirectly based on the source of total registered capital (equity), for example state capital, collective capital, private capital, HMT capital, foreign capital and capital from legal entities. However, the two methods do not produce exactly the same outcomes. This study follows Ge and Chen (2008) and uses the sources of the registered capital to identify the ownership structure. For a JV, local Chinese ownership structure is thus classified into four categories in the study: (1) State capital control (2) Collective capital control; (3) Private capital control; (4) Capital from legal entity control.

Control Variables

In addition, the analysis reported later on incorporated two control variables which might influence EU subsidiary innovation performance: Firm experience (measured by Log of years since opening in China) and firm advertising (measured by advertising expenditures to sales). One may reasonably suggest that younger firms are less likely to have established routines, technologies and products (De Jong and Vermeulen, 2006) and it is a variable commonly used to measure the experience and the learning of the firms, factors that are organisational resources (Kumar and Saqib, 1996; Gumbau, 1997; Kuemmerle, 1998). The advertising industry has a long history of creativity and innovation. Advertising places a heavy premium on identifying what's new in the world and then exploiting this product innovation. Advertising intensity positively affects the adoption of innovating and exporting activities. Advertising can help firm providing a

means through which firms can interact with foreign and domestic markets to herald the value of their innovative products. (Zinkhan. and Watson, 1996; Golovko and Valentini, 2011). In the study, the advertising measure was derived by using advertising expenditures to sales, advertising has been hypothesized to facilitate appropriability and therefore encourage innovation (Comanor, 1967; Kamien and Schwartz, 1982; Golovko and Valentini, 2011).

The above hypotheses including control variables, their theoretical justification, variable definitions, the expected signs and data source are detailed in Table 3.2.

Table 3. 2 The determinants of EU subsidiary innovation in China

Variable name	Definition	Sign	Theoretical Justification	Main or control	Data source
A. Innovation indicators					
Innovation performance (Dep. Var. 1)	New Products/ Output or Sales				NBS
Production Innovation (Dep. Var. 2)	Natural logarithm of output involving new process or product innovation. LN (1+PI)				NBS
B. Firm-level Internal Resource and Capabilities					
H1.R&D intensity	R & D: The ratio of Intangible assets to Total asset	+	Resource-Based View	Main	NBS
H2.Labour training	Employee training expenditure per employee (1+EDU）	+	Resource-Based View	Main	NBS
H3. Firm size	Natural logarithm of total assets	+	Resource-Based View	Main	NBS
H4.Export intensity	Export sales over total sales	+	Resource-Based View	Main	NBS
C. Firm-level External IJV with local Ownerships Variables					
H5. State share	Natural logarithm of State capital plus one	+	Transaction-Cost View	Main	NBS
H6.Collective share	Natural logarithm of Collective capital plus one	+	Transaction - Cost View	Main	NBS
H7.Legal Person share	Natural logarithm of Legal Persons capital plus one	+	Transaction - Cost View	Main	NBS
H8.Personal share	Natural logarithm of Personal capital plus one	-	Transaction Cost View	Main	NBS
D. Institutional variables					
H9. Economy Openness of Host Country	OPEN: Exports plus imports over GDP in China	+	Economic institutions	Main	WBDI
H10. Exchange rate	EXRA: Exchange rate between Euro and Chinese Yuan	-	Political institutions	Main	WTOSD
H11. Rule of law	ROL: Rule of law in China	+	Political Institutional factor	Main	ICRG
All monetary values are in constant (2007) China RMB Prices. NBS is National Bureau of Statistics of China. ICRG is international Country Risk Guide. WTOSD is World Trade Organization Statistics Division. WBDI is World Bank Development Indicator.					

3.5.3 Model Specification

Two models are developed to examine innovation indicators on (i) product Innovation and (ii) innovation performance. On the basis of theory, the following multiple regression equation is employed as the base specification for the empirical test to identify the major determinants of EU subsidiary' innovation in China:

$$Innovation_{it} = a + \sum_{k=1}^{n} b_k * \mathrm{SC}_{it} + \sum_{k=1}^{m} c_k * \mathrm{SIJV}_{it} + \sum_{k=1}^{m} d_k * Institutions_{t} + \sum_{k=1}^{m} e_k * Control_{it} + \varepsilon_{it} \quad (3.1)$$

where SC, SIJV, *Institutions and Control* are the set of firm resource and capability variables, a set of JV with local ownerships variables, a set of host institutional variables and control variables, respectively, as shown in Table 2; α is the intercept term, *a, b, c, d,* and *e* are estimable coefficients; ε is the error term; *i* and *t* stand for firm and time, respectively. Innovation is either (i) Production Innovation or (ii) Innovation Performance.

Equation (1) is used as a regression model for the pooled OLS, RE and FE estimation methods. The Hausman specification test compares two alternative specifications the RE and FE and allows the appropriate specification for a particular set of data to be determined. This test was performed on the data, yielding a chi-squared statistic of 128.37 (*p*-value = 0.0000), supporting the premise that the difference in coefficients was systematic and that a fixed effects specification was appropriate in Table 3.4.

Table 3. 3 Descriptive statistics and correlation

	Mean	S.D	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7))*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*
1. Product Innovation	1.855	4.379														
2.Innovation Performance	1.107	0.302	0.735**													
3. R & D	0.031	0.055	-0.024	0.010												
4. Labour training	1.592	2.477	0.024*	0.033*	-0.05**											
5. Firm size	12.072	0.2750	0.255**	0.19**	-0.038*	0.26**										
6. Export intensity	0.167	0.005	0.029	0.015	-0.07**	-0.012	0.08**									
7. State share	1.602	3.785	0.098*	0.092*	0.648*	-0.04**	0.143*	-0.099*								
8. Collective share	0.529	2.212	-0.045*	0.0052	0.0310	0.0260	-0.003	0.0189	-0.10**							
9. Legal persons	3.226	4.885	0.022**	0.13**	0.0200	0.083**	0.24**	-0.11**	-0.26**	-0.15**						
10. Person Share	0.196	1.342	-0.008	0.0142	0.048**	0.0204	-0.003	0.037*	-0.0264	-0.01**	-0.0046					
11. Openness	0.585	0.127	-0.06**	-0.023	-0.13**	0.55**	0.09**	0.03	-0.17**	-0.0273	0.051**	0.0129				
12. Exchange rate	9.624	1.215	-0.09**	-0.009	-0.17**	0.41**	0.07**	-0.07**	-0.12**	0.0408	-0.05**	0.171	0.739**			
13. Rule of law	-0.409	0.0461	-0.045*	0.012	0.15**	-0.28**	-0.08**	-0.14**	0.08**	0.101**	-0.0043	-0.1030	-0.64**	-0.37**		
14. Firm age	2.570	0.439	0.11**	0.0127	-0.10**	0.0371*	0.17**	-0.04**	-0.11**	0.05**	0.126**	-0.06**	-0.17**	-0.11**	0.08**	
15. advertising	1.228	2.6563	0.048**	0.06**	0.033	0.471**	0.21**	-0.08**	-0.021	-0.0292	-0.0419	0.0008	0.39**	0.30**	-0.17**	0.07**
* (**) indicates correlation is significant at the 0.05(0.01) level (two-tailed, Pearson).																

3.6 Results

Table 3.3 presents the descriptive statistics and correlations for 680 EU subsidiary product innovations in China. The sector pattern of their innovation activities is reported in Table 3.1. Typically overseas subsidiaries have a low level of product innovation output and the ratio of innovation sales; the average output value of new products by the subsidiary and the ratio of innovation sales were 1.107 and 1.855, respectively. Subsidiaries like Transport equipment (62.45%) had a higher than average output value of new products, while subsidiaries of Electronic and telecommunications, and other electronic equipment (18.54%), Instruments and meters(14.47%), Ordinary machinery (2.1%), Electric equipment and machinery (1.2%) demonstrated lower than average innovation output. The rest of the manufacturing sectors had almost no product innovation.

Among the firm internal capabilities factors, labour training averaged 1.59, indicating that training expenditure per employee for the last 10 years in each firm in the sample generated around 1.6 percent of total employee education expenditure. Subsidiary size and export intensity are about 12 and 0.167, explaining large and middle firm size with small export sales. The data on JV with state, collective, corporate and personal owned firms show a low average collective share, only 0.529, with less innovation experience (2.57) in the China market. Subsidiary innovation had limited linkages to economy openness (0.585) and quality of rule of law (0.409) in the host country environment.

Most of the explanatory variables and controls are correlated with product innovation, and the correlation coefficients of the explanatory variables have the predicted signs,

except for firm characteristic (labour training, JV with collective share) and local innovation institution (openness and rule of law).

Table 3.4 provides the findings for the full sample of EU subsidiary innovation based on equation (1) multiple regression models with fixed effects. In all regression specifications, industry dummies were employed to reflect any industry-specific factors that could have an impact on firm product innovation. These coefficient estimates are excluded from the report for the sake of brevity.

Table 3. 4 Result for determinants of EU subsidiary innovation in China (1998-2007)

	Pooled OLS	Random effects	Fixed effects
H1. R & D	-2.694(1.431)*	-1.838(1.4041)	-0.2353(1.661)
H2. Labour training	-0.049(0.040)	-0.1114(0.0351)***	-0.1336(0.038)***
H3. Firm size	0.494(0.542)***	0.3440(0.0623)***	0.2172(0.0891)**
H4. Export intensity	0.532(0.291)*	1.0213(0.3120)***	1.464(0.3912)***
H5.State share	0.1357(0.2265)***	0.0501(0.2494)**	-0.4267(0.3239)
H6. Collective share	0.0202(0.3584)	-0.0288(0.0341)	-0.0878(0.0399)**
H7. Legal person	0.1799(0.1788)***	0.1203(0.0209)***	0.04266(0.0283)
H8.Personal share	-0.0003(0.5687)	0.1231(0.5778)	-0.0492(0.0679)
H9. Economy Openness of Host Country	-1.3556(1.2417)	-0.4267(1.041)	-2.9373(1.559)*
H10. Exchange rate	-0.305(0.096)***	-0.3278(0.07131)***	-0.2849(0.0735)***
H11. Rule of law	-8.6760(2.2425)***	-7.7551(1.688)***	-6.9673(1.7477)***
Age	0.2148(0.1849)	0.42131(0.2421)*	2.2331(0.8562)***
Advertising	0.07512(0.0338)**	0.0480(0.0313)	0.0346(0.0351)
Constant	-5.2142(1.2182)***	-3.6656(1.0989)***	-4.9803(1.922)***
Firms/observations	680 / 2932	680 / 2932	680 / 2932
Adjusted R^2	0.1212	0.0894	0.0697
F statistic	31.97***	219.12***	12.90***
Dependent variable is Production Innovation 1. The standard errors robust to heteroscedasticity are reported in the parentheses. (*), (**) and (***) indicates that the coefficients are significant or the relevant null is rejected at the 10, 5 and 1 percent level, respectively. Under Hausman test is fitting Fixed effects. All specifications include the full set of time and two –digit industry dummies.			

Table 3.5 shows all the models regression results. The model starts with subsidiary capability and control variables only (model 1), then it adds stepwise JV ownership variables (model 2) and host country institutions variables (model 3).

Results from the baseline model (Model 1) start with firm specific and control variables only, showing that these main variables are statistically significant in term of labour training, size, export intensity and age, in line with Hypothesis 3, Hypothesis 4 and Hypothesis 12. These results are consistent with previous studies' findings. The regression coefficient for the labour training variable is negative and statistically significant, showing that there is an inverse relationship between subsidiary innovation and local labour training in the manufacturing industry. This contrasts with the expectation in Hypothesis 2, and it represents an important result in relation to the innovation of EU firm's education expenditure. Firms' unawareness of environmental changes and lack of the appropriate education/ training may limit their innovative climate.

However, the variables for R&D intensity and advertising are insignificant with unexpected signs compared to Hypothesis 1 and the control variable. These results show that large and young EU subsidiaries with less R&D assets and low advertising expenditures are not innovative in Chinese manufacturing industry. However, the explanatory power of the baseline model 1 is low, as shown by the adjusted R^2. The more main independent variables are added in, the more the power of the model is improved.

Model 2 presents the findings on the effect of the EU firm JV with local– level ownership share on subsidiary innovation. Table 3.5 shows significant positive associations between the presence of state and corporate capital and firms' innovation,

as predicted in Hypothesis 5 and Hypothesis 7. Surprisingly, collective share and personal share linkages to EU subsidiary do not have an impact on subsidiary innovation. Hypotheses 6 and 8 are not supported. The inclusion of the variables related to the EU JV with local partner improves the fit of the model, with the adjusted R^2 increasing to 0.0520.

Model 3 incorporates the effects of the host country innovation institutions, presenting the results of the comprehensive model. It provides negative and significant effects for economy openness of host country and rule of law, in contradiction of Hypotheses 9 and 11. The results suggest that in the context of the developing Chinese economy, with large regional disparities making the country a heterogeneous economic entity, and different levels of opacity of decision making, the environment is not properly open for subsidiary innovation. At this less advantaged stage of economy development, the institutional framework of the Chinese system of innovation is at an embryonic stage and there is an absence of innovation in foreign affiliates. These two new results limit the important relation to EU firms' innovation activities. In addition, the variable measuring the exchange rate is statistically significant and negative, showing that there is an inverse relationship between exchange rate (Euro and Chinese Yuan) and EU firms' innovation in an industry. This supports Hypothesis 10. In the case of home currency depreciation, the firm might decide on a majority JV relationship with one of its established local partners, which would reduce its capital exposure to exchange rate uncertainty and maintain " intangible " assets such as local relationship and "produced locally" brand image and customer loyalty. The new tested variable is in line with theory and confirms the EU JV choice of ownership structure of production innovation in China.

In terms of local ownership of EU firms, different results were obtained, as shown in Model 2, that JV with Chinese collective share is in negative, but significant. However, JV with state and corporate share has inverse relationship with subsidiary innovation in Model 3 compared to Model 2. These results suggest joint innovation with collective firm plays a more important role in Chinese market than JV with other local ownerships. To check for the overall robustness if the empirical results, alternative measures were adopted for (i) Production Innovation or (ii) Innovation Performance; the results are not sensitive to the changed measure.

Table 3. 5 Result for determinants of EU subsidiary innovation in China (1998-2007): hierarchical moderated regression

	Model 1 Firm-level specific and control level variables	Model 2 Firm-level and local Ownership variables	Model 3 Firm and Macro-level variables, the comprehensive model
Firm-level specific resource variables			
H1. R & D	0.2117(1.6294)	1.6294(1.4041)	-0.2353(1.661)
H2. Labour training	-0.1898(0.0364)***	-0.1114(0.0351)***	-0.1336(0.038)***
H3. Firm size	0.2105(0.0896)**	0.3440(0.0623)***	0.2172(0.0891)**
H4. Export intensity	2.4325(0.3708)***	1.0213(0.3120)***	1.464(0.3912)***
Firm local Ownerships variables			
H5. State share		0.0501(0.2494)**	-0.4267(0.3239)
H6. Collective share		-0.0288(0.0341)	-0.0878(0.0399)**
H7. Legal person share		0.1203(0.0209)***	0.04266(0.0283)
H8. Personal share		0.1231(0.5778)	-0.0492(0.0679)
Host institutions variables			
H9. Economy Openness of Host Country			-2.9373(1.559)*
H10. Exchange rate			-0.2849(0.0735)***
H11. Rule of law			-6.9673(1.7477)***
Control Variables			
H12. Age	1.2561(0.5292)**	0.42131(0.2421)*	2.2331(0.8562)***
H13.Advertising	0.0106(0.0347)	0.0480(0.0313)	0.0346(0.0351)
Constant	-4.0385(1.5340)***	-3.6656(1.0989)***	-4.9803(1.922)***
Firms/observations	680 / 2932	680 / 2932	680 / 2932
Adjusted R^2	0.0381	0.0520	0.0665
F statistic	5.69***	12.29***	14.52***
Dependent variable is Production Innovation 1. The standard errors robust to heteroscedasticity are reported in the parentheses. (*), (**) and (***) indicates that the coefficients are significant or the relevant null is rejected at the 10, 5 and 1 percent level, respectively. Under Hausman test is fitting Fixed effects. All specifications include the full set of time and two –digit industry dummies.			

3.7 Discussion

3.7.1 Contributions

Three sets of contributions emerge from the study. This study develops an integrated research framework that analyses determinants of subsidiary innovation in an emerging market with a focus on firm capabilities, JV with local Chinese partners and host innovation institution environment. It finds generally that all the above three sets are important determinants of subsidiary innovation. Although past research has highlighted the importance of subsidiary innovation and also the relevance of environment and ownership separately, this study takes a first step towards examining interdisciplinary areas in subsidiary innovation in manufacturing industry in an emerging economy, that is, EU subsidiary innovation in the China context. The results show that firm- specific resources of labour training, size and export are significantly associated with subsidiary innovation. It finds EU firms' JV with Chinese collective share company is an important source of innovation. The Chinese innovation institution context, such as economic openness, exchange rate and rule of law, directly determines firm innovation.

These consistent results imply that foreign affiliates play a significant part in innovation from more technologically advanced OECD countries to emerging economies. This may be because with globalization movement of education and innovation across national borders is facilitated. This is a new contribution to international business theory. If international trade and investment were the dominant flows driving economic development and technology transfer in the past, then MNC subsidiaries' innovation is likely to play a central role in today's integrated world economy.

Further downplaying the role of subsidiary innovation ability, one important finding of the study is that labour training in the industry has a negative and significant impact on

the innovation performance of firms, which is not in line with expectation and it did not support innovation in China. The literature generally suggests that the presence of labour training in an industry increases subsidiary innovation. Rosenstein-Rodan (1943) suggested that an often-made claim is that capital investments in less developed economies are limited because the workforce is not sufficiently skilled. Another possible reason is difficulty in management labour training due to the Chinese language and the culture gap. EU joint ventures should be leaders in training and technical supervisors (Andreosso-O'Callaghan and Qian, 1999; Huang and Luc, 2008). In particular, the total expenses during 1998-2007 for labour training account for 0.33%, which compared to the Industrial sales output value in the data may reflect that the major motivation of EU firms' innovation in China is "market driven" instead of "technological driven" or "human resource driven".

Surprisingly, R & D of the EU firms in China was found to have a negative impact on innovation performance, and does not help innovation. A possible explanation is that major weaknesses of the Chinese NSI are a relative absence of R&D in foreign affiliates and the problem of skill shortages in technical and marketing areas (Andreosso-O'Callaghan and Qian, 1999).The other reason is that motives of EU subsidiaries' investment are dominated by market – oriented ones to serve the Chinese market, a localized production system. Additional, the National IP Strategy has set the path for the development of Chinese IP rights. However, more needs to be done to improve the protection of IP rights as important obstacles to opening R&D activities in China so as to promote MNCs' innovation; for example implementing the rules of Patent Law will make European businesses less likely to do R&D in China. China's IP law is actually quite modern, and in the larger cities increasingly well-enforced. However, there are many counterfeiters in central China, where IP enforcement is still weak.

Taking the set of IJV variables between subsidiary and local ownership into consideration, the findings indicate that there is a negative and significant relation between firm innovation and EU JV with Collective Share, not consistent with the theoretical suggestion that IJV and subsidiary innovation are strategic management complementarities (Choi et al., 2011). One possible explanation is that this emphasized the value of institutional environment in complementing TCT's insufficiencies in emerging economies (Brouthers, 2002; Kim and Gray, 2008; Puck et al., 2009). The analysis shows that EU JV share equity during 1998-2007 for local LPs was 3.6% of ownership structure in the data and LPs need to take care of both government regulations and market competition. LPs may not be profit-maximizing, given their social and political linkages with the local government (Peng et al., 2004). Another explanation lies in the central role of government in the process of industrialisation in transition economies. Government can be expected similarly to influence the development of innovation capabilities whether by direct intervention on industrial and S&T policies.

In the host country innovation institution environment, the most innovative subsidiaries appear to have greater limitation with the Chinese economy openness and rule of law. Surprisingly, economic openness of the host country does not support innovation. A possible explanation for the lack of significance of host economy openness is the short history of economic liberalization in this emerging economy. Substantial risks associated with inefficient information and dramatically-shifting market demands pose a challenge for foreign firms' innovation. In addition, given the less advanced stage of economic development, the task of isolating and explicating the major components of the Chinese NSI is a complex one. With regard to the rule of law, the obstacles to

innovation remain strong in China because the Chinese NIS is very much at a developing stage and there are many sources of uncertainty for firm operations there. China has yet to establish fully an enterprise-cantered national innovation system (Cao, et al., 2009). Although China has seen innovations increasing dramatically, few are actually protected by any legal institutions such as IPR, there is little flexibility in regulations, and problems of standards, imitation and fraud are prevalent. In addition, one can only comprehend the Law by appreciating some Chinese cultural values embedded into the Law. For example, such as a good *guanxi,* which today emphasizes communications rather than deals under the table, generally helps the subsidiary start its business more quickly and smoothly.

The findings point to the conditions under which the MNC subsidiary characteristics and host country institutions influence subsidiary innovation in general. It is argued that the study extends the IB literature in a number of ways. First, the study goes beyond a single-country study, as the concept of MNCs' innovation proposed in the study is relevant not only to the single country of China, but also to other emerging markets where subsidiaries experience innovation or are innovating globally. The study thus adds to an understanding of cross-country innovation activities, which are a central aspect of IB and strategic management. Second, both scholars and policymakers have paid much attention to the impact of rapid globalization in relation to FDI and international trade and MNCs innovation. In particular, the impact of FDI and trade on MNCs innovation in developing countries has been the focus of attention. However, the growing mobility of S&T represents a new channel for international knowledge transfer, parallel with FDI and global innovation. Therefore the study develops research by drawing its traditional focuses away from FDI and trade toward the important role of cross-border and inter and extra-firm innovation.

3.7.2 Implications for both EU and China

The findings generally suggest EU–China economic and innovation collaboration with mutual benefits arising from innovation. From the brief theoretical discussion above, it follows that well-managed innovation activities lead to the following benefits for China. First, increased technology and innovation content in the restructured companies yield efficiency gains; second, innovation and technology transfer through JV is very often associated with training of labour and management skills upgrading, a factor which enhances productivity in the host country. Beyond these direct effects, China may play a significant role in the process of economic integration in the region. A greater Sino-EU firm innovation collaboration will produce positive trickle-down effects for EU firms willing to extend their collaboration beyond the boundaries of China. For the government of China, IJV need to be encouraged in order to promote efforts, particularly from OECD countries, to raise both the probability and intensity of introducing new products to speed up firm innovation and manufacturing production innovation.

From the standpoint of the EU, the optimal type of technological collaboration with China is one that allows the different countries to maximise their gains in their strong science-based industrial sectors. For EU subsidiaries, it is essential to develop and strengthen strategic alliances with indigenous firms in host countries so that local strategic resources can be accessed in order to perform product innovation activities better. Using the standard terminology associated with the RBV, TCT and institution theory, industry and firm-specific assets (competitive advantages) as well as intemalisation explain why and how a firm invests and innovates abroad (Buckley & Casson, 1976; Rugman, 1980). Any firm would be sensitive to the location advantages of China conveyed by rapid economic growth rates, by the potential size of the market,

by the availability of local resources, and also by a myriad of incentives aimed at promoting technology-embodied FDI.

In the case of China, most of the technology and innovation has been, and still is, transferred via FDI, and more specifically with the help of joint ventures. However, the current Chinese NIS, characterised by a poor investment record in scientific and skilled labour, weakens the development of the country's technological capability. From the standpoint of EU firms, it should be borne in mind that the Chinese market has been problematic due to its many barriers to innovation. Nevertheless, in the future, all firm innovations that match exactly the Chinese priority list will be promoted by facilitating financing, guarantees, and IPR and insurance procedures. Subsidiary innovation is a superior form of technological collaboration in that it allows EU high-technology companies to build up a long-term relationship with a Chinese counterpart, and to minimise risks, when compared with direct investment.

3.7.3 Limitations and extensions

Of course, this study has limitations. First, the study was limited by the lack of information on R&D; it has used intangible assets as a proxy for R&D intensity, and this prevents us from a more accurate assessment of the impact of R&D. Second, the study treats the EU as a single country in the Chinese context. Further research might extend to EU member countries within the EU, such as Germany and France. This extension would enable examination of the differences in determinants of subsidiary innovation among individual countries and whether it is constrained by local institutions and economic environments. Furthermore, this study has focused solely on EU firm JV with local ownership partners, and has emphasized the importance of the JV with COE. Of course, it would be desirable to include wholly-owned subsidiaries of EU MNCs

from China to compare analysis in the future. Finally, because the study only focuses on manufacturing industry, the validity of the findings for EU firms in general cannot be answered. Future work needs to replicate this study with individual data for sectors and with alternative methods to reinforce the confidence in the research.

3.8. Conclusion

Using panel data analysis of a unique sample of 680 firms, comprising the population of EU subsidiary innovation activities in manufacturing industry in China, this study has analysed a new phenomenon, cross-border technology mobility in the form of product innovation, based on the RBV, TCT and the theory of innovation institutional environment. It also accommodated the impact of MNCs subsidiary capacity, IJV ownership structure and host NIS linkage economic and political factors on EU firms' innovation in an emerging market. The study thus provides a better understanding of patterns of subsidiary innovation via JV that have not previously been widely recognized within the EU-China context in IB and strategic management theory.

CHAPTER FOUR: ESSAY 3: MNC OWNERSHIP PERFORMANCE: EVIDENCE FROM EU SUBSIDIARY[32] PANEL STUDY IN CHINA

4.1 Introduction

Reform in China began in the late 1970s. Since then, China has embarked on a path of rapid economic growth. China has become the top FDI destination among all developing countries and remained host to the world's largest share of FDI receipts since its accession to the World Trade Organisation (WTO) in 2001(OECD, 2003). This astonishing growth is believed to have come from two main sources: ownership structure reform and the operation of foreign-invested enterprises (FIEs) in China. Other than anecdotal accounts. There is a growing body of literature examining ownership structure issues from emerging economies, but few studies(Qi et al, 2000; Lemmon and Lins, 2003; Chen, 2004; Wei et al;) in the strategy and finance realm. We know few studies on EU subsidiary ownership performance in China, even though the EU plays an important role in China's modernisation process and in both sides' trade and investment relations. While the overall statistics on EU capital inflows in China are impressive, there is a lack of comprehensive understanding of the performance of EU multinational firms in China. The profitability of multinational firms with certain country origins is reportedly on the decline (Pan & Chi, 1999). Further, it appears that multinational firms are abandoning their long-standing strategy of entering China through WOSs versus JVs (Vanhonacker, 1997). Thus, it is important to evaluate the performance of FIEs as a

[32] 'EU subsidiaries' includes EU large & middle sized manufacturing subsidiaries; 329 WOS and 351 IJV firms from the Annual Reports of Industrial Enterprises Statistics compiled by the National Bureau of Statistics of China (NBS) over the period of 1998-2007.

whole in China, as well as to assess the relative advantages of equity joint ventures (EJVs) and WOS (Vanhonacker, 1997; Xu et al. 2006).

The goal of this study is to examine firm performance in relation to ownership structure, the provision of scarce resources by various shareholders, and the prevailing institutional context. The study investigates the relationship between ownership types and foreign investment performance by bringing together arguments from three theoretical perspectives, namely, agency theory, resource based theory and institutional theory (Scott, 1995; Xu & Shenkar, 2002). The study is particularly interested in knowing whether combining these various perspectives is beneficial in deepening and broadening understanding of the influence of various shareholders on performance especially in China, after years of ownership reform, and will formulate basic hypotheses addressing this research question. It focuses on the EU manufacturing industry in China, and hypotheses are tested in a sample of 329 EU WOS and 351 subsidiary JV investments in the Chinese Market. EU foreign subsidiaries provide an appropriate empirical setting because EU firms have very been actively engaged in FDI activities in China; details are discussed in section 1.1.

This study offers several contributions to the literature of the resource – based view, agency theory and institutional development in the context of emerging economies. Firstly, the major purpose of this chapter is to explore an additional explanation for the observed profitability differences; specifically, agency costs associated with ownership concentration differences, with a focus on EU subsidiary ownership-performance in China. Second, it presents an integrative framework combining firm-level resource and ownership structure creativity by multinational enterprises' (MNEs) affiliates with host institutional change at the macro level to identity the variables affecting MNEs' performance in the Chinese context. Third, it is one of the few studies that contribute to

knowledge on how the combination of EU subsidiaries' various strategic choices, operations and performance can lead to success. This study develops a comprehensive picture of the patterns and processes of EU ownership strategy over time, from 1998 to 2007. Fourth, this study extends the recent surge in scholarly attention directed towards institutional theory in the international business strategy arena (e.g., Bjo¨rkman et al 2007; Hillman & Wan, 2005; Husted & Allen, 2006; Meyer & Peng, 2005) by assessing the impact of macro-level economic and social institutions on micro- level performance.

The argument will proceed in the following manner. In the next section, we use agency cost theory, resource based theory and institutional theory to develop a series of hypotheses about factors that are expected to influence the likelihood of foreign firms' ownership – performance. Section 3 provides an overview of ownership reform in China. The study then tests the hypotheses against data gathered from EU subsidiaries' actual WOS and IJVs located in China, using PLOS, and FE and RE regression analysis. A discussion of the results and an outline of their implications for theory and practice conclude the chapter.

4.2 Theoretical Background

A number of studies have examined ownership and performance relationships using agency theory, as the theoretical lens. However, for MNEs and their affiliaties in emerging economies, this perspective does not fully account for the diversity in the ownership–performance linkage (Hoskisson *et al*., 2000, Gaur and Lu, 2007). It can be argued that agency theory presents a partial view of the world and largely focuses on firms within one particular country environment (Oliver 1997; Strange et al. 2009), although a second generation of research examines the effects of different legal systems on the nature of governance (Denis and McConnell 2005). Furthermore, there has been

considerable work in the international business literature on the internal governance of MNEs. This has drawn principally on the resource based view, in particular the decision on the extent of their commitment to an overseas affiliate (i.e., the choice of entry mode) (Filatotchev and Wright, 2011; Strange, et al. 2009). For example, studies that examined the performance effect of ownership levels have found conflicting results (Delios & Beamish, 2004). Some researchers have reported a positive association between the level of control by the foreign partner and foreign investment performance (Killing, 1983; Luo et al., 2001). Others have found that equally split equity ownership improved performance (Bleeke & Ernst, 1991). Kole and Mulherin (1997), Fare et al. (1985), and Atkinson and Halvorsen (1986) conclude that ownership is not a determinant factor in a firm's performance. Vickers and Yarrow (1991) suggested the need to consider the effects of ownership, competition and regulation jointly on firm performance. A single theory, such as agency theory, is not sufficient to explain the relationship between ownership and FDI performance. In view of these deficiencies, the study takes a multi-theoretic approach by incorporating insights from three major perspectives in strategy, corporate governance, and organisation theories to formulate hypotheses: the resource based view, the agency theory, and the institutional perspective. Strange et al. (2009) identified these three as the leading theoretical perspectives in research on emerging economies. Combining these various perspectives yields a richer and more composite understanding of the influence of various shareholders in determining firm performance, especially among emerging economies. Several recent studies (e.g., Buckley and Strange, 2011; Filatotchev et al., 2007; Strange et al., 2009) have usefully employed a multi-theoretic approach to examine a wide array of governance issues.

4.2.1 The Agency perspective on Subsidiary Performance

Good corporate governance should enable owners to exercise control over management (e.g., Eisenhardt, 1989; Fama and Jensen, 1983; Jensen and Meckling, 1976). Also corporate governance is at the heart of the strategic decision-making process in the MNE, and, by affecting risk preferences and interest congruence among various stakeholders, various constellations of governance factors such as ownership structure, firm resource and capabilities, and incentive systems may have profound effects on the MNE's global strategy, operations, and performance. Agency theory (AT) explicitly assumes that the risk preferences of MNE shareholders and managers, and of different groups of shareholders (e.g. the State, private owners, foreign investment enterprises and institutional investors), may vary, which may lead to different strategic objectives. The relevant costs for AT are the *ex ante* costs of crafting mechanisms to reconcile differing interests of the parties. The objective of AT is the design of a contract that optimizes alignment between principal and agent. These objectives are important to both the efficiency and profitability of the MNE.

A considerable literature suggests that agency costs can be related to differences in ownership structures, including share ownership concentration. The debate on the importance of ownership structures, agency problems and the effect of separation of ownership and control on performance stems from Berle and Means (1932) who established a tradition of equating agency costs with the extent of managerial discretion which, in turn, is conditioned by the extent of share dispersal (Boardman et al., 1997). Previous studies have, nevertheless, adopted an overly narrow perspective on corporate governance, concentrating on a static theorizing of the principal–agent perspective. The superior performance of MNE subsidiaries is at least partially attributable to ownership agency cost differences between MNE subsidiaries and domestic firms. The essential

principal-agent argument is that in the absence of direct monitoring by principals (in this context, shareholders), agents (in this context, managers) will tend to pursue some activities that improve their own welfare at the expense of the principal.

Some research in agency theory has also examined *principal-principal* conflicts. Here, principals differ in their preferences with respect to risk and returns on investments, so that conflicts among them can also lead to agency problems (Yoshikawa et al., 2005). One stream advances the notion that principals with conflicting interests may support agents' pursuit of self-interest if in doing so the former achieve their own goals (Salancik & Pfeffer, 1983). The empirical research has examined firm performance issue (Thomsen & Pedersen, 2000). Another stream examines the principal conflicts that arise when block shareholders use their power to expropriate wealth from minority shareholders (Claessens, Djankov et al., 2002; Dharwadkar et al., 2000; Faccio, et al., 2001). More recently, agency theorists have played an increasingly important role in refining agency and broader corporate governance issues. Dharwadkar et al (2000) Firstenberg and Malkiel(1994)and Jensen and Meckling(1976) argue that firms in emerging economies are especially characterized by unique agency problems arising from *principal–principal* goal incongruence. In EU-FDI in China is especially characterized by unique agency problems arising from *principal–principal* goal incongruence. This arises in emerging economy firms when weak governance enables large or majority owners to expropriate minority owners, preventing them from reaping appropriate returns on their investments (Claessens *et al*., 2000; Lemmon and Lins, 2003).

Whilst agency theory provides useful insights, it has unduly restricted corporate governance research by considering only principals and agents. Corporate governance is concerned with "the distribution of rights and responsibilities among different

participants in the corporation (OECD, 2011). Less attention has been paid to the change processes in governance and variations in the principal–agent relationship across national context. (e.g., Filatotchev and Wright 2011). Although recent studies are beginning to undertake empirical analyses of MNEs within an AT framework, a clear articulation of agency mechanisms remains very limited (e.g., Cuervo-Cazurra and Dau, 2009; Filatotchev et al., 2007). For example, the literature on the determinants of EU FDI has little or nothing to say about how corporate governance factors due to differential agency cost, with focus on WOS or JVs, might affect performance differences. AT fails to address the relationship between EU subsidiaries and their performance in China. In the case of emerging economies such as China, a higher ownership concentration may substitute for the absence of strong external governance (Dharwadkar et al., 2000).

Agency problems are a particular concern in Asian Pacific countries and emerging markets (Gedajlovic and Shapiro, 1998; Hoskisson et al., 2005). There are other agency costs associated with international ownership, which are likely to vary according to the country of origin of the parent, and include cultural and institutional differences that affect governance. They may not be great. Indeed, they are almost certainly dominated by resource endowments; otherwise, it would be difficult to explain why firms locate abroad at all.

4.2.2 The Resource based perspective on Subsidiary Performance

The resource-based view (RBV) of the firm suggests that industry structure and a firm's resources and capabilities are the primary determinants of firm performance. According to the RBV, firms gain competitive advantage and attain superior performance by holding, acquiring, and effectively using strategic assets. These assets include tangible,

physical assets as well as intangible assets that have been internalized, developed and used by firms in pursuing competitive and profitable strategies (Wernerfelt, 1984). Physical assets (plant, property, equipment, and physical technologies) are easily imitable and substitutable, and can be traded within the market. Intangible assets are valuable, rare, non-substitutable and hard to imitate, which is why they are treated as strategic assets capable of generating sustainable competitive advantage and superior financial performance (Barney, 1991).

A major advantage of resource-based theory is its ability to account for long-term differences in firm profitability that are not explicable by differences in industry conditions (Peteraf, 1993). It can be argued that shareholder categories vary widely in the resources at their disposal. According to Aguilera and Jackson (2003), owners can be categorized on the basis of the interests, financial or strategic, they pursue and the level of commitment or liquidity their ownership stakes reflect. . For emerging economy firms, these differences arise from shareholders being either foreign or domestic and financial or strategic. The RBV suggests that MNCs exist not only to cut costs, but also to create advantages that will in turn create profits (Chiao et al; 2010). The study will now exemplify the impact on firm performance of various ownership structures. For example, *financial–foreign* shareholders are strictly concerned with their returns on investments and are likely to value liquidity and typically own fewer shares, preferring strategies of exit rather than voice to monitor management (Aguilera and Jackson, 2003) and to engage in a process of restructuring in case of poor performance. Therefore, these shareholders are expected to have a negative influence on firm performance.

On the other hand, *Strategic–foreign* shareholders are concerned with multiple goals using their ownership stakes as a means to foster their strategic interests, such as access

to new markets, location-specific resources and low-cost production facilities. *Strategic–domestic* owners pursue their own strategic interests (e.g. regulating competition, underwriting relational contracts, securing new markets, etc) (Aguilera and Jackson, 2003). Typically, they have other commercial interests or strategic relationships with the firms in which they invest. Such owners are likely to *own larger stakes* and be committed to the long-term interests of the firm (Yoshikawa et al., 2005). All these shareholders have their impact on firm performance and have their resource endowments and capabilities.

In determining the preferred ownership structure for a subsidiary, the MNE is assumed to seek to maximize expected net economic benefits, which vary with the ownership structure chosen (Gomes-Casseres, 1989). The basic choice examined here is between a wholly owned subsidiary (WOS) and one that is owned jointly with one or a limited number of host-country firms or individuals (JV)[33].

The attractiveness of a JV as compared to a WOS depends partly on the costs and benefits of cooperation between the MNE and a local firm. These costs and benefits, in turn, depend on the nature and the form of cooperation considered. It depends on whether the MNE has all the capabilities required by its strategy for the subsidiary (Gomes-Casseres, 1989). To the best of our knowledge, this study is the first time an important application of the RBV focusing on resources discussed and empirically tested in the EU-China ownership performance context.

[33] The analysis ignores joint ventures between two MNEs, as well as MNE subsidiaries with widely dispersed local ownership. The great majority of joint ventures in the data used here were, in fact, between MNE subsidiaries and one, two and three local partners.

4.2.3 The Institutional perspective on Subsidiary Performance

Despite the variable contributions of agency theory and the resource based theory how ownership structure influence firm performance, they share a serious shortcoming in their failure to take account of the social context within which the firm carries out its operations. Little has been revealed about the countries in which the variation in foreign affiliate performance is greater (or less), or about the host country-specific factors that influence this variation (Chan, et al; 2008).

Institutional theory (IT) could contribute to fill this significant gap by exploring the impact of the social and regulatory context an organisational structure and firm behaviour. IT is primarily concerned with how national institutions affect national economic performance, though there are implications for how firm behaviour is influenced by the environment in which it operates (North 1990). Institutions determine the costs of acting in various ways in different economic (and political) contexts (Strange et al., 2009).

Economic institutions, which generally include market intermediaries, determine the incentives for and constraints on economic actions (North, 1990). Market intermediaries include agents. Intermediary institutions credibly communicate information between transaction parties and serve to resolve information problems and reduce transaction costs in the product, capital, and financial markets (Khanna and Rivkin, 2001). Economic institutions also involve the suppliers of the infrastructure that supports economic transactions. Political institutions include governments and the constraints that they impose on key factors such as investment regulations (Djankov et al., 2002), restrictions on foreign ownership (Gomes-Casseres, 1990), government protection

(Boddewyn and Brewer, 1994), and setting and enforcing the rule of law (Rodriguez, et al., 2005). Social institutions have their own distinct practices that constrain the choice of action and facilitate acceptable and preferred behaviour by the members of a society (Martin, 2004). Economic, political, and social institutions form the institutional environment within which firms carry out their business activities and from which they gain a return on their investments.

More recently, as researchers increasingly probe into emerging economies whose institutions differ significantly from those in developed economies, there is increasing appreciation that formal and informal institutions, commonly known as the "rules of the game" (North, 1990), significantly shape the strategy and performance of firms—both domestic and foreign—in emerging economies (Hoskisson et al., 2000; Wright et al., 2005). In the case of China, the argument is that micro- level institutional developments such as ownership reform in China, and interpersonal relationships among managers, are translated into a macro, interorganizational strategy of relying on networks and alliances to grow the firm and foreign affiliate performance (Chan et al; 2008).

In particular, although governments play a major role in developing the policies and strategies of firms (Mahmood & Rufin, 2005), emerging-economy countries have gradually implemented market-oriented institutional change consisting mainly of market liberalization and corporate governance reforms (Cuervo-Cazurra & Dau, 2009; Park, et al., 2006; Peng, 2003).

Economic, political, and social institutions vary across host countries. Such differences in institutions create opportunities and challenges for foreign affiliates and thus affect their performance. Hence, they have the potential to help explain distinctiveness in the behaviour of EU subsidiary ownership performance in China. Thus, there are

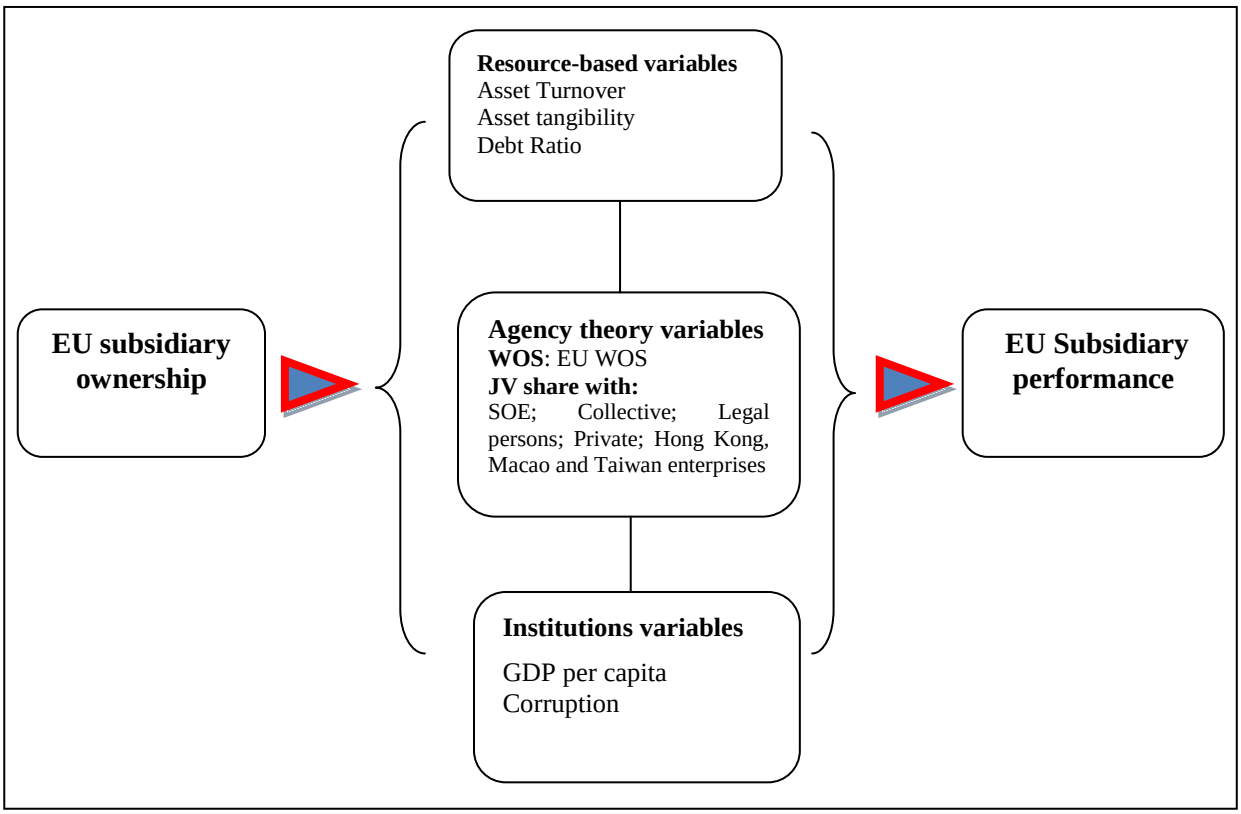
implications for how EU firm behaviour is influenced by the Chinese institutional environment in which it operates. Such considerations are important for MNEs which must operate in several different institutional environments at the same time. Institutions determine the costs of acting in various ways in different economic (and political) contexts.

4. 2.4. Multi-theoretic perspective

In view of the weakness of a unitary perspective, discussed above, a multi-theoretic view is adopted in this study, whereby to elements of agency cost, resource- based and institutional theories are combined develop a richer and broader view of the impact of ownership structure on firm performance. Figure 1 indicates the main points of this multi-theoretic approach. The three theoretical perspectives highlighted above are in many ways complementary.

Combining the agency cost, resource-based and institutional-based theories reveals the differing influences of various categories of shareholders among emerging economy firms. The reinforcing effects are accentuated further when the resource-based and transaction –based characteristics of these shareholders are embedded in emerging economy institutional settings.

Figure 4. 1 Research Framework: Multi-theoretic approach in explaining ownership-performance relationship among subsidiaries in an emerging economy context



Source: Compiled by the author according to the literature review

4.3 FDI Entry Mode and Ownership Reform in China Economy

The transition from a centrally planned Chinese economy towards a market-oriented one during the past quarter century has been a gigantic economic, political, and social experiment. The promulgation of the Equity Joint Venture Law by the National People's Congress in 1978 marked the first step in the 'open door' policy of the Chinese government. Gradually, China continued on the path of encouraging FDI through carefully designed promotion policy measures, especially by creating a business-friendly environment and through preferential treatment of foreign investors. This resulted in the growing recognition of China's economic potential and sparked off a boom in the number of FDI projects. During the period 1983-2008, both the contractual value and the realised value of FDI in China increased by more than 112 times and 117

times respectively from US$1,732 million to US$ 193,727 million and from US$ 636 million to US$ 74, 767.89 million (MOFTEC, 2010).

The Chinese government policies on entry modes of foreign firms have evolved over time. Foreign-invested enterprises (FIEs) have entered as equity joint ventures (EJVs), cooperative (or contractual) joint ventures (CJVs), wholly foreign-owned enterprises (WFOEs) or foreign-invested companies limited by shares (FICLS). For a firm considered as FIE, for purposes of investment incentives and other measures foreigners must own at least 25 per cent of the registered capital of an EJV (Cheung, 2007). From 1979 to 1997, equity joint ventures were the main mode of inward direct investment. WOSs were first made lawful in China in 1986. Since 1997 the foreign investments in WOSs have surpassed those in JVs in China, partly because of relaxation of government restrictions on entry modes (Xia et al., 2008). After China joined the WTO in 2001, restrictions on FDI were further relaxed. Not until early 1990 did China allow foreign investors to manufacture and sell a wide variety of goods on the domestic market. In the manufacturing industries, there is an explicit ownership restriction by the government on auto assembly plants – foreign firms can use only JVs to enter this industry (Economist Intelligence Unit, 2005; Teng, 2004). Moreover, in the high or middle-tech sector such as the auto industry, the foreign share is limited to 50%.

China's enterprise reform has spanned four interrelated stages. The first of these was characterised by the growth in number of s non-state firms during the 1980s. In the second, during the mid-1980s, managerial control rights within SOEs underwent reform. The third stage witnessed associations between formal ownership classification and ownership structure of assets. This led in the mid-1990s to the fourth stage, when the formal conversion of ownership took place, usually from state or collective ownership

to some other formal ownership classification; the outcome of the three preceding stages of reform (Jefferson and Su, 2006).

The first stage was the entry of new firms through (1) collectives, mainly township and village enterprises (TVEs), during the 1980s; (2) individually owned enterprises (*getihu*); and (3) foreign-owned enterprises including investors in HMT and from foreign sources (FOR), primarily OECD and Southeast Asian countries. This rapid entry of both domestic and foreign investment resulted in the intensification of competition in many sectors and in turn, a substantial drop in profitability, irrespective of across all ownership type (Naughton, 1992). This motivated a search for technical innovations and new mechanisms of governance throughout Chinese industry (Jefferson and Rawski, 1995; Su and Jefferson, 2006).

The second stage was the reform of control rights including the vertical reassignment of control rights from government supervisory agencies to enterprises and the horizontal allocation of managerial control rights among managers, workers' councils, and party secretaries within enterprises (Jefferson et al., 1998a, 1998b). A significant effect of these reforms was the rise of a managerial class who were strongly motivated towards privatization.

The third stage was the changing asset structure. In China's enterprise sector, the association between formal ownership classification and the ownership structure of the assets has become increasingly fluid. These somewhat confusing patterns of asset ownership across the range of ownership classifications call into question the formal classification system. The following discussion on the historical progression of China's ownership reform shows that asset restructuring often created de facto conversion, making formal conversion a mere formality (Jefferson and Su ,2006).

The fourth stage was outright conversion of enterprises, from new entry and competition, strengthened managerial control, and the accumulation of non-state asset to create the condition for formal conversion of SOEs during the latter half of the 1990s in China. A distinctive feature of the Chinese corporate landscape is privatization. Three restructuring polices (a furlough policy – *xiagang*, a mandate for the conversion of most SOEs and the intensification of the shareholding experiment) policies were initiated during the mid-1990s. In 1997, the Chinese Communist Party's 15th Party Congress made the shareholding system a centrepiece of China's enterprise restructuring. While formal privatization was ruled out for ideological reasons, the shareholding experiment was viewed widely as a covert mandate for privatization (Li et al. 2000).

By 2002, the central government had adopted the policy of ''grasping the large and releasing the small '' (Xu et al; 2006). Under this policy, the government retained direct control over some of the largest SOEs, and the state sector has indeed shrunk in the past two decades. However, the state sector continues to dominate, control and monopolize the 'commanding heights' of the national economy.

4. 4 Hypothesis Development

4. 4.1 Resource –based variables

The study suggests that the superior financial performance of EU MNE subsidiaries is at least partially attributable to ownership agency cost differences between EU subsidiaries and domestic firms. The essential principal-agent argument is that without direct monitoring by principals (in this context, shareholders), agents (in this context, managers) will tend to pursue some activities that improve their own welfare at the expense of the principal (Boardman, et al., 1997).

Asset Turnover

EU firm' asset turnover ratio is an important financial indicator that can be used to achieve the purpose of measuring management efficiency. Asset turnover measures the ability of firms in an industry to use the asset to generate sales. It measures the degree of capital intensity (Erramilli and Rao, 1993). In industries with high asset turnover, a given amount of the asset could generate larger sales. Firms operating in industries with high asset turnover are more likely to internalize their operations overseas (Gatignon and Anderson, 1988) and effectively utilize their assets to generate revenue (Luo and Chen, 1997; Luo et al, 2012); EU subsidiary assets are more efficiently managed with a lower level of assets than domestic assets. In this study, it is expected that a positive relationship exists between EU subsidiary asset turnover and its firm performance. The hypothesis to be tested here is:

Hypothesis 4.1: There is a positive relationship between asset turnover and firm performance for EU subsidiaries in China.

Asset Tangibility

EU firms' asset tangibility is considered to be one of the major determinants of firms' performance. The most common argument in the literature favours a positive relationship between asset tangibility and performance. Mackie- Mason (1990) concludes that high proportion of plant and equipment (tangible assets) in the firm's asset base makes the debt choice more likely and influences firm performance. The study uses data spanning 10 years for EU subsidiaries to smoothen the measure. EU industries with high classed tangibility include petroleum refineries, paper, and its products, iron and steel and industrial chemicals. At the other end of the tangibility scale are pottery, china and earthenware, professional, scientific and controlling

equipment, and nonelectrical machinery (Hur, et al., 2006). Evidence shows that the degree of asset tangibility across industries is fairly stable over time (Braun, 2003). In the study, tangibility indicates the tangibility of assets and is measured by the ratio of fixed assets to total assets. Akintoye (2008) argues that a firm retaining large investments in tangible assets will have smaller cost of financial distress than a firm relying on intangible assets. The relationship between asset tangibility and firm performance is expected to be positive. The hypothesis to be tested here is:

Hypothesis 4.2: There is a positive relationship between EU firm's asset tangibility and its performance.

EU subsidiary Debt Ratio

One contribution of agency cost theory is that, generally, leverage of firms is better for shareholders as debt level can be used for monitoring the managers (Boodhoo, 2009). Theoretically, this influence is grounded on the binding role of debt; higher leverage is expected to lower agency costs, reduce inefficiency and thereby lead to improvement in firm performance (Jensen, 1986, 1988, Kochhar, 1996, Akintoye, 2008). Thus, higher leverage is expected to lower agency costs, reduce inefficiency and thereby lead to improvement in a firm's performance (Kochhar, 1996). Researchers also agree with this idea. For example, Agrawal and Knoeber (1996) illustrate ownership as an important corporate governance mechanism.

On the other side, principal agent reasoning suggests that the greater the level of debt, the greater the amount of lender monitoring and higher agency costs, hence a negative relation between financial leverage and corporate performance (Jensen and Meckling, 1976; Myers, 1977). It has been argued that lack of monitoring by government-owned lenders has permitted industrialists to earn large rents on low personal investments, and

there have been no incentives to attain superior performance (Majumdar and Chubbier, 1999). Empirical supports for the relationship between capital structure and firm performance from the agency perspective are many and in support of a significant negative relationship (e.g. Zeitun and Tian 2007). Thus, literature provides opposite arguments on the relationship between leverage and performance.

Additionally, the different influence of leverage on performance can come from differences in performance measures and the impact of different institutional frameworks. Thus, debt ratio is measured by the ratio of total liabilities to total assets in the study and we expect that the variable EU subsidiary debt equity ratio will be negatively related to its performance. The following hypothesis will be tested:

Hypothesis 4.3: There is a negative relationship between EU firm's debt ratio and its performance.

4. 4.2 Ownership variables

Accompanying China's transition since the late 1970s has been the rise of firms with diverse ownership types (Jefferson et al., 2000; Peng, 2003; Tan, 2002). China's enterprise reform has spanned four related processes: entry of many new, non state enterprises; reform of incentive structures within established public-ownership systems; change in asset structures as non- state entitles began to invest in the state sector; and formal conversion of enterprises, usually from state or collective ownership to another formal ownership classification, as explained in section 4.3 (Jefferson and Su, 2006; Xu et al. 2006). Officially defined ownership types in China include state owned enterprises (SOE), collective owned enterprises (COE), mixed enterprises (ME), foreign owned enterprises (FOE), joint ventures (JV) and domestic private owned enterprises (POE) (Wei, et al., 2002).

FDI entry modes are chosen based on the internal capabilities of an MNE and external contingencies (Luo, 2001). The basic choice examined in the study is between a EU wholly owned venture (WOS) and one that is EU owned jointly with one of a limited number of host-country firms or individuals (JV). Until the mid-1990s, the main change in ownership structure in Chinese industry was the entry of new firms through JV with local Chinese partners which can be categorized into five types: state-owned enterprises (SOEs), collectively owned enterprises (COEs), legal persons (LPs), private owned enterprises (POEs) and Hong Kong, Macro and Taiwan (HMT) share enterprises and foreign owned enterprises (Thomas, et al., 2008). China's enterprise system currently combines a wide variety of ownership types. One approach to evaluating the implications of ownership change is to compare the performance of firms already established in an ownership classification.

EU WOS

FIEs in China, including both joint ventures and wholly foreign-owned subsidiaries, have attracted significant research attention (Beamish, 1993; Luo and Peng, 1999; Yan and Gray, 2001). Foreign investments must be more than 25% of registered assets according to the Management of Registration of Corporate Enterprises. EU WOS share means wholly EU–owned enterprises in China. While FIEs as a whole are distinguished from the other types of firms, some FIEs may be more aggressive, whereas others may be more conservative, thus making it difficult to generalize about their strategic posture (Meyer, 2001a; Pan, 1997). Furthermore, it is expected that due to differential agency costs, wholly-owned subsidiaries of foreign MNEs will perform better than partially-owned but highly-concentrated subsidiaries (Boardman et al., 1997). The larger EU presence is in a combination of high-technology and capital intensive sectors such as raw chemical materials & chemical products transport equipment, electronic &

telecommunications and other electronic equipment in our data set. The FIEs also suffer from conflicting demands caused by incompatible institutional rules of their home and host-countries (Kostova & Zaheer, 1999; Xu & Shenkar, 2002) and encounter unique information and legitimacy problems in an environment far away from their home countries (Xu, et al., 2006). However, according to the statistics documents, the number of EU FDI projects rose from 1002 to 1844 during the period of 1998-2008 and European companies invested €5.3 billion in China in 2009 (up from €4.7 billion in 2008). This is about 2-3% of overall European FDI (MOFTEC, 2010). Almost half of EU FDI to China goes to manufacturing, while China remains the EU's biggest source of manufactured imports (Eurostat). 44% of EU subsidiaries share in China were WOS during the period of 1998-2007 in current data (We coded 100 % equity ownership by EU subsidiaries in this study). These are by definition financial and strategic foreign shareholders (market–oriented, profit-maximizing economic entities). Thus,

Hypothesis 4.4: The presence of WOS is positively associated with EU firm' performance in China.

EU JV with state-owned enterprises (SOE)

In China, State-owned enterprises (SOE) are owned by the central government and the government is responsible for appointing managers and monitoring the performance (Wei et al., 2002). They are non-corporate economic units whose entire assets are wholly owned by the state. Consequently, managers are appointed by the government and credit plans formulated and controlled by the state banks. Their managers have historically paid little attention to competitive issues since there was little need to 'strategize' under the old system (Peng and Heath, 1996), and workers in SOEs hold the 'Iron Rice Bowl' or life-long employment.

China's SOE face agency problems between the state or the public as the principal, and workers, managers, and government officials as agents. The state assigned the SOEs certain quantities of capital and manpower with which they were requested to meet given output targets. State ownership shares account for the largest portion of shares of firms in China. Political pressure for excessive employment is likely to be greater on SOEs. Another problem is the difficulty in monitoring managers and the lack of interest in restructuring (Kang and Kim 2012), Lin et al (1998) claim that decreases in state ownership may undermine firm performance by causing severe principal-agent problems. In light of the above argument, the study hypothesizes that:

Hypothesis 4.5: The presence EU JV with SOE is negatively related to performance.

EU JV collectively owned enterprises (COE)

Collective share enterprises in China, mainly TVEs, were established during the 1980sFollowing the transformation of commune enterprises to TVEs in the early 1980s, many townships and villages, in an effort to build on their success, established new TVEs. Operating outside the central economic plan, COEs contribute substantially to local government revenues, and Chinese local officials have a strong incentive to protect COEs (Walder, 1995). Agency theory assumes that difficulties arise as a result of good incongruence between the principal (local authorities in the case of the COEs) and the agent (the COE managers). Recently research has extended agency theory in transition economies to understand mismanagement by SOE managers (Shirley and Xu, 2001; Xu, et al., 2005). Yet, being owned at least nominally by local governments, COEs, labelled by Nee (1992) as 'collective hybrids' are different from POEs. Specifically, close relationships with local governments result in more institutional support for COEs (Tan, 2001). Once TVEs become established and make a profit, they

immediately start to upgrade operation and performance. COEs were more efficient and profitable than SOEs during the early years of the Chinese reform (Xia, et al. 2009) Thus,

Hypothesis 4.6: EU Subsidiary JV with COE is positively associated with EU firm' performance in China.

EU JV with legal persons (LPs)

Legal person shareholding, which is an essential feature of Chinese ownership reform, is considered to give firms freedom in deciding on investment projects, disposal of major assets, and profit allocation. In this regard, one may expect that Chinese ownership reform results in better firm performance. In contrast, there is an argument that Chinese ownership reform is merely "a change of logo" that disguises true ownership of the state and keeps state involvement in operation of firms (Xu &Wang, 1999). Legal person shareholding can also possibly be a source of conflict of interests; it promotes collusion between legal person shareholders and managers but hurts the interests of other shareholders, including minority ones. State ownership and legal person ownership have a negative and a positive impact on firm performance, respectively (Sun, et al., 2002), although empirical findings from the previous studies on ownership reform and firm performance are not clear-cut (Kang and Kim 2012). Hence, Chinese ownership reform possibly fails to improve firm performance or even undermines it. Thus,

Hypothesis 4.7: JV with EU JV legal person capital is negatively related to firm performance in China.

JV with Private owned enterprises (POEs)

Private enterprises (POEs) or individually owned enterprises (*getihu*), generally speaking, are smaller with a shorter history. Often they were started by a firmly or group of individual investors, and they are run more flexibly than other types of enterpris. With the slogan of "grasping the large, letting go the small", the privatization of small SOEs was promoted. However, there is a positive relationship between government ownership and firm performance (e.g., Peng et al., 2004; Tan, 2002), and one argument for the failure of privatization is that the institutional framework in transition economies is too weak to sustain effective privatization (Spicer et al., 2000; Uhlenbruck et al., 2003), and another is agency problems in transition economies (e.g., the spectre of principal–principal agency conflicts) (Qian, 1996; Zhu, 1999). In the fourth stage of Chinese ownership reform, the number of registered SOEs decreased nearly 50% from 1997 to 2001 and private shareholders also are more likely to select managers according to their ability to maximize the wealth of the shareholders (Jefferson & Su, 2006; Kang and Kim, 2012). Furthermore, WTO accession has pressurized the Chinese government to accelerate its privatization process, and WTO accession increases competitive pressures on the state sectors by introducing more foreign competition (Yusuf et al., 2006). Thus,

Hypothesis 4.8: EU Subsidiary JV with POE is positively associated with EU firm performance in China.

JV with Hong Kong, Macao and Taiwan (HMT)

Foreign-owned enterprises from investors in Hong Kong, Macao, and Taiwan (HMT) are primarily organizations for South East Asian countries. The major sources of FDI in China are from HKMT, accounting for 58 per cent of the total FDI in China. For

individual entities, the foremost source, however, is from Hong Kong which contributes about half of China's total inward FDI (Cheung, 2007). One unique and critical advantage of these firms is their ethnic links to China. The HMT investments tend to be relatively small in size and short in duration, focusing on export-processing manufacturing and products. During the same 10-year period, the number of large- and medium-size industrial enterprises classified as HKMT-owned enterprises grew fast in existing data. Thus,

Hypothesis 4.9 EU Subsidiary JV with HKMT share is positively associated with EU firm's performance in China.

4. 4.3. Institutional variables

Institutional development is defined as the extent to which the economic, political, and social institutions in a host country are developed and are favourable for MNC subsidiaries. In the study, we selected GDP per capita of China and Corruption for institutional variables. Firstly, EU FDI inflows and JV with Chinese local patterns were primarily motivated by Chinese economic growth, and the incentive to produce for the growing Chinese market. China's large population and economic need, depend on more and more imports, so world markets have to make the corresponding adjustment. Secondly, the level of institutions development and quality of the legal environment in China is relatively low, largely because institutional rules are absent, insufficient, or poorly enforced (Hitt et al., 2005; Hoskisson et al., 2000; North, 1990; Peng and Heath, 1996). Informal institutional replace informal ones. A lack of reliable market information, efficient intermediary institutions, predictable government actions, and an efficient bureaucracy create what are known as 'institutional voids', which make market transactions costly and transformation less efficient for foreign affiliates, because

institutions lack the cognitive or moral basis for legitimacy (Henisz and Zelner, 2005). In this context, these two variables are crucial to EU- China ownership performance.

GDP per capita of China (Economic Institution)

GDP per capita (GDP P C) is a measure that results from GDP divided by the size of the nation's overall population. So in essence, it is theoretically the amount of money that each individual gets in that particular country. The GDP per capita provides a much better determination of living standards as compared to GDP alone. Having said this, GDP per capita is a more reliable measure for determining the economic state of a nation in an individual perspective. China may have a very high GDP but the standard of living is rather low because of the nation's extremely large population. There are limitations of GDP per capita as a measure of growth. Economic institutions, which generally involve market intermediaries, determine the incentives for and constraints on economic actions (North, 1990). Market size is often measured by GDP per capita. When the economy grows quickly, as in the case of China, large local markets and business opportunities may be created for foreign investors and which in turn increases their palatial for high performance.

Hypothesis 4.10: The level of GDPPC is positively associated with EU firm performance in China.

Corruption in government of China (Social Institution)

Social institutions are derived from the populace (Scott, 2001; Searle, 1995), and the informal frameworks that determine acceptable behaviour vary from region to region (Meyer and Nguyen, 2005; Putnam, 1993). The institutional factor 'corruption' can be a proxy for the quality of the legal environment in China. Corruption index data ranging from zero to six is taken from Political Risk Services (PRS) Group, a consultant

company specializing in producing macro economic and political related data, with a lower score indicating severe corruption and thus lesser desirability for MNCs. Control of corruption in the host country lessens the average firm's likelihood of encountering corruption in its normal interactions with state officials in the society that hosts the IJV. Globerman and Shapiro (2003) found that American MNEs were less likely to enter countries characterized by weak rule of law and control of corruption than those with strong rule of law and control of corruption. As these local traditions and cultural values differentiate one institution from another, regional social institutions influence interpersonal trust (Johnston and Soroka, 2001; Tung, et al, 2008) to explain differences in economic performance (Locke, 1995). Thus,

Hypothesis 4.11: The lower Corruption in China, the better the performance of EU firms.

Our hypotheses, their theoretical justification, the proxies we use and the expected signs are detailed in Table 4.1, together with our data sources. We expect the distinctive nature of the factors influencing EU FDI in China to be captured by the collective significance in the main variables and Control variables (detailed discussion in section 4.5.2) that we identify in the table.

Table 4.1 Explaining ownership-performance relationship among EUsubsidiaries in China context

Variable name & Hypotheses	Definition	Sign	Theoretical Justification	Main or control	Data source
Firm performance indicators					
ROA (return on assets)	Profit before depreciation, interest, and taxes as a ratio over total assets				
ROS (return on sales)	Profit before depreciation, interest, and taxes as a ratio over net sales				
A. Firm capability variables					
H1. Asset Turnover	Sales/ Total Assets	+	Resource – based theory	Main	NBS
H2. Asset Tangibility	Fixed Assets/ total assets	+	Resource – based theory	Main	NBS
H3. Debt Ratio	Total non- equity liabilities over total assets	_	Resource – based theory	Main	NBS
B. Ownership variables: WOS Vs JV Variables					
Wholly owned subsidiary (WOS)					
H4. WOS: EU Subsidiary share	EU subsidiary capital over total capital or EU share with others	+	Agency theory	Main	NBS
Joint Ventures (JVs)					
H5. JV with State share/ share of state capital	JVSS: State capital over total capital	_	Agency theory	Main	NBS
H6. JV with Collective share/ share of collective capital	Collective capital over total capital	+	Agency theory	Main	NBS
H7. JV with legal persons capital share/ share of legal persons capital	Corporate capital over total capital	_	Agency theory	Main	NBS
H8. JV with Personal share/share of private capital	Personal capital over total capital	+	Agency theory	Main	NBS
H9. JV with Hong Kong, Macao and Taiwan share/ share of HMT capital	Hong Kong, Macao and Taiwan capital over total capital	+	Agency theory	Main	NBS
C. Host country institutional variables					
H10.GDP per capita	GDPPC: Log of gross domestic product (GDP) per capita at current prices and exchange rates.	+	Economic institution	Main	IMF
H11.Corruption in government	The extent to which corruption within the political system is likely to occur. Scaled from 0 to 10, with a lower score indicating severe corruption and thus lesser desirability for MNCs	_	Social Institution	Main	ICRG
D. Subsidiary– specific principal control variables					
Subsidiary Age	Natural logarithm of years since founded	+		Control	NBS
Subsidiary Size	Natural Logarithm of total asset	+		Control	NBS
Subsidiary Capital Intensity	Fixed assets to number of employees	+		Control	NBS

Notes: All monetary values are in constant (2007) China RMB Prices. NBS is National Bureau of Statistics of China. ICRG is international Country Risk Guide 1998-2007. WTOSD is World Trade Organization Statistics Division. WBDI is World Bank Development Indicator. Source: International Monetary Fund 1998–2007.

4. 5 Methodology

4. 5.1 Data and ownership distribution

The study uses China, a leading emerging market, as the research setting. The article draws upon a unique database that contains information on the ownership-performance practices of the foreign activities of EU large & middle sized manufacturing subsidiaries, 329 WOS and 351 IJV firms from the Annual Reports of Industrial Enterprises Statistics compiled by the National Bureau of Statistics of China (NBS). EU subsidiaries are broadly classified into six ownership categories: WOS and forms of JV (i) state-owned (SOE) , (ii) collective-owned (COE) , (iii) private-owned (POE) , (iv) Hong Kong, Macao and Taiwan-owned (HMT), (v) Legal Person (LPs) and (vi) Mix EU JV in China[34]: based on the proportion of JV capital held by local partners in the database. It is estimated that the firms contained in the dataset account for about 85–90% of total output in most industries. The database contains detailed information about a company's operational profile including firm ownership structure, industry affiliation, geographic location, establishment year, employment, gross output, sales, R&D, exports, and employee training expenditures. For the NBS the original dataset covers an unbalanced panel spanning the period 1998-2007. The NBS has maintained high consistency in data collection across time, industries, and regions, and existing international business studies have used the census data (e.g., Buckley et al., 2002; Li, and Li, 2010; Zhou & Li, 2008).

The time period 1998-2007 is chosen because of data availability. For this time period the census dataset includes detailed information about how much equity share is owned by foreign and domestic investors. We need such information to measure the main

[34] In the current study, we focus on five main ownership types.

variables of interest (i.e., ownership structure and foreign equity share). These are the key variables that identify the level of treatment received by EU subsidiaries in China and the study analyses WOS and IJV ownership performance, which has not previously been studied. The year 1998 marked the twentieth anniversary of China's reform and open-door policies, and was one year after China started to accelerate ownership reform (Huang, 2003). Specifically, WOSs became a predominant entry mode in 1997, accounting for more than half of all FDI in terms of both number and value, and the ratio of the number of WOSs to the number of JVs has increased steadily since 1997 (Xia et al., 2008). The sample thus indicates a similar overall trend of foreign entry modes to that as found in existing studies. The study revisits the issue of government ownership restrictions in robustness checks. It identifies new foreign entries according to their founding-year information in China, contained in the census data. Note that these new entries are not necessarily MNEs' first time investments in China, and the census data do not have information about the identity of MNEs.

Following China's transitions since the late 1970s has been the rise of firms with diverse ownership types. There are 1011 EU subsidiary firms in the original dataset. After cleaning for missing observations, outliers, and non-responses, 329 WOS and 351 IJV firms were left in the study[35].

Details of industries in each category, the pattern of EU subsidiary capital share performance activities, and the pattern of their ownership structure changes/ development are reported in Table 4. 2

[35] Criteria from the first Economic Census were followed in classifying the EU subsidiaries into 33 sectors in the industry and 9 industries according to standard industrial classification (SIC) classes.

Table 4. 2 EU Ownership distribution: % of total in China

Ownership type	1998	2002	2007	1998-2007
State-owned Share (SOE)	14.41%	19.26%	9.04%	9.80%
Collective Share (COE)	1.17%	0.26%	0.64%	3.10%
Legal Persons share (LPs)	21.93%	14.70%	23.60%	21.80%
Privately owned Share (POE)	0.01%	0.00%	0.24%	1.10%
Hong Kong, Macao, Taiwan Share (HKMT)	1.35%	0.78%	0.07%	6.40%
EU wholly owned subsidiary share (EWOS)	10.97%	21.37%	29.15%	44.00%
Mix EU JV shares in China	50.16%	43.63%	37.26%	13.80%
Total	100.00%	100.00%	100.00%	100.00%

Source: Author analyses based on data from China National Bureau of Statistics.

a. Mix EU JV share means JV with more than one local Chinese partner/ EU wholly owned subsidiary (WOS) IJV with two and three local partners.

b. EWOS are coded in the study 100% equity ownership by EU subsidiaries. EU IJV with SOE, COE, LPs, POE is coded only one partner equity ownership.

Table 4.2 reports the changing ownership profile of EU Large and Middle-Sized Enterprises (LME) subsidiary firms in China sector from 1998 to 2007. As Table 4.2 indicates, the proportion of COEs, and HKMTs enterprises represented in the data set declines significantly, while the proportions of the POE and EU - owned enterprises as major categories of ownership types grow substantially. In particular, the POE share is 0.01% in 1998 and rises 110 -fold to 1.10 % by 2007. Moreover, the proportion of SOEs fluctuated in this period. The rapid increase in the number of shareholding enterprises, concomitant with the government's promotion of private shareholding and the acceleration of privatization and was the hallmark of China's ownership reform programme during the later 1990s.

4. 5.2 Variables construction

Performance measures

Two sets of dependent variables were used in this study. One was of analysis the impact of ownership type is to compare from performance in relation to ownership classification. This involves initially looking at the ownership classification under which the firms registered and the ownership composition of assets to establish the

relative significance these of two measures of ownership relative to performance (Jefferson and Su, 2006): Return on assets (ROA) and Return on sales (ROS). In line with similar studies of this nature, the first measure, ROA is defined as the operating earnings before interest over total assets (e.g., Douma *et al.,* 2006; Jefferson, et al., 2000) and measures of ownership concentration. The second measure, productivity[36] is measured by sales per employee, and the same measure of ownership concentration (Boardman, et al. 1997; Jefferson and Su, 2006). A description of the variables used in this study with WOS is presented in Table 4.3 and with IJV in Table 4.4 (Sample of FDI with IJV).

[36] As a robustness check we also use the sales per employee. However, as LN (sales / employee) is substantially correlated with the ROA and the empirical results do not change qualitatively, we do not report these results separately.

Table 4. 3 Mean value, standard deviations: sample of EU FDI with both IJV and WOS Mode of Entry

Variable	Mean	Std. Dev.	Min	Max
Panel A: Performance Measure				
ROA (%)	0.06	0.18	-1.61	1.48
ROS (%)	0.03	0.38	-12.58	1.62
Panel B: Firm specific variables				
Asset turnover	1.25	1.27	0	29.59
Asset tangibility	0.33	0.22	0	0.96
Debt ratio	0.51	0.26	0	1
Panel C: Ownership variables				
WOS (=1): EU Subsidiary share	0.44	0.50	0.00	1.00
Panel D: Host country institutional development variables				
GDP per capita	7.27	0.35	6.71	7.85
Corruption in government	1.65	0.44	1	2
Panel E: Subsidiary characteristics				
Subsidiary sale	12.07	1.62	0	17.42
Subsidiary size	2.57	0.44	0.69	4.51
Subsidiary capital intensity	4.47	2.35	0	10.05

Notes: FDI = foreign direct investment; WOS= wholly owned subsidiary. ROA =Return on assets; ROS=Return on sales. Means and standard deviations based on raw values.

a. ROA is the independent variables in the sample of FDI with both IJV and WOS modes of entry.

b. The sample consists of 680 EU Subsidiary including WOS and IJV and Annual data for the fiscal year 1998-2007 in China. All variables are as defined in Table 4.1.

Descriptive statistics concerning the performance measures of sample firms are presented in Table 4. 3 and Table 4. 4. The mean (median) values for ROA are 0.06 (0.18) with WOS type for the entire sample in Table 4.3 and 0.07(0.16) percent with IJV ones in Table 4.4. And for ROS, the mean (median) are 0.03(0.38) with WOS for the entire sample and 0.04(0.45) percent with IJV, respectively.

Table 4. 4 Mean value, standard deviations: Sample of EU FDI with only IJV Mode of Entry

Variable	Mean	Std. Dev.	Min	Max
Panel A: Performance Measure				
ROA (%)	0.07	0.16	-1.04	1.48
ROS (%)	0.04	0.45	-12.58	1.62
Panel B: Firm specific variables				
Asset turnover	1.24	1.03	0.01	16.97
Asset tangibility	0.32	0.22	0.00	0.96
Debt ratio	0.50	0.25	0.00	1.00
Panel C: Ownership variables				
JV share of state capital	0.098	0.18	0.00	1.00
JV with Collective share	0.031	0.11	0.00	0.83
JV with legal persons capital share	0.218	0.25	0.00	1.00
JV with Personal share	0.011	0.07	0.00	1.00
JV with HMT share	0.064	0.22	0.00	1.00
Panel D: Host country institutional development variables				
GDP per capita	1.649	0.450	1.000	2.000
Corruption in government	7.214	0.349	6.706	7.848
Panel E: Subsidiary characteristics				
Subsidiary sale	12.33	1.49	8.43	17.42
Subsidiary size	2.64	0.43	0.69	4.51
Subsidiary capital intensity	4.34	2.44	0.00	10.05

Notes: FDI = foreign direct investment; IJV = international Joint venture; ROA =Return on assets; ROS=Return on sales. Means and standard deviations based on raw values.

a. ROA is the independent variables in the sample of FDI only with IJV modes of entry.
b. The sample consists of 351EU Subsidiary IJV and Annual data for the fiscal year 1998-2007 in China. The pattenr of their structure changesis reported in Table 4.2

Explanatory Variables.

The main important explanatory variables used in the study are resource variables, ownership variables and host country institutional development variables. At first, the study distinguishes two distinct samples, according to equity ownership entry mode, wholly owned subsidiary (WOS) and international joint venture (IJV) with domestic partnerships, respectively. The distinction criterion between a wholly owned subsidiary

and an international joint venture was 100% equity ownership by foreign MNCs. The study coded wholly owned subsidiaries (minimum 100% equity ownership by EU subsidiaries) as 1 and international joint ventures (less than100% equity ownership by EU subsidiaries) as 0. Since the intention in this study was to examine the influence of ownership at a disaggregated level, the broad ownership variables were divided into key categories.

The study accounts for Asset turnover, Asset tangibility and Debt ratio, as important resource and capability variables (see Panel B of Table 4.3), and which are seen as significant drivers of EU subsidiaries' performance. The mean (median) value of Asset turnover, Asset tangibility and Debt ratio are 1.25 (1.03), 0.32(0.22) and 0.50 (0.25) percent, respectively. In the JV subsample of Table 4.4 accordingly, the mean (median) values of three factors are 1.24 (1.03), 0.32(0.21) and 0.50(0.25) percent. The average of these three variables of EU firms for the entire sample (WOS) is greater than the average for the IJV sample in China.

Among the subsample of international joint ventures in Table 4.4, the average JV percentages of equity ownership with State, Collective, Legal persons, Personal and HMT capital share are 0.10, 0.03, 0.22, 0.01, 0.06 percent, respectively. For the entire sample, the average total of equity ownership by EU subsidiary share is 0.44 percent (see Panel C of Table 4.3).

With Host country institutional development variables, the average Corruption in government and GDP per capita in China for the JV sample (in Panel D Table 4.4) are 1.65 and 7.21 percent, respectively, as compared to 1.65 and 7.27 for the WOS for entire sample. These variables are employed in the regression specification to examine

the influence of these ownership categories on firm performance when they invest in a different country.

Control variables

A number of organizational factors can influence performance. The analysis reported later on incorporated three control variables which might influence EU subsidiary ownership performance: The three principal control variables the study uses are *subsidiary size, age, and capital intensity*. Theoretically, *the size* (natural logarithm of total assets) of a firm can affect a firm's performance in many ways. Alternatively, larger firms could be less efficient because of the loss of control by top managers over strategic and operational activities within the firm (Williamson, 1967), while smaller firms can be more flexible in adapting to situations where rapid decision making can allow firms to obtain larger profit (Carlson, 1989). Size of a firm can have a significant influence on firm performance and a proxy for firm size is used in almost all studies explaining firm performance. *Age* (Natural logarithm of years since founded) is also assumed to have an important impact on firm performance. Larger – established firms are more experienced, likely to have benefited from learning and have the advantages of being the pioneers in their field. On the other hand, they may suffer from inertia and rigidity in weakening their ability to cope with competitive pressures. One further heterogeneity variable is added, *capital intensity* (Fixed assets to number of employees), and the variable controls for variations in firms' input structures. Differences in input structure between firms can be associated with a number of factors such as capital market influences, managerial decisions as to what is thought to be an optimally feasible level of a particular input, or supply conditions in factor markets. Evidence also points to the fact that firms with greater levels of foreign ownership are relatively more capital intensive than domestic firms (Bulcke, et al., 2003). Summary statistics of these

three control variables are presented in Panel E of Table 4.3 and 4.4. A correlation involving performance and other variables is shown in Table 4.5 for the entire sample and Table 4.6 for JV subsample.

The study also adjusts for EU subsidiary industry factors that may have impacts on firms' relative performance. For this purpose and in order to facilitate comparison with previous studies, the industry categories used in the database have been recorded into their closest 2-digit Standard Industrial Classification (SIC) equivalents. The database criteria from the first Economic Census in classifying the EU firm into 30 sectors in large & middle sized manufacturing industry and 9 industries according to SIC classes, which form the basis for industry dummies, used in the regression analysis.

Table 4. 5 Correlation: Sample of EU FDI with both IJV and WOS Mode of Entry

	1	2	3	4	5	6	7	8	9	10
1.ROA										
2. ROS	0.47**									
3.Size	0.02	0.06**								
4.Age	0.05**	0.06**	0.17**							
5.Capital Intensity	-0.03	0.03	0.26**	-0.02						
6.Asset Turnover	0.19**	0.05**	-0.08**	-0.03	-0.17**					
7.Asset Tangibility	-0.25**	-0.12**	0.16**	-0.13**	0.30**	-0.20**				
8.Debt Ratio	-0.36**	-0.26**	0.19**	-0.06**	0.01	0.02	-0.05**			
9.WOS (=1)	-0.44	-0.02	-0.18**	-0.17**	0.06**	0.00	0.02	0.05**		
10.GDP P C	0.11**	0.08**	0.11**	-0.14**	0.16**	-0.08**	-0.03	0.02	0.18**	
11.Corruption	-0.04*	-0.05**	0.01	-0.11**	-0.29**	0.01	0.01	0.04	0.01	0.17**

* (**) indicates correlation is significant at the 0.05(0.01) level (two-tailed, Pearson).

Table 4. 6 Correlation: Sample of EU FDI with only IJV Mode of Entry

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.ROA														
2. ROS	0.36**													
3.Size	0.04	0.08**												
4. Age	0.08**	0.06*	0.14**											
5.Capital Intensity	0.00	0.04	0.21**	-0.05										
6.Asset Turnover	0.18**	0.05*	-0.08**	0.00	-0.18**									
7.Asset Tangibility	-0.26**	-0.08**	0.11**	-0.18**	0.29**	-0.28**								
8.Debt Ratio	-0.32**	-0.22**	0.17**	-0.06	-0.05*	0.08*	-0.08**							
9.JV with state	-0.0782**	-0.08**	0.09**	0.05*	0.07**	-0.06*	0.04	-0.07**						
10.JV with collective	0.0147	0.00	-0.11**	0.02	-0.18**	0.03	0.00	-0.01	-0.14**					
11.Jv with legal person	0.0569*	0.02	0.093**	-0.01*	0.10**	0.01	-0.07**	-0.01	-0.45**	-0.23**				
12.JV with private	0.0007	0.01	-0.10**	-0.17**	-0.04*	0.07**	0.01	-0.04	-0.07**	-0.02	-0.10**			
13.JV with HMT	0.0148	-0.00	-0.08**	-0.07**	-0.36**	0.03	-0.07**	0.09**	-0.12**	0.16**	-0.24**	-0.04		
14.GDP P C	0.14**	0.07**	0.13**	-0.09**	0.16**	-0.09**	-0.01	0.02	-0.12**	-0.01	0.11**	0.07**	0.03	
15.Corruption	-0.05*	-0.05*	0.02	-0.08**	-0.32**	-0.00	0.04	0.07**	-0.07**	0.07**	0.01	0.04	0.14**	0.12**

* (**) indicates correlation is significant at the 0.05(0.01) level (two-tailed, Pearson).

4. 5.3. Model specification

To the best of our knowledge, there is no regression model readily available in the extant literature that links firm performance to agency cost and ownership structure and host institutional development. In line with prior studies that examine the relationship between ownership and firm performance (e.g., Douma, et al., 2006; Khanna and Palepu, 2000; Thomsen and Pedersen, 2000), the study thus develops a regression model based on prior studies, which uses the following specification: performance = f (control variables, resource variables, ownership variables, host institutional variables).

The specification uses corporate performance as measured by ROA or ROS as the dependent variable.

$$Performance_{it} = a + \sum_{k=1}^{n} b_k * CV_{kit} + \sum_{k=1}^{m} c_k * ACV_{kit} + \sum_{k=1}^{m} d_k * OV_{kit} + \sum_{k=1}^{m} e_k * IV_{ki} + \sum_{k=1}^{m} + \varepsilon_{it} \quad (4.1)$$

where CV, ACV, OV and IV are Subsidiary– specific principal control variables (CV), Agency cost variables (ACV), Ownership variables (WOS vs JV) and Host country institutional variables (IV), respectively, as shown in Table 4.1; *a* is the intercept term, *b, c, d,* and *e* are estimable coefficients; ε is the error term; *i* and *t* stand for firm and time, respectively.

Arguably, the above specification could potentially suffer from reverse causality, a phenomenon wherein ownership is influenced by firm performance rather than the other way around. However, this is unlikely to be a serious problem in this study because of the fact that the major categories of EU subsidiary (WOS vs. IJV) ownership in China have remained relatively stable over time according to the dataset.

Equation (4.1) is used as a regression model for the Pooled OLS, RE and FE estimation methods. The Hausman specification test compares two alternative specifications, the RE and FE, and allows the appropriate specification for a particular set of data to be determined (Houseman, 1998)[37]. In the study, the model specification is fitting fixed effects based on the Hausman test.

The study proceeds in two stages, where each stage is characterized by a broader definition of ownership. In stage 1, it follows the literature in simply distinguishing between WOS and IJV with local firms. The coefficient on WOS is expected to be positive in the equation, reflecting the superior performance of EU foreign subsidiaries. In Stage 2, it examines the effect of ownership concentration differences for EU subsidiaries IJV with SOE, COE, LP, POE and HMT enterprise. Table 4.5 and Table 4.6 summarise WOS for the entire sample and IJV samples' Pearson correlations involving performance.

Furthermore, in an effort to emphasize the robustness of the results as far as causality is concerned, the study employed a regression specification for a small subsample of firms for which it had performance data for the year 2007 and ownership data for 2006. Using a lagged measure of the ownership variable can partially account for causality. While it was not possible to recreate a fully representative subsample (in terms of a similar proportion of WOS/IJV subsidiaries, etc.), exactly the same criterion was followed for firm selection as in the WOS vs IJV main sample.

4. 6 Results and Analysis

As described earlier, the study used two samples to test our hypotheses. The study tested the performance effect of WOS and IJV ownerships in the full sample of EU

[37] Hausman chi-square test was conducted and the result is not significant at 5% level. The random effect estimate is preferable to the fixed effect estimate.

foreign subsidiaries, and then the study restricted the test on equity ownership to its subsample of 351 international joint ventures in China during the period from 1998 to 2007. Table 4.4 and Table 4.6 provide descriptive statistics and correlations among the variables used in this study. Forty -four percent of the cases in the entire sample were wholly owned subsidiaries, as shown in Table 4.3. The main assumptions underlying the multivariate regression, the method used to test the hypotheses, were verified. First, possible multicollinearity was checked by testing the variance inflation factor (VIF) values of all independent and control variables[38]. We examined VIFs to check for multicollinearity and found the values to be less than 2, well below the cut off value of 10 that indicates excessive multicollinearity (Greene, 2003). The highest VIF values in the full (WOS + IJV) model (in Table 4.7) and in the IJV one (in Table 4.8) are 1.13 and 1.11, respectively, which is significantly lower than the threshold point, suggesting the absence of multicollinearity .

Table 4. 7 The entire sample (WOS and IJV) Variance inflation factor test

Variable	VIF	1/VIF
Size	1.22	0.821612
Asset Tangibility	1.19	0.839419
Debt Ratio	1.17	0.856208
GDP P C	1.13	0.881557
Age	1.13	0.884157
ROS	1.13	0.884201
WOS(=1)	1.11	0.903168
Capital Intensity	1.08	0.926192
Asset Turnover	1.07	0.938234
Corruption	1.05	0.956929
Mean VIF	1.13	

[38] We centered the values of the explanatory variables by subtracting the means to reduce potential multicollinearity in our tests of the interaction effects (Aiken & West, 1991)

Table 4. 8 Only IJV subsample Variance inflation factor test

Variable	VIF	1/VIF
JV with Legal Person	1.68	0.594067
Capital Intensity	1.57	0.635765
JV with State	1.57	0.636241
JV with HMT	1.33	0.751923
Asset Tangibility	1.29	0.776119
Size	1.22	0.823003
Corruption	1.2	0.833062
JV with collective	1.19	0.840035
Debt Ratio	1.17	0.856594
Age	1.14	0.878417
GDP P C	1.14	0.880677
Asset Turnover	1.13	0.888468
ROS	1.11	0.897467
JV with private	1.11	0.904814
Mean VIF	1.27	

The study tested the hypotheses using two sets of regressions in a hierarchical manner, one for the WOS sample consisting of 680 EU subsidiary firms and the other for the IJV subsample. The study first developed the base model including controls, and then entered all the main effect variables including ownership variables and host institutional variables in order. Hierarchical regression results thus verify the arguments that resources, and ownership and institutions are important predictors of firm performance. In all regression specifications, industry dummies are incorporated to take account of any industry-specific factors that could have a bearing on firm performance. These coefficient estimates are not reported, in the interest of brevity. Table 4.9 reports the regression results for the entire sample, in which ownership was gauged by ownership entry mode (wholly owned subsidiary ownership vs. international joint venture). Table 4.10 reports the regression results for the subsample of international joint ventures with one partner in China, while Table 4. 11 presents the regression results for IJV with two or three partners in China; Ownership was gauged by the percentage of equity held by

EU subsidiary. IJV sample consists of 351 EU subsidiaries From Chinese NSB. These tables present the results of FE regression of firm performance on firm-specific control, firm –specific resources, ownership, and host institutions variables.

Table 4. 9 Result for ownership -performance of both IJV and WOS Mode of Entry measured by ROA

Explanatory variables	Model 1	Model 2	Model 3	Model 4
Control variables				
Subsidiary size	0.082 (0.037)**	0.03(0.01)***	0.03(0.002)***	0.03(0.01)***
Subsidiary age	012(0.02)***	0.06(0.02)***	0.07(0.02)***	0.19(0.05)***
Capital intensity	0.01(0.02)	0.01(0.01)	-0.02(0.01)	0.01(0.01)
Firm specific variables				
Asset turnover		0.02(0.003)	0.01(0.01)	0.01(0.02)
Asset tangibility		-0.22(0.03)***	-0.22(0.03)***	-0.22(0.03)***
Debt ratio		-0.29(0.02)***	-0.29(0.02)***	-0.28(0.02)***
Ownership variables				
WOS (=1) : EU Subsidiary share			-0.01(0.01)	-0.01(0.01)
Institutional variables				
GDP per capita				-0.07(0.024)***
Corruption in government				-0.03(0.01)**
Constant	-0.35(0.06)***	-0.23(0.06)***	-0.21(0.06)***	-0.01(0.09)
Adjusted R^2	0.0008	0.2052	0.2002	0.0832
F statistic	21.21***	65.03***	55.86***	46.09***

Notes: Dependent variable is measured ROA as performance. The standard errors robust to heteroscedasticity are reported in the parentheses. (*) (**) and (***) indicates that the coefficients are significant or the relevant null is rejected at the 10, 5 and 1 percent level. Under Hausman test we farour fixed effects estimates.

Among the control variables tested, *firm size* showed a significant positive relationship with performance in model 1 of Table 4.9, Table 4.10 and Table 4.11 and consistent with all the studies explaining firm performance. *Firm age* presents a significant positive relationship with firm performance (Model 1 of Table 4.9), thus confirming that firm performance experience gained through operational length contributes to the integration in WOS ownership performance but this was not supported in IJV (Model1 of Table 4.10; Table 4.11). *Subsidiary Capital Intensity* shows a negative effect on

WOS firm performance, implying that the IJV capital intensity did not support firm performance as well.

Table 4. 10 Result for ownership -performance of only IJV with one partner in China

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Control variables								
Subsidiary size	0.09(0.01)***	0.05(0.01)***	0.06(0.01)***	0.06(0.01)***	0.06(0.01)***	0.06(0.01)***	0.06(0.01)***	0.06(0.01)***
Subsidiary age	0.01(0.02)	-0.01(0.02)	0.01(0.05)	0.10(0.05)**	0.10(0.05)**	0.10(0.05)**	0.08(0.05)*	0.08(0.05)
Subsidiary capital intensity	-1.11(0.11)***	0.12(0.13)	0.011(0.012)	0.01(0.012)	0.01(0.01)	0.012(0.01)	0.011(0.01)	0.012(0.016)
Agency cost variables								
Asset turnover		-0.03(0.01)***	-0.03(0.01)***	-0.03(0.01)***	-0.013(0.01)***	-0.03(0.01)***	-0.03(0.01)***	-0.03(0.01)***
Asset tangibility		-0.21(0.03)***	-0.21(0.03)***	-0.21(0.03)***	-0.21(0.03)***	-0.21(0.03)***	-0.21(0.03)***	-0.21(0.03)***
Debt ratio		-0.37(0.02)***	-0.36(0.02)***	-0.36(0.02)***	-0.36(0.02)***	-0.36(0.02)***	-0.36(0.02)***	-0.37(0.02)***
Ownership variables								
share of state capital				0.02(0.05)				
share of collective capital					0.01(0.03)			
share of legal persons capital						0.011(0.02)		
share of private capital							-0.16(0.05)***	
share of HMT capital								0.04(0.02)**
Institutional variables								
GDP per capita			-0.06(0.03)**	-0.06(0.03)**	-0.06(0.03)**	-0.06(0.03)**	-0.05(0.03)*	-0.05(0.03)*
Corruption in government			-0.02(0.01)**	-0.02(0.01)**	-0.02(0.01)**	-0.02(0.01)**	-0.02(0.01)**	-0.02(0.01)**
Constant	-1.10(0.11)***	-0.29(0.18)	-0.20(0.18)	-0.20(0.18)	-0.20(0.18)	-0.02(0.01)**	-0.21(0.18)	-0.21(0.18)
Adjusted R^2	0.0013	0.0492	0.0426	0.0361	0.0364	0.0362	0.0346	0.0386
F statistic	39.05***	78.76***	61.05***	54.22***	54.23***	54.31***	55.59***	54.64***

Dependent variable is ROA as EU subsidiary performance. The standard errors robust to heteroscedasticity are reported in the parentheses. (*), (**) and (***) indicates that the coefficients are significant or the relevant null is rejected at the 10, 5 and 1 percent level, respectively. Under Hausman test we favour fixed effects. All specifications include the full set of time and two –digit industry dummies

Table 4.11 Result for ownership -performance of only IJV with multiple partners in China

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Control variables								
Subsidiary size	0.09 (0.01)***	0.05 (0.01)***	0.06 (0.01)***	0.06 (0.01)***	0.06 (0.01)***	0.06 (0.01)***	0.06 (0.01)***	0.06 (0.01)***
Subsidiary age	0.01 (0.02)	-0.01 (0.02)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)
Subsidiary capital intensity	-1.11 (0.11)***	0.12 (0.13)	-0.03 (0.02)	-0.02 (0.01)	0.010 (0.00)	0.016 (0.02)	0.015 (0.012)	0.02 (0.01)
Agency cost variables								
Asset turnover		-0.03 (0.01)***	-0.03 (0.01)***	-0.03 (0.01)***	-0.03 (0.01)***	-0.03 (0.01)***	-0.03 (0.01)***	-0.03(0.01)***
Asset tangibility		-0.21 (0.03)***	-0.21 (0.03)***	-0.21 (0.03)***	-0.21 (0.03)***	-0.21 (0.03)***	-0.21 (0.03)***	-0.21 (0.03)***
Debt ratio		-0.37 (0.02)***	-0.36 (0.02)***	-0.36 (0.02)***	-0.36 (0.02)***	-0.36 (0.02)***	-0.36 (0.02)***	-0.36 (0.02)***
Ownership variables								
share of state capital			-0.02 (0.02)			0.01 (0.03)		0.02 (0.03)
share of collective capital							-0.02(0.03)	0.01 (0.04)
share of legal persons capital				0.01 (0.02)	0.02 (0.02)	0.01 (0.02)		0.02 (0.03)
share of private capital			-0.16 (0.05)***	-0.16 (0.02)***		-0.16 (0.06)***	-0.16 (0.05)***	-0.15 (0.05)***
share of HMT capital					0.04 (0.02)**		0.04 (0.03)	0.04 (0.03)
Institutional variables								
GDP per capita			-0.05 (0.03)*	-0.05 (0.03)*	-0.05 (0.03)*	-0.05 (0.03)*	-0.05 (0.03)*	-0.05(0.02)*
Corruption in government			-0.02 (0.01)**	-0.02 (0.001)**	-0.02 (0.01)**	-0.02(0.001)**	-0.02(0.001)**	-0.02 (0.01)**
Constant	-1.10 (0.11)***	-0.29 (0.18)*	-0.21 (0.18)	-0.21 (0.18)	-0.20 (0.18)	-0.21 (0.18)	-0.21 (0.18)	-0.29 (0.18)*
Adjusted R^2	0.0013	0.0492	0.0437	0.04426	0.0421	0.0311	0.0416	0.0460
F statistic	39.05***	78.76***	49.99***	50.01***	49.32***	45.44**	45.75**	44.45***

Dependent variable is ROA as EU subsidiary performance. The standard errors robust to heteroscedasticity are reported in the parentheses. (*), (**) and (***) indicates that the coefficients are significant or the relevant null is rejected at the 10, 5 and 1 percent level, respectively. Under Hausman test we favour Fixed effects. All specifications include the full set of time and two –digit industry dummies

For the firm resource variables of the WOS and IJV, results of regression analysis are presented in Table 4.9, Table 4.10 and Table 4.11. Table 4.9 reports the regression results for the EU WOS sample, in which ownership was gauged by entry mode by wholly owned subsidiary. To test the asset variable effect on ownership performance, Hypothesis 1 proposed that asset turnover is positively related to firm performance through IJV. As shown in Table 4.10 and Table 4.11, the association between assets turnover and performance is significant and negative for all models, which is not in line with expectation as foreign assets are more efficiently managed with a lower level of asset. The finding is not consistent with those of prior studies (Gatignon and Anderson, 1988; Luo et al, 2012). In terms of theory, Aguilera and Jackson (2003) found foreign shareholders prefer strategies of exit rather than voice to monitor management in case of poor performance. However, on the other hand, in China, market opportunities, market access barriers to trade and investment performance, and lack of uniformity of regulations in different provinces are also problematic as EU subsidiaries operators expand their local presence or utilize the assets of the firm to yield positive return to the firm. Thus, the variable assets *turnover* will be negatively related to performance. Hypothesis 2 predicted that asset tangibility is positively related to subsidiary performance, and regression results regardless of ownership type. The results in Table 4.9, Table 4.10 and Table 4.11 are significant but negative, so this proposition is not supported by the finding. The finding suggests that asset tangibility is important but negatively affects ownership performance. This is inconsistent with prior studies. A possible explanation is that the larger EU subsidiaries' presence is in a combination of high-technology and capital-intensive sectors such as raw chemical materials & chemical products; the existing data set was different from Mackie- Mason's (1990) and Akintoye (2008) argument. Hypothesis 3 results show that Debt ratio is significantly negatively related to firm performance, supported by the findings in Table 4.9, Table

4.10 and Table 4.11. In theory, principal agent reasoning suggests that the greater the level of debt, the greater the amount of lender monitoring and the better firms' performance, which is in line with Jensen and Meckling (1976), and Myers (1977). In China, financial support, regulatory policies, transparency and substantial subsidies create soft budget constraints for SOEs, and there have been no incentives for MNCs to attain superior performance.

In terms of the ownership variables of WOS and IJV, as model 3 of Table 4.9 shows, Hypothesis 4 predicted that WOS is positively related to performance, and this prediction is not supported by the regression results. The finding suggests that EU WOS ownership does not affect firm performance, and is inconsistent with prior studies (Boardman et al., 1997) and our expectations. Possible explanations are the development of Chinese entry mode policy, ownership restriction and governance incentives (Cheung, 2007). Another important explanation is agency problems arising from principal -principal goal incongruence in emerging economies (Dharwadkar et al., 2000). Ownership caps and legal restrictions have led many foreign investors to enter China through setting up ‘‘forced JVs’’. A possible explanation for this unexpected finding is that IJV in the Chinese institutional development environment is better than WOS for EU firm experience in China. We argue that IJV exists for two reasons. First, a lack of information on legitimate ways of doing business prompts MNC subsidiaries to engage in a wider range of strategic actions with local enterprises. Second, foreign subsidiaries differ in their institutional ability to manage institutional idiosyncrasies, which is of strategic importance in flexible entry modes and performance operation.

In terms of the sample of EU subsidiary international joint ventures with SOE - Hypothesis 5, COE - Hypothesis 6, LPs - Hypothesis 7, POE - Hypothesis 8 and HMT– Hypothesis 9 the results are presented in Table 4.10 and Table 4.11. EU IJV with LPs

do not affect subsidiary ownership performance in all JVs regression, perhaps due to agency costs and problems due to the conflicts of interest between the principal (local governments) and the agent (the managers), which conflicts with the expectation.

Surprisingly, EU IJV with POE has a highly significant and negative impact on firm performance growth. The finding is not in line with expectation. One reason is that POE is highly linked with the effects of China's fourth ownership reform, privatization of SOEs (Jefferson and Su, 2006); Moreover, the Chinese government and WTO accession accelerated the privatization process by introducing more foreign competition. On the other side, first, Chinese ownership reforms in a transition economy are too weak to sustain effective privatization. Second, agency problems emerge after privatization in transition economies and considerable success was not expected in the Chinese context (Qian, 1996; Zhu, 1999). Third, privately owned firms face significant institutional hurdles such as not being allowed to form JVs with foreign investors until recently, and restricted the high or middle-tech sector JV such as autos to 50% share. Finally, the average percentage of private sector share of EU firms presents only 1.10% during the period under study, implying that privatization is not operationalized as strongly through the regulative pillar as it is through the cognitive and normative pillars. So private share is significantly negatively related to firm performance. The results suggest JV with private firms plays a more important role in the Chinese market than JV with other local ownerships. These findings are not consistent with those of prior studies (Jensen and Meckling, 1976) but support the arguments of Bleeke & Ernst (1991). Additionally, as shown in Model 8 of Table 4.10 and Model 5 in Table 4.11, both the association between HMT share and performance are significant for EU JV with HMT Share. The findings are in line with the expectations. Possible explanations are that Legal Person share only keeps state involvement in operation of firms (Xu &Wang, 1999), while accounting for 58 per cent of the total FDI in China from Hong

Kong with a focus on export-processing manufacturing and products (Cheung, 2007). These results show that the Chinese ownership reform and political and economic environment for IJV have large room for improvement.

Incorporating the effects of the host country institutional variables on performance, Table 4.9, Table 4.10 and Table 4.11 present the results of the basic and comprehensive models. The finding shows negative and significant effects for GDP per capita on performance, in contradiction to the prediction of Hypothesis 10. This may be because in the context of the developing Chinese economy, GDP is very high but the standard of living is rather low because of the nation's extremely large population and the full Chinese market is not open because of government ownership regulation changes, which do not support EU subsidiary performance. Hypothesis 11 predicted that Corruption in government is negatively related to performance, and the regression results yielded significant support for this proposition, which means corruption and rule of law and IPR are still problems for foreign investment in China. The evidence shows that *guanxi*-based business variables have a profound and positive impact on firm efficiency and growth (Luo and Chen, 1997).

However, our findings show a negative relationship between the level of institutional development and level of MNC subsidiaries product performance. The above results suggest the environment is not properly suitable for subsidiary ownership performance. A possible explanation for these unexpected findings is that the negative effects of intuitional environment appear more strongly than the positive effects, probably because at this less advantaged stage of economic development, the lower score indicating severe corruption and thus lesser desirability for MNC operation, the Chinese institutional framework is not conducive to performance of WOS and JV foreign affiliates. These two new results limit the important relation to EU ownership

performance activities. In addition, EU subsidiaries retain large investments in tangible assets and firm performance is expected to be negative, which is not in line with Akintoye's (2008) argument. The host institutional environment reduces performance.

In order to assess robustness, censored regressions for all the specifications were performed for all the specifications reported previously, with the same results. As a further check on the validity of our interpretations, a specification using lagged values of key explanatory variables was adopted. The results are fairly robust. Additionally, performance measured by ROS was applied and the results seem similar.

4.7 Conclusions

This study investigated the issue of impact of MNCs ownership performance from a theoretical framework based on insights from the literature on agency cost theory, resource based theory and institutional theory perspective to develop a richer understanding of ownership performance previously unexplored in extant literature. Using a database of 329 WOS and 351 JV EU manufacturing subsidiaries in China, we find empirical evidence supporting EU International joint ventures' better performance than that of wholly owned subsidiaries in China and three perspectives of factors that influence EU subsidiaries' performance in China. The study shows the institution-based view of MNC firm performance to be a fitting adjunct to the conventional resource – based view and agency based view of firm performance. Specifically, we suggest that foreign ownership performance is influenced by host institutions of financial assets, the cost of engaging in business and the strategic choice of action. In short, each of the three theories noted contributes a different, complementary perspective to our understanding of foreign ownership performance in Chin. Thus, the study contributes to the literature in the following three ways.

First, agency theory is based on the assumption of profit-maximizing principals (Jensen & Meckling, 1976), yet principals may have divergent preferences and ideas on how to maximize those preferences. Particularly, there are potential conflicts between ownership reforms and the interests of principal – principal goal incongruence in China's developing economy. Our findings highlight the fact that cooperative venture ownership channels are preferred to wholly owned subsidiary when the costs are high and the corporate governance ownership environment uncertain. Ownership restrictions have led many foreign investors to enter China through setting up ''forced JVs". Regarding the results on performance of the IJV subsample, the main finding is that EU JV with private owned enterprises is better than other local ownership but the negative relationship suggests agency problems emerge after privatization in China and the Chinese ownership reform and political and economic environment for IJV have large room for improvement.

Second, a major contribution of resource-based theory is that it explains long-lived differences in firm profitability that cannot be attributed to differences in industry conditions (Peteraf, 1993) and considers resource heterogeneity among various shareholder categories. We believe that these shareholders have their resource endowments and capabilities of impact on firm performance. The negative and statistically significant sign of relations on asset tangibility is the main finding on the set of firm resource factors that influence EU firm performance. Our analysis suggests that the EU firms with high-tech and capital intensive advantage in higher value-added economic activities are at a disadvantage in commoditised markets as their advantages cannot easily be emulated in the rapidly changing Chinese ownership institutional circumstances. For EU subsidiaries, a JV portfolio with a high proportion of plant and equipment (tangible assets) in the firm's asset base is more likely to achieve firm performance in commoditised markets where price plays the most important role.

Third, from a host ownership institutional perspective, unexpectedly, whether WOS and IJV ownership types with China, market size and corruption in governance do not support EU ownership performance in China. The study concludes that given China's high GDP with a large but not fully open market, EU companies face substantial market access barriers to achieve ownership performance, e.g. equity restrictions on foreign investment still remain in a multitude of sectors, lax enforcement of IPR, local level protectionism and provincial trade barriers. Economic, political, and social institutions vary across host countries. Government ownership restriction and regulation change, IPR standards and *guanxi*-based business impede EU ownership- performance in China. The study also accommodated the impact of MNCs subsidiary resource, ownership structure and host development economic and social factors on EU ownership performance in an emerging market. It thus provides a better understanding of patterns of subsidiary performance via ownership type, which has not previously been widely recognized within the EU-China context in corporate governance and strategic management theory.

Additionally, this study has important implications for furthering the research on ownership strategy –subsidiary performance relationship. Our framework presents a more comprehensive account of the relationship between ownership strategy and performance. Host institutional development is an important addition to the literature, which mostly depicts institutional environments as disadvantageous for foreign subsidiaries. The findings of the three sets of variables in the study also have implications for internationalizing EU firms and for the managers involved in the international operations of EU firms. The design of governance structure of international investment FDI should take into account the role played by dissimilarities in the host institutional environment and EU subsidiary capabilities and ownership strategy

Finally, the study has its limitations that need to be noted. This study focuses only on EU manufacturing industry, and performance is a multidimensional construct. Future studies could investigate ownership strategies, institutional distance, and host country experience in relation to other performance measures. More detailed sector level and EU member countries level investigation would be useful to examine their influence on performance, which may shed more light on this vexing issue. Future studies may refine our research and test its robustness in other theoretical and empirical contexts.

CHAPTER FIVE: CONCLUSIONS

5.1 Introduction

Identifying EU FDI in China is a complicated, boundless and interesting subject.

The purpose of this study was to present a combination of three academic essays related to the correlates of determinants of FDI, MNCs' innovation investment performance, and foreign ownership structure performance. Although each paper can be read separately, also they are all associated with EU FDI inflow to China. In the thesis, we seek to understand how EU FDI is related to three firm investment issues, by conducting a more comprehensive EU – China FDI study.

To focus on the three issues, we first used a ten-year unbalance of firm –level panel dataset for 1998- 2007 with four econometric analysis tools, including the pooled ordinary least squares method, fixed effects model, random effects model and fixed effects model with interactive terms. This thesis contributes to the ongoing body of work relating to FDI in China. It reviews the institutional setting in China and FDI related literature in details. As EU FDI is considered to be one of the key elements to enhance EU – China trade and investment relations, the empirical study considers issues relating to change in EU FDI determinants and performance. This chapter provides a concluding discussion and is focused on bringing together the three sets of empirical evidence and other facets raised in earlier chapters. The main findings and contribution of this study, the theoretical and practical implications, the limitations of the study and the conclusion are set out in the following sections.

5.2 The Main Findings and Contribution

The three research areas of focus were selected because each is an important issue in the firm determinants and performance literatures. At the same time, each area s closely related to EU FDI in theory and in empirical evidence. The study found some significant results which are discussed below. Firstly, EU FDI in China is positively associated with the host country's institutions, which play a significant role in the determinants and direction of EU FDI in China. Secondly, in the study, not only are firm-level factors significantly associated with EU FDI in China but also China's country and some institutional factors influence EU FDI innovation activities in China. Finally, the ownership structure, resources available to the EU FDI firms in China and China's institutional environment are all determinants of EU FDI firms' performance in China.

Essay one explored location determinants of EU FDI in China. This is the first attempt to examine the determinants of EU firms' FDI by adding an institutional-based view in theory formulation. Our motivation was to complement Dunning's OLI paradigm by incorporating institution theory in the EU-China FDI context. We developed an institutional OLI theoretical framework based on the OLI paradigm; we conclude that a large but not fully open economy is more attractive to foreign investors than a small but relatively open economy. China needs to improve the quality of its institutional environment for foreign investment. The negative and statistically significant sign of relations on the rule of law, lack of IPR and substantial market access barriers lead to relatively low profitability, and less personal ownership for EU firms seeking opportunities to grow in China.

Essay two took a first step towards examining interdisciplinary areas in EU subsidiary FDI innovation investment in the China context. The results show that firm- specific resources of labour training, size and exports are significantly associated with subsidiary innovation. It was found EU JV with Chinese collective share is an important source of innovation. The Chinese institutional context directly determines firm innovation.

Essay three drew on newly available official data on 329 WOS and 351 JV (EU) manufacturing subsidiaries drawn from the SNB of China over a 10-year period (1998-2007) to examine the performance of EU subsidiaries' ownership structure in China, reflecting EU firm FDI ownership strategic choices between JV and WOS. The findings suggest the desirability of joint venture. One of the main findings is that IJV, particularly EU JV with private owned enterprises, perform better than other JV in China. It is shown that ownership strategy impact on subsidiary performance depends on the institutional development between ownership reforms and principal – principal goal incongruence in transitional economies.

Theoretically, these three studies used a multi – theoretical approach to develop a theoretical framework and hypotheses, contributing to FDI literature in the EU-China context. Essay one proposed a framework that integrates the Chinese institutional context into the existing OLI configuration to test and extend further Dunning's OLI paradigm (1977, 1983, and 1993a). The study contributes to fill in the gap currently existing in the literature of FDI from EU in China with a new comprehensive official firm data and country data set by exploring the determining factors in FDI flows over the period 1998-2007. Essay two focuses on MNC subsidiaries' innovation investment strategy and thereby fills an important gap in the International Business literature on MNCs innovation. This study contributes to the literature on the evolution of MNCs by

exploring determinants of developed foreign subsidiaries' innovation activities in emerging markets. Essay three investigates a phenomenon previously unexplored in extant literature, namely, the differential impact of foreign resource, ownership type and host institutions on subsidiaries' performance in China. A conceptual framework is developed that integrates the Resource-based theory, Agency theory, and Institutional theory of international business strategy. It contributes to filling a gap in EU firm FDI ownership strategic choices by analysing the relationship between EU ownership structure and performance of marketing seeking EU subsidiaries in China. This study extends the recent surge in scholarly attention directed towards institutional theory in the international business strategy arena. (e.g., Bjo¨rkmanet al., 2007; Hillman & Wan, 2005; Husted & Allen, 2006; Meyer & Peng, 2005) by assessing the impact of macro-level economic and social institutions on micro level performance. This study contributes to the literature on the evolution of MNCs by exploring determinants of developed foreign subsidiaries' ownership performance experience in China.

Methodologically, all empirical tests adopted panel analysis at firm level and country institutional environment level with a new official firm-level dataset derived from the annual reports of industrial enterprise statistics compiled by the National Bureau of Statistics of China (NBS) and a country –level dataset. Additionally, each study contains robustness checks for endogeneity issues and provided empirical support for the argument / hypotheses developed. Overall, this thesis has made a contribution to FDI literature in the EU- China context.

5.3 Theoretical and Practical Implications

This research can be important to policy making, business practitioners and academic research. The current research also discusses policy implications in terms of FDI

determinants and performance, and should be of some use to Chinese policy makers. In the host country FDI policy, the current Chinese NIS and ownership reform regulations need to fully implement the spirit of China's WTO commitments and support further liberalisation of its economy. It is argued that a sufficiently transparent policy regime is important for a developing country's economic development. In the case of China, the FDI policies and innovation policy involve excessive levels of governmental approval. The drive to boost innovation in China has resulted in aggressive acquisition of foreign intellectual property, supported through technology transfer obligation and a generally lax enforcement of IPR (European Commission, 2007). For example, as discussed in Essay three, there are potential conflicts between ownership reforms and the interests of principal – principal goal incongruence in transitional economies. As many other developing countries continue to improve the policy climate for FDI related institutions, China must make commensurate improvements so as to keep her attractiveness as a host. In addition, China's experience in utilising FDI may provide valuable lessons for other host developing countries. For instance, to attract more FDI and further enhance its role in economic growth, one important element of government policy is to encourage domestic R&D and improvement of technological capabilities in local firms.

Investors may be interested in the results because we explain firm internal specific advantage and firm external/ local factors at firm level, incorporating host political, economic, social and cultural institutions factors influencing EU firm FDI decisions and performance at country level. It is essential for MNCs to develop and strengthen strategic alliances with indigenous firms in host countries so that local strategic resources can be accessed in order to perform FDI, product innovation and ownership activities better. EU firms would be sensitive to the location advantages of China conveyed by rapid economic growth rates, and by the potential size of the market. On the other side, it should be borne in mind that the Chinese market has been somewhat

problematic due to its many barriers to operation. IJV need to be encouraged in order to promote efforts to raise both the probability and intensity of introducing new operations to speed up firm-level development for both EU and China. It is important to allow EU high-technology companies to build up a long-term relationship with Chinese counterparts, and to minimise risks, when compared with direct investment.

Academics may find the results useful because they provide not only a number of interesting findings from both theoretical and empirical perspectives but also directions for future study. Especially, they highlight the importance of further studying the "transitional problems".

5.4 Limitations of the Study and Conclusion

Of course, this study has limitations. Further work is needed to overcome the limitations of this thesis. Firstly, the research treats the EU as a single country in the Chinese context. Further research might extend to the main EU member countries within the EU, such as Germany and the UK. This extension would enable examination of the differences in determinants of FDI, subsidiary innovation, and ownership- performance among individual countries and whether they are constrained by local institutions and economic environments. Secondly, because the study only focuses on manufacturing industry, the validity of the findings for EU firms in general cannot be assured. Future work is needed to replicate this study with data for individual sectors and to reinforce the confidence in the research. Thirdly, the study was limited by the lack of information on R&D; it has used intangible assets as a proxy for R&D intensity, and this prevents us from a more accurate assessment of the impact of R&D. Finally, of course, it would be desirable to conduct comparative research on MNCs in China from the Triad (Japan, U.S. and EU) to get a distinctive picture of "transitional problems" in the future.

In conclusion, through our thesis using panel data analysis of a unique sample of EU firms, comprising the population of EU FDI activities in manufacturing industry in China, we have related our new development with three important issues associated with EU FDI in China: determinants of EU FDI in China, EU subsidiaries' product innovation performance in China and performance of EU subsidiaries ownership structure in China. This study has analysed a new phenomenon, contributing to fill in the gap currently existing in the literature of FDI from EU in China over the period 1998-2007. EU FDI development was influenced by China's dramatic institutional change in formal and informal institutions, influencing the strategy and performance of MNCs in emerging market. The three essays work together to demonstrate that EU FDI in China is an important correlate in many of the fundamental EU-China investment issues. The study thus provides a better understanding of patterns of FDI via determinants and performance that have not previously been widely recognized within the EU-China context in IB and strategic management theory.

REFERENCES

Abiad, A. and Mody, A., 2005. Financial Reform: What Shakes It? What Shapes It? *American Economic Review*, 95(1): 66–88.

Acs, J. Z. and Audretsch, D. B. 1987. Innovation, Market Structure and Firm Size. *Review of Economics and Statistics,* 69(4): 567–575.

Acs, J. Z. and Audretsch, D. B. 1988. Innovation in Large and Small Firms: An Empirical Analysis. *American Economic Review,* 78(4): 678–690.

Acs, J. Z. and Audretsch, D. B. (Eds.), 1991a. *Innovation and Technological Change: An International Comparison*. Ann Arbor: University of Michigan Press.

Acs, J. Z. and Audretsch, D. B. 1991b. *Innovation and Small Firms*. Cambridge, MA: The MIT Press.

Agrawal, A. and Knoeber, C.R. 1996. Firm performance and mechanisms to control agency problems between managers and shareholders, *Journal of Financial and Quantitative Analysis*, 31(03):377– 398.

Aguilera R. V. and Jackson, G. 2003. The cross-national diversity of corporate governance: dimension and determinants. *Academy of Management Review,* 28(3): 447–465.

Aiken, L. S., and West, S. G. 1991. *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Akintoye, L. R. 2007. Effect of capital structure on firms' performance: the Nigerian experience. *European Journal of Economics, Finance and Administrative Sciences,* 10:233- 243.

Akintoye, I. R. 2008. *Investment Decisions, Concept, Analysis & Management.* (3rd Edition). Lagos: Glorious Hope Publishers.

Alfaro, L., Kalemli-Ozcan. S. and Volosovych, V. 2008. Why doesn't capital flow from rich to poor countries? An empirical investigation. *Review of Economics and Statistics,* 90(2): 347-368.

Aliber, R. Z. 1970. A Theory of Direct Foreign Investment. In: C. Kindleberger (ed.), *The International Corporation: A Symposium*, Cambridge: MIT Press: 17–34.

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

Amsden, A. 1989. *Asia's Next Giant: South Korea and Late Industrialization.* New York:Oxford University Press.

Andreosso-O'Callaghan, B. and Qian, W. 1999. Technology Transfer: A Mode of Collaboration between the European Union and China. *Europe-Asia Studie*s, 51(1): 123-142.

Artz, K. W., and Norman, P. M. 2010. A Longitudinal Study of the Impact of R&D, Patents, and Product Innovation on Firm Performance. *Journal of Product Innovation Management*, 27(5): 725-740.

Asakawa, K. 2001. Evolving headquarters–subsidiary dynamics in international R&D: the case of Japanese multinationals. *R&D Management*, 31(1): 1–14.

Atkinson, S. E., and Halvorsen, R. 1986. The Relative Efficiency of Public and Private Firms in a Regulated Environment: The Case of U.S. Electric Utilities. *Journal of Public Economics*, 29 (3): 281-294.

Atuahene-Gima, K. 1996. The Influence of Innovation Orientation in Human Resource Management on New Product Development: The Moderating Role of Innovation Type. *Journal of Market-Focused Management*, 1(1): 87-107.

Atuahene-Gima, K. and Ko, A. 2001. An empirical investigation of the effect of market orientation and entrepreneurship orientation alignment on product innovation. *Organisation Science,* 12(1): 54-74.

Austin, J. 1991. The boundaries of business: the developing country difference. *Harvard Business Review*, 69(4), 134–136.

Barbosa, N., and Louri, H. 2002. On the determinants of multinationals' ownership preferences: evidence from Greece and Portugal. *International Journal of Industrial Organization,* 20(4): 493-515.

Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management,* 17(1): 99–120.

Barney, J. B., 1996. The Resource-Based View of the Firm. *Organization Science,* 7(5): 469-496.

Bartel, A. P. 1994. Productivity gains from the implementation of employee training programs. *Industrial Relations*, 33(4): 411–425.

Bartholomew, S. 1997. National system of biotechnology innovation: Complex interdependence in the global system. *Journal of International Business Studies*, 28(2): 241–266.

Basile, R., 2001. Export behaviour of Italian manufacturing firms over the nineties: the role of innovation. *Research Policy, 30*(8): 1185–1201.

Beamish, P. W. 1993. The characteristics of joint ventures in the People's Republic of China. *Journal of International Marketing*, 1(2): 29–48.

Beamish, P. and Banks, J. 1987. Equity joint ventures and the theory of the multinational enterprise. *Journal of International Business Studies*, 18(2): 1-16.

Bedewing, JJ, and Brewer, TL. 1994. International business political behaviour: new theoretical directions. *Academy of Management Journal*, 19(1): 119–143.

Belderbos, R. 2003. Entry Mode, Organizational Learning, and R&D in Foreign Affiliates: Evidence from Japanese Firms. *Strategic Management Journal,* 24 (3): 235-259.

Belderbos, R., Carree, M., Diederen, B., Lokshin, B., and Veugelers, R., 2004. Heterogeneity in R&D cooperation strategies. *International Journal of Industrial Organization,* 22 (8-9): 1237– 1263.

Bennett, D., Liu, X., Parker, D., Steward, F., and Vaidya, K. 2001. Technology transfer to China: a study of strategy in 20 EU industrial companies. *International Journal of Technology Management*, 21(1-2):151- 82.

Berle, A. A. and Means, G.C. 1932. *The Modern Corporation and private property*. New York: Macmillan.

Bevan, A., Estrin, S., and Meyer, K. 2004. Foreign investment location and institutional development in transition economics. *International Business Review*, 13(1):43–64.

Birkinshaw, J. 1997. Entrepreneurship in multinational corporations: the characteristics of subsidiary initiatives. *Strategic Management Journal, 18*(3): 207–229.

Birkinshaw, J. M., Hood, N., and Jonsson, S. 1998. Building firm specific advantages in multinational corporations: The role of subsidiary initiative. *Strategic Management Journal*, 19(3): 221–241.

Bjo¨rkman, I., Fey, C. F., and Park, H. J. 2007. Institutional theory and MNC subsidiary HRM practices: Evidence from a three country study. *Journal of International Business Studies,* 38(3): 430–446.

Bleeke, J., and Ernst, D. 1991. The way to win in cross-border alliances. *Harvard Business Review,* 69(6): 127-135.

Blomstrom, M., and Lipsey, R.E. 1991. Firm size and foreign operations of multinationals. *Scandinavian Journal of Economics*, 93(1):101-107.

Blonigen, B. A. 2005. A review of the empirical literature on FDI determinants. *Atlantic Economic Journal*, 33(4): 383-403.

Boardman, A. E., Shapiro, D. M., and Vining, A. R. 1997. The role of agency costs in explaining the superior performance of foreign MNE subsidiaries. *International Business Review*, 6(3): 295-317.

Boddewyn, J. J. and Brewer TL. 1994. International business political behaviour: new theoretical directions. *Academy of Management Journal, 19*(1): 119–143.

Boodhoo, R. 2009. Capital structure and ownership structure: a review of literature. *The Journal of on line Education*, January Edition, pp 1- 8.

Bound , P. 2001. Skills Formation in the Twenty-first Century. In P. Brown, A Green and H. Lauder (Eds), *High Skills: Globalization, competitiveness, and Skill Formation:* 1-55. Oxford: Oxford University Press.

Braun, M. 2003. Financial contractibility and asset hardness. Mimeo. Boston: Harvard University

Brissimis, S.N., and Kosma, T. S., 2005. Market power, innovative activity and exchange rate pass-through. Bank of Greece Working Paper No. 22.

Brouthers, K. D. 2002. Institutional, cultural and transaction cost influences on entry mode choice and performance. *Journal of International Business Studies*, 33(2): 203–221.

Brouthers, K. D., Brouthers, L. E and Nakos, G. 1998. Entering central and eastern Europe: Risks and cultural barriers. *Thunderbird Inter-national Business Review*, 40(5): 485-504.

Buch, C. M., Kleinert, J., Lipponer, A., and Toubal, F. 2005. Determinants and effects of foreign direct investment: evidence from German firm-level data. *Economic Policy*, 20(41): 52-110.

Buckley, P.J., and Casson, M. 1976. *The Future of the Multinational Enterprise.* London: Macmillan Press.

Buckley, P. J., Clegg, J., and Wang, C. 2002. The impact of inward FDI on the performance of Chinese manufacturing firms. *Journal of International Business Studies*, 33(4): 637–655.

Buckley, P.J., and Hashai N. 2008. Formalizing internationalisation in the eclectic paradigm, *Journal of International Business Studies*, 40(1):1-13.

Buckley, P. J. and Strange R. 2011. The Governance of the Multinational Enterprise: Insights from Internalization Theory. *Journal of Management Studies*, 48(2): 460-470.

Bulcke, D.V.D; and Zhang, H. 1994. The Development of Local Marketing Knowledge within Joint Ventures: An Analysis of the Performance of Belgian Multinationals in China, in

K. Obloj (ed.), High Speed Competition in A New Europe, Proceedings of the 20th Annual Conference of EIBA, Vol.2, Warsaw.

Bulcke, D.V.D; and Zhang, H. 1998. Foreign Direct Investment in China: Interactions between Government Policies and Multinational Investment Strategies, in P.K.M. Tharakan and D. Van Den Bulcke (eds.), *International Trade, Foreign Direct Investment and Economic Environment,* London: Macmillan.

Bulcke, D.V.D., Zhang, H., and Esteves, M. 2003. *European Union Direct Investment in China: Characteristics, Challenges and Perspectives*. London: Routledge.

Calvet, A.L. 1981. A synthesis of foreign direct investment theories and theories of the multinational firm. *Journal of International Business Studies,* 12(1): 43-59.

Cantwell, J.1989. *Technological Innovation and Multinational Corporation*, London: Basil Blackwell.

Cantwell, J. A., Dunning, J. H. and Lundan, S. M. 2008. An Evolutionary Approach to Understanding International Business Activity: The Co-evolution of MNEs and the Institutional Environment. Rutgers, Reading and Maastricht Universities: mimeo.

Cantwell, J., and Sanna-Randaccio, S. 1993. Multinationality and firm growth. *Review of World Economics*, 129(2): 275-299.

Cao, C; Simon, D; and Suttmeier, R. 2009. Commentary - China's innovation challenge. *Innovation: Management, Policy & Practice*, 11(2): 253-259.

Carlsson, B. 1989. Flexibility and the theory of the firm. *International Journal of Industrial Organization*, **7**(2): 179-203.

Cassidy, J.F., and Andreasso-O'Callaghan, B. 2006. Spatial determinants of Japanese FDI in China. *Japan and the World Economy*, 18(4): 512-527.

Cassiman, B., and Martinez-Ros, E., 2007. Product innovation and exports. Evidence from Spanish manufacturing. Mimeo.

Casson MC. 1982. Transaction costs and the theory of the multinational enterprise. In Rugman A.M. (Ed) *New Theories of the Multinational Enterprise,*. London, UK; Croom Helm: 24–43.

Castellani, D. and Zanfei, A. 2006. *Multinational Firms, Innovation and Productivity*. Cheltenham, UK: Edward Elgar.

Caves, R. E. 1974. Multinational firms, competition, and productivity in host-country markets. *Economica*, 41(162):176-193.

Caves, R. E. 1996. Multinational firms and productivity convergence in host-country markets. *Economic* , May: 176-93

Chadee, D.D., and Qiu, F., 2001. Foreign ownership of equity joint ventures in China: a pooled cross-section-time series analysis. *Journal of Business Research,* 52(2): 123–133.

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

Chang, S.J., Chung, C., and Mahmood, I.P. 2006. When and how does business group affiliation promote firm innovation? A tale of two emerging economies. *Organization Science*, 17 (5): 637–656.

Chen, C.H. 1996. Regional determinants of foreign direct investment in mainland China. *Journal of Economic Studies*, 23(2): 18-30.

Chen, J.J. 2004. Determinants of Capital Structure - Empirical Evidence from Chinese Company Panel Data. *Journal of Business Research*, 57(12):1341-1351.

Chen, M.-J. 2001. *Inside Chinese Business*. Boston, MA: Harvard Business School Press.

Chen, X. and Reger, G. 2006. The role of technology in the investment of German firms in China. *Technovation*, 26(3): 407-415.

Cheng, J. and Bolon. D. 1993. The management of multinational R&D: a neglected topic in international business research. *Journal of International Business Studies,* 24(1): 1-18.

Cheng, L.K., and Kwan, Y.K. 2000. What are the determinants of the location of foreign direct investment? The Chinese experience. *Journal of International Economics*, 51(2): 379 - 400.

Cheng, Y-C. 2007. The upgrading of multinational regional innovation networks in China. *Asia Pacific Business Review*, 13(3): 373–403

Chesbrough, H. 2003. *Open Innovation*. Cambridge, Massachusetts: Harvard University Press,

Chesbrough, H. 2006. *Open Business Models: How to thrive in the New Innovation Landscape.* Boston: Harvard Business School Press.

Cheung, Kui-yin. 2007. The Impact of Ownership on the Propensity to Innovate in China's Large- and Medium-size Industrial Enterprises. *China: An International Journal,* 5(2): 228-249.

Chiao, Y.C., Lo, F.Y., and Yu, C. M. 2010. Choosing between wholly-owned subsidiaries and joint ventures of MNCs from an emerging market. International Marketing Review, 27(3): 338 - 365

Chiesa, V. and Manzini, R. 1996. Managing knowledge transfer within multinational firms. *International Journal of Technology Management*, 12(4): 462–476.

Child, J., and Markóczy, L. 1993. Host-country management behavior and learning in Chinese and Hungarian joint ventures. *Journal of Management Studies,* 34(4): 611-631.

Child, J. and Tse, D. 2001. China's transition and its implications for international business. *Journal of International Business Studies*, 32(1): 5–21.

Choi, S., Lee, S. H; and Williams, C. 2011. Ownership and firm innovation in a transition economy: Evidence from China. *Research Policy*, 40(3): 441.

Claessens, S., Djankov, S., Fan, J. P. H., and Lang, L. H. P. 2002. Disentangling the incentive and entrenchment effects of large shareholdings. *Journal of Finance*, 57(6): 2741-2771.

Claessens S., Djankov S., and Lang L.H. P. 2000. The separation of ownership and control in East Asian corporations. *Journal of Financial Economics,* 58 (1-2): 81–112.

Clarke, T., and Du, Y. 1998. Corporate Governance in China: Explosive Growth and New Patterns of Ownership. *Long Range Planning, 31*(2): 239-251.

Cleeve, E., 2007. Japanese Foreign Direct Investment in the UK Electronic Industry: The Eclectic Approach. *Asia Pacific Business Review,* 13 (2): 183–200.

Cohen, W., 1995. Empirical studies of innovative activity. In: Stoneman, P. (Ed.), *Handbook of the Economics of Innovation and Technological Change,* 182–264. Oxford: Blackwell,

Comanor, William S. 1967. Market Structure, Product Differentiation, and Industrial Research. *Quarterly Journal of Economics*, 81(4): 639-57.

Connor, K. 1991. A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm? *Journal of Management*, 17 (1): 121–154.

Connor, T. 2002. The resource-based view of strategy and its value to practising managers, *Strategic Change*, 11(6): 307-16.

Contractor F. J. 1990. Ownership patterns of U.S. joint ventures abroad and the liberalization of foreign government regulations in the 1980s: evidence from the benchmark surveys. *Journal of International Business Studies,* 21(1): 55–73.

Coombs, R. 1996. Core competencies and the strategic management of R&D. *R&D Management, 26*(4): 345–354

Coughlin, C.C. and Segev, E. 2000. Foreign direct investment in China: a spatial econometric study. *World Economy*, 23(1):1-23.

Cuervo-Cazurra, A., and Dau, L. A. 2009. Structural reform and firm exports. *Management International Review*, 49(4): 479–507.

Culem, C.G. 1988. The locational determinants of direct investment among industrialized countries. *European Economic Review*, 32(4): 885-904.

Damanpour, F. 1991. Organizational innovation: a meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 5(34): 555–590.

Danneels, E. 2002. The dynamics of product innovation and firm competences. *Strategic Management Journal, 23*(12): 1095-1121.

De Backer, K., and Sleuwaegen, L., 2003. Foreign ownership and productivity dynamics. *Economics Letters,* 79(2): 177–183.

De Jong, J. P. J. and Vermeulen, P. A. M. 2006. Determinants of Product Innovation in Small Firms: A Comparison across Industries. *International Small Business Journal,* 24(6): 587–609.

Dee, S., 1998. Foreign direct investment in China: Determinants and Effects. *Economics of Planning*, 31(2-3): 175-194.

Del Canto J.G. and Gonzalez I.S., 1999. A resource-based analysis of the factors determining a firm's R&D activities. *Research Policy,* 28(8): 891-905.

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

Delios, A. and Henisz, W.J. 2003a. Policy uncertainty and the sequence of entry by Japanese firms, 1980-1998. *Journal of International Business Studies,* 34 (3): 227-41.

Delios, A. and Henisz, W.J. 2003b. Political hazards, experience, and sequential entry strategies: the international expansion of Japanese firms, 1980-1998. *Strategic Management Journal,* 24(1): 1153-64.

Delios, A., and Beamish, P. W. 2004. Joint venture performance revisited: Japanese foreign subsidiaries worldwide. *Management International Review,* 44(1): 69-91.

Denis, D. and McConnell, J., International Corporate Governance, in Keasey, K.,Thompson, S. and Wright, M. (eds.), *Corporate Governance: Accountability, Enterprise and International Comparison*, London: Wiley 2005:251–284.

Dharwadkar R; George G; and Brandes, P. 2000. Privatization in emerging economies: an agency theory perspective. *Academy of Management Review,* 25(3): 650–669.

Díaz-díaz, N., Aguiar-díaz, I., Saaperez, P.D. 2008. Impact of foreign ownership on innovation. *European Management Review,* 5(4): 253-263.

Dimelis, S., and Louri, H. 2002. Foreign ownership and productivity efficiency: a quantile regression analysis. *Oxford Economic Papers*, 54(3): 449-469.

Djankov S; La Porta R; Lopez-De-Silanes F; and Shleifer A. 2002. The regulation of entry. *The Quarterly Journal of Economics,* 117(1): 1–37.

Dodgson, M., and Rothwell, R., 1994. *The Handbook of Industrial Innovation.* Cheltenham: Edward Elgar.

Dollinger, M. J. 1995. *Entrepreneurship: Strategies and Resources.* Boston, MA: Irwin.

Dougherty D. 1995. Managing your core in competencies for corporate venturing. *Entrepreneurship Theory and Practice*, 19(3): 113–135.

Douma, S., George, R. et al. 2006. Foreign and domestic ownership, business groups, and firm performance: evidence from a large emerging market. *Strategic Management Journal*, 27(7): 637-657.

Drake, T. A., and Caves, R.E. 1992. Changing determinants of Japanese foreign investment in the United States. *Journal of the Japanese and International Economies*, 6(3): 228-246.

Du, J., Lu, Y. and Tao, Z. 2008. Economic institutions and FDI location choice: Evidence from US multinationals in China. *Journal of Comparative Economics*, 36(3): 412-429.

Dunning J. H. and Lundan S. M. 2009. The MNE as a creator, fashioner and respondent to institutional change. In: Collinson S, and Morgan G, (eds). *The Multinational Firm*. Oxford*:* Blackwell Publishers: 93- 115.

Dunning, J. H. 1970. *Studies in International Investment*. London: Allen & Uniwin.

Dunning, J. H. 1977. Trade, location of economic activities, and the MNE: a search for an eclectic approach, In Ohlin, B., Hesselborn, P.O., and Wiskman, P.M. (eds.), *The International Allocation of Economic Activity,* London, Macmillan, pp. 395-418.

Dunning, J. H. 1983. Market power of the firm and international transfer of technology. *International Journal of Industrial Organization*, 1(4): 333-51.

Dunning, J. H. 1988. The eclectic paradigm of international production: a restatement and some possible extensions. *Journal of International Business Studies*, 19(1):1-31.

Dunning, J. H. 1992. *Multinational enterprises and the global economy*. Wokingham, UK and Reading, MA: Addison-Wesley Publishing Company.

Dunning, J. H. 1993a. *Multinational Enterprises and the Global Economy*, Wokingham, UK and Reading, MA: Addison Wesley.

Dunning, J. H. 1993b. *The Globalization of Business*, London and New York: Routledge.

Dunning, J. H. 1994. Multinational enterprises and the globalization of innovatory capacity. *Research Policy*, 23(1): 67-88.

Dunning, J. H. 2000. The eclectic paradigm as an envelope for economic and business theories of MNE activity. *International Business Review*, 9(2):163–190.

Dunning, J. H. 2001. The eclectic (OLI) paradigm of international production: past, present and future. *International Journal of the Economics of Business*, 8(2):173–190.

Dunning, J. H. 2004. An evolving paradigm of the economic determinants of international business activity. In J. L. C. Cheng and M. A. Hitt (Eds.). *Managing multinationals in a knowledge economy: Economics, culture, and human resources,* Vol. 15: 3–27. Amsterdam: Elsevier.

Dunning, J. H. 2006. Towards a new paradigm of development: Implications for the determinants of international business. *Transnational Corporation*, 15(1): 173–227.

Dunning, J. H. 2009. Location and the multinational enterprise: a neglected factor? *Journal of International Business Studies*, 40(1): 5–19.

Dunning, J. H. and Lundan S.M. 1998. The geographical sources of competitiveness of multinational enterprises: an econometric analysis. *International Business Review*, 7(2): 115-133.

Dunning, J. H., and Lundan, S. M. 2008a. *Multinational enterprises and the global economy*. 2nd edn. Cheltenham: Edward Elgar

Dunning, J. H., and Lundan, S. M. 2008b, Institutions and the OLI paradigm of the multinational enterprise, *Asia Pacific Journal of Management*, 25(4): 573-593.

Dunning, J. H. and Lundan, S. M. 2010. The institutional origins of dynamic capabilities in multinational enterprises. *Industrial and Corporate Change*, 19(4):1225–1246.

Dunning, J., and Narula, R. 1995. The R&D activities of foreign firms in the United States. *International of Study Management Organization*, 25(1/2): 39–73.

Economist Intelligence Unit. 2005. *China Country Commerce*. London: Economist Intelligence Unit.

Edquist, C.C. 1997. *System of Innovation: Technologies, Institutions and Organizations*. London: Pinter.

Edwards, S. 1990. Capital flows, foreign direct investment, and debt-equity swaps in developing countries. NBER working paper #3497, Cambridge, MA.

Eisenhardt, K. M., 1989. Agency theory: an assessment and review. *Academic of Management Review*, 14(1): 57–74.

Erramilli, M. K; and Rao. C.P. 1993. Service firms' international entry-mode choice: A modified transaction-cost analysis approach. *Journal of Marketing*, 57(3): 19-38.

European Commission 2000. Innovation policy in a knowledge –based economy, Luxemburg.ftp://ftp.cordis.lu/pub/innovation-policy/studies/studies_knowledge_based_economy.pdf..

European Commission. 2007. Study on the Future Opportunities and Challenges in EU-China Trade and Investment Relations 2006-2010. Pub. March 2007. http://ec.europa.eu/trade/issues/bilateral/countries/china/legis/index_en.htm

Eurostat. 2004. www.europa.eu.int/comm/eurostat.

Faccio, M., Lang, L. H. P., and Young, L. 2001. Dividends and expropriation. *American Economic Review*, 91(1): 54-78.

Fama, E., and Jensen, M., 1983. Separation of ownership and control. *Journal of Law Economics,* 26(2): 301–325.

Fan, J, P.H., Morck, R., Xu, L.C., and Yeung, B. 2009. Institutional and foreign direct investment: China versus the rest of the world. *World Development*, 37(4): 852-865.

Fare, R.F., Grosskopf, and Logan, J. 1985. The relative performance of publicly owned and privately owned electric utilities. *Journal of Public Economics*, *26*(1): 89–106.

Faure, G.O. and Fang, T. 2008. Changing Chinese values: keeping up with paradoxes. *International Business Review*, 17(2): 194-207.

Filatotchev, I., Strange, R., Piesse, J.,and Lien, Y-C. 2007. FDI by firms from newly industrialised economies in emerging markets: corporate governance, entry mode and location. *Journal of International Business Studies,* 38(4): 556-572.

Filatotchev, I. and Wright, M. 2011. Agency Perspectives on Corporate Governance of ultinational Enterprises. *Journal of Management Studies,* 48(2): 471-486.

Firstenberg, P. B. and Malkiel, B. G. 1994. The twenty-first century boardroom: who will be in charge? *Sloan Management Review,* 36(1), 27-36.

Fitzmaurice, G. M., Laird, N. M., and Ware, J. H. 2004. *Applied longitudinal analysis.* New York: John Wiley & Sons

Forssbaeck, J., and Oxelheim, L. 2008. Finance-specific factors as drivers of cross-border investment: an empirical investigation. *International Business Review*, 17(6): 630-641.

Franco, E., Ray, S., and Ray, P. K. 2011. Patterns of Innovation Practices of Multinational-affiliates in Emerging Economies: Evidences from Brazil and India. *World Development*, 39(7): 1249-1260.

Freeman, C. 2002. Continental, national and sub-national innovation systems - complementarity and economic growth. *Research Policy,* 31 (2): 191-211.

Freeman, C., 1987. *Technology Policy and Economic Performance: Lessons from Japan.* Pinter Pub Ltd.

Freeman, C., and Soete, L. 1997. *The Economics of Industrial Innovation*. Cambridge (3rd ed) MA: The MIT Press.

Friar, J.H. 1995. Competitive advantage through performance innovation in a competitive market. *Journal of Product Innovation Management*, 12(1): 33-42.

Fu, J. 2000. *Institutions and Investments: Foreign Direct Investment in China during an Era of Reforms*. Ann Arbor: The University of Michigan Press.

Fu, X. and Gong, Y. 2011. Indigenous and Foreign Innovation Efforts and Drivers of Technological Upgrading: Evidence from China. *World Development*, 39(7): 1213-1225.

Fung, K. C., Iizaka, H., Lee, J. and Parker, S., 2000. Determinants of U.S. and Japanese foreign investment in China. Asian Development Bank Institute.

Fung, K.C., Iizaka, H., Lin, C. and Siu, A., 2002. An econometric estimation of locational choices of foreign direct investment: The case of Hong Kong and U.S. firms in China. Asian Development Bank Institute.

Galende, J. and de la Fuente J. M. 2003. Internal factors determining a firm's innovative behaviour. *Research Policy,* 32(5): 715-736.

Gao, G.Y., Murray J.Y., Kotabe, M. and Lu, J. 2010. A "strategy tripod" perspective on export behaviors: evidence from domestic and foreign firms based in an emerging economy. *Journal of International Business Studies*, 41(3): 377-396.

Gassmann, O. and Han, Z. 2004. Motivations and barriers of foreign R&D activities in China. *R&D Management*, 34(4): 423-437.

Gatignon, H; and Anderson, E. 1988. The multinational corporation's degree of control over foreign subsidiaries: An empirical test of a transaction cost explanation. *Journal of Law, Economics, and Organization*, 4(2): 305-336.

Gatignon, H. and Xuereb, J.-M. 1997. Strategic orientation of the firm new product performance. *Journal of Marketing Research*, 34(1): 77-90.

Gaur, A. S. and Lu, J. W. 2007. Ownership Strategies and Survival of Foreign Subsidiaries: Impacts of Institutional Distance and Experience. *Journal of Management*, 33(1): 84-110.

Ge, Y. and Chen, Y. 2008, Foreign Ownership and Productivity of Joint Ventures. *Economic Development and Cultural Change*, 56(4): 895-920.

Gedajlovic, E. R; and Shapiro, D. M. 1998. Management and ownership effects: Evidence from five countries. *Strategic Management Journal*, 19(6): 533–553.

Ghoshal, S. and. Bartlett. C 1988. Creation, adoption, and diffusion of innovations by subsidiaries of multinational corporations. *Journal of International Business Studies*, 19(3): 365-388.

Giddy, I.H. 1978. The demise of the product cycle model in international business theory. *Columbia Journal of World Business*, 13(1): 90-97.

Girma, S and Hong, Y. 2008. Putting people first? Chinese state-owned enterprises' adjustment to globalisation. *International Journal of Industrial Organization*, 26 (2): 573-585.

Girma, S., Gong, Y., and Görg, H. 2009. What determines innovation activity in Chinese state owned enterprises? The role of foreign direct investment. *World Development*, 37(4), 866-873.

Globerman, S. and Shapiro, D. 2003. Governance infrastructure and US foreign direct investment. *Journal of International Business Studies*, 34(1), 19-39.

Golovko, E. and Valentini, G. 2011. Exploring the complementarily between innovation and export for SMEs' growth. *Journal of International Business Studies*, 42: 362–380.

Gomes-Casseres, B. 1989. Ownership structures of foreign subsidiaries: Theory and evidence, *Journal of Economic Behaviour & Organization*, 11 (1): 1–25.

Gomes-Casseres B. 1990. Firm ownership preferences and host government restrictions: an integrated approach. *Journal of International Business Studies*, 21(2): 1–22.

Gorodnichenko, Y., Svejnar, J., and Terrell, K., 2008. *Globalization and innovation in emerging markets*. IZA DP No. 3299, Bonn: IZA.

Graves, S. B. and Langowitz, N. 1993. Innovative Productivity and Returns to Scale in the Pharmaceutical Industry. *Strategic Management Journal*, 14(8):593-605.

Greene, W. H. 2003. *Econometric Analysis*. Upper Saddle River, NJ: Prentice Hall.

Grosse, R. and Trevino, L.J. 2005. New institutional economics and FDI location in Central and Eastern Europe. *Management International Review*, 45(2): 123-145.

Grossman, G. M. and Helpman, E. 1990. Comparative Advantage and Long-Run Growth. *American Economic Review:* 80 (4): 796-815.

Grubaugh, S. 1987. Determinants of direct foreign investment. *Review of Economics and Statistics*, 69(1):149-152.

Gul, FA and Zhao, R. 2001. Corporate Governance and Performance in Chinese Listed Companies. Paper presented at the AAA International Accounting Section, Phoenix, AZ (January).

Gumbau, M., 1997. Analysis of Microeconomic determinants of Innovation: Application to Spanish manufacturing firms. *Spanish Journal of Economy*. 14(1): 41-66.

Gupta, Anil and Wang, Haiyan. 2011. China as an innovation Centre? Not so fast. The Wall Street Journal. http://online.wsj.com/article/SB10001424053111903591104576469670146238648.html. Accessed 16 Nov.2011.

Hadjimanolis, A. 1999. Barriers to Innovation for SMEs in a Small Less Developed Country (Cyprus). *Technovation*, 19 (9): 561–570.

Haggard, S. 1994. Business, politics and policy in Northeast and Southeast Asia. In: Maclntyre, A. (Ed.), *Business and Government in Industrializing Asia*. New York, Ithaca: Cornell University Press.

Hakanson, L. and Zander, U. 1988. International management of R&D: the Swedish experience. *R&D Management*, 18(3): 217–226.

Hall, R. 1993. A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic Management Journal,* 14(8): 607-18.

Hausman, D.M 1998. *Causal Asymmetries*. New York, Cambridge University Press.

Helfat CE. 2000. Guest editor's introduction to the special issue: the evolution of firm capabilities. *Strategic Management Journal*, Special Issue, 21(10/11): 955–959.

Helfat, C. and Peteraf, M.A. 2003. The Dynamic Resources-Based View: Capabilities Lifecycle. *Strategic Management Journal*, 24(10): 997–1012.

Hemmelskamp, J., 1999. Environmental policy and technological progress. Series of the Centre for European Economic Research, Heidelberg: Physica Verlag.

Henisz WJ, and Zelner BA. 2005. Legitimacy, interest group pressures, and change in emergent institutions: the case of foreign investors and host country governments. *Academy of Management Journal,* 30(2): 361–382.

Hennart, J.-F. 1986. What Is internalization? *Review of World Economics,* 122(4): 791-804.

Hennart, J.-F., and Anderson, E. 1993. Countertrade and the minimization of transaction costs: an empirical examination. *Journal of Law, Economics and Organization*, *9*(2): 290-313

Hewitt-Dundas, N. 2006. Resource and Capability Constraints to Innovation in Small and Large Plants. *Small Business Economics*, 26(3): 257-277.

Hillman, A. J., and Wan, W. P. 2005. The determinants of MNE subsidiaries' political strategies: Evidence of institutional duality. *Journal of International Business Studies,* 36(3): 322–340.

Hitt MA, Ahlstrom D, Dacin MT, Levitas E, and Svobodina L. 2004. The institutional effects on strategic alliance partner selection in transition economies: China versus Russia. *Organization Science,* 15(2): 173-185.

Hong, J. 2008. WTO accession and foreign direct investment in China. *Journal of Chinese Economic and Foreign Trade Studies*, 1(2): 136-147.

Hoskisson, R.E., Eden, L., Lau, C.M. and Wright, M. 2000, Strategy in emerging economies. *Academy of Management Journa*l, 43(3): 249-67.

Hoskisson RE, Johnson RA, Tihanyi L, and White RE. 2005. Diversified business groups and corporate refocusing in emerging economies. *Journal of Management,* 31(6): 941–965.

Huang, Can and Soete, Luc. 2008. The global challenges of the knowledge economy: China and the European Union, *Science and Public Policy*, 35(10):771-781.

Huang, Y. 2003. *Selling China: Foreign direct investment during the reform era*. Cambridge, UK: Cambridge University Press.

Huiban J.P., and Bouhsina Z.1998. Innovation and quality if the labour factor: An empirical investigation in the French food industry. *Small Business Economics*, 10: 389-400.

Hur, J., Raj, M., Riyanto, Y.E. 2006. Finance and trade: A cross-country empirical analysis on the impact of financial development and asset tangibility on international trade. *World Development*, 34(10): 1728-1741.

Husted, B. W., and Allen, D. B. 2006. Corporate social responsibility in the multinational enterprise: Strategic and institutional approaches. *Journal of International Business Studies,* 37(6): 838–849.

Hymer, S.H.1960. *The international operations of national firm: a study of direct foreign investment.* Doctoral dissertation published in 1974. Cambridge, MA: MIT Press.

International Monetary Fund. 1993. *Balance of Payment Manual*, fifth edition. IMF. Washington.

Jefferson, G. H., Zhao, L. M., and John Z.Q., 1998b. Reforming property rights in Chinese industry. In: Jefferson, G., and Singh, I. (Eds.), *Enterprise Reform in China: Ownership, Transition, and Performance.* Oxford Univ. Press, New York.

Jefferson, G. H., and Rawski T, G., 1995. How industrial reform worked in China: The role of innovation, competition, and property rights. In: Proceedings of the World Bank Annual Conference on Development Economics 1994:129–156

Jefferson, G., Rawski, T., Li, W. and Zheng, Y. 2000. Ownership, productivity change, and financial performance in Chinese industry. *Journal of Comparative Economics*, 28(4): 786- 813.

Jefferson, G. H. and Su, J. 2006. Privatization and restructuring in China: Evidence from shareholding ownership, 1995–2001. *Journal of Comparative Economics*, 34(1): 146-166.

Jefferson, G; Zhang, H., Zhao, P; and John. Z.Q., 1998a. Structure, authority, and incentives in Chinese industry. In: Jefferson, G., and Singh, I. (Eds.), *Enterprise Reform in China: Ownership, Transition, and Performance.* Oxford Univ. Press, New York.

Jensen, M. 1986. Agency costs of free cash flow, corporate finance and takeovers. *American Economic Review*, 76(2): 323- 329.

Jensen, M. 1988. Takeovers: their causes and consequences. *Journal of Economic Perspectives*, 2(1): 21- 48.

Jensen M. and Meckling W. 1976. Theory of the Firm: Managerial Behaviour, Agency Costs, and Capital Structure. *Journal of Financial Economics,* 3(4), 305-360

Jeon, B.N., and Rhee, S.S. 2008. The determinants of Korea's foreign direct investment from the United States, 1980-2001: an empirical investigation of firm-level data. *Contemporary Economic Policy*, 26(1):118-131.

Jiang, C. 2006. A re-examination of technology transfer in Sino-foreign joint ventures after China's WTO accession. *Journal of American Academy of Business*, 9(2):133-138.

Johnson, C., 1982. *MITI and the Japanese Miracle: The Growth of Industrial Policy*, 1925–1975. Stanford: Stanford University Press,

Johnson, D. and Turner, C. 2003. *International Business: Themes and Issues in the Modern Global Economy*. London: Routledge.

Johnston, Richard and. Soroka, Stuart N. 2001. Social capital in a multicultural society: the case of Canada, Pp. 30-44 in Paul Dekker and Eric M. Uslaner, (Eds)., *Social Capital and Participation in Everyday Life*, London: Routledge.

Jones, G. K., and Davis, H. J. 2000. National culture and innovation: Implications for locating global R&D operations. *Management International Review*, 40(1):11–39.

Jong, J.P.J. de; and Vermeulen, P.A.M. 2006. Determinants of Product Innovation in Small Firms: A Comparison Across Industries. *International Small Business Journal*, 24(6): 587-609.

Jun, K. and Singh, H. 1996. The determinants of foreign direct investment in developing countries. *Transnational Corporations*, 5(2): 67-105.

Kalfadellis, P. and Gray, J., 2002, Are Proxies Valued Measures Of Internationalization?, Retrieved On November, 19th, 2008, From http://Www.Aueb.Gr/Deos/EIBA2002.Files/Index.Htm

Kamien, M. I., and Schwartz, N. L. 1982. *Market Structure and Innovation*. Cambridge: Cambridge University Press

Kang, Y.-S. and Kim, B.-Y.2012. Ownership structure and firm performance: Evidence from the Chinese corporate reform. *China Economic Review*, 23(2): 471-481

Kaufmann, L. and Reossing, S. 2005. Managing conflict of interests between headquarters and their subsidiaries regarding technology transfer to emerging markets – a framework. *Journal of World Business*, 40(3): 235-53.

Keister, L.A., and Hodson, R., 2009. Ownership and innovation during economic development: corporate ownership and strategy formation in China. *Research in the Sociology of Work* , 19: 129–163.

Kessler E. H., and Chakrabarti A. K., 1999. Speeding up the pace of new product development. *Journal of Product Innovation Management*, 16(3): 231-247.

Khanna T, and Rivkin JW. 2001. Estimating the performance effects of business groups in emerging markets. *Strategic Management Journal, 22*(1): 45–74.

Khanna T, and Palepu, K. 2000. Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *Journal of Finance*, 55(2): 867-891.

Killing, J. P. 1983. *Strategies for Joint Venture Success.* New York: Praeger.

Kim, Y., and Gray, S. 2008. The impact of entry mode choice on foreign affiliate performance: The case of foreign MNEs in South Korea. *Management International Review*, 48(2): 165-188.

Kimura, Y. 1989. Firm-specific strategic advantages and foreign direct investment behaviour of firm: The case of Japanese semiconductor firm. *Journal of International Business Studies*, 20(2): 296-314.

King, A. Y. 1991. Kuan-hsi and network building: a sociological interpretation. *Daldalus*, 120(2): 63–84.

Kleinknecht, A. 1996. *Determinants of Innovation*, London: Macmillan Press.

Klomp, L., and Leeuwen van, G., 2001. Linking innovation and firm performance. *International Journal of the Economics of Business*, 8 (3): 343–364.

Knoke, D. and Kalleberg. A. L. 1994. Job training in U.S. organizations. *American Sociological Review*, 59(4): 537–546.

Kochhar, R. 1996. Explaining firm capital structure: the role of agency theory vs transaction cost economics. *Strategic Management Journal*, 17(9): 713- 728.

Kogut, B. 1988. Joint Ventures: Theoretical and Empirical Perspectives. *Strategic Management Journal*, 9(4): 319-332.

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

Kole, S., and Mulherin, H., 1997. The government as a shareholder: a case from the United States. *Journal of Law and Economics*, 40 (1): 1–22.

Kostova, T. 1999. Transnational transfer of strategic organizational practices: A contextual perspective. *Academy of Management Review*, 24(2): 308-324.

Kouvelis, P., Axaraloglou, K. and Sinha, V. 2001. Exchange rated and the choice of ownership structure of production facilities. *Management Science*, 47(8): 1063–1080.

Kravis, I. B., and Lipsey, R.E. 1982. The location of overseas production and production for export by US multinational firms. *Journal of International Economics*, 12(3-4): 201-223.

Krugman, P., 1979. A model of innovation, technology transfer and trade. *Journal of Political Economy*, 87(2): 253–266.

Krugman, P., 1991. *Geography and Trade*. Cambridge, MA: MIT Press.

Krugman, P., 1995. D*evelopment, Geography and Economic Theory*, Cambridge, MA: MIT Press.

Kuemmerle, W., 1998. Optimal scale for research and development in foreign environments: an investigation into size and performance of research and development laboratories abroad. *Research Policy*, 27(2): 111–126.

Kuemmerle W. 1999. The Drivers of Foreign Direct Investment into Research and Development: An Empirical Investigation. *Journal of International Business Studies*, 30(1): 1-24.

Kumar, N., and Saqib, M., 1996. Firm size, opportunities for adaptation and in-house R&D activity in developing countries: the case of Indian manufacturing. *Research Policy*, 25(5): 713–722.

Lachenmaier, S., and Woessmann, L., 2006. Does innovation cause exports? Evidence from exogenous innovation impulses and obstacles using German micro data. *Oxford Economic Papers*, 58(2): 317–350.

Lall, S. 1980. Monopolistic advantages and foreign involvement by U.S. manufacturing industry. *Oxford Economic Papers*, 32(1): 102-122.

Lane, P., Salk, J.E. and Lyles, M.A. 2001. Absorptive capacity, learning and performance in international joint ventures, *Strategic Management Journal*, 22(12): 1139–1161.

Lansbury, M., Pain, N., and Smidkova, K. 1996. Foreign direct investment in Central Europe since 1990: an econometric study. *National Institute Economic Review*, 156(1):104-124.

Laursen K. and Foss, N. J. 2003. New human resource management practices, complementarities, and the impact on innovation performance. *Cambridge Journal of Economics*, 27(2): 243–63.

Laursen, K., and Salter, A. 2006. Open for innovation: The role of openness in explaining innovation performance among UK manufacturing firms. *Strategic Management Journal*, 27(2): 131–150.

Le Bas, C., and Sierra, C. 2002. Location versus home country advantages in R&D activities: some further results on multinationals locational strategies. *Research Policy*, 31(3): 589–609.

Lemmon ML, and Lins KV. 2003. Ownership structure, corporate governance and firm value: evidence from the East Asian financial crisis. *Journal of Finance*, 58(4): 1445–1468.

Leonard-Barton D. 1992. Core capabilities and core rigidities: a paradox in managing new product development. *Strategic Management Journal*, Summer Special Issue 13 (S1): 111–125.

Li, H. and Atuahene-Gima, K. 2001. Product Innovation Strategy and the Performance of New Technology Ventures in China. *The Academy of Management Journal*, 44(6): 1123-1134.

Li, H, and Scott, R. 2000. Savings or stripping rural industry: An analysis of privatization and efficiency in China. *Agricultural Economics*, 23 (3): 241–252.

Li, J. and Li, Y. 2010. Flexibility versus commitment: MNEs' ownership strategy in China." *Journal of International Business Study*, 41(9): 1550-1571.

Li, J.J. 2005. The formation of managerial networks of foreign firms in China: The effects of strategic orientation. *Asia Pacific Journal of Management*, 22(4): 423-443.

Li, S., LI, S., and Zhang, W. 2000. The Road to Capitalism: Competition and Institutional Change in China. *Journal of Comparative Economics*, 28(2): 269-292.

Lien, Y., Piesse, J., Strange, R. and Filatotchev, I. 2005. The role of corporate governance in FDI decisions: evidence from Taiwan. *International Business Review*, 14(6):739-763.

Lin, F.J. 2010. The determinants of foreign direct investment in China: the case of Taiwanese firms in the IT industry. *Journal of Business Research*, 63(5): 479-485.

Lin, H., and Yeh, R.S. 2005. The interdependence between FDI and R&D: an application of An endogenous switching model to Taiwan's electronics industry. *Applied Economics*, 37(15):1789-1799.

Lin, Y., Fang, C., and Zhou, L. 1998. Competition, Policy Burdens, and State-Owned Enterprise Reform. *American Economic Review*, 88(2): 422–427.

Liu, X., and Buck, T., 2007. Innovation performance and channels for international technology spillovers: Evidence from Chinese high-tech industries. *Research Policy* 36(3): 355–366.

Liu, X., Pamela, S; Wang, C and. Wei, Y. 2000. Productivity spillovers from foreign direct investment: evidence from UK industry level panel data, *Journal of International Business Studies*, 31(3): 407–425.

Liu, X, and Wang, C, 2003. Does Foreign Direct Investment Facilitate Technological Progress? Evidence from Chinese Industries. *Research Policy*, 32(6): 945-953.

Liu, X. and White, S. 2001.Comparing innovation systems: a framework and application to China's transition context. *Research Policy*, 30(7): 1091-1114.

Locke, R.M. 1995. *Remaking the Italian Economy.* Ithaca: Cornell University Press.

Lockett, A. 2005. Edith Penrose's legacy to the resource-based view. *Managerial and Decision Economics*, 26(2): 83–98.

Lockett, A. and Thompson, S. 2001. The resource based view and economics. *Journal of Management:* 27(6): 723–754.

Lu, Y. 1996. *Management Decision-Making in Chinese Enterprises.* London: Macmillan.

Lucas, R. 1993. On the determinants of direct foreign investment: evidence from East and Southeast Asia. *World Development*, 21(3): 391-406.

Lundvall, B-A(ed). 1992 *National system of innovation; Towards a Theory of Innovation and Interactive Learning* .London: Pinter.

Lundvall, B.-A., 1998. Why study national systems and national styles of innovation? *Technology Analysis and Strategic Management* .10(4): 407-422.

Luo, X., Chung, C.N., and Sobczak, M. 2009. How do corporate governance model differences affect foreign direct investment in emerging economies? *Journal of International Business Studies*, 40(3): 444-467.

Luo, Y. 2001. Determinants of Entry in an Emerging Economy: A Multilevel Approach. *Journal of Management Studies*, 38(3): 443-472.

Luo, Y. 2002a. Capability exploitation and building in a foreign market: Implications for multinational enterprises. *Organization Science*, 13(1): 48–63.

Luo, Y. 2002b. *Multinational Enterprises in Emerging Markets*. Copenhagen: Business School Press.

Luo, Y. 2007. From foreign investors to strategic insiders: Shifting parameters, prescriptions and paradigms for MNCs in China. *Journal of World Business*, 42(1): 14–34

Luo, Y. and Chen, M. 1997. Does Guanxi Influence Firm Performance? *Asia Pacific Journal of Management*, 14(1): 1-16.

Luo, Y., Huang, Y. and Wang, S.L. 2012. Guanxi and Organizational Performance: A Meta-Analysis. *Management and Organization Review*, 8(1): 139-172.

Luo, Y., and Peng, M. W. 1999. Learning to compete in a transition economy: Experience, environment, and performance. *Journal of International Business Studies*, 30(2): 269–295.

Luo, Y., Shenkar, O., and Nyaw, M. K. 2001. A dual parent perspective on control and performance in international joint ventures. *Journal of International Business Studies*, 31(1): 19-38.

Mackie- Mason, J. 1990. Do taxes affect corporate financing decisions? *Journal of Finance*, 45(5): 1471- 1494.

Mailath, G. J. and Samuelson, L. 2006. *Repeated Games and Reputations: Long-run Relationships*, New York: Oxford University Press.

Mahmood, I. P., and Rufin, C. 2005. Government's dilemma: The role of government in imitation and innovation. *Academy of Management Review*, 30(2): 338–360.

Majumdar, S.K., and Chhibber, P. 1999. Capital structure and performance: Evidence from a transition economy on an aspect of corporate governance. *Public Choice*, 98 (3-4): 287-305.

Mansfield, E. and Romeo, A. 1980.Technology transfer to overseas subsidiaries by US based firms. *Quarterly Journal of Economics*, *95*(4): 737–750.

Markusen, J. R. 1995. The boundaries of multinational firms and the theory of international trade. *Journal of Economic Perspectives*, 9(2):169-189.

Martin PY. 2004. Gender as social institution. *Social Forces*, 82(4): 1249–1273.

Mathews, J. A. 2002. Competitive advantages of the latecomer firm: A resource-based account of industrial catch-up strategies. *Asia Pacific Journal of Management*, 19(4): 467–488.

Maximilian von, Z., Ikeda, T., Li, G., Richard, C., and Seppo, H. 2007. Management foreign R&D in China. *Research Technology Management*, 50(3): 19-27.

McGrattan, E.R. and Prescott, E.C. 2009. Openness, technology capital, and development. *Journal of Economic Theory*, 144(6): 2454-2476.

McMillan, C.S., Mauri, A., and Hamilton, R.D. III. 2003. The Impact of Publishing and Patenting Activities on New Product Development and Firm Performance: The Case of the US Pharmaceutical Industry. *International Journal of Innovation Management*, 7(2):213–22.

Meyer, J.W. and Rowan, B. 1977. Institutionalized organizations: formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): 340-63.

Meyer, K. E. 2001a. Transition economies. In Rugman, A. and Brewer, T. (Eds), *Oxford Handbook of International Business*. Oxford: Oxford University Press.

Meyer, K.E. 2001b, Institutions, transaction costs, and entry mode choice in Eastern Europe. *Journal of International Business Studies*, 32 (2): 357-67.

Meyer, K. E. 2004. Book Review on *European Union Direct Investment in China: Characteristics, Challenges and Perspectives* by Bulcke, D.V.D., Zhang, H., & Esteves, M. (2003), *Journal of International Business Studies*. March, 1-3.

Meyer, K. E., and Peng, M. W. 2005. Probing theoretically into Central and Eastern Europe: Transactions, resources, and institutions. *Journal of International Business Studies*, 36(6): 600–621.

Meyer, K. E., and Jensen, C. 2005. Foreign direct investment and government policy in Central and Eastern Europe In R. Grosse (Ed.), *International business and government relations in the 21st century:* 119–145. New York: Cambridge University Press.

Meyer, K.E. and Nguyen, H. 2005. Foreign investment strategies and sub-national institutions in emerging markets: evidence from Vietnam. *Journal of Management Studies*, 42(1): 63-93.

Michalisin, M.D., Smith, R.D. and Kline, D. M. 1997. In search of strategic assets. *The International Journal of Organizational Analysis*, 5(4): 360-87.

Michie, J and Sheehan, M. 1999. HRM Practices, R&D Expenditure and Innovative Investment: Evidence from the 1990 Workplace Industrial Relations Survey (WIRS). *Industrial & Corporate Change*, 8(2): 211-234

Miles, R. and Snow, C. 1978. *Organizational Strategy, Structure and Process*. New York: McGraw Hill.

Ministry of Commerce of China (formerly Ministry of Foreign Trade and Economic Co-operation: MOFCOM). 2010. Statistics of foreign investment. <www.mofcom.gov.cn>.

Ministry of Science and Technology of China (MOST). 2010. Statistics of science and technology. <www.most.org.cn>.

Ministry of Foreign Trade and Economic Co-operation of China (MOFCOM). Ministry of China. Available from http://english.mofcom.gov.cn/.

Morrissey, O. and Udomkerdmongkol, M. 2012. Governance, private investment and foreign direct investment in developing countries. *World Development*, 40(3): 437-445.

Motohashi, K. 2010. R&D Activities of Manufacturing Multinationals in China: Structure, Motivations and Regional Differences. *China & World Economy*, 18(6): 56-72.

Motohashi, K. and Yun, X. 2007. China's innovation system reform and growing industry and science linkages. *Research Policy*, 36(8): 1251-1260.

Myers S. 1977. Determinants of Corporate Borrowing. *Journal of Financial Economics*, 5: 147-175

Narula, R. 2003. *Globalisation and Technology*. Cambridge: Polity Press.

Narula, R., 2006. Globalization, New Ecologies, New Zoologies, and the Purported Death of the Eclectic Paradigm, *Asia Pacific Journal of Management*, 23(2): 143-151.

National Bureau of Statistics of China. 1998-2007. The Annual Reports of Industrial Enterprises Statistics1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007. Beijing: the National Bureau of Statistics of China.

Naughton, B. 1992. Implications of the state monopoly over industry and its relaxation. *Modern China*, 18 (1): 14–41.

Nee, V. 1992. Organizational dynamics of market transition: hybrid forms, property rights, and mixed economy in China. *Administrative Science Quarterly*, 37(1): 1–27.

Nelson, R. 1993. *National innovation systems: a comparative analysis*. New York: Oxford University Press,

Ng, L.F.Y. and Tuan, C. 2001. FDI promotion policy in China: governance and effectiveness. *World Economy,* 24(8):1051-1074.

Ng, L.F. Y. and Tuan, C. 2003. Location decision of manufacturing FDI in China: Implication of China's WTO accession. *Journal of Asian Economics*, 14(1), 51-72.

Nobel, R., and Birkinshaw, J. 1998. Innovation in multinational corporations: Control and communication patterns in international R&D operations. *Strategic Management Journal*, 19(5):79–96.

North, D. C. 1990. *Institutions, Institutional Change and Economic Performance.* Cambridge: Cambridge University Press.

North, D. C. 1994. Economic performance through time. *American Economic Review*, 84(3): 359-368.

North, D. C. 2005. *Understanding the Process of Economic Change*. US: Princeton University Press.

OECD. 1992. *Proposed Guidelines for Collecting and Interpreting Technological Innovation Data.* OSLO Manual, OECD-Eurostat, Paris.

OECD. 1999. *OECD Benchmark Definition of Foreign Direct Investment*, third edition. Paris: OECD Publications.

OECD. 2003. *Investment policy Review of China: Progress and Reform Challenges*. Paris: OECD.

OECD. 2008. *OECD Reviews of Innovation Policy China*. Paris: OECD.

OECD. 2011. *OECD principles of corporate governance*. Paris: OECD

Oliver C. 1997. Sustainable competitive advantage: combining institutional and resource-based views. *Strategic Management Journal,* 18(9): 697–713.

Ostergard, R. 2000. The measurement of intellectual property rights protection. *Journal of International Business Studies*, 31(2): 349-360.

Oxelheim, L. and Ghauri, P. 2008. EU-China and the non-transparent race for inward FDI. *Journal of Asian Economics*, 19(4):358-370.

Oxley, J. 1999. Institutional environment and the mechanisms of governance: the impact of intellectual property protection on the structure of inter-firm alliances. *Journal of Economic Behavior and Organization*, 38(3): 283-309.

Pain, N. and Welsum, D.V. 2003. Untying the Gordian knot: The multiple links between exchange rates and foreign direct investment. *Journal of Common Market Studies*, 41(5): 823-846.

Pajunen, K. 2008. Institutions and inflows of foreign direct investment: a fuzzy-set analysis. *Journal of International Business Studies*, 39(4): 652-669.

Pan, Y. 1997. The formation of Japanese and U.S. joint ventures in China. *Strategic Management Journal*, 18(3): 247–54.

Pan, Y., and Chi, P. S. K. 1999. Financial performance and survival of multinational corporations in China. *Strategic Management Journal*, 20(4): 359–374.

Pan, Y., Li, S., and Tse, D. K. 1999. The impact of order and mode of market entry on profitability and market share. *Journal of International Business Studies*, 30(1):81-104.

Park, S. H., Li, S., and Tse, D. K. 2006. Market liberalization and firm performance during China's economic transition. *Journal of International Business Studies,* 37(1): 127–147.

Park, Y.S. and Park, Y-R. 2005. Characteristics of Japanese FDI in the east and west: understanding the strategic motives of Japanese investment, *Journal of World Business*, 40(3): 254-266.

Pavitt, K. 1998. The social shaping of the national science base. *Research Policy*, 27(8): 793–805.

Pearce, R. J. 2001. Looking inside the joint venture to help understand the link between inter-parent cooperation and performance. *Journal of Management Studies*, 38(4): 557–82

Peng, M. W. 2000. *Business Strategies in Transition Economies*. Thousand Oaks, CA: Sage.

Peng, M. W. 2001. How entrepreneurs create wealth in transition economies. *Academy of Management Executive*, 15(1): 95–108.

Peng, M. W. 2002. Towards an institution-based view of business strategy. *Asia Pacific Journal of Management*, 19(2-3): 251-267.

Peng, M. W. 2003. Institutional transitions and strategic choices. *Academy of Management Review*, 28(2): 275–296.

Peng, M. W. and Heath, P. 1996. The growth of the firm in planned economies in transition: institutions, organizations, and strategic choice. *Academy of Management Review,* 21(2): 492–528.

Peng, M.W. and Luo, Y. 2000. Managerial ties and firm performance in a transition economy: the nature of a micro macro link. *Academy of Management Journal*, 43(3): 486-501.

Peng, M. W., Tan, J., and Tong, T. 2004. Ownership types and strategic groups in an emerging economy. *Journal of Management Studies*, 41(7): 1105–1129

Peng, M., Wang, D.Y.L., and 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.

Peteraf MA. 1993. The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal*, 14(3): 179–191.

Phene, A., and Almeida, P. 2008. Innovation in multinational subsidiaries: The role of knowledge assimilation and subsidiary capabilities. *Journal of International Business Studies*, 39(5): 901–919.

Pitelis, C.N. and Teece, D.J. 2010. Cross-border market co-creation, dynamic capabilities and the entrepreneurial theory of the multinational enterprise. *Industrial and Corporate Change*, 19(4): 1247-1270.

Porter, M.E., 1990. *The Competitive Advantage of Nations*, New York: The Free Press.

Pradhan, J.P. 2004. The determinants of outward foreign direct investment: a firm-level analysis of Indian manufacturing. *Oxford Development Studies*, 32(4): 619-639.

Pride, W. E. Hughes R. J and. Kapoor J. R. 1993. *Business*, (4th ed), Boston, MA: Houghton Mifflin.

Prugel, T.A. 1981. The determinants of foreign direct investment: an analysis of US manufacturing industries. *Managerial and Decision Economics*, 2(4): 220-228.

Puck, J.F., Holtbru¨gge, D. and Mohr, A.T. 2009. Beyond entry mode choice: explaining the conversion of joint ventures into wholly owned subsidiaries in the People's Republic of China. *Journal of International Business Studies*, 40(3): 388-404.

Putnam, R. D. 1993. The prosperous community: social capital and public life. *The American Prospect*, 13 (Spring)**:** 35-42.

Qian, Y. 1996. Enterprise reform in China: Agency problems and political control. *Economics of Transition*, 4(2): 427–448.

Qi D, Wu W, and Zhang H. 2000. Shareholding structure and corporate performance of partially privatized firms: evidence from listed Chinese companies. *Pacific Basin Finance Journal* **8**: 587–610

Redding, S. 1996. The low-skill, low-quality trap: Strategic complementarities between human capital and R&D. *Economic Journal,* 106 (435):458–470.

Roberts, M.J., and Tybout, J R. 1997. The decision to export in Colombia: an empirical model of entry with sunk costs. *American Economic Review*, 87(4): 545–564.

Rodriguez P, Uhlenbruck K, and Eden L. 2005. Government corruption and the entry strategies of multinationals. *Academy of Management Review*, 30(2): 383–396.

Roper, S., Hewitt-Dundas, N. and Love, J H . 2004. An Ex Ante Evaluation Framework for the Regional Benefits of Publicly Supported R&D Projects. *Research Policy,* 33(3): 487-509.

Roper, S., 2001. Innovation, Networks and Plant Location; Evidence for Ireland. *Regional Studies*, 35(3): 215–22.

Rosenstein-Rodan, P. 1943. Problems of Industrialization of Eastern and Southeastern Europe. *Economic Journal,* 53(210-211): 202-211.

Rugman A M. 1980. Internalization as a general theory of foreign direct investment: a reappraisal of the literature. *Review of World Economics*, 116(2): 365-379.

Rugman, A.M. 2008. How Global are TNCs from Emerging Markets? In K. P. Sauvant, K. Mendoza and I. Ince (Eds.). *The rise of transnational corporations from emerging markets: threat or opportunity?* 86-106. US: Edward Elgar.

Rugman, A. M., and Verbeke, A. 2001. Subsidiary specific advantages in multinational enterprises. *Strategic Management Journal*, 22(3): 237–250.

Russell, J. S., Terborg J. R. and Powers, M. L.1985. Organizational performances and organizational level training and support. *Personnel Psychology*, 38(4), 849–863.

Salancik, G. R. and Pfeffer, J. 1983. The effects of ownership and performance on executive tenure in U.S. corporations. *Academy of Management Journal*, 23(4): 653-664.

Salomon, R. M., and Shaver, J. M., 2005. Learning by exporting: new insights from examining firm innovation. *Journal of Economics & Management Strategy*, 14(2): 431–460.

Salorio E. 1993. Strategic use of import protection: seeking shelter for competitive advantage. In Rugman AM, and Verbeke A (eds). *Research in Global Strategic Management* (Vol. 4), Greenwich, CT; JAI Press: 101–124.

Scarborough H. 2003. Knowledge management, HRM and the innovation process. *International Journal of Manpower*, 24(5): 501–16.

Schumpeter, J.A., 1934. *The Theory of Economic Development.* Cambridge, MA: Harvard University Press.

Schumpeter, J.A., 1942. *Capitalism, Socialism and Democracy*. New York: Harper & Row.

Scott WR. 1995. I*nstitutions and Organizations (Foundations for Organizational Science)*. Thousand Oaks, CA: Sage Publications.

Scott, W. 2001. *Institutions and Organizations* (2nd ed). Thousand Oaks, CA: Sage

Searle JR. 1995. *The Construction of Social Reality*.New York: Free Press.

Sethi, D., and Guisinger, S.E., Phelan, S.E., and Berg, D.M. 2003. Trends in foreign direct investment flows: a theoretical and empirical analysis. *Journal of International Business Studies*, 34(4): 315–326.

Shan, W. 2005. *The Legal Framework of EU-China Investment Relations: A Critical Appraisal.* Oxford: Hart Publishing.

Shirley, M. M., and Xu, L. C. 2001. Empirical effects of performance contracts: Evidence from China. *Journal of Law, Economics, & Organization*, 17(1): 168–200.

Shiro Armstrong. 2009. Japanese FDI in China: Determinants and Performance. Crawford School Asia Pacific Economic paper No. 378.

Smarzynska-Javorcik, B., and Wei, S. 2005. Pollution Havens and Foreign Direct Investment: Dirty Secret or Popular Myth? Contributions to Economic Analysis & Policy, Berkeley Electronic Press.

Solo, R. 1966. The capacity to assimilate an advanced technology. *American Economic Review*, 56(2), 91–97.

Song X. M., and Parry M.E.1997. The determinants of Japanese new product success. *Journal of Marketing Research*, 34(1): 64-76.

Spicer, A., McDermott, G., and Kogut, B. 2000. Entrepreneurship and privatization in Central Europe: The tenuous balance between destruction and creation. *Academy of Management Review*, 25 (3): 630–64.

Steensma, H.K. and Lyles, M.A. 2000. Explaining IJV survival in a transitional economy through social exchange and knowledge- based perspectives. *Strategic Management Journal*, 21(8): 831–851.

Stefanović, S. 2008. Analytical Framework of FDI Determinants: Implementation of the Model. Facta University Series: *Economics and Organization*, 5(3): 239 – 249.

Stein, E., and Daude, C. 2007. Longitude matters: time zones and the location of foreign direct investment. *Journal of International Economics*, 71(1): 96-111.

Steinfeld, E. 1998. *Forging Reform in China: The Fate of State-Owned Industry*. Cambridge: Cambridge University Press.

Stoian, C. and Filippaios, F. 2008. Dunning's eclectic paradigm: a holistic, yet context specific framework for analysing the determinants of outward FDI: evidence from international Greek investments. *International Business Review*, 17(3): 349-367.

Strange, R., Filatotchev, I., Buck, T., and Wright M. 2009. Corporate Governance and International Business. *Management International Review*, 49(4): 395-407.

Strange, R., Slater, J., and Wang, L. 1998. *Trade and Investment in China: the European experience.* London: Psychology press.

Su, J. and Jefferson, G. 2006. The determinants of decentralized privatization: Theory and evidence from China. http://people.brandeis.edu/~jefferso/index.htm.

Su, Y.-S., Tsang, E., Peng, M. 2009. How do internal capabilities and external partnerships affect innovativeness? *Asia Pacific Journal of Management*, *26*(2): 309-331.

Suarez-Villa, L., and Fischer, M. M., 1995. Technology, organization and export-driven R&D in Austria's electronic industry. *Regional Studies,* 29 (1): 19–42.

Sun, Q., Tong, W. H. S., and Tong, J. 2002. How does government ownership affect firm performance? Evidence from China's privatization experience. *Journal of Business Finance and Accounting*. 29 (1&2): 1– 27.

Sun, Q., Tong, W. and Yu, Q., 2002. Determinants of foreign direct investment across China, *Journal of International Money and Finance*, 21 (1): 79-113.

Tan, J. 1996. Regulatory environment and entrepreneurial strategic orientations: a study of Chinese private entrepreneurs. *Entrepreneurship: Theory and Practice*, 21(1): 31-46.

Tan, J. 1999. The growth of entrepreneurial firms in a transitional economy: the case of a Chinese entrepreneur. *Journal of Management Inquiry*, 8(1): 83–89.

Tan, J. 2001. Venturing in turbulent environments: the perspective of a non-state Chinese enterprise. *Journal of Management Inquiry*, 10(1): 82–87.

Tan, J. 2002. Impact of ownership type on environment-strategy linkage and performance: evidence from a transition economy. *Journal of Management Studies*, 39(3): 333–354.

Tan, J. and Li, M. 1996. Effect of ownership types on environment-strategy configuration in China's emerging transitional economy. *Advances in International Comparative Management*, 11: 217–250.

Tan, J., and Peng, M.W. 2003. Organizational slack and firm performance during economic transitions: two studies from an emerging economy. *Strategic Management Journal*, 24(13): 1249-1263.

Teece, D, J. 1977. Technology Transfer by Multinational firms: the resource cost of transferring technological Know-how. *Economic Journal*, 87(346): 242-61.

Teece, D. J., Pisano, G. and Shuen, G. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7): 509–533.

Teng, B.-S. 2004. The WTO and entry modes in China. *Thunderbird International Business Review*, 46(4): 381–400

Thomas, H., Li X.Y. and Liu X. M. 2008. Ownership structure and new product development in transnational corporations in China. *Transnational Corporations*, 17(2):17-44.

Thomsen S, and Pedersen T. 2000. Ownership structure and economic performance in the largest European companies. *Strategic Management Journal*, 21(6): 689–705.

Thursby, J. G., and Thursby, M. 2006. *Here or There? A Survey of Factors in Multinational R&D Location*. Washington, DC: National Academies Press.

Tripsas, M., 1997. Unraveling the process of creative destruction: complementary assets and incumbent survival in the typesetter industry. *Strategic Management Journal*, Summer Special Issue 18(S1): 119–142.

Tripsas, M., and Gavetti, G. 2000. Capabilities, cognition, and inertia: evidence from digital imaging. *Strategic Management Journal*, Special Issue 21(10-11): 1147–1161.

Tung, Rosalie L., Worm, V., and Fang, T. 2008. Sino-Western Business Negotiations Revisited--30 Years after China's Open Door Policy. *Organizational Dynamics*, 37(1): 60-74.

Tung, S. and Cho, S., 2001. Determinants of regional investment decision in China: An Econometric model of incentive policy, *Review of Quantitative Finance and Accounting*, 17 (2): 167-185.

Uhlenbruck, K., Meyer, K. E., and Hitt, M. A. 2003. Organizational transformation in transition economies: Resource-based and organizational learning perspectives. *Journal of Management Studies*, 40(2): 257–282.

UNCTAD. 2006. *World investment report 2006. FDI from developing and transition economies: Implications for development.* New York: United Nations Press.

Vanhonacker, W. R. 1997. Entering China: An unconventional approach. *Harvard Business Review*, 75(2): 130–140.

Venkatraman, N. and Prescott, J. 1990. Environment-strategy coalignment: an empirical test of its performance implications. *Strategic Management Journal*, 11(1): 1–23.

Vernon, R. 1966. International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80(2):190-207.

Vickers, J., and Yarrow, G., 1991. Economic perspectives of privatization. *Journal of Economic Perspectives* 5 (2): 111–132.

Voss, C. S. 1994. Significant Issues for the Future of Product Innovation. *Journal of Product Innovation Management*, 11(5): 460–463.

Wagner, J. 1996. Export Performance, Human Capital, and Product Innovation in Germany: A Micro View. *Annual Review of Economics*, 47 (1): 40–45.

Walder, A. 1995. Local governments as industrial firms: An organizational analysis of China's transitional economy. *American Journal of Sociology*, 101(2): 263-301.

Wang, X., Xu, L., Zhu, T. 2012. Foreign Direct Investment under Weak Rule of Law: Theory and Evidence from China. *Economics of Transition*, 20(3): 401–424.

Wang, Z.Q. and Swain, N.J. 1995. The determinants of foreign direct investment in transforming economies: evidence from Hungary and China. *Review of World Economics*, 131(2): 359-382.

Wei, S. 2000a. How taxing is corruption on international investors? *Review of Economic and Statistics*, 82(1): 1-11.

Wei, S. 2000b. Local corruption and global capital flows. *Brookings Papers on Economic Activity*, 31(2): 303-354.

Wei, X., and Andreosso-O'Callaghan, B. 2008. Modelling EU FDI deflection between the new EU member states and Chinese provinces. *Intereconomics*, 43(3): 163-175.

Wei, Y., and Liu, X. 2001. *Foreign direct investment in China: determinants and impact.* Cheltenham. UK/Northampton, MA, USA: Edward Elgar Publishing Limited.

Wei, Y., and Liu, X. 2006. Productivity spillovers from R&D, exports and FDI in China's manufacturing sector. *Journal of International Business Studies*, 37(4): 544-557.

Wei, Z., Varela, O., and Hassan, M.K. 2002. Ownership and performance in Chinese manufacturing industry. *Journal of Multinational Financial Management, 1*2(1): 61-78.

Wernerfelt, B. 1984, A resource-based view of the firm, *Strategic Management Journal*, 5(2): 171-80.

Wheeler, D., and Mody, A. 1992. International investment location decisions: the case of US firms. *Journal of International Economics*, 33(1-2): 57-76.

Williamson, O.E., 1967. Hierarchical control and optimal firm size. *Journal of political Economy (April) 123-13.*

Williamson, O.E., 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.

Williamson, O. E. 1981. The Economics of Organization: The transaction cost approach. *The American Journal of Sociology, 87*(3), 548-577.

Williamson, O. E. 1995. Transaction Cost Economics and Organization Theory. In O. E. Williamson (Ed.), *Organization Theory: From Chester Barnard to the Present and Beyond,* 207-256 (Expanded Ed.). New York: Oxford University Press

Williamson, O.E. 2000. The New Institutional Economics: Taking Stock, Looking Ahead. *Journal of Economic Literature*, 38(3): 595-613.

World Trade Organization. 2006. Trade policy review report by the Secretariat: People's Republic of China. Geneva: World Trade Organization.

Wright, M., Filatotchev, I., Hoskisson, R. E. and Peng, M. W. 2005. Strategy research in emerging economies: challenging the conventional wisdom. *Journal of Management Studies*, 42 (1): 1-33.

Wright, R.E., Palmer, J.C., Perkins, D. 2005. Types of product innovations and small business performance in hostile and benign environments. *Journal of Small Business Strategy*, 15 (2), 33–44.

Wu, S. 2006. Corruption and cross-border investment by multinational firms. *Journal of Comparative Economics*, 34(4): 839-856.

Xia, J., Li, S., and long, C. 2009. The Transformation of Collectively Owned Enterprises and its Outcomes in China, 2001–05. *World Development, 37*(10): 1651-1662.

Xia, J., Tan, J., and Tan, D. 2008. Mimetic entry and bandwagon effect: The rise and decline of international equity venture in China. *Strategic Management Journal*, 29(2): 195-217.

Xin, K. R., and Pearce, J. L. 1996. Guanxi: Connections as substitutes for formal institutional support. *Academy of Management Journal*, 39(6): 1641–1658.

Xu, D., Pan, Y., Wu, C., and Yim, B. 2006. Performance of domestic and foreign-invested enterprises in China. *Journal of World Business, 41*(3): 261-274.

Xu, D., and Shenkar, O. 2002. Institutional distance and the multinational enterprise. *Academy of Management Review*, 27 (4): 608– 618.

Xu, L. C., Zhu, T., and Lin, Y.-M. 2005. Politician control, agency problems and ownership reform: Evidence from China. *Economics of Transition*, 13(1):1–24.

Xu, X and Wang. Y 1999. Ownership Structure and corporate Governance in Chinese Stock Companies. *Chinese Economic Review*, 10(1): 75-98.

Yan, A., and Gray, B. 2001. Antecedents and effects of parent control in international joint venture. *The Journal of Management Studies*, 38 (3): 393- 416.

Yang, J.Y., Groenewold, N. and Tcha, M. 2000. The determinants of foreign direct investment in Australia. *Economic Record*, 76(232): 45-54

Yao, Shujie and Kailei, Wei, 2007. Economic growth in the present of FDI from a newly industrializing economy's perspective. *Journal of Comparative Economics,* 35(1):211-234.

Yiu, D. and Makino S. 2002. The choice between joint venture and wholly owned subsidiary: An institutional perspective. *Organization Science, 13*(6): 667-683.

Yoshikawa T, Phan P H, and David P. 2005. The impact of ownership structure on wage intensity in Japanese corporations. *Journal of Management*, 31 (2): 278-300.

Yusuf, S., Nabeshima, K., and Perkins, D. H. 2006. *Under new ownership: Privatizing China's state owned enterprises*. Washington, DC: World Bank Publication.

Zeitun, R and Tian, G.G 2007: Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting, Business & Finance Journal*, 1(4): 40- 61.

Zhang, K. H., 2000. Why is direct investment in China so small? *Contemporary Economic Policy*, 18(1): 82-94.

Zhang, Y., Li, H., Michael, A. H., and Cui, G. 2007. R&D intensity and international joint venture performance in an emerging market: moderating effects of market focus and ownership structure. *Journal of International Business Studies*, 38(6): 944-960.

Zhao, H. and Zhu, G. 2000. Location factors and country of origin differences: an empirical analysis of FDI in China. *Multinational Business Review*, 8(1): 60-73.

Zhou, C; and Li, J. 2008. Product innovation in emerging market-based international joint ventures: An organizational ecology perspective. *Journal of International Business Studies*, 39(7): 1114-1132.

Zhu, T. 1999. China's corporatization drive: An evaluation and policy implications. *Contemporary Economic Policy*, 17(4): 530–539.

Zinkhan, G. M. and R. T. Watson.1996. Advertising trends: Innovation and the process of creative destruction. *Journal of Business Research* 37(3): 163-171.

APPENDICES

Appendix 1: EU –China relations : Chronology

1975	May	Diplomatic relations established. Christopher Soames first European Commissioner to visit China
1978	2 May	Trade agreement EEC-China signed. Inter alia, establishes
1979	February	Roy Jenkins visits China. First visit of a Commission President. Meets Deng Xiaoping
	July	First meeting of the Joint Committee in Beijing
	18 July	(First) agreement on textile trade
1980	16-19 June	First inter-parliamentary meeting between delegations of the EP and of the National People's Congress,
1983		Launch of first science and technology cooperation program
1984		First political consultations at ministerial level, in the context of European Political Cooperation
		Launch of first cooperation projects in China (Management training and rural development)
1985	21-23 May	Agreement on trade and economic cooperation signed
1988	4 October	Opening of the Delegation of the European Commission in
1989	June	As a reaction to Tian An Men incidents of 4 June, EC freezes relations with China and imposes a number of
1990	October	Council and EP decide to re-establish bilateral relations step
1992		EC-China relations largely back to normal; arms embargo remains in place
	June	Launch of environmental dialogue
	June	Establishment of a new bilateral political dialogue
1993	October	Opening of Commission office in Hong Kong
1995	15 July	European Commission publishes first Communication "A long-term policy for China-Europe relations"
		Launch of a specific dialogue on human rights Issues
1996	1-2 March	First Asia-Europe Meeting (ASEM); China and EU are active
1998	25 March	European Commission publishes Communication "Building a Comprehensive Partnership with China"
	2 April	1st EU-China Summit, London
	22 December	Agreement on scientific and technological cooperation
1999	21 December	2nd EU-China Summit, Beijing
2000	19 May	Bilateral agreement on China's WTO accession signed in
	11 July	Visit of Prime Minister Zhu Rongji in Brussels (first visit of a Chinese Premier to the Commission)
	24 October	3rd EU-China Summit, Beijing
2001	15 May	European Commission publishes Communication "EU Strategy towards China: Implementation of the 1998 Communication and Future Steps for a more Effective
	5 September	4th EU-China Summit, Brussels
	17 September	New Information Society Working Group launched
	25 -26 October	Human Rights Dialogue, Beijing
	13 November	Ministerial Troika, New York (in the margin of UN General
	30 November	Political Directors Troika, Beijing

	8 December	Human Rights Seminar, Brussels
_	11 December	China becomes the 143rd Member of the World Trade
2002	30-31January	EC-China Joint Committee, Brussels.
	1 March	Release of China country Strategy paper 2002-2006
	5-6 March	Human Rights Dialogue, Madrid
	28 March-4 April	Visit of Commissioner Patten to China
	16 May	Launch of negotiations on Chinese participation in GALILEO
	June	Exchange of letters strengthening the EU-China political dialogue
	24 September	5th EU-China Summit, Copenhagen
	13-15 November	Human Rights Dialogue, Beijing
	6 December	EU-China maritime transport agreement signed
2003	14 February	EU—China Ministerial Troika held in Beijing
	5-6 March	Human Rights Dialogue, Athens
	10 March	EC opens European Economic and Trade Office in Taiwan
	3 June	China formally requests market economy status under EU's anti-dumping instrument
	30 June	Ministerial Troika, Athens
	10 September	European Commission adopts policy paper "A maturing partnership: shared interests and challenges in EU-China
	13 October	EU Council of Ministers endorses Commission policy paper "A maturing partnership"
	13 October	China releases first ever policy paper on EU
	30 October	6th EU-China Summit, Beijing: Agreements signed on - cooperation in the Galileo satellite navigation program - Industrial Policy Dialogue
	26-27 November	Human Rights Dialogue, Beijing
2004	10-11 February	EU-China Seminar on the two Policy Papers issued in October held in Beijing, leading to "Guidelines for
	12 February	Signing of MOU on Approved Destination Status (the "Tourism
	26-27 February	Human Rights Dialogue, Dublin
	26 February	Political Directors Troika, Beijing
	16 April	Commission President Romano Prod' visits China
	6 May	Chinese PM Wen Jlabao visits Commission Headquarters, new dialogue initiatives signed; customs cooperation agreement initialed; political leaders recommend that the °Guidelines for
	26 May	5th High Level Consultations on Illegal Migration and trafficking of human beings, Brussels
	24 September	Human rights dialogue, Beijing
	8 October	Ministerial Troika, Hanoi
	12 November	Geographical Directors' Troika, Beijing
	8 December	7th EU-China Summit, The Hague: the EU and China signed - Joint declaration on Non-proliferations and Arms Control - EU-China Customs Cooperation Agreement - Agreement on R&D cooperation on the peaceful use of nuclear
2005	24-25 February	Human Rights Dialogue, Luxembourg
	11 May	Ministerial Troika, Beijing
	30 June-1 July	EU-China Civil Aviation Summit, Beijing
	7 July	First ADS Committee ("Tourism Agreement") Meeting, Beijing
	14-18 July	Commission President Jose Manuel Barroso visits China
	5 September	8th EU-China Summit, Beijing: the EU and China signed: - MoU on labour, employment and social affairs - Joint Statement on cooperation in space exploitation, science & technology development
	25-27 October	Human Rights Dialogue, Beijing
	4 November	EC-China Joint Committee, Brussels
	20 December	1st EU-China Strategic Dialogue, London, UK

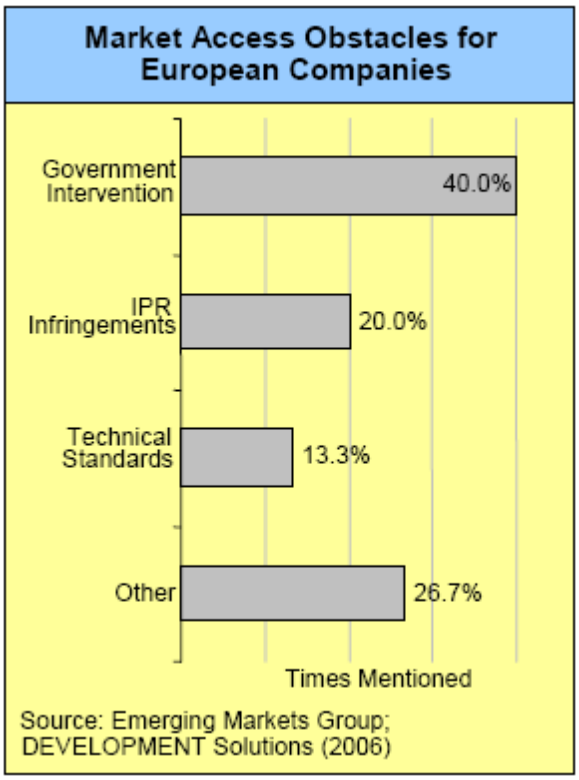
2006	January	EU-China MoU on food safety is signed in Beijing
Last update: zs	wypbtniary	Ministerial Troika, Vienna
	20 February	Commission and Chinese Government sign a MoU on cooperation on near-zero emissions power Generation
	27 March	Political Directors Troika, Beijing
	30 March	The first EU-China bilateral consultations under the Climate Change Partnership are held, Vienna
	6 April	Geographical Directors Troika, Brussels
	15 May	EU-China Dialogue on Regional Cooperation initialed
	25-26 May	Human Rights Dialogue, Vienna
	6 June	2nd EU-China Strategic Dialogue
	9 September	9dt EU-China Summit, Helsinki: the EU and China agree on opening negotiations for a new comprehensive
	11 October	Official launch of China-EU Science and Technology Year
	19 October	Human Rights Dialogue, Beijing
	24 October	Commission adopts Communication "EU-China: Closer Partners, growing responsibilities" and a policy paper
	7 November	EC-China Joint Committee, Beijing
	7 December	The first Macroeconomic Dialogue is held
	11 December	The Council endorses the Commission Communication and adopts related Council Conclusions
2007	16-18 January	Commissioner for External Relations Ferrero-Waldner visits Beijing: launch of negotiations on a Partnership and
	5 March	Geographical Directors Troika, Beijing
	3 May	Commission and ECB discuss economic policy issues with Chinese counterparts, Beijing, China
	8 May	Political Directors Troika, Brussels
	15-16 May	Human Rights Dialogue, Berlin, Germany
	11-12 June	EC-China Joint Committee, Brussels
	22 June	1st Meeting of the EU-China Civil Society Round Table,
	17-18 October	Human Rights Dialogue, Beijing, China
	25 October	3ss EU-China Strategic Dialogue, Lisbon
	14 November	2nd Meeting of the EU-China Civil Society Round Table,
	28 November	Euro-zone Troika and Chinese counterparts, Beijing, China
	28 November	10th EU-China Summit, Beijing: the EU and China - established High Level Economic and Trade Dialogue - agreed to enhance
2008	11 March	Geographical Directors' Troika, Brussels
	24-25 April	President Jose Manuel Barroso and nine Commissioners meet with their counterparts in
	25 April	1st EU-China High Level Economic and Trade Dialogue,
	15 May	Political Directors' Troika, Beijing
	15 May	Human Rights Dialogue, Brdo, Slovenia
	9 June	EU-China Ministerial Troika, Ljubljana
	11 June	Chinese Foreign Minister Yang Jiechi visits Brussels
	23-26 June	3td Meeting of the EU-China Civil Society Roundtable, Beijing,
	24-25 September	EC-China Joint Committee, Beijing
	6-7 November	4th Meeting of the EU-China Civil Society Roundtable, Paris,
	28 November	Human Rights Dialogue, Beijing
2009	19 January	4th EU-China Strategic Dialogue, Beijing
	30 January	Chinese Prime Minister Wen Jiabao visits Brussels
	29-30 March	Commissioner B. Ferrero-Waldnees visit to China
	7-8 May	2nd EU-China High Level Economic and Trade Dialogue,
	18-19 May	5th meeting of the EU-China Civil Society Round Table,
	20 May	11th EU-China Summit, Prague, Czech Republic: the EU and China - addressed the issues of the financial
	14 May	Human Rights Dialogue, Prague, Czech Republic

	27 May	EU-China Ministerial Troika, Phnom Penh, Cambodia
	28 October	6th meeting of the EU-China Civil Society Round Table,
	18 November	Political Directors' Troika, Stockholm, Sweden
	20 November	Human Rights Dialogue, Beijing, China
	29 November	Euro-zone Troika and Chinese counterparts, Nanjing, China
	29 November	EU-China Ministerial Troika, Nanjing, China
	30 November	12th EU-China Summit, Nanjing, China: the EU and China - agreed to speed up the negotiations on the Partnership and Cooperation Agreement - agreed to strengthen people-to-people exchanges and
	17 December	5th EU-China Strategic Dialogue, Stockholm, Sweden
2010	28 January	EU High Representative C. Ashton meeting with FM Yang Jiechi in margins of London Conference on Afghanistan
	5 February	China experts Group meeting
	24-27 February	PCA negotiations, Beijing
	16 March	Regional Directors' Troika, Brussels, Belgium
	12 April	Meeting between President Van Rompuy and President Hu (Washington, on the margins of the Nuclear Security
	26 April-2 May	College visit (President Barroso, EU High Representative C. Ashton) to Beijing and Shanghai
	6 May	Celebration of the 35th anniversary of the establishment of diplomatic relations between the EU and China
	21 May	24th EU-China Joint Committee
	26-29 June	29th EU-China Human Rights Dialogue, Madrid, Spain
	29 August- 4 September	EU High Representative C. Ashton's visit to China (including first round of the High Level Strategic
	14 September	PCA negotiations, Brussels
	6 October	13th EU-China Summit, Brussels: the EU and China addressed issues related to global governance (sustainable growth in a post crisis-world economy), trade and investment
	6-7 October	High Level Cultural Forum
	29-30 November	Chinese State Councilor Ma Kai visits Brussels
2011	10-14 January	EU-China Year of Youth, official opening ceremony in
	21-28 February	EU-China Year of Youth, official opening ceremony in
	25 March	Chinese Vice Minister for Foreign Affairs FU Ying visits
	1 April	Visit of Lu Zhongyuan, office of Premier Wen, to Brussels: Presentation of China's 12th Five-Year-Plan
	12 May	2nd EU-China High Level Strategic Dialogue, Godtillo,
	15-18 May 2011	President Van Rompuy's visit to China
	17-23 May	European Youth Week in Brussels and around Europe
	4-11 July	EU-China Youth Culture Week and EU-China Forum on Sustainable Development in Beijing
	7 June	EU High Representative C. Ashton met FM Yang in the margins of the ASEM Foreign Ministers' Meeting, GOdollti,
	14 July	EU-China Joint Committee, Beijing
	9-15 August	EU-China Youth Festival for Universiade and EU-China Forum for Participation in Shenzhen
	4-11 September	EU-China Volunteer Bridge in Brussels in the framework of the 2011 EU-China year of Youth
	5-9 September	Human Rights Dialogue, Beijing
	8 September	EU-China Political Director's Dialogue, Brussels
	21 September	EU High Representative C. Ashton met FM Yang at the margins of the UNGA, NY
	19-22 September	Visit of COO O'Sullivan to Beijing (Summit preparations; consultations on the PCA negotiations)
	20-27 October	EU-China Youth Leaders Summit in Beijing
	24-25 October	EU High Representative C. Ashton's visit to China

	16 November	**6th Round of EU-China Consultations on African Affairs,**
2012	**17 January**	**EU High Representative C. Ashton met State Counselor Dai Bingguo, New Delhi**
	1 February	**Launch of 2012 EU-China Year of Intercultural**
		Dialogue by A. Vassiliou, European Commissioner for Education, Culture, Multilingualism and Youth, and Cai Wu, Minister of Culture of the People's Republic of China, Brussels
	14 February	**14th EU-China Summit, Beijing: the EU and China discussed bilateral issues including Strategic partnership, trade, climate change. They announced new initiatives: partnership on sustainable urbanisation; high-level people-topeople dialogue;**
	18 April	**Launching of the EU-China High Level People-to-People Dialogue by Ms A. Vassiliou, European Commissioner for Education, Culture, Multilingualism and Youth and Ms Liu Yandong, State Councilors of the People's Republic of China**
	3 May	**Visit of vice-prime minister Li Keqiang to Brussels First EU-China High Level Meeting on Energy**
	28-31 May	**Third EU-China High Level Political Parties' and Groups' Forum,**
	29-31 May	**Human Rights Dialogue, Brussels**
	30 May	**EU High Representative C. Ashton met Wang Jiarui, Minister of the International Department of CPC**
	31 May	**EU-China Joint Committee, Brussels**
	8-13 June	**Visit of D. Ciolos, European Commissioner for Agriculture and Rural Development to China**
	14-16 June	**Visit of K. Georgieva, European Commissioner for International Cooperation, Humanitarian Aid and Crisis Response to China; Launch of EU-China Disaster Risk Management Project and inauguration of the China-EU Institute of Emergency**
	6-9 July	**Crisis management talks between EU (CMPD-Crisis Management and Planning) and the Chinese Ministry of**
	9-10 July	**The Third EU-China Higl Level Strategic Dialogue, Beijing**
	20 July	**EU-China Political Director's Dialogue, Beijing**

Source: European External Action Service. tittp://eeas.europa.euichina/index_en.htm (last update: 08/10/2012)

Appendix 2: Market Access obstacles for European Companies in China



Notes:
EU Trade Commissioner, Peter Mandelson said the strategic review would focus on "*key challenges such as intellectual property, market access issues and investment opportunities*", "European companies face substantial market access barriers to trade and investment in China. These barriers cost EU firms more than € 21.4billion a year in massed business opportunities (European Commission, 2007:4).

Source: European Commission, 2007:4 European Commission 'study on the Future opportunities and challenges in EU-China Trade and Investment Relations 2006-2010' pub. March 2007. http://trade.ec.europa.eu/doclib/docs/2007/february/tradoc_133299.pdf