

Attracting and benefiting from foreign direct investment under absorptive capacity constraints : a case for Vietnam

Citation for published version (APA):

Nguyen, H. T. (2011). *Attracting and benefiting from foreign direct investment under absorptive capacity constraints : a case for Vietnam*. [Phd Thesis 2 (Research NOT TU/e / Graduation TU/e), Industrial Engineering and Innovation Sciences]. Technische Universiteit Eindhoven. <https://doi.org/10.6100/IR693574>

DOI:

[10.6100/IR693574](https://doi.org/10.6100/IR693574)

Document status and date:

Published: 01/01/2011

Document Version:

Publisher's PDF, also known as Version of Record (includes final page, issue and volume numbers)

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.tue.nl/taverne

Take down policy

If you believe that this document breaches copyright please contact us at:

openaccess@tue.nl

providing details and we will investigate your claim.

**ATTRACTING AND BENEFITING FROM
FOREIGN DIRECT INVESTMENT
UNDER ABSORPTIVE CAPACITY CONSTRAINTS**

A CASE FOR VIETNAM

Nguyễn Thanh Hoàng

Hoang T. Nguyen

H.T.Nguyen@tue.nl

nguyenth@msm.nl

thanhhoang711@yahoo.com

A catalogue record is available from the Eindhoven University of Technology Library

ISBN: 978-90-386-2419-8

NUR: 800

Copyright ©2010 by Hoang T. Nguyen

Financial support has been supplied by the People Committee of Ho Chi Minh city, Vietnam

Cover design: Paul Verspaget and Hoang T. Nguyen

Printed at the Univeriteitsdrukkerij, Eindhoven University of Technology

**ATTRACTING AND BENEFITING FROM
FOREIGN DIRECT INVESTMENT
UNDER ABSORPTIVE CAPACITY CONSTRAINTS**

A CASE FOR VIETNAM

PROEFSCHRIFT

ter verkrijging van de graad van doctor aan de
Technische Universiteit Eindhoven, op gezag van de
rector magnificus, prof.dr.ir. C.J. van Duijn, voor een
commissie aangewezen door het College voor
Promoties in het openbaar te verdedigen
op woensdag 19 januari 2011 om 16.00 uur

door

Nguyễn Thanh Hoàng

geboren te Ho Chi Minh City, Vietnam

Promotoren:

prof.dr. G.M. Duysters

Eindhoven University of Technology, the Netherlands

Tilburg University, the Netherlands

prof.dr. H. Sander

Cologne University of Applied and Sciences, Germany

Maastricht School of Management, the Netherlands

Copromotor:

prof.dr. J.H. Patterson

Indiana University, the United State

Beoordelingscommissies

prof. dr. Tantatape Brahmasrene, Purdue University North Central, USA

prof. dr. Wim VanHaverbeke, University of Hasselt, Belgium

prof. dr. Ed Nijssen, Eindhoven University of Technology, the Netherlands

Dit proefschrift is goedgekeurd door de promotoren:

prof.dr. G.M. Duysters

en

prof.dr. H. Sander

Copromotor:

prof.dr. J.H. Patterson

Kính tặng Ba Má và Cha Mẹ

Respectfully dedicated to my Parents and my Parents-in-law

Acknowledgements

I am grateful for the constant support and guidance by my supervisors: Geert M. Duysters, Harald Sander, and James H. Patterson. Professor Duysters has built my knowledge and capacity through his guidance. Professor Sander has guided me in the main contents, while Professor Patterson has given me constructive comments for methodology used in my research. Their advice has led me to attain essential academic growth. Last but certainly not least, my great thanks to the three members of my Readers Committee, Prof. dr. Tantanape Brahmasrene, Prof. dr. Wim VanHaverbeke, and Prof. dr. Ed Nijssen, who give me supportive comments to strengthen my dissertation.

I would like to appreciate the support I had been receiving from the many MSM professors. Professor Beatrice I.J.M. van der Heijden was the first lecturer who taught me Behavioral Sciences. Professor Edward F. McDonough III gave me the skills for building an hypothesis. Professor Vincent Feltkamp, together with Professor Patterson taught me how to choose improved quantitative techniques to analyze data. Professor Ludovico Alcorta, and Professor Sander taught me advanced economics, and they introduced me to improved academic writing skills. Professor Kami S.P Rwegasira and Professor Arlyn Melcher taught me foundations for developing advanced research. Especially, Professor Bob Wilkinson gave me useful and interesting academic writing skills.

I deeply thank Professor Eno L. Inanga, Mrs. Amorelle Inanga, Mrs. Truong, Vân Thù, Ms. Esther Mbise, Mr. Ma'ruf, Mr. Delci Mario, and especially Dr. econ. Cort M. Johns for tirelessly reviewing and correcting my research dissertation and English writing. With their assistance, I have greatly widened my intellectual horizons.

I would like to extend my thanks to Ms. Sandra A.F. Kolkman-Linke, Mr. Patrick W.J. Mans, Ms. Anna R.Pirson-Orru, Mr. Rocco J.J.H. Muhlenberg, Ms. Iris E.J.G.T Weijenberg, Ms. Lourense H. Das, Ms. Trang Kager, Ms. M.A.A.A.W.C van den Heuvel-van Veldhoven, Ms. B. van Broeckhoven, Mr. M van Gennip, and all other TU/e and MSM staffs. Without their support, I would not have successfully completed my studies in the Netherlands.

Furthermore, I express my sincere thanks to the UNCTAD staff, viz. Ms. Laurence Schlosser, Ms. Claudia Cardenas, Mr. Masataka Fujita, Mr. Jovan Licina; the World Bank staffs, Mr. Lê, Minh Tuấn, and Mr. Jeep Jrojchai; and Vietnamese government staffs, Mr. Trần, Văn Truyền, Mr. Nguyễn, Đức Hòa, Mr. Bùi, Quốc Trung, Ms. Trần, Xuân Mai, Mr. Phan, Quang Dũng and the others who exerted in helping me with data collection.

Tôi xin bày tỏ lời cảm ơn chân thành đến anh Ba Truyền, ông Nguyễn Đức Hòa, anh Quốc Trung, chị Xuân Mai, anh Quang Dũng đã nhiệt tình tạo điều kiện để tôi thu thập số liệu.

I would also like to express deep appreciation to my sponsor the People's Committee of Ho Chi Minh City, Vietnam, especially Ms. Trần, Mỹ An, Ms. Nguyễn, Thị Lan, and Project 300' staffs for supporting me morally and financially during my studies.

Tôi xin bày tỏ lời cảm ơn sâu sắc đến Ủy ban Nhân dân Thành phố Hồ Chí Minh, đặc biệt chị Trần Mỹ An, chị Nguyễn Thị Lan và nhân viên dự án 300 đã hỗ trợ tinh thần và tài chính trong suốt thời gian tôi làm nghiên cứu.

Nevertheless, I am extending my utmost thanks to my parents, Mr. and Mrs. Nguyễn Văn Hải – Phạm Thị Lệ Hằng; my parents in-law, Mr. and Mrs. Nguyễn Tấn Phát – Nguyễn Thị Khao; uncle Lê Tâm Dũng; my husband, Nguyễn Anh Kha; my sister in-law, Nguyễn Thị Anh Thư; my sisters and brothers; my daughter, Nguyễn Thanh Thi Mai; my son, Nguyễn Anh Phúc, and my best friends, Ms. Tạ Thị Mỹ Linh, Ms. Kha Huệ Tâm, Ms. Nguyễn Thị Mỹ Hạnh, Ms. Triệu Hoa, Mr. Trần, Quang Tuyền, and the others. They greatly encouraged me during challenging moments in the Netherlands.

Tôi xin bày tỏ lòng biết ơn sâu nặng đến Ba Má, Cha Mẹ chồng, cậu Tư, chồng, em chồng, anh chị em trong gia đình, con gái, con trai, và những người bạn thân thiết đã không ngừng khuyến khích, động viên tôi trong suốt thời gian đầy thử thách tại Hà Lan.

Last but not least, I convey my sincere thanks to all my professors, staff, colleagues and friends, whose names I am unable to mention, but who nevertheless were extremely helpful in many ways.

Finally, I am solely responsible for any errors or omissions in this dissertation.

Abstract

Most developing countries have made concerted efforts to advance their national development. One way to increase gains in terms of capital and advanced technology is to attract investments from foreign countries with external investment reserves. However, the challenge host countries face is by definition their limitation of financial resources, when concurrently, they need to satisfy both their FDI partner's profits and maintain their national economic growth. Weighing the balance of such decisions is a complex task for policy makers as well as decision takers. How to optimize the externality and utilize the internality, in combining them to create an aggregated synergy, ergo national development, is both an interesting and pragmatic research topic. The research in this thesis is conducted from the perspective of a host country and addressed the issues of attracting and benefitting from foreign direct investment (FDI). The whole process of FDI flow is examined in order to (1) understand factors that initiate FDI; (2) identify factors trigger FDI inflows into a particular developing country, (3) discover and isolate factors that capture absorptive capacities of host country. This research approach is a mixture of analytical methods applied to a selected case study – Vietnam.

Quantitative data of forty-two FDI inflows into Vietnam in the period 1990-2006 were applied to determine specific factors influencing FDI initiation and establishment. The qualitative literary analysis, including an in-depth review of current FDI sources, and in-depth interviews, conducted with policy makers, professional experts, and domestic and international investors, are combined to explore factors that a host country requires to position itself for the absorption of FDI benefits.

In summary, this research finds that both external or home investor and host countries' characteristics impact FDI initiation and establishment. Also, it will be demonstrated that a host country demands prerequisites for a certain initial level of economic development, in terms of human capital, absorptive capacity of local firms, physical infrastructure, stable financial system, sufficient technology, and reliable institutions to absorb the benefits of potential FDI. To the best of my knowledge, this may be the first study on the entire process of FDI life from FDI birth, to growing up, and finally to maturation. This dissertation

provides guidelines for future research on FDI's Gravity approach forces, further FDI comparative advantages, and especially FDI's absorptive capacities. This dissertation should provide a significant contribution to literature about FDI in Vietnam in particular.

Keywords: Vietnam's economy, developing country, life of FDI, FDI initiation, FDI establishment, FDI absorptive capacity, determinants of FDI, inward FDI, FDI Gravity, FDI comparative advantages, and FDI photosynthesis model.

Tóm Tắt

Hầu hết các quốc gia đều nỗ lực thúc đẩy sự phát triển của đất nước. Một trong những cách để tiếp cận nguồn vốn và kỹ thuật tiên tiến là thu hút đầu tư trực tiếp nước ngoài (FDI). Tuy nhiên, những thử thách mà các quốc gia phải đối diện là nguồn tài nguyên có hạn, trong khi phải vừa thỏa mãn lợi nhuận cho các nhà đầu tư quốc tế vừa phục vụ tăng trưởng kinh tế nước nhà. Những quyết sách như vậy không dễ dàng cho các nhà lãnh đạo. Luận văn này quan tâm đến vấn đề làm cách nào vừa tối đa hóa nguồn lợi bên ngoài vừa tận dụng nguồn lực bên trong, và từ đó phối hợp cả hai tạo nên nguồn lực tổng hợp thúc đẩy sự tăng trưởng quốc gia. Nghiên cứu này đứng trên lập trường của quốc gia tiếp nhận đầu tư tìm hiểu những vấn đề liên quan đến thu hút và hưởng lợi từ FDI. Toàn bộ tiến trình của dòng FDI được đào sâu từ (1) hiểu sâu sắc về các yếu tố khởi sự hình thành FDI, đến (2) nhận dạng các yếu tố quyết định dòng chảy FDI vào một quốc gia cụ thể, và (3) phát hiện ra các yếu tố phản ảnh năng lực thẩm thấu FDI của quốc gia tiếp nhận đầu tư. Luận văn này áp dụng phương pháp nghiên cứu hỗn hợp và dùng số liệu liên quan đến Việt Nam để minh chứng. Một bảng số liệu chéo về 42 quốc gia đầu tư vào Việt Nam trong khoảng thời gian 1990-2006 được sử dụng để xác định các yếu tố ảnh hưởng đến dòng FDI. Cùng với việc chất lọc nội dung đã nghiên cứu trước đây, những cuộc phỏng vấn sâu với các nhà lãnh đạo, chuyên gia, các nhà đầu tư trong và ngoài nước được thực hiện để phát hiện những yếu tố mà quốc gia tiếp nhận đầu tư cần phải có để thẩm thấu lợi ích của FDI. Nói một cách tóm tắt, nghiên cứu này đã khẳng định được những yếu tố từ các quốc gia đầu tư cũng như quốc gia tiếp nhận đầu tư tác động đến dòng FDI vào Việt Nam. Liên quan đến vấn đề hưởng lợi từ FDI, nghiên cứu này biện luận rằng để thẩm thấu lợi ích FDI, quốc gia tiếp nhận đầu tư phải có sự phát triển ban đầu về nguồn nhân lực, khả năng thẩm thấu của các công ty trong nước, hệ thống cơ sở hạ tầng, hệ thống tài chính, trình độ khoa học kỹ thuật và các thể chế liên quan. Trong tầm hiểu biết tốt nhất mà chúng tôi có, đây là luận văn đầu tiên nghiên cứu toàn bộ (chuỗi) tiến trình hình thành và phát triển của FDI tại một quốc gia đang phát triển. Luận văn này đã đưa ra những hướng dẫn nghiên cứu về FDI dựa trên phương pháp “lực hấp dẫn”, “lợi thế so sánh”, và đặc biệt là thẩm thấu lợi ích từ FDI. Luận văn này là một đóng góp có ý nghĩa vào lý thuyết FDI nói chung và Việt Nam nói riêng.

Từ khóa: Nền kinh tế Việt Nam, quốc gia đang phát triển, dòng đời FDI, sự hình thành FDI, sự thành lập FDI, sự thâm thấu FDI, các yếu tố tác động đến FDI, dòng vào FDI, năng lực thâm thấu, lực hấp dẫn về FDI, lợi thế so sánh về FDI, mô hình thâm thấu FDI.

Abbreviation

ABC	Absorptive capacity
AFTA	ASEAN Free Trade Area
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CPV	Communist Party of Vietnam
EPZ	Export processing zone
FDI	Foreign direct investment
FIS	Foreign investment sector
GDP	Gross domestic product
GNP	Gross national product
GSO	General Statistics office of Vietnam
ILO	International Labor Organization
MNE	Multinational enterprise
MNC	Multinational Corporation
MOFA	Ministry of Foreign Affairs
MPI	Ministry of Planning and Investment
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
R&D	Research and development
SOEs	State-owned enterprises
TNC	Transnational Corporation
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
USD	US dollar
VND	Vietnam dong
WIR	World Investment report
WTO	World Trade Organization
WWII	World War II

Contents

Acknowledgements	i
Abstract	iii
Tóm Tắt	v
Abbreviation	vii
Contents	ix
List of Figures	xi
List of Tables	xii
List of Appendices	xiii
1. Introduction	1
1.1. An overview	1
1.2. Vietnam as a case study for empirical evidence	8
1.3. Scope of the thesis	9
1.4. Structure of the thesis	11
2. The Role of FDI Inflows into Vietnam	17
2.1. Introduction	17
2.2. The Vietnam economy: Macro aspect	18
2.3. FDI in Vietnam	37
2.4 FDI in Vietnam: A comparison with ASEAN countries	42
2.5. Conclusion	44
Appendices	46
3. A Survey of Theoretical and Empirical Analyses for Determinants of Foreign Direct Investment	53
3.1. Introduction	53
3.2. Theoretical studies	55
3.3. Empirical works	66
3.4. Research conceptual framework	84
3.5. Conclusion	87
Appendices	90
4. The Origin of FDI: Push – Pull Factors initiate FDI Flow	95
4.1. Introduction	95
4.2. Gravity approaches to FDI: A brief review of literature and variables applied	98
4.3. Data and an empirical model	103
4.4. Results	107
4.5. Conclusions	111
Appendices	113

5. FDI Establishment under Comparative Advantage Constraints	121
5.1. Introduction	121
5.2. The comparative advantages between Vietnam and source countries	122
5.3. Determinants of FDI with respect to comparative advantage theory and UNCTAD methodology	127
5.4 Data and empirical model	132
5.5 Results and Interpretation	140
5.6 Conclusion	147
Appendices	150
6. Foreign Direct Investment’s Absorptive Capacity Theory	157
6.1. Introduction	157
6.2. The path of spillovers	160
6.3. The FDI photosynthesis model	163
6.4. Opinions towards the Photosynthesis absorptive capacity model: Evidence from Vietnam	171
6.5. Conclusions, policy recommendation and further research	184
Appendices	189
7. Conclusion	195
7.1. The life of FDI	195
7.2. The life of FDI in Vietnam: Investigating and Findings	197
7.3. Policy recommendations	206
7.4. Model application, and suggestions for future research	209
7.5. Overall conclusion	210
Appendices	212
References	213
Curriculum Vitae	225
List of Papers	226

List of Figures

Figure 1.1: Life of FDI	3
Chart 1.1: Research tree	14
Figure 1.2: The map of the research	16
Figure 2.2.2: The reported status of enterprises from 2000-2007	21
Figure 2.2.3.1a: State budget expenditures on socio-economic services in Vietnam	27
Figure 2.2.3.1b: Employed population structure by kind of economic activity in Vietnam	28
Figure 2.2.3.3a: Volume of freight by type of transport in Vietnam (1995-2007)	31
Figure 2.2.3.3b: Number of telephones subscribers in Vietnam	33
Figure 2.3.1: Flowchart from the point of application submission through project approval	37
Figure 2.3.2a: Investment of FDI in Vietnam (Billion Dongs)	38
Figure 2.3.2b: FDI distribution (1988-2007)	40
Figure 2.3.2c: FDI distribution by major investor countries (1988-2006)	41
Figure 3.2: Summary of theoretical review	67
Figure 3.4: Research's conceptual framework	86
Figure 3.5: Framework of literature review	89
Figure 5.2.1: Average GDP between Vietnam and source countries in 1988-2008	124
Figure 5.2.2: Average monthly wages between Vietnam and source countries from 1988-2006	124
Figure 5.2.3: Average share of R&D spending as a % of GDP for Vietnam and its source countries from 1988-2008	125
Figure 5.2.4: Average risk indicators for Vietnam and source countries from 1988-2008	126
Figure 5.2.5: Average risk indicators for Vietnam and emerging economies from 1988-2008	126
Figure 5.3.2: Four-fold matrix of inward FDI performance and potential	131
Figure 6.1: Position of absorption in FDI inflow analysis	159
Figure 6.2.2: Absorptive process	163
Figure 6.3: Photosynthesis	164
Figure 6.4.2: Research methodology review	173
Figure 6.4.2.1: Most attractive prospective R&D locations, 2005-2009	182
Figure 6.4.2.2: Response on absorptive capacity factors	184
Figure 7.1: The inward FDI process	197

List of Tables

Table 1.1: Summary of research issues	7
Table 3.2.2.2: Push - Pull factors	60
Table 3.3.1: Summary of certain observed factors used in selected empirical studies	76
Table 3.3.2: Summary of empirical factors applied in country case studies	83
Table 4.2: Gravity approaches to FDI: A literature synopsis	101
Table 4.4: Push and pull factors of FDI initiation	108
Table 6.4.2: The factual situation of enterprises from 2000-2007	175

List of Appendices

Table A2.1: The reported status of enterprises from 2000-2007	46
Table A2.2: FDI project registrations and average sizes	50
Table A2.3: Source countries of FDI, 1988-2006	51
Table A3.1: Related discussion	90
Table A4.1: FDI by countries and economies, 1988-2006	113
Table A4.2: Data description and sources	115
Table A4.3: Summary statistics	116
Table A4.4: Correlation matrix	116
Table A4.5: Result of the unit root test (Levin)	117
Table A4.6: Result of a specifications test (Hausman test)	117
Table A4.7: The role of home country characteristics: Push factors	118
Table A4.8: The role of host country characteristics: Pull factors	119
Table A4.9: The role of home and host country characteristics: Push and pull factors	120
Table A5.1. Summary of statistic	150
Table A5.2. Correlation matrix	151
Table A5.3. Time dummy effects	152
Table A5.4. Data resources	153
Table A5.5. The inward FDI potential index – UNCTAD methodology	155
Table A6.1: List of agencies interviewed	189
Table A6.2: Interview questionnaire guide	191
Table A6.3: Most absorptive capacity factors used in previous research	192
Table A6.4: Map of business environment in Vietnam	193
Table A7.1: Direct investment in reporting economies (FDI inward)	212

1. Introduction

1.1. An overview

According to Godley (1999), foreign direct investment (FDI) first occurred in 1890 in the industrial goods sectors of the United Kingdom. FDI, per se, is therefore 120 years old. Nevertheless, the study of FDI is still not considered to be an outdated topic. Rather FDI as an important economic research field continues to expand. FDI bloomed in 1950s after the World War II (WWII), and became a phenomenon in the late twentieth century. FDI changes so rapidly that economic theory may be appropriate for exploring its entire dimension in greater depth. Apart from those dimensions, FDI naturally offers considerable benefits; however, whether the recipient country can fully obtain those benefits becomes an interesting matter for further study. This research contributes a better understanding to the full extent of FDI life, specifically in the natural flow of FDI generation to FDI establishment, and resulting FDI achievement.

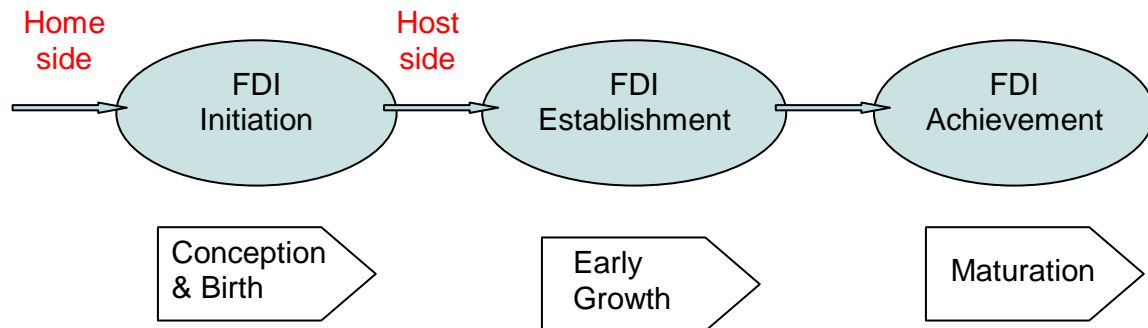
FDI became prominent, when the British adopted this form of lending to spur finance economic development in the British Commonwealth and other countries in the 19th century. FDI bloomed in the years after the WWII because of the improvement of technology in transportation and communications, as well as the need for capital to finance reconstruction damages. At that time, most FDI was initiated by the United States (US) to European countries and Japan. In the 1980s, the surge of FDI changed its host country direction. Because of internal financial problems and its restrictive trade policy, the US became a major recipient of FDI, primarily from Japan and Germany. In addition, because of low labor costs, Japanese FDI expanded in South East Asia as well (Moosa & Cardak, 2006). In the 1990s, FDI became a global phenomenon. The number of countries that were outward investors or hosts of FDI rose considerably, especially between transitional countries and emerging countries. This created a South - South corridor of FDI (UNCTAD, 2006). Historically, FDI has played a vital role in enhancing national economic growth. FDI benefits both investor and recipient countries; therefore, there has been a general tolerance for the acceptance of FDI in many host countries. In addition, some factors influencing the acceptance of FDI

include demand (and supply) of capital, transfers of advanced technology, lower cost of labor, and supportive governmental policy (from both source and recipient countries). The phenomenon of FDI has attracted researchers' attention to better understand and benefit from it.

FDI is defined as a movement of advanced technology, managerial skills, financial and human capital from one country to another country; therefore, FDI is counted on as a principal resource for host country economic growth. For this reason, FDI is considered an attractive economic vehicle for expansion and potential improvement in their economic development for most countries in the world. To be successful at attracting and benefiting from FDI, it is necessary to understand FDI per se: why FDI occurs, what factors attract FDI to a destination, and how to benefit from FDI. These three issues are analyzed in detail in this thesis. Actually, there are a seemingly endless number of FDI studies. However, the entire process of FDI flow has not been sufficiently studied as yet. Thus, this thesis examine the life of FDI from FDI initiation, to FDI establishment, and then to its final achievement.

For each phase of FDI life, a corresponding issue is studied. FDI initiation is the first phase that explains FDI's conception and birth. Generally countries need capital and advanced technology for instance to commence and enhance their development. These motivating factors stimulate a country to call for FDI. At the same time, certain more fully developed countries have accumulated abundant capital and developed more complex and advanced technology; therefore these countries may rationalize that FDI logically improves their marginal profitability and spreads their investment risk for their capital expenditure investments as well as increases their return on transferred proprietary technology (cap-ex). Such demand and supply stimulates FDI flows. In this phase, this research determine which factors underlie FDI initiation. In the next phase, it is determined how FDI will migrate to a particular destination for business establishments. We refer to this phase as FDI establishment (growing up). Investors make decisions as to where to invest under mainly attractive economic and political factors. In this phase, the research identify those factors that determine FDI inflows. After FDI has taken root in a host country, both an investor and host country want to harvest their outputs. This phase is called the FDI achievement phase (maturing). This research specify those factors that host countries require to absorb benefits from FDI. Figure 1.1 Illustrates these research concepts.

Figure 1.1: Life of FDI



Based on literature reviewed and empirical surveys, the research seeks answers to the three following questions:

- (1) *What push and pull factors initiate FDI flows?*
- (2) *What are comparative advantages that trigger FDI establishment in a particular country?*
- (3) *What overall factors does a host country require to position itself for absorbing FDI benefits?*

According to the IMF (1993) “...capital flows between the enterprise and entities in other economies should be classified as FDI...” (UNCTAD website¹). A country where FDI components reside is termed a home or source country, while its corresponding flow is referred to as the outward FDI, or FDI outflow. A country to which FDI components are transferred is called a host or recipient country, and their corresponding flow is named inward FDI or FDI inflow. This thesis examines specific issues from a host country’s position to study FDI inflow from a macro national, multi-disciplinary aspect.

Literature indicates that FDI is generally conceived and born from the interaction of forces between home and host countries (e.g., Dunning, 1981, 1988; UNCTAD, 2006). Certain factors appearing in a home country tend to motivate or push outward seeking FDI behavior in seeking out ‘marriages’ in terms of potential markets, lower costs of production for example. Conterminously, specific factors such as GDP growth and a lower cost of production in a candidate host country attract or pull FDI inflows. Obviously, FDI may occur when both push and pull factors are functioning in an operative and dynamic state of

¹ <http://www.unctad.org/Templates/Page.asp?intItemID=3146&lang=1>

mutually interested behavior, not unlike human partnering. However, FDI incentive policies, offered by host countries to attract FDI, reflect only the most attractive internal factors, such as the availability of natural resources, or the promise of higher investment returns from lower costs of production. Such simplistic incentive filters for investment determination are usually insufficient, and not necessarily positive in furthering FDI decisions to invest by a home country. Host countries should better understand a broader list of factors that push or motivate enterprises to invest abroad, what capacities a host country possesses to offer, and what symbiotic characteristics both home and host countries may apply to shape the potential characteristics of future FDI flows. A sound incentive policy must be established with such considerations fully studied to attract and optimize the quantity and quality of an FDI commitment on both sides.

This research track and follow the direction of these interacting effects. Certain empirical research studies have been conducted to identify not only specific pull factors signaled from a host country, but also push driving factors emanating from a home country. These home country factors are considered to be both largely identifiable and finite in number. Since FDI is generated concurrently by both the mutual push (of the home country) and the pull (of the host country) factors, this has led researchers to develop the analog concept compare as a “force of gravity” or mutual attraction on a more human scale. However, most existing research mentions only a few and incoherent aspects of the shifting or modulating of FDI from one pole to the other, back and forth, ergo an ongoing dynamic between home and host countries, while courtship ‘rituals’ are proceeding. From this researchers literature review, there appears to be a certain gap in current research emphasizing the interaction of such push and pull factors for FDI conception and initiation. This research attempts to fill that void.

One other aspect that is critical to recognize, is that each country holds specific advantages compared to other countries, due to given imbalances in the distribution of natural resources, population demographics, and chronological point of economic and technical development. These comparative advantages (or disadvantages) might cause differences in the movement of FDI in terms of investment size and technological as well as management experience transfer. Why does a source country prefer to invest in a particular host country over other candidates? Vice versa, why does a host country attract a specific home country, but not others? To the best of my knowledge, there is currently no published

research available to refer to for evaluating a comparative advantage approach for identifying the specific critical determinants of FDI to be found in both home and host countries' attraction characteristics. This research is going to apply comparative advantage theory to test specific determinants of FDI.

After taking the first steps in demonstrating an interest in or promoting FDI, host countries welcomes investors to contact or register with their representatives for more host country information for conducting future business. The first challenge begins when investors negotiate a project proposal for specific terms of practice. Investors request detailed land and materials requirement to build factories, office space, money transfers, and types of skills required for recruitment. Then, once an FDI contract is negotiated and signed, the FDI process proceeds on to the next step of operation and achievement. During the operational step, investors still will request extensive support from a host country including institutional administration, skilled and educated labor, sufficient infrastructure for goods transportation, and a financial system allowing for the smooth flow of financial transactions. Certainly, a host country is considered to be the most appropriate supplier for these demands. However, for satisfying all FDI demands, in a relatively short timeframe, requires that a host country's economy have sufficient capacity in terms of creating extended factors of production, such as available land, construction materials, human capital resources, a good financial system, and an administrative system of government, to be able to absorb and satisfy this unprecedented demand for these factors.

Eventually, in the achievement step, investors should obtain returns from their investment, and a host country collects taxed from the related new FDI revenues as a contribution to gross domestic product (GDP). However, tax is only one of the benefits of FDI that a host country expects to derive. For a host country, the most important aspect of involving themselves in an FDI is how to manage and convert the FDI benefits into further positive economic 'spillovers'. As indicated previously, FDI brings benefits such as capital, advanced technology and managerial skills. However, these benefits do not automatically convert to host country spillovers. This process requires that a host country first has sufficient economic development, referred to as absorptive capacities (ABC) to garner further positive, spillover economies. If during the step of calling for FDI, a host country offers a very high incentive policy to attract large quantity FDI, when a host country's

economic development is low, then a host country may not be able to meet an FDI's demands and obligation. Thus, a host country in such case could not sustain its prior contractual obligations agreed to in its FDI negotiations. Therefore, a host country's ability to absorb the full impact of an FDI is more essential than its efforts at promotional attractiveness, because the absorptive capacity directly impacts on how much benefit from an FDI a host country can earn in the full term over several years, if not decades, of such an investment. Highly absorptive capacities most likely should further support the attractiveness of higher quantity and quality of FDI inflows. This awareness leads to questions concerning which factors does a host country need to improve its chances of absorbing more positive FDI spillovers? How can a host country improve its absorptive capacities to make the most of spillovers? In terms of absorptive capacity, current theory on absorptive capacity is either ad hoc and limited, or a poorly established theoretical paradigm for the determinants of spillover efficiency (Blomström, Globerman, & Kokko, 1999). Therefore, this gap presents an opportunity to fill this void in research literature. This challenge is addressed by this research.

Generally, FDI brings to host countries not only capital but also advanced technology, managerial skills, and competition. It is an accepted fact that FDI has made significant contributions to the economic growth of many host countries. Nevertheless, a large quantity of FDI is not necessarily synonymous with high quality, as assessed by the presence of advanced technology. Advanced technology is the main benefit that host countries can expect from FDI. Therefore, host countries should better target high quality FDI instead of high quantity FDI. From another point of view, international investors are defined as seekers (J.H. Dunning, 1993)². They look for opportunities to find lower costs, bring their goods and or services to the market, rationalize production, conduct distribution and marketing activities, and to sustain international competitiveness by getting high returns. In a similar manner, host countries also have possibilities to maximize profits from FDI. Host countries cannot only be seekers of source countries, but also utilizers and exploiters of FDI to gain advanced technology and know-how. However, to benefit from FDI, host countries must first obtain an initial or 'critical mass' before development can proceed. Blomstrom, Lipsey, and Zejan

² Dunning (1993) classified foreign investors into four different groups of resource-seeking, market-seeking, efficiency-seeking, and strategic asset seeking.

(1994)³ made the distinction that FDI can only enhance the growth in higher income countries. This indicates that not all host countries are, as yet, far enough advanced, in terms of critical mass status, to be able to benefit from FDI.

To attract higher quantity and quality FDI, and especially to optimize the use of FDI, host countries are required thorough understanding of how FDI may be able to benefit them. For that purpose, this research examines the full lifespan of FDI from its generation to its maturation. Table 1.1 summarizes these research issues. Details of activities to fill gaps created by a host country's lack of absorption are presented in the next section.

Table 1.1: Summary of research issues

<i>FDI life</i>	FDI Initiation	FDI Establishment	FDI Achievement
<i>Research question</i>	Factors that initiate FDI	Factors that determine inward FDI	Factors that capture FDI's absorptive capacity
<i>Literature Gap</i>	Few studies on both home and host country characteristics concurrently	No study that identifies FDI determinants relying on the comparative advantage approach,	Lack of an over-embracing theory
<i>Research objective</i>	Recognize push and pull factors that give birth to FDI	Identify determinants of FDI inflow into a particular country	Developing an overall theory concerning absorptive capacity

Notably, this research provides fundamental contributions to current FDI literature, as this is arguably the first thesis of its kind to study the overall process of FDI life that involves FDI conception and initiation (birth), establishment (growth), and achievement (maturation). This approach is thought to add a distinctive adjunct to the current status of published FDI

³ Blomstrom, Lipsey, and Zejan (1994) studied FDI effects on technology gap of the host country by observing two groups of developing countries. The first group was low income countries and the second one had a little bit higher income compared to the first one. They distinguished that FDI only enhanced the growth in the latter group.

research. By presenting a general picture surrounding FDI life as well as specific portraits of each FDI phase, this research provides an academic and practical perspective concerning absorptive aspects of FDI. From a theoretical perspective, this research claims that FDI requires an understanding of the mutual, symbiotic relationship between home and host countries in terms of multi-disciplinary social, economic, and political conditions. Additionally, there is also interaction among the various phases of FDI life. For host countries to attract more FDI projects, it is necessary to comprehend the specific phases of FDI, from initiation through to the improvements in a host country's national internal capacity to absorb the benefits of FDI. Once absorptive capacity is developed, a country can, thereafter, attract more FDI, especially higher technology FDI. From an empirical perspective, this research provides host countries with in-depth concepts about FDI life and stipulates sound policies towards increasing FDI inflows. Instead of attracting FDI at any cost, a host country can select and create FDI through better understanding and management of how it functions. Such FDI has to be consistent with national capacity and expectation to achieve optimal advantages from FDI. These contributions is discussed further details in the following empirical Chapters 4, 5, 6 as well as the concluding Chapter 7.

1.2. Vietnam as a case study for empirical evidence

Vietnam is selected as the primary case study for this thesis. There are three major reasons for this selection. First, this research focuses on FDI in developing countries and stands on the host country side of FDI projects for examining corresponding FDI flows. Vietnam might serve as a useful example for other developing countries similar to Vietnam, starting to grow from a relatively low economic foundation. Recently, Vietnam has witnessed and experienced significant growth in comparison to prior decades. This achievement is, in part, linked to past successes with FDI projects. Some scholars (L. P. Nguyen, 2006; Vu, Gangnes, & Noy, 2008) find a positive and statistically significance correlation between economic growth and FDI, and vice versa. Although Vietnam is one of many destinations for international investors, it remains under constant pressure to attract FDI for its own national economic interest, and since it is located within one of the most dynamic area in the world for international investors. Further study of FDI in Vietnam may, thus, provide valuable theoretical and empirical models for other emerging economies in

terms of not only attracting more FDI, but importantly an improved underlying concept of forces and conditions that lead to such improvements.

Secondly, while Vietnam has gained significant achievements; it still faces challenges in terms of the quality of FDI inflows. This might be caused by a misunderstanding or incomplete knowledge of FDI behavior. Therefore, partially informed governments may offer a dysfunctional or inappropriate promotion strategy as well as poorly constructed incentive policies. Besides, the serious problem of bottlenecks or operational constraints in FDI capital disbursements, host countries should also recognize their real infrastructural capacity to absorb FDI benefits, when they would occur at some point in the future. Such an academic research project as this on FDI with evidence from Vietnam should provide specific knowledge gains beneficial for future FDI management strategies.

Thirdly, there currently exist certain studies about FDI in Vietnam involving dimensions differing from this study, such as FDI and export (T. X. Nguyen & Xing, 2006), FDI and infrastructure (Oostendorp, Trung, & Tung, 2009), FDI and economic growth (L. P. Nguyen, 2006; Vu, Gangnes, & Noy, 2008), and FDI with spatial distribution (A. N. Nguyen & Nguyen, 2007). However, there is no known or published research, which studies about factors initiate FDI generation, factors trigger FDI establishment, and factors capture FDI's absorptive capacity. Furthermore, there is no known study focusing alone on FDI in Vietnam in particular without including other regional countries. This research is a contribution to FDI literature in Vietnam.

By selecting Vietnam as a case study, this research brings not only new contribution to all FDI literature, but also as country specific, Vietnamese, research as well.

1.3. Scope of the thesis

This section introduces some minor questions related to major questions listed above; including research methods and research design (see Figure 1.2).

For the first phase of FDI life, FDI birth (initiation), this research applies the gravity model approach for investigating what factors generate FDI flow in general. There are two sides or entities involved: home and host countries. Thus, for finding an answer for the first major question, "What push and pull factors initiate FDI?", we first want to investigate (1.1), what home country characteristics push FDI flows, followed by (1.2), what host country

characteristics pull FDI flows, and then test a combination of (1.3), what common home and host country characteristics initiate FDI flows (Chapter 4).

For the second FDI phase, FDI growing up (establishment in a destination country), this research examines the comparative advantages for both a host (recipient) and a home (investing) country, and uncovers those host country factors that encourage inflows of investment. Thus, the second major question: “What are the comparative advantages that trigger FDI establishment in a particular country?” is split into two minor questions. The first of which is (2.1): “What common comparative advantage factors, between a home and host country, influence and attract FDI inflows into a particular developing country?” The second minor question is (2.2): “What host country factors attract FDI?” Because, this research also seeks to test the suitability of the United Nations Conference on Trade and Development (UNCTAD) method, which ranks both the potential and the performance levels of FDI; another minor question is directed at (2.3): “Whether the UNCTAD method is a general application for all countries of the world?”, (Chapter 5).

In the maturation phase of FDI, this research explores what factors are required for a host country to absorb FDI benefits. To obtain these findings, it is necessary to identify (3.1) what qualifies as an FDI benefit and (3.2) what channels are available for transferring these benefits. It is necessary to be familiar with the proper terms (3.3), and what absorptive capacity factors were identified in previous literature (Chapter 6).

Concerning methods used to fill in the above-mentioned gaps, this research employs several approaches. First, to understand the push and pull factors, the gravity model approach is adopted to investigate how home and host country characteristics affect and influence FDI flows. A panel data set of forty-two FDI flows⁴ into Vietnam during the period of 1990-2006 is used for this analysis. It is proposed that FDI initiation is impacted by both the push and pull factors (Chapter 4). Secondly, determinants of FDI inflows are identified. The comparative advantage approach as well as the UNCTAD method is applied to build models that reveal the comparative advantages between home and host countries, and uncover attractive and beneficial factors for a host country. It is hypothesized that both the source and recipient countries’ advantages influence the inward flow of FDI. In addition, the suitability of the UNCTAD method is tested to observe, whether it reflects FDI’s attractiveness for all

⁴ Population: 76 source countries have invested in Vietnam since 1988-2006

countries and economies. The data is taken from the above panel set applying different variables (Chapter 5). Thirdly, since existing literature is not thought to have been able to generate a well-established theoretical paradigm that guides empirical research related to spillover efficiency, this research takes on this challenge by developing a new theoretical model on absorptive capacity. Based on FDI literature and practice, the best features of FDI's absorptive capacity is selected and combined to construct this new model. A proposal of this model is introduced to the practice to elicit their response (Chapter 6). Eventually, we identify policies, the host country can adopt, to ensure benefits for their investors and to maximize FDI spillovers for its national growth.

Regarding research design, a mix of quantitative and qualitative methods is used. For the quantitative study, the secondary data was supplied by UNCTAD, the Ministry of Planning and Investment of Vietnam (MPI), the General Statistics Office of Vietnam (GSO), and the International Labor Organization (ILO). The dependent variable is the annual amount invested in Vietnam from each home country during a given period. Independent variables sourced from UNCTAD are used to rank all countries and economies in terms of their potential and performance of FDI inflows. Ordinary least squares (OLS) and double logarithms as a type of panel of analytic model are applied. For the qualitative study, the factors that determine absorptive capacity are identified from existing literature. In addition, in-depth interviews with 43 policy makers, FDI promotion centers, relevant professional agencies, and domestic as well as international investors were conducted to ascertain their response in support of these propositions.

1.4. Structure of the thesis

The thesis is constructed as follows:

Chapter 2 introduces a brief overview of the Vietnamese economy. The situation of its national economy is a foundation not only for posing the hypotheses of determinants of FDI in Vietnam, but also for recognizing the strength and weakness of a host country's capacity regarding its inward flow of FDI. This chapter includes three parts. The first gives a general analysis in macro aspects of Vietnam's economy. It reviews the major economic sectors to point out its roles in the domestic and foreign investment sectors. Important challenges for Vietnamese development are also described. The second part focuses on relevant FDI issues

in Vietnam, such as investment regulations and FDI trends and structures. Finally, the third part examines FDI in Vietnam through a comparison of FDI in ASEAN countries (Association of South-East Asia Nations).

Chapter 3 comprises of an FDI literature review. This chapter covers a survey of FDI determinants from after WWII up till 2010. It delves, furthermore, not only into the theoretical aspects, but also cites evidence from empirical studies in specific countries of those determinates. Also, it focuses on two major aspects of those FDI factors, focusing on the related economic and political events as main drivers. A general conceptual framework is constructed that hypothesizes that FDI is influenced by four local conditions: market structure, cost of production, local business capacity, and government policy. Further literature on the gravity law, the comparative advantage theory, and absorptive capacities related to FDI are revised in the empirical Chapters 4, 5 and 6.

Chapter 4 comprises of an investigation of push and pull factors to better understand the origin of FDI flows, as evidenced from Vietnam. Certain different specifications of the gravity model are applied to analyze panel data of 42 home countries in the period of 1990-2006. This analysis suggests that both home and host country characteristics as well as distance between the two parties play a major role in creating or inhibiting FDI initiation.

Chapter 5 identifies determinants in the establishment of FDI, again as evidenced from Vietnam. Based on the UNCTAD methodology for ranking a country's inward FDI potential, this chapter identifies comparative advantages for both host and home countries along with uncovering specific factors drawing or attracting FDI to a host country. These findings state that inward FDI is not only influenced by such attracting factors of the host country, but also the comparative advantages between the home and host countries. Furthermore, based on these results, this study indicates that factors, used by UNCTAD to rank FDI attractiveness level for of all countries, may not be completely for relevant each and every country.

Chapter 6 expresses how this thesis model relates to absorptive capacity. This model is referred to as a so-called Photosynthesis model that argues that a recipient developing country only achieves benefits from FDI, once it has sufficient absorptive capacity. That is, absorptive capacity related to domestic enterprise, human capital resources, financial systems, physical infrastructure, technological level, and institutional development. An empirical survey is conducted to gain a response and reaction from practitioners concerning

these academic findings. The results from these in-depth interviews are thought to support our argument.

Chapter 7 provides our conclusion with examined findings. In addition, certain recommendations for host country governments are put forth as well as further research suggestions.

Chart 1.1 reflects major activities of this research. It contains seven chapters, including several major research issues and anticipated results. The study starts with a general introduction (1), and then proceeds to analyze an actual situation in Vietnam connected with FDI incentive policy, and Vietnam's internal absorptive capacity (2). In this step, this research also focuses on factors active in generating FDI flow, determining FDI inflows, and capturing FDI's absorptive capacity (3). Based on this current situation and theories, this research studies three major stages of FDI life: FDI initiation (4), FDI establishment (5), and FDI achievement (6). This research's meanings (7) presents that FDI is a product of mutual effects and interaction between a home and a host country. In addition, external benefits (FDI) combine with internal capacity to synergize and to enhance a host country's national development.

Chart 1.1: Research tree

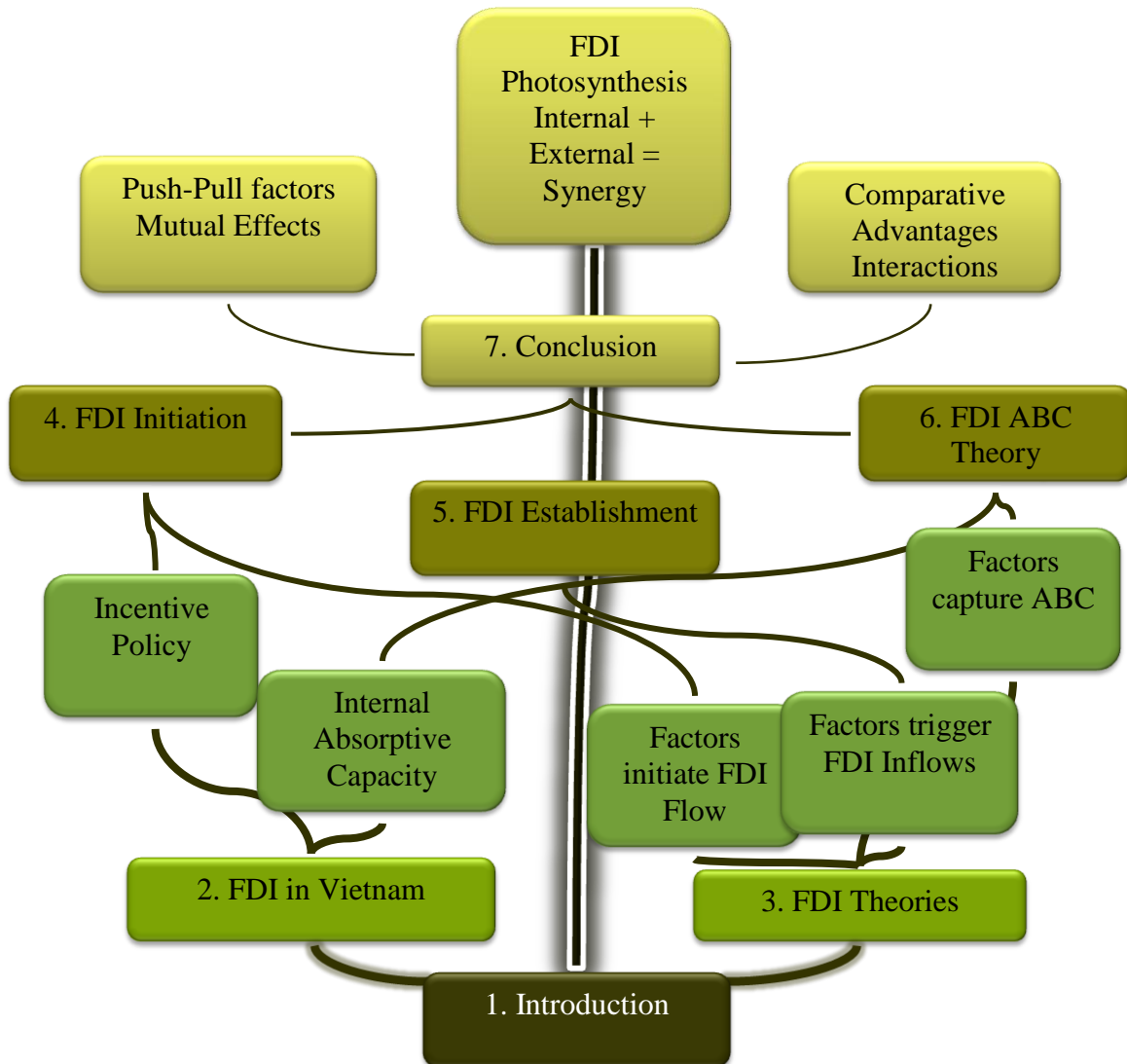
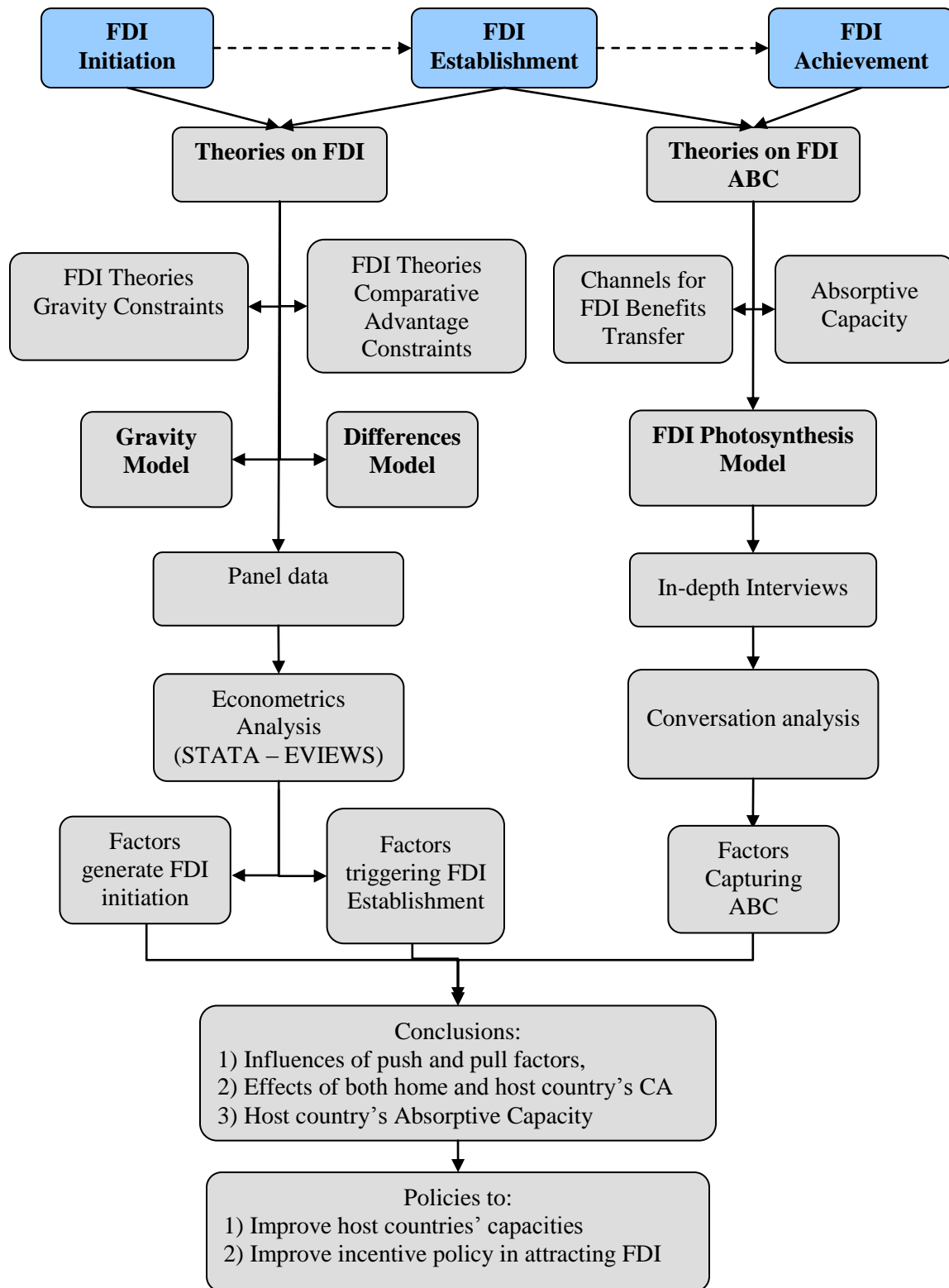


Figure 1.2 is this research's conceptual flowchart. It demonstrates the route and connectivity of this research. On the left side, based on literature related to FDI determinants, this study applies the gravity model and differences model to identify determine which factors initiate FDI flows and other factors that direct FDI establishment. The methods applied are econometric analyses conducted with time series and cross-sectional data. On the right side of our Research Tree, based on FDI benefits literature and FDI absorptive capacity, this study develops a theoretical model, referred to as so-called FDI Photosynthesis. This model is based and constructed on FDI literature reviewed and in-depth interviews employed. Besides, the in-depth interviews conducted to obtain a response, reaction and impression concerning the theoretical arguments employed to support this model convincingly. The in-depth interview is analyzed by conversation analysis.

Figure 1.2: The map of the research



CA: Comparative Advantage; ABC: Absorptive Capacity

2. The Role of FDI Inflows into Vietnam

2.1. Introduction

FDI first came to Vietnam in 1987. It was quite late compared with neighboring countries, such as Malaysia, which received FDI beginning in the 1950s, and Thailand in the 1970s. Vietnam waited over four decades since the mid 1940s, when FDI became popular in the world, to commence its first FDI project. Now after more than twenty years, FDI continues to maintain an important role in enhancing Vietnamese economic growth. FDI has contributed approximately 13% to Vietnam's GDP. During the FDI literature review for Chapter 3, it was unable to identify a single research item related to Vietnam's FDI experience. This search for such items will, of course, continue; however, the lack of such literature has only increased the motivation to fill this apparent research gap.

Looking back in history, Vietnam's industrial economy took root from extremely anemic beginnings. Its previous economy was almost solely agricultural, using only hand labor with little or no farm machinery. Much of this primitive method of production was heavily destroyed by the Vietnam conflict of the '60s and '70s. Nonetheless, Vietnam is developing into an emerging economy with real GDP increasing at an annual average rate of 7.26%⁵. Studying FDI in Vietnam might provide research benefits for other developing countries in the region or those facing similar economic circumstances.

This chapter attempts to introduce a general picture of the Vietnamese economy with regard to its foreign investment sector. In examining official laws, regulations, economic reports, and development strategies of the Vietnamese government and involved international organizations, this chapter identifies (1) *what is the current position of its foreign investment sector compared to major economic sectors?*; (2) *what are the development challenges Vietnam must face in order to benefit from FDI*; and (3) *what are quantity and quality of planned and completed FDI projects in Vietnam in comparison with its neighboring countries?* A closer scrutiny of the Vietnamese economy in respect to FDI provides greater insight into the country's economic situation and status. This chapter's research is thought to

⁵ Average from 2000-2009, GSO

be able to provide a foundation, not only for posing hypotheses of FDI determinants, but also for recognizing and for identifying specific comparative advantages and internal capacities playing a role in boosting its overall ability to secure increased levels of FDI. Furthermore, this chapter address certain pragmatic problems observed and encountered concerning Vietnam's future ability to attract, and therefore, benefit from increasing levels of FDI.

This chapter includes Section 2.2 that is an overview of the Vietnamese economy targeted at its macroeconomic level, major economic ownership, and specific development challenges. Section 2.3 covers relevant issues concerning FDI in Vietnam, such as investment regulations, FDI trends and structures. Section 2.4 describes FDI in Vietnam in comparison with other ASEAN countries.

2.2. The Vietnam economy: Macro aspect

2.2.1. Overview

Vietnam is located on Indochina's peninsula in Southeast Asia. It borders with Laos to the northwest, with Cambodia to the southwest, and China in the North. Its eastern border has a long coastline with the East Sea (South China Sea). This geographical location gives Vietnam trading advantages with countries in the region and with seaports around the world. Vietnam' area covers 331,211.6 km², its population is approximately 86.2 million (2008). Its rate of employment amounted to 52.1%; while, its unemployment rate was 2.38%, and its underemployment rate was stated at 5.1%. The percentage of graduates in upper secondary reached 86.58%⁶.

Today, the official name of the country is the Socialist Republic of Vietnam with a single-party, communist state political system. It is a socialist-oriented market economy. Throughout recent history, its economic-political regime controls FDI policy, has been changed and impacted by national government policy.

In September 1945, Vietnam gained its independent from France. However, during the long-fought war with first France, then the United States from the early 1960s to 1975, the Vietnamese economy declined and stagnated, while the country was divided in two separately governed parts, namely North Vietnam and South Vietnam, divided physically by a 'no-man's-land' referred to as the DMZ or Demilitarized Zone. After Vietnam's

⁶ Data bases on GSO (General Statistics Office of Vietnam), 2008.

reconstruction in the post-war period, the government issued its first five-year plan from 1976 to 1980, which contained, arguably, unrealistic economic policies and goals. To initiate land reform and handover control rights of farms and commercial entities to its workers, the revolutionary government implemented two campaigns for industrial and commercial modification in former South Vietnam. As a result, 171 companies and 59 large commercial consortium were nationalized and put under the authority and control of the Vietnamese government (PCHCMC, 2006)⁷. At that time the Vietnamese economy consisted of three sectors: state institutions, collectives, and family households. There was no private sector and nor foreign investment sector as well. This first plan was not judged to be successful. Production came to a deadlock and the growth rate approached zero (0.4% per year, while extremely, optimistically overestimated at 13-14%). There was a general shortage of food and consumer goods, a deficit in the national budget, a surplus in net exports, and a scarcity of investment capital.

Throughout the duration of a second five-year plan, the government demonstrated an awareness to subdivide its national territory into smaller, more manageable regions. In 1982 it divided its northern area into three economic sectors and five in the south. These eight sectors were further organized into state institution, collectives, both state and non- state cooperatives or co-ops, as well as representative capitalist and privately owned holdings. This plan initiated the first step in transforming Vietnamese private ownership into its current form of a socialized, market economy. Due to serious management mistakes guided by inadequately formulated policies and incompetent implementation in their execution⁸, the second plan was widely deemed to be unsuccessful. Inflation increased 30-50% in 1980s, reaching 587.2% by the end of 1985, and finally peaking at 774.7% in 1986⁹. In light of these failures, the government decided upon reform, “Doi Moi”. Major policy changes were issued to initiate this reform movement, that included liberalized investment in capital structures, an improved positive perception of those working in the economic sectors, encouragement of domestic and foreign investments, and institutionalized policies for private and capitalist sectors (CPV, 1986). In 1987, a year after the reform, Vietnam issued its first law on foreign investment, which was subsequently amended several times in 1992, 1996,

⁷ www.hochiminhcity.gov.vn, assessed on September 27, 2006

⁸ Communist Party Document VI, 1986 – CPV. CPV: Communist Party of Vietnam – electric newspaper

⁹ Vietnam Economic Features, (MOFA, 2005). MOFA : Ministry of Foreign Affairs of Vietnam

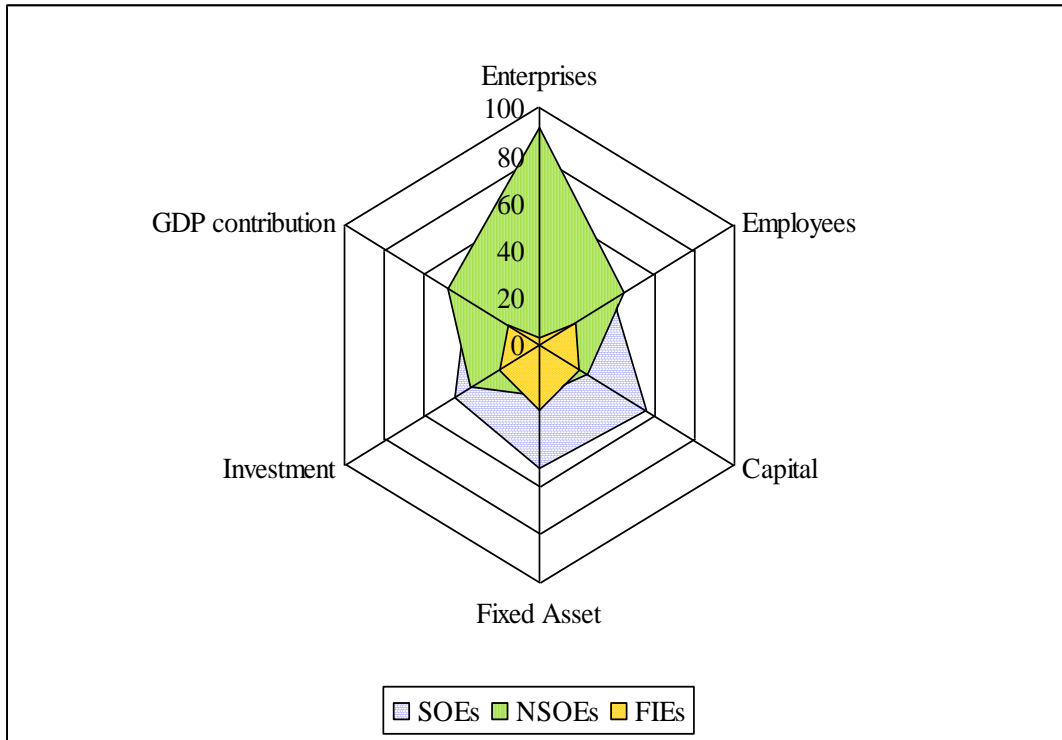
and 2000. It was eventually replaced by the “Law on Investments”, which integrated both domestic and foreign investments into one act (NAV, 2005)¹⁰. Since then, Vietnam has followed and maintained policies for encouraging FDI. Moreover, by privatizing state-owned enterprises in 1999, the government formally opened new, private and foreign investment sectors that accepted multi-economic ownership in state, private, and foreign capitalist enterprises, in which state-owned control plays a decisive role.

Figure 2.2.2 introduces the comparative situation of State Owned Enterprises (SOEs), Non State Owned Enterprises (NSOEs) which include Collective and Private enterprises, and Foreign Investment Enterprises (FIEs) in the Vietnamese economy (see A2.1). Among these, FIEs occupy a modest position, while non-state enterprises play an important economic role. These FIEs are not large in number. In terms of the average number of employee and invested capital, FIEs are significantly larger in comparison to other Vietnamese commercial entities is somewhat over 300 employees and 137.22 billion Dongs¹¹/ per enterprise. In contrast, the NSOEs (small businesses) are most numerous (91.44%), the smallest size such enterprises based on the average number of employee and capital invested (29.28 employee and 5.21 billion Dongs/ per enterprise). Nonetheless, they deliver the highest GDP contribution of all enterprises (46.53%). SOEs provide the infrastructural bedrock for the entire national economy. The annual average capital investment for these enterprises, the value of fixed assets, and total assets is 55.34%, 51.87%, and 43.89%, respectively. The SOE’s are small in number, but are larger in size in terms of number of employees (456.48 worker/ per enterprise, compared to 29.28 and 309.92 of NSOE and FIE), capital (271.54 billion Dongs/ per enterprise, compared to 5.25 and 137.22 of NSOE and FIE), fixed assets (110.58 billion Dongs/ per enterprise, compared to 1.89 and 79.76 of NSOE and FIE) as well as investments (32.33 billion Dongs/ per enterprise, compared to 1.14 and 16.36 of NSOE and FIE).

¹⁰ 59/2005/QH11, dated 29/11/2005, issued by National Assembly of Vietnam (NAN)

¹¹ One Euro equals approximately 27,300 VND, and 1 USD equals approximately 19,600 VND (October 2010)

Figure 2.2.2: The reported status of enterprises from 2000-2007



(Illustrative figures are in Table A2.1)

The Vietnamese government’s acceptance of private business and foreign investment demonstrates that each sector maintain its socialist role and solidarity and has a contribution to the country’s economy.

In conclusion, a general overview of the Vietnamese economy incorporated in its Constitution stipulated: “the State promotes a multi-component, commodity economy functioning in accordance with market mechanisms under the management of the State following a socialist orientation. The multi-component economics structured with various forms of organization in production; trading is based on a system of ownership by the entire people, collectives, and individuals, whose ownership constitutes the foundation” (Article 15, Constitution 1992).

2.2.2. Major economic sectors

Vietnam is a socialist-oriented market economy. In addition, due to its historical heritage, each economic sector has contributed in a unique manner to Vietnam’s development over

time. This section aims to introduce the role of the foreign investment sector in combination with the state sector, and the non-state sector.

2.2.2.1. State economic sector

The state economic sector includes all state-owned companies, enterprises, businesses, manufacturers, and technology-science institutions. Most of these properties are publically owned except that one part is a cooperative (state-owned companies holding a controlling role).

The public directors of the state economic sector are the driving force that the Vietnamese government relies on to manage their economy. Their charter is to establish satisfactory commercial and industrial working conditions and an amicable environment for private ownership and foreign investment to flourish, and to promote the general stimulation of national economic growth. While transitioning to a market economy, the state economic sector has had to continuously overcome difficulties quickly as well as establish and execute new measures to support rapid growth. State-owned businesses provide important products and services that affect and drive activities of the national economy, especially in the industrial sector, infrastructural maintenance and development, and financial services. These sectors have been continuously reforming since 1986. This reform process has involved a number of steps, including consolidation, liquidation, and sale of economic entities and assets at all levels and in all regions.

By the end of 2007, there were 3,497 state-owned enterprises (SOEs). The state economic sector controlled the most important industries and retained the most profitable commercial entities under its control. However, its performance was not consistent with its stature. On average during the period 2000-2007, the state's investments were the largest, 43.89% compared to 35.38% of the non-state enterprises, and 20.73% of the foreign investment enterprises (FIEs), but SOEs contribution to GDP were only 37.18% of the total revenues, while NSOEs contributed 46.53% to GDP. The average state economic sector's GDP growth rate was booked at 14.17% compared to 15.27% for non-state entities, and 21.35% for FIEs. Table A2.1 lists related statistics.

2.2.2.2 Non-State economic sectors

In the Vietnamese economy, the non-state sector includes the collectives, the privately held firms and households sectors. The collective economic sector also includes individuals and legal entities. Profit distribution is related to production and shares owned. In practice the collective economic sector is mainly comprised of consolidated agricultural units, handicraft productions, trading and services; it also supplies a partial demand for labor in business, and plays an important role in maintaining and stabilizing Vietnams' socio-economic growth. Thus, the collective economic sector may be characterized as a diversified set of cooperatives. Regarding the private economic sector, the first business law was promulgated in 2000. It softened former private ownership restrictions allowing entrepreneurs more latitude in conducting their commercial operations. Entrepreneur could invest in most areas, except in certain restricted ones. Since 2000, this has caused a significant increase in the number of companies and enterprises. The private sector was revived especially in agriculture, forestry and aquaculture, light, small and medium scale industry, trading, and services areas.

A household economy describes collective economic activities of one or more persons sharing a common family dwelling. The household sector is distinct from business, government and foreign sectors. Household production of goods and services is produced by members of a household, for their own consumption, using their own capital and their own unpaid labor (Ironmonger, 2001). In Vietnam, the household sector contains a wide variety of commercial activities, such as small scale industry, construction, services, artisan crafts, agriculture, forestry, and aquaculture. They play an important role in generating income and employment opportunities.

According to the GSO, there were 35,004 businesses in 2000 and 147,316 enterprises in 2007, a 421% increase. On the other hand, these investment have had some limitations not only in small scale operations (an average of 28.65 laborers, and average size of capital of 6.16 billion Vietnamese Dongs), but also in advanced technology facilities (an average of 2.26 billion Vietnamese Dongs of fixed asset per enterprise). Therefore, non-state companies reluctantly joined larger state projects. As a result, the non-state sector is not capable of competing internationally. However, the non-state sector has conducted national economic activities with an unprecedented level of commitment. Recently, the non-state sector is being

recognized for its significant contributions to economic growth in Vietnam. Non-state enterprises have also created millions of jobs, with the number of laborers directly working in this sector increasing in tandem with the number of workers in state owned enterprises. Small and medium sized enterprises accounting for 96% of non-state enterprises, contribute 26% to total consumer product revenues, 31% to the total industrial output, 78% of total retail revenues, 49% of non- agricultural jobs in rural areas, and 25 - 26% of the total labor force of the country.

The role and contribution of the non-state sector in Vietnam have continued to rise. The investment status of the non-state sector was not high (35.38%, compared to 43.89% for the State sector). However, the rate of investment has grown increasingly, and contributed 46.53% to the GDP. Although, the GDP growth rate of the non-state sector has been steadily increasing, it is still lower than the growth rate of foreign investment sector. The growth rate for NSOE was 8.58% in 2000, and increased to 31.60% in 2008, while the corresponding percentages in the foreign investment sector were 19.75% in 2000, and 24.14% in 2007, reaching a high of 34.38% in 2008. Table A2.1 lists related statistics.

2.2.2.3 Foreign investment sector (FIS)

In 1987, a foreign investment law was passed soon after Vietnam started its economic reform program, opening trade with other countries and economies. Socially oriented capital investments and related technology are important factors for economic growth and are top priorities for development in Vietnam. These advantages are attainable from foreign direct investment. With an improved investment climate reducing potential country risk for private ownership, Vietnam is positioning itself to attract increasing amounts of FDI as a potential destination for foreign investors.

From 1996 to 2000, total FDI reached USD 4.6 billion, an increase of 30% compared to 8 years earlier. Total implemented FDI funds totaled USD 10 billion (indexed in 1995 dollars), increasing by 1.8 times. Between 2001 and 2005, due to continuous improvements in the investment environment in Vietnam in terms of revision and amendments of various government policies, the total registered foreign invested capital in Vietnam reached USD 20 billion, 39% more than planned projections (USD 15 billion). It should be noted that total implemented capital of USD 14.3 billion exceeded forecasts by 30% (follow data from MPI

(2006))¹². In addition, 730,000 additional jobs were created, bringing the total number of direct workers in Vietnam to 1,220,000 employees, an increase of 2.49 times. The rate of GDP growth in the foreign investment sector has been higher than either SOE or NSOE sectors. Nguyen (2004) finds that FDI has brought important benefits to Vietnam's economy such as increasing investment capital and use of domestic resources, thus giving new impetus and strength to the development of the economy. FDI creates advantages in approaching and opening international markets, thereby increasing export volumes and production capacities. Often it leads to the development of industrial parks, establishment of export processing zones, socially responsible industrial disposition, and higher goal oriented, investment performance. FDI creates more jobs demanding higher education and technical skills. The foreign investment sector provides a vital "push" for Vietnam's economic growth.

Foreign investment businesses continue to develop at an increased pace, thus making a crucial contribution to the country's growth, technology and managerial capacity. The average production turnover has been increasing during a period of 10 years, with a 22.3% increase from 1991 to 1996, 24.20% from 1991 to 1995, and 20.40% from 1996 to 2000. The foreign-investment sector has provided a significant contribution to the Vietnamese economy. However, invested capital increased, while the percentage of state owned capital declined from 25% (1991-1995) to 24% (1996-2000), and 17.8% in 2003. In addition, investments from developed countries, which invest in high technology, such as Japan, the EU, and the United States, are increasing at a smaller rate than previously experienced. Most FDI investments placed on a small or medium scale. Therefore, levels of technological transfer associated with FDI have not led to significant local technological changes. Although the foreign investment law has been amended for the fifth time since 2005, these modifications have not led to increase FDI. Furthermore, the failure rate of FDI projects has increased. In the period from 1988 to 2000, approximately USD 10 billion was withdrawn from Vietnam (data from Economy and forecast magazine, 02/5/2006); and in the first six months of 2006, USD 65 million was withdrawn (data from TuoiTre newspaper, 19/7/2006), and some large-scale projects are thought to have been implemented slowly. The geographic allocation of capital in Vietnam was a cause for internal dissension , since it was directed primarily into more developed regions, thus its influences were very sparing in more remote

¹² The five-year socio-economic development plan 2006 – 2010

Northern, highland, central, and the Cuu Long delta regions. Table A2.1 lists related statistics.

2.2.3 Development challenges

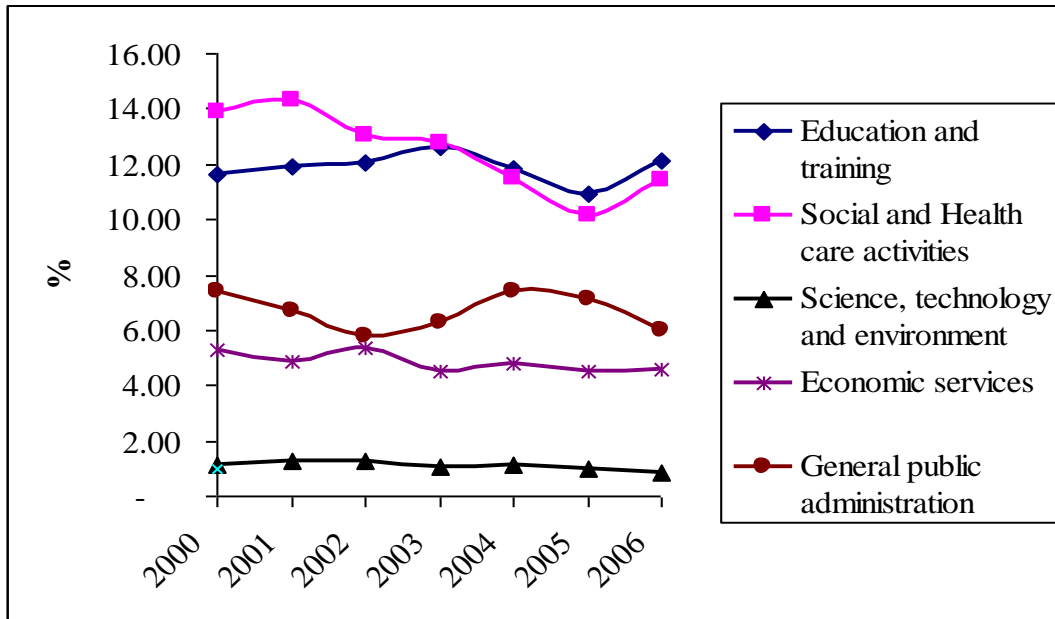
This part provides pragmatic views of the development challenges in terms of human capital and education, financial development, infrastructure development, technology and R&D, as well as institutional development in Vietnam. This research's detailed analysis of these research areas establish the foundation for research claims related to national absorptive capacity presented in Chapter 6.

2.2.3.1 Human capital and Education

The education and training system of Vietnam includes kindergarten, primary, lower and upper secondary, vocational training, and higher levels of education (bachelor, master, and doctoral degrees). Upper secondary education is compulsory in its major cities while only lower secondary education is compulsory for the rest of the country.

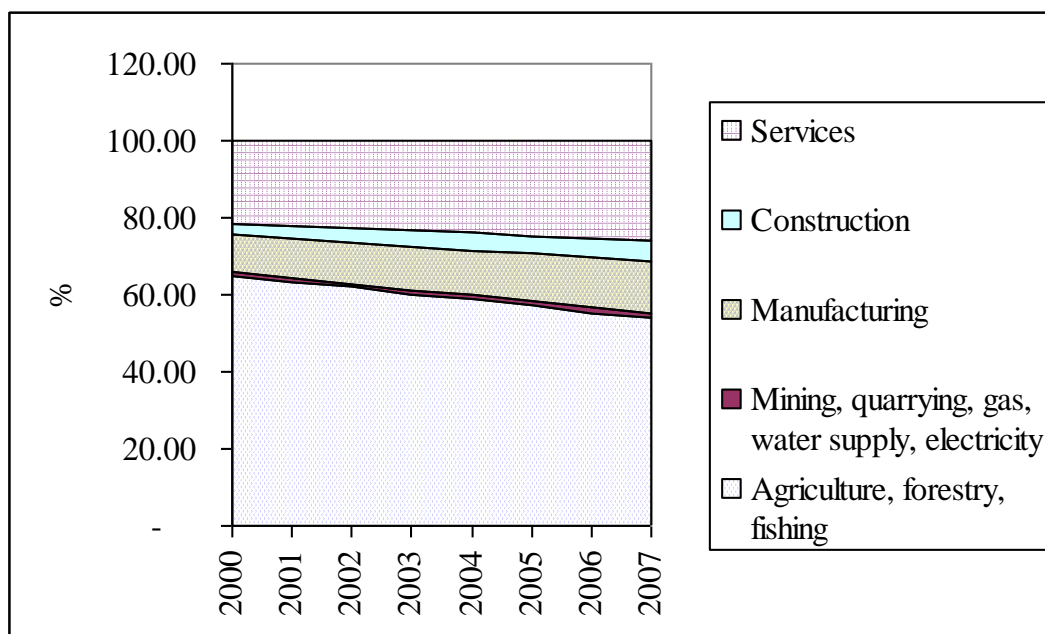
School age children comprise approximately 25% of population, indicating that there is a high demographic demand for education, especially in major cities where secondary education is compulsory. The government is committed to strengthening education by providing more opportunities for these children to remain in school for longer periods of time required to complete advanced programs. The pro capita expenditure on education and training is supported by government policy as the highest proportion of GDP (see Figure 2.2.3.1a). The socio-economic development plan (SEDP) sets out specific quantitative targets for the education sector; it also outlines a program of actions covering network rationalization, renovation of examination and pricing policies. The long-term objective is for enrollment in higher education to reach 40% by 2020 (WB, 2007).

Figure 2.2.3.1a: State budget expenditures on socio-economic services in Vietnam



Source: Based on data from GSO

However, the education system has had to face problems in re-educating its labor forces. Figure 2.2.3.1b demonstrates that more than half of employed population is working in agriculture, forestry, and fishing areas without any specific educational skills levels. In addition, modifications to economic structure cause related changes in labor force structure by increasing the number of knowledge based positions requiring employee retraining or knowledge based new hires. Many agricultural workers have become jobless or the domain of casual workers and need new special training to reenter the industrial labor force. This shift in increased worker skills has placed a heavy demand on Vietnam's current education system.

Figure 2.2.3.1b: Employed population structure by kind of economic activity in Vietnam

Source: based on data from GSO

2.2.3.2 Financial development

Since the period of French domination in the 19th and 20th centuries, the Vietnamese financial system has developed in parallel with the rise and fall of the nation's economy. Today, this system is a bank-based financial one. Their banking structure includes four major components: (1) financial market, (2) financial institutions, (3) financial instruments, and (4) a financial infrastructure.

The Vietnamese financial market is comprised of capital, money, and foreign exchange markets. Their financial institutions embrace a central banking and credit institutions, a state securities commission, securities corporations, insurance companies, and some financial institutions such as the Vietnam Postal Savings Service Company and provincial development investment funds. The banking sector has evolved into a greater diversification of financial products. The state bank of Vietnam serves as a central bank and employs a bank regulator for 80 commercial banks and 927 People's Credit Unions. According to one report, there are four state owned commercial banks, two policy and a small housing banks, which are grouped with the four State owned commercial banks. Beside its banks, Vietnam has five financial companies owned by the biggest State owned groups such as the Vietnam

Electricity Group, Petro Vietnam, the Vietnam Post Office and Telecommunications Group; and six financial leasing companies that belong to State owned commercial banks. International investors have indicated a continued high level interest in Vietnam's financial market. At the end of 2007, there were five foreign banks, thirty-five foreign bank branches, two foreign financial corporations and four joint venture financial companies currently active there¹³. Furthermore, the Vietnamese market is comprised of an informal financial sector, which includes moneylenders and rotating savings and credit union associations. There are also an informal credit connections between professional moneylenders, relatives, and their friends. It enables individuals to jointly collect and distribute personal savings. The transaction is not legally regulated, however, credit trust is guaranteed by individual commitments.

The Vietnam market covers many kinds of financial instruments, for example, loans from banks, government bonds, treasury bonds, forward and futures' contracts, swaps and other types of derivative options. Vietnam's financial infrastructure is founded on a set of institutions, which provide an environment for the effective operation of financial intermediaries. The existing legal and regulatory framework of Vietnam is thought to be adequate to support these financial operations. Since 2000, their financial institutions have implemented an electronic payment system. This system has speeded progress in payment processing by applying the advanced technology in banking payment transactions. However, national financial supervision has not indicated that its financial institutions are sufficiently mature to enough to push the current Vietnamese financial system towards global integration, with a concomitant comfort level for sustainable development and continuous sound operations.

Since 2001 the government has started an intense reform agenda which aims to create a modern financial system. Laws and regulations have been issued to advance accounting standards and the regulatory framework for commercial banks up to the standard of international practices propounded by the International Accounting Standards Board (IASB) and its related financial reporting requirements embodies in the International Financial Reporting Standards (IFRS). Furthermore, in 2006, the government approved a five-year banking sector development program that built the State Bank of Vietnam into a modern

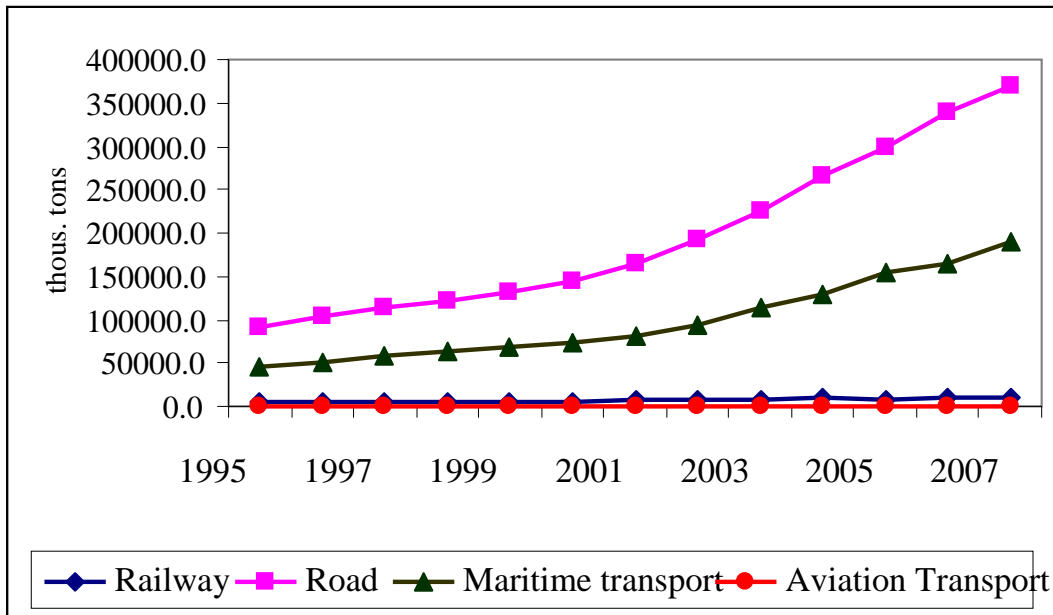
¹³ <http://www.saga.vn/Taichinh/Thitruong/Nganhang/10058.saga>, accessed on May 4, 2009

central bank and strengthened its control authority in terms of effective supervision of its financial banks that are capable of conducting standardized monetary policy within its institutions. In addition, the strategy calls for private capital to join with the State owned commercial banks and encourages modernization of its foreign investment policies. Moreover, the development of a legal foundation, including the drafting of four new laws covering their central bank, credit institutions, bank supervision and deposit insurance regulations has been stipulated.

2.2.3.3. Infrastructure development

By 1975, the infrastructure system in Vietnam was heavily destroyed by the war. The government has spent enormous efforts to reconstruct it since then. Annual investments rates in the order of 9% to 10% of GDP led to significant increases in the construction and improved maintenance of roads, telecommunications, port capacity and power supplies. In 2007, Vietnam had 151,632 kilometers of highways, 25 percent of which were paved, 37,312 kilometers of rivers and 28,161 bridges. Vietnam's major ports are located in Hai Phong (in the north), Da Nang (in the central region) and Ho Chi Minh City (in the south), as well as other smaller local ports. Vietnam has nine international, fourteen civil, and eleven military airports. Figure 2.2.3.3a presents in part Vietnam's transportation capacity. Freight is mostly transported by road and maritime shipping both in Vietnam's river systems and on the South China Sea.

Figure 2.2.3.3a: Volume of freight by type of transport in Vietnam (1995-2007)



Source: Based on data from GSO

The Vietnamese government has given priority to developing its various transportation systems. In Decree no. 78/2007/ND-CP, dated 11/5/2007¹⁴, the government directed that construction projects be initiated in the construction of infrastructure works including highways and roads, bridges, tunnels and related utilities, plus railways, electrical car and truck tracking, airport terminals, sea ports, river terminals, ferry boat jetties, water supply systems, water drainage systems, sewerage and waste treatment facilities, power plants, and power transmission lines. Specific major transportation, infrastructure projects are scheduled to be financially underwritten and deployed from now until the year 2020. These projects include the TransViet (north- south), Phase II links between Hanoi-Haiphong, Hanoi-Laocai, and Dau Giay - Da Lat highways; plus the Ho Chi Minh Interstate highway system; the Van Phong international transit port, and the Long Thanh international airport terminal.

According to the Power Regulation Authority of Vietnam, annual electrical generation output was up over 4.0% and reached 18.6 billion kilowatt-hours (kWh) in the first quarter of 2009. The state-owned Electrical Power of Vietnam Group (EVN) mainly supplies over 65%

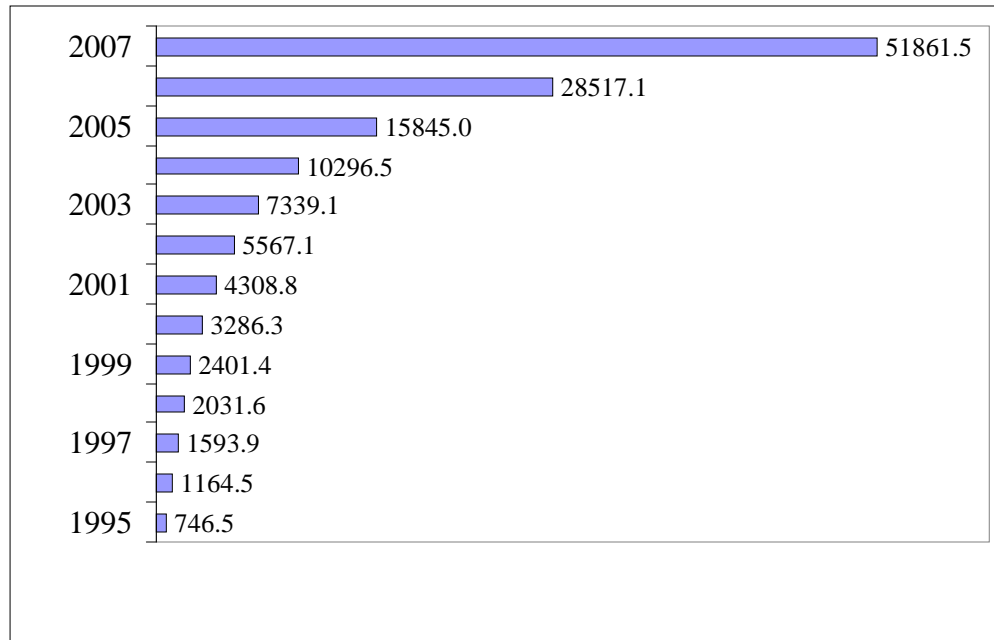
¹⁴ On investments under the build-operate-transfer (BOT), build-transfer-operate (BTO) and build-transfer (BT) models

of the nation's total output. The Vietnamese oil and gas group (Petro Vietnam) has produced another 11.8%. The coal and mineral industries group, small hydropower plants, and several build-operate-transfer projects have provided the rest of Vietnam's electrical output. Despite this, Vietnam still suffers from energy shortages, due to increasing consumer demand outstripping its power industries' ability to increase output sufficiently, especially in periods of peak demand when industrial demand is high or during the summer when air conditioners are being switched on.

Many projects are in the building phase, such as Ca Mau Gas-Power-Fertilizer Complex, one of gas pipelines, urea plants, and thermal power plants in southern Vietnam. Total design, gas transport capacity of this pipeline reaches 2 billion cubic meters per annum. The Son La Hydroelectric dam is the most extensive facility of its kind plant in South-East Asia with electrical output expected to reach 9.429 billion kWh/ per year. Wind power is more recently preferred in Vietnam as it generates energy and does not consume fuel to operate, and has proven to be environmentally friendly and its time required to install is minimal compared with other conventional power producing facility installations. The government has planned to build several more wind power plants in areas with favorable wind conditions. This will be a possible long term solution for Vietnam's rising energy demand.

In the area of telecommunications, Vietnam has demonstrated radical transformation. The density of telephones reached a new high density of thirty-five telephones per one hundred people in 2007, and the mobile network covered 100% of the districts with over 12,000 Base Transceiver Stations (BTS). In 2008, Vietnam's first telecommunications satellite, named VINASAT I, was launched into permanent orbit, marking a new step of Vietnamese telecommunication infrastructure development. Figure 2.2.3.3b presents the rapid growth of telephone user density.

Figure 2.2.3.3b: Number of telephones subscribers in Vietnam



Source: Based on data from GSO

2.2.3.4 Technology and R&D

According to international guidelines, R&D (also occasionally referred to as research and experimental development) comprises creative work “undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications” (OECD, 2002b) (p. 30).

Although Vietnam maintains hundreds of research institutions, research centers, consultant centers, laboratories, experimental stations, and observatory stations; the technological level and R&D capacity has been insufficiently developed to respond to rapid economic and social demands. Generally, based on their individual administrative status, there are eight major recipients, both government funded and non-government funded, R&D organizations in Vietnam, as follows:

- (1) State critical scientific organizations, the two most important are the Vietnam Academy of Science and Technology, and the Vietnam Social Science Institute.

(2) Scientific organizations are set up and owned by ministries or provinces, such as the Ministry of Agriculture and Rural Development, the Ministry of Information, and Telecommunications, the Population, and Family and Children's Committee. These organizations' research concentrates on the scientific, technical and / or policy problems in the field for ministries or provinces.

(3) Scientific organizations of universities

(4) Scientific organizations of State owned enterprises

(5) R&D organizations of non-State enterprises

(6) R&D organizations of political, social and professional organizations

(7) Scientific organizations of professional associations, and

(8) Foreign R&D organizations including joint-venture R&D organizations

Recently, certain foreign investors, interested in underwriting R&D in Vietnam, have authorized FDI project funding there. For example, Matsushita Electric, the owner of the Panasonic brand name, has announced that it will invest in an R&D research park in Vietnam. This will be the third group of R&D research parks in Southeast-Asia to design chipsets, mobile phones' software, and flat-screen television sets. Renesas Technology, Japan's leading and the world's third-largest semiconductor and chipset producer has planned to establish another R&D research park in Vietnam as well.

The first four of the above research organizations normally receive funding from Vietnam's public budget. Their funding as a percent of Vietnam's total budget has steadily receded from 2000 to 2006. Table 2.2.3.4 charts the share of expenditure in GDP in science, technology and environment in Vietnam.

Table 2.2.3.4: Share of expenditure on science, technology and environment in GDP in Vietnam

Unit: %

2000	2001	2002	2003	2004	2005	2006
1.14	1.25	1.25	1.02	1.10	0.98	0.82

Source: based on data from GSO

The Vietnamese government considers incentivizing research organizations to transform the structure of their activities to more market oriented FDI studies. During the period from

2001 to 2010 the SEDP wrote that “strongly transform[ing] some non-productive scientific and technological activities into service providing function in line with the market economy, including evaluation, assessment, appraisal, information, consultancy and brokerage of technology transfer; study, design and implementation; legal counseling on intellectual property rights; and service functions regulating national standards, measurements and quality norms”. (MPI, 2006, p.76).

2.2.3.5 Institutional development

According to North’s famous definition, institutions are ‘humanly devised constraints that shape human interaction’. They are the ‘rules of the game’ in a society, the rules that facilitate human interaction and societal life. Consequently, institutional development may be seen as the processes by which institutions evolve and perish, i.e. ongoing endogenous and autonomous processes in society.

Vietnam is going through a process of profound social and institutional transformation. Economic and civil relations have been progressively turned into regulations and market practices instead of the administrative orders and disciplines of the former centrally planned executive economy. The laws most significantly needed for performing business activities now have been enacted. Although the legal framework has been developed, it still remains complex and inconsistent. In respect to current public administration, the Vietnamese government has been carrying out the Public Administration Reform Act (PAR) master program during the period from 2001 to 2010, which are associated with four reform categories (Table 2.2.3.5).

In addition, the Vietnamese government has been strongly investigating, trying, and convicting corruption to gain citizens’ and international investors’ trust and confidence. The government ensures “openness and transparency in organization’s activities such as: public procurement and capital construction, management of construction investment projects, finance and State budgeting, mobilization and utilization of people’s contributions, use of grants and aids, and management of land use” (MPI, 2006b) (p.133).

Table 2.2.3.5: The PAR master program for 2001-2010

Key program	Tasks
1. Institutional reform	<ol style="list-style-type: none"> 1. To build up and perfect institutions, focusing on economic institutions required for the market-oriented economy with socialist orientation, and institutions responsible for the organization and operation of the public administration system 2. To renovate the process of developing and issuing normative legal documents 3. To ensure strict and transparent law enforcement by public institutions as well as by cadres and civil servants 4. To reform administrative procedures
2. Organization structure reform	<ol style="list-style-type: none"> 1. To redefine and adjust functions and tasks of the government agencies, so that these functions will be in line with the requirements of State management 2. To adjust tasks handled by government agencies in order to avoid overlapping and duplication of functions and responsibilities 3. To transfer service delivery tasks which are not necessarily best handled directly by government agencies to social organizations, non-governmental organizations, or businesses
3. Renovation and improvement of quality of cadres and civil servants	<ol style="list-style-type: none"> 1. Renovation of the management of cadres and civil servants 2. Reforming the salary system and developing incentives 3. Training and upgrading cadres and civil servants 4. Enhancing cadres and civil servants' responsibility, accountability, and ethical standards
4. Public finance reform	<ol style="list-style-type: none"> 1. To reform the mechanism for decentralizing financial and budgetary management to ensure unity of the national and financial management system 2. To reform financial mechanisms in service delivery units

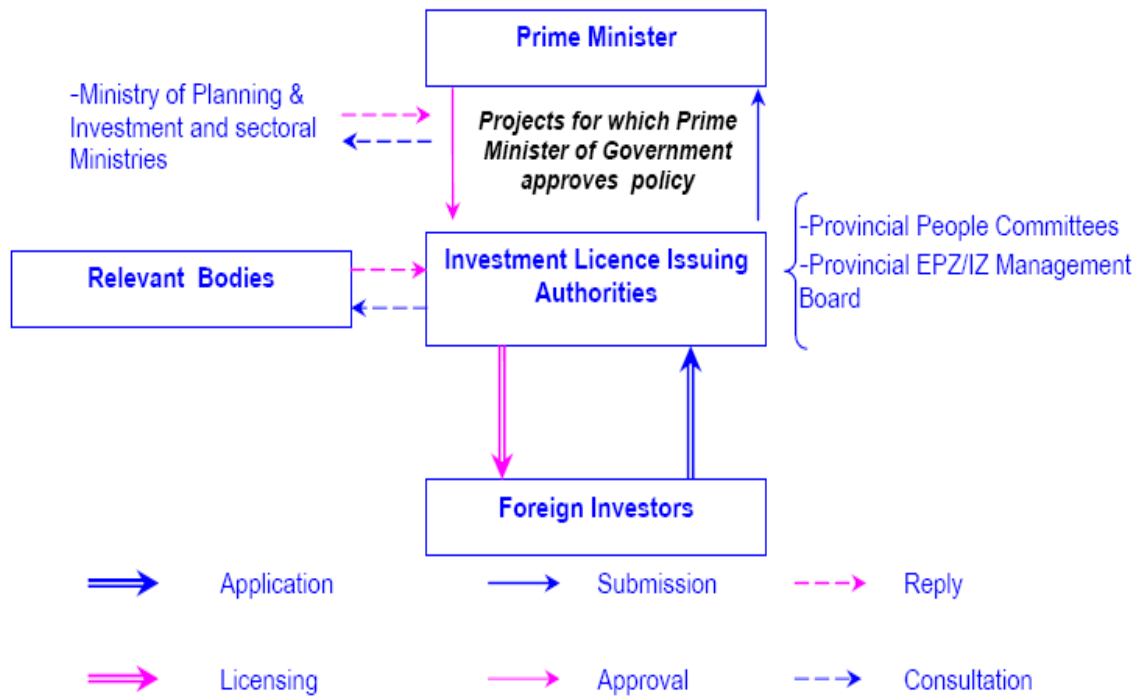
Source: Based on (PAR, 2001)

2.3. FDI in Vietnam

2.3.1 Policy on FDI

The FDI sector is recognized in Vietnam’s Constitution as an important integral part of the country’s economy. The law on investment in Vietnam can be summarized as follows (cited Foreign Investment Agency – MPI): The Vietnamese government guarantees that investors will receive “fair and equitable treatment.” The capital and other lawful assets of foreign investors will not be requisitioned or expropriated by administrative measures or without their voluntary consent. Enterprises with foreign capital shall not be nationalized. The investor’s industrial property rights and legitimate interests in technology transfers are also protected. Foreign investors’ legitimate interests are protected from detrimental legislative changes. Figure 2.3.1 is a flowchart of the project appraisal process.

Figure 2.3.1: Flowchart from the point of application submission through project approval

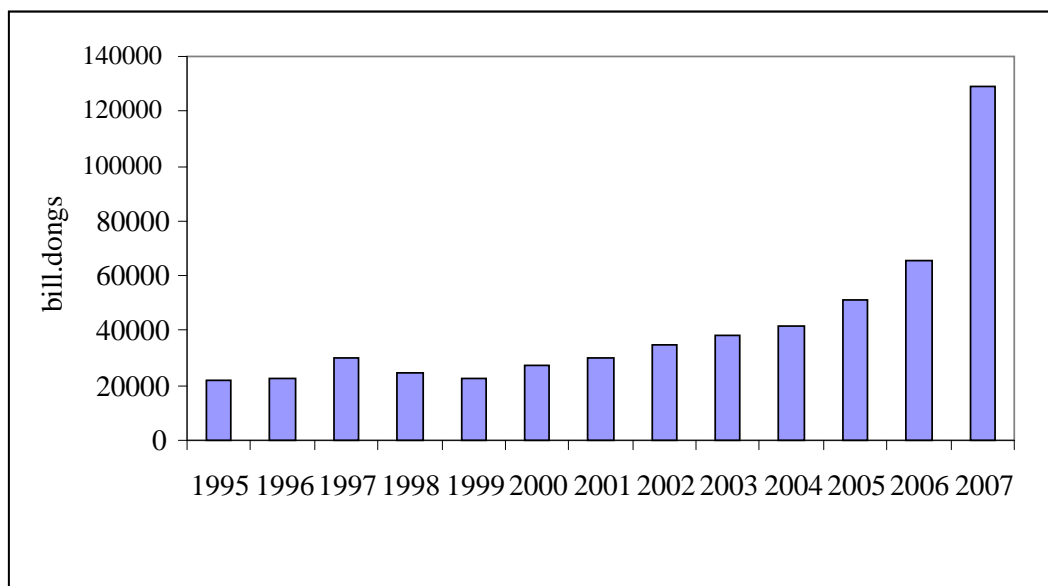


Source: Foreign Investment Agency – MPI

2.3.2 Trends and structure of FDI in Vietnam

As mentioned previously, foreign invested sectors become a crucial contribution to Vietnamese economic growth. With much of the improvement in the area of investment, Vietnam is now an interesting and potential destination for foreign investors. Amount of FDI inflows into Vietnam is shown in Figure 2.3.2a.

Figure 2.3.2a: Investment of FDI in Vietnam (Billion Dong)

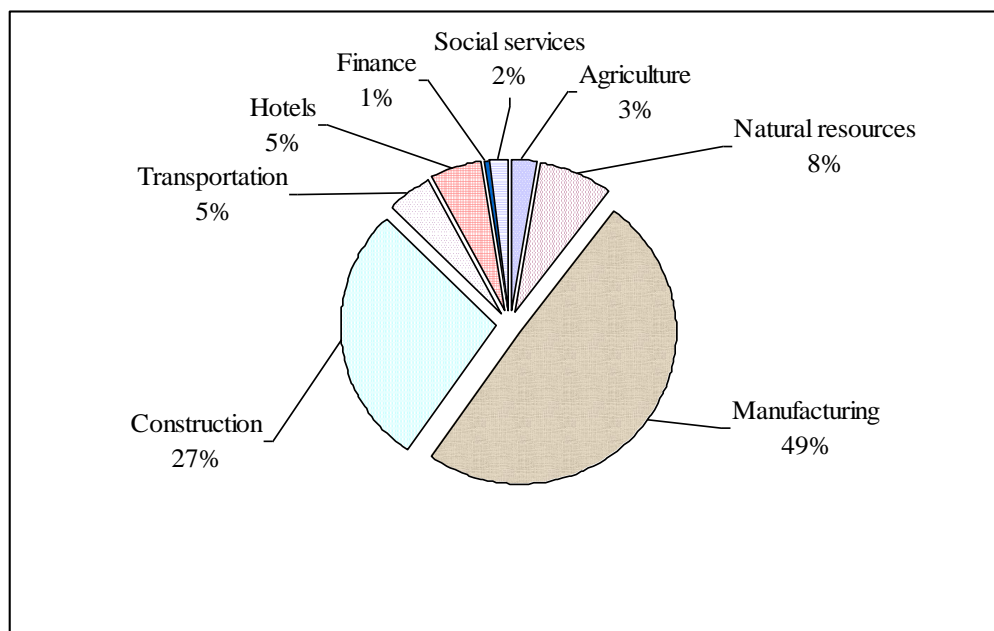


Source: Based on data from GSO

Up through to December 2008, there were 9,761 FDI projects with USD 143.3 billion invested in Vietnam. In 2008, FDI flows increased dramatically into Vietnam. The registered capital went up sharply in some sectors, for instance, oil and gas were recorded at 17.55% of total registered capital in 2008 as compared to 4.65% of the registered capital from the period of 1988 to 2007. Similarly, new urban area construction was increased to 8.12% compared with its former 4.18%; office space and apartment buildings increased to 15.92% as compared to 11.15%; and heavy industry acquired 32.26% in contrast to its former 28.85%. However, investment has decreased sharply in light industry (3.02% compared to 15.97%), in the food industry also down (0.72% compared to 4.36%), in construction (0.58% compared to 6.38%), in banking and finance (0.03% compared to 1.08%), and in IZ & EPZ infrastructure construction (0.23% compared to 1.69%).

The pie chart presented in Figure 2.3.2b expresses the percentage distribution of FDI in Vietnam as well as Vietnam's relative manufacturing and service distribution as percentages. From 1988-2007, sectors that attracted decidedly more FDI were heavy industry (49.66% of the total investment capital), construction and Real estate, renting business activities (27.62%), mining and quarrying, electricity, gas, and water supply (7.66%), hotels and restaurants (5.48%), while the service sector, which was less attractive, included culture, health, and education (1.81%), and finally banking and finance (0.57%). Agriculture, forestry and fishery, transportation, wholesale and retail trade, repair of motor vehicles, and motor cycles, plus personal and household goods garnered only between 2.53% and 4.68% of invested capital, respectively.

Investments from developed countries, which have funded high technology projects, such as Japan, EU, and United States, are increasing at a smaller rate from year to year. Most foreign investors underwrite on a small and medium scale. They have either invested in industries that require inexpensive and low educated labor, such as textile, food processing, and agriculture or exploit natural resources, such as oil and gas, mineral deposits, mineral water and premium fish. Heavy industry has received the highest investment because of its iron and steel projects, which production processes are also a primary cause of CO² emissions and fine particulate pollution. Further information is presented in A2.2 (Source countries of FDI) and A2.3 (FDI project registration).

Figure 2.3.2b: FDI distribution (1988-2007)

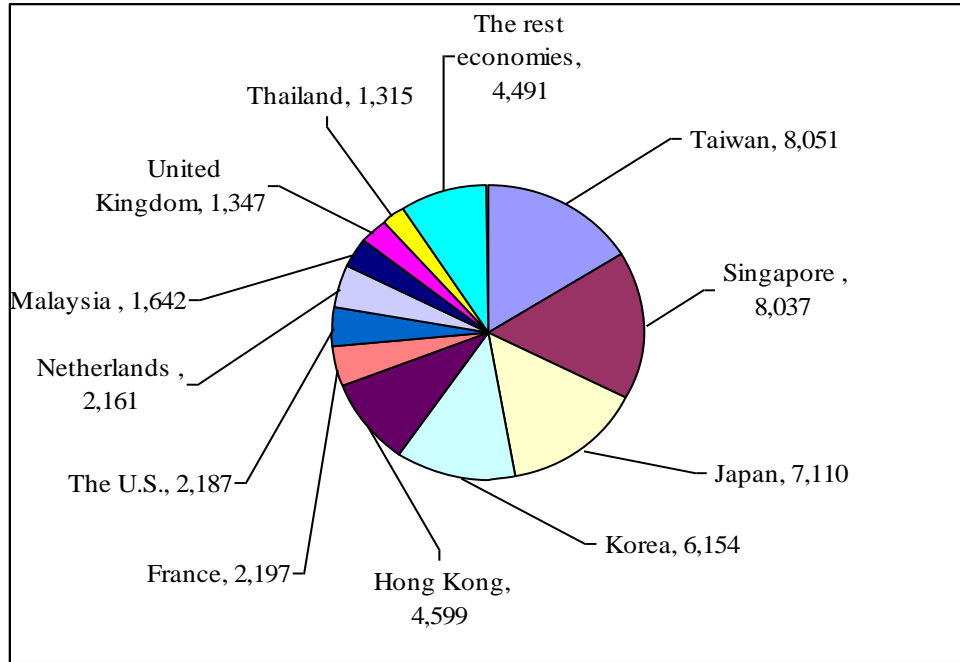
Source: Based on data from GSO

With respect to FDI fund sourcing countries, there are 82 economies, which have registered project proposals with Vietnam, but only 64 of them have disbursed funding for their projects. The Netherlands has the highest rate of implemented capital with 78.17%; the average size of a Dutch project is USD 3.021 billion¹⁵. Among those 64 economies, there are 25 from Asia-Pacific and Middle East, 21 from Europe, 17 from America and Caribbean area, and 2 from Africa. The investment from developed countries, such as Japan, EU, and United States, is increasing, but at a smaller rate. South Korea is Vietnam's top investor with 21.38% of the total number of projects and 16.93% of invested capital. The size of South Korea's projects on average is not the largest at USD 775.3 million. Theirs is 11 times lower than the British West Indies, who leads in average-sized projects with USD 8.5 billion. However, the rate of implemented capital from the British West Indies projects is 22.92% as a percentage of total registered capital. Figure 2.3.2c demonstrates FDI distribution by major countries. For more details on the source country funding, refer to Table A2.2, A2.3, and A4.1 in the Appendix.

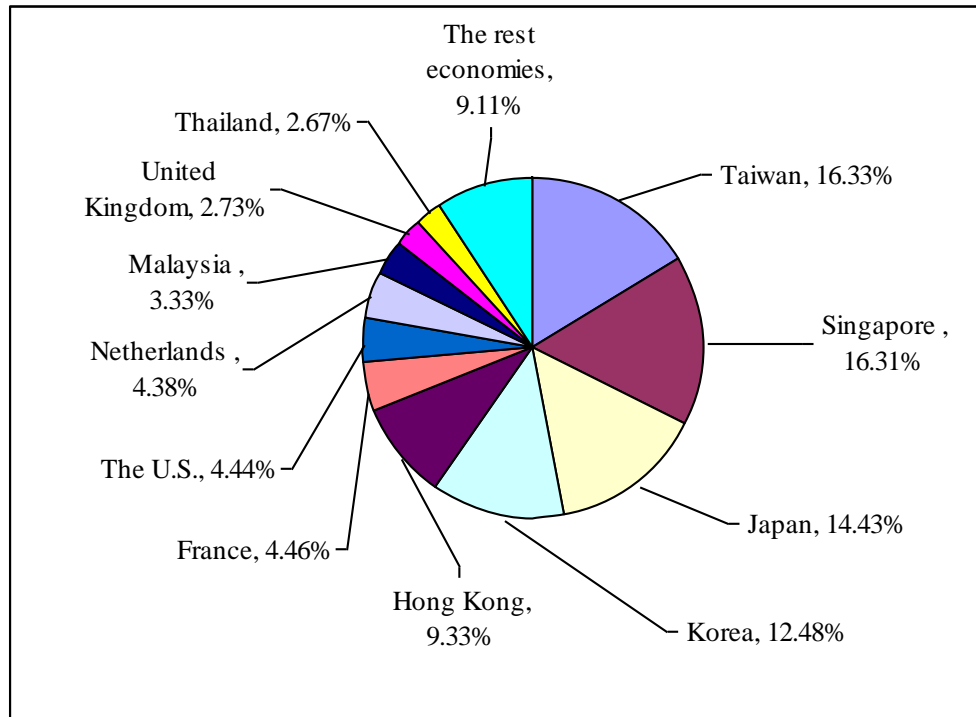
¹⁵ Dutch FDI is mainly in the maritime sector, shipping, shipbuilding, energy, medical equipments, clean water supply, high-tech and telecoms.

Figure 2.3.2c: FDI distribution by major investor countries (1988-2006)

Unit: \$ US thousand billion



Unit: % of total capital registered



Foreign investment plays a significant role in pushing forward national economic growth. However, FDI in Vietnam is not adequate for matching its future projected requirements. The quantity and quality of FDI are not high compared with some neighboring countries such as Singapore, Malaysia, and Thailand.

2.4 FDI in Vietnam: A comparison with ASEAN countries

Vietnam is ranked as the country with the highest annual economic growth rate in recent times. It reached 8.5% in 2007. Nonetheless, Vietnamese GDP per capita is very low, only USD 2800¹⁶ in 2008, ranking it the 7th overall, which is lower than Singapore by 18.8 times, Brunei, 9.84, Malaysia, 5.54, Thailand, 3.01, Indonesia, 1.31, Philippines, 1.27 while higher than Laos only 1.37 times, and Cambodia, 1.44.

The literacy rate in ASEAN countries is also similarly high; however, economic GDP growth rates in these same countries vary widely. In most of the above-mentioned countries, including Vietnam, their literacy rate is over 90%. This figure confirms that Vietnamese labor consists of highly educated individuals, a good condition for attracting FDI. The amount of the inward FDI that flows into Vietnam is quite high, although not as high as Singapore or Malaysia. However, the FDI inflow as a percentage of Vietnam's GDP is marginally higher than that of Indonesia, or the Philippines, while it is much lower than that of Singapore, Brunei, Malaysia, Thailand, Laos, or Cambodia. This means that FDI inflow into Vietnam is not as high as previously projected. Regarding its inward FDI ranking, Vietnam stands 78th, an average position when compared to the other 141 economies surveyed. In terms of ranking, Vietnam is 92nd in terms of favorable business conditions, while Singapore is first, Thailand 13th and Malaysia 20th. These indices confirm that the conditions for doing business in Vietnam are below the ASEAN countries average (see Table 2.4).

¹⁶ See appendix A.2 for database sources of all used datum

Table 2.4: Key economic and investment climate indicators (2008)

	BRU	KHM	IDN	LAO	MYS	PHL	SGP	THA	VNM
GDP growth rate*** (%)	0.6	7	5.9	6.5	5.5	4.5	3	4.8	6.3
GDP** (\$US)	14927	9916	496826	4629	214734	172348	192765	272143	81328
PPP***(\$US)	25600	1800	3400	1900	14400	3300	48900	8000	2600
Net FDI inflows	239.2	815.2	7918.5	227.8	7318.4	1520	22801.8	9834.5	8050
Share to total net inflows to ASEAN	0.4	1.4	13.3	0.4	12.3	2.6	38.4	16.5	13.5
Doing Business****	88	135	129	165	20	140	1	13	92
- Starting a Business	130	169	171	92	75	155	10	44	108
- Dealing with Construction Permits	72	147	80	110	104	105	2	12	67
- Employing Workers	5	134	157	85	48	126	1	56	90
- Registering Property	177	108	107	159	81	97	16	5	37
- Getting Credit	109	68	109	145	1	123	5	68	43
- Protecting Investors	113	70	53	180	4	126	2	11	170
- Paying Taxes	35	24	116	113	21	129	5	82	140
- Trading Across Borders	42	122	37	165	29	58	1	10	67
- Enforcing Contracts	157	136	140	111	59	114	14	25	42
- Closing a Business	35	181	139	181	54	151	2	46	124

Sources: * Foreign direct investments net inflow, intra- and extra-ASEAN

** International Monetary Fund, 2008

*** CIA World Fact book, 2008

**** Doing Business, World Bank, 2008

Brunei (BRU), Cambodia (KHM), Indonesia (IDN), Lao PDR (LAO), Malaysia (MYS), Philippines (PHL), Singapore (SGP), Thailand (THA), Vietnam (VNM). There lacks of values of Myanmar and East-Timor.

2.5. Conclusion

Investment ownership conditions in Vietnam have changed along with its history and economic development. Section 2.2 confirms that the economy developed mainly through domestic trade in the period 1975 to 1986. There was no FDI during that period, except ostensibly grants in aid from Eastern European countries. More than 20 years after opening its door to foreign investment in 1986 coupled with the first launching of a foreign investment law in 1987, the Vietnam economy has accomplished significant FDI growth. Its annual growth rate is averaging approximately 7%. Its GDP is 46th largest in the world, and GDP per capita was \$2,800 in 2008, an increase of almost 700% as compared to 2000. Their foreign investment sector has contributed to this achievement as well. From 2000 to 2006, the foreign investment sector has provided 16.33% of the country's capital investments, contributed 14.77% of the GDP and has increased employment by 16.38%. Furthermore, the foreign investment sector has brought greater competition to Vietnam. This has caused changes in the development of domestic entities' manufacturing and servicing capabilities, in terms of upgrading advanced technological facilities, high quality of production, and highly experienced international trading teams. These improvements and renovations have led to additional positive developments in Vietnam. However, comparisons between Vietnam and its neighboring countries charted in the Section 2.4 indicate that FDI inflows into Vietnam are fairly average.

Should Vietnam's present FDI policy be reconsidered? This issue is taken into account and discussed in the research presented here. To establish a sound policy, it is important to understand FDI's theoretical aspects and identify salient factors that influence FDI inflow, as either facilitators or barriers in its transmission and transformation process. The introduction to Vietnam's economy and its major economic sectors are the foundation for posing these respective research's hypotheses and objectives. Those items have been selected to investigate the push and pull factors discussed in Chapter 4 as well as comparative advantage factors and attraction factors influencing inward FDI flows in Chapter 5.

With regard to domestic entities, State-owned enterprises (SOEs) are well financed and endowed with advanced technology. However, most capital investments are directed towards public works, such as infrastructure, education, and public health where gains in productivity are difficult to identify. Privately owned enterprises (POEs) are usually small in size, have

less advanced technologically and as a result, their capacities most likely will not have the critical mass to join as partners in or suppliers to the foreign investment sector. Moreover, Vietnam's labor force is abundant, but insufficiently trained in professional skills to meet the requirements of the foreign investment sector. Innovation is basically developed by State institutions, universities, and SOEs, while in contradistinction; it is mainly created by private enterprises in developed countries. Consequently, Vietnam's planned innovation processes require greater lead times for development than is required to meet the fast paced demands of the market. Such conditions have created barriers for FDI's smooth operation and growth. From 1987 to 2007, the average ratio of paid out capital to registered FDI was only 34.37%. This cash flow bottleneck poses a significant dilemma concerning the absorptive capacity of FDI for Vietnam's economy. Like a green plant, to absorb sunlight and water, it needs to have a complete interactive system of leaves, roots, a stem, and body to function. Likewise, to absorb FDI, a country also needs to have functional, interactive absorptive capacities to spread FDI benefits. It is necessary to study and analyze from an existing situation in practice the necessary factors required to absorb FDI externally and extend benefits internally to complete FDI's full life cycle. The development challenges discussed in Section 2.2 supplies ideas for stating propositions mandated for constructing a reliable FDI absorptive capacity model as described later in Chapter 6.

Appendices

Table A2.1: The reported status of enterprises from 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average 2000-07
Number of existing enterprises	unit									
<i>State owned enterprise</i>	5,759	5,355	5,363	4,845	4,597	4,086	3,706	3,494		4,651
<i>(in %, compared to total)</i>	13.62	10.36	8.53	6.73	5.01	3.62	2.82	2.24		5.16
<i>Non-state enterprise</i>	35,004	44,314	55,237	64,526	84,003	105,167	123,392	147,316		82,370
<i>(in %, compared to total)</i>	82.78	85.75	87.81	89.60	91.55	93.11	93.96	94.57		91.44
<i>Foreign investment enterprise</i>	1,525	2,011	2,308	2,641	3,156	3,697	4,220	4,961		3,065
<i>(in %, compared to total)</i>	3.61	3.89	3.67	3.67	3.44	3.27	3.21	3.18		3.40
<i>Total</i>	42,288	51,680	62,908	72,012	91,756	112,950	131,318	155,771		90,085
	100	100	100	100	100	100	100	100		100
Number of employees in enterprises	person									
<i>State owned enterprise</i>	2,088,531	2,114,324	2,259,858	2,264,942	2,250,372	2,037,660	1,899,937	1,763,117		2,084,843
<i>(in %, compared to total)</i>	59.05	53.76	48.52	43.77	39.00	32.67	28.29	23.88		38.42
<i>Non-state enterprise</i>	1,040,902	1,329,615	1,706,857	2,049,891	2,475,448	2,979,120	3,369,855	3,933,182		2,360,609
<i>(in %, compared to total)</i>	29.43	33.80	36.65	39.61	42.90	47.76	50.18	53.28		43.50
<i>Foreign investment enterprise</i>	407,565	489,287	691,088	860,259	1,044,851	1,220,616	1,445,374	1,685,861		980,613
<i>(in %, compared to total)</i>	11.52	12.44	14.84	16.62	18.11	19.57	21.52	22.84		18.07
<i>Total</i>	3,536,998	3,933,226	4,657,803	5,175,092	5,770,671	6,237,396	6,715,166	7,382,160		5,426,064
	100	100	100	100	100	100	100	100		100

Annual average capital of enterprises	billion Dongs									
<i>State owned enterprise</i>	670,234	781,705	858,560	932,942	1,128,831	1,333,935	1,575,959	1,956,849		1,154,877
<i>(in %, compared to total)</i>	67.13	65.91	63.50	59.53	57.40	54.88	51.92	47.06		55.34
<i>Non-state enterprise</i>	98,348	142,202	202,396	289,625	422,892	607,271	854,848	1,442,319		507,488
<i>(in %, compared to total)</i>	9.85	11.99	14.97	18.48	21.50	24.98	28.16	34.69		24.32
<i>Foreign investment enterprise</i>	229,841	262,107	291,120	344,611	414,789	489,521	604,609	758,734		424,417
<i>(in %, compared to total)</i>	23.02	22.10	21.53	21.99	21.09	20.14	19.92	18.25		20.34
<i>Total</i>	998,423	1,186,014	1,352,076	1,567,178	1,966,512	2,430,727	3,035,416	4,157,902		2,086,781
	100	100	100	100	100	100	100	100		100
Value of fixed asset and long term investment of enterprises	billion Dongs									
<i>State owned enterprise</i>	229,856	263,153	309,084	332,077	359,988	486,561	794,194	900,583		459,437
<i>(in %, compared to total)</i>	55.83	55.22	55.96	51.44	48.35	51.09	55.55	47.85		51.81
<i>Non-state enterprise</i>	33,916	51,049	72,663	102,945	147,222	196,200	298,296	591,188		186,685
<i>(in %, compared to total)</i>	8.24	10.71	13.16	15.95	19.77	20.60	20.86	31.41		21.05
<i>Foreign investment enterprise</i>	147,941	162,313	170,579	210,483	237,363	269,676	337,292	390,186		240,729
<i>(in %, compared to total)</i>	35.93	34.06	30.88	32.61	31.88	28.31	23.59	20.73		27.14
<i>Total</i>	411,713	476,515	552,326	645,505	744,573	952,437	1,429,782	1,881,957		886,851
	100	100	100	100	100	100	100	100		100
Investment	billion Dongs									
<i>State owned enterprise</i>	89,417	101,973	114,738	126,558	139,831	161,635	185,102	197,989	174,435	143,520
<i>(in %, compared to total)</i>	59.14	59.81	57.33	52.90	48.06	47.11	45.74	37.21	28.55	43.89
<i>Non-state enterprise</i>	34,594	38,512	50,612	74,388	109,754	130,398	154,006	204,705	244,081	115,672
<i>(in %, compared to total)</i>	22.88	22.59	25.29	31.09	37.73	38.00	38.05	38.47	39.96	35.38
<i>Foreign investment enterprise</i>	27,172	30,011	34,795	38,300	41,342	51,102	65,604	129,399	192,360	67,787
<i>(in %, compared to total)</i>	17.97	17.60	17.38	16.01	14.21	14.89	16.21	24.32	31.49	20.73
<i>Total</i>	151,183	170,496	200,145	239,246	290,927	343,135	404,712	532,093	610,876	326,979
	100	100	100	100	100	100	100	100	100	100

Growth rate of Investment	%										
<i>State owned enterprise</i>		16.19	14.04	12.52	10.30	10.49	15.59	14.52	6.96	(11.90)	9.86
<i>Non-state enterprise</i>		9.68	11.33	31.42	46.98	47.54	18.81	18.10	32.92	19.24	26.22
<i>Foreign investment enterprise</i>		19.85	10.45	15.94	10.07	7.94	23.61	28.38	97.24	48.66	29.13
GDP Contribution by ownership	billion Dongs										
<i>State</i>		170,141	184,836	205,652	239,736	279,704	322,241	364,250	410,883	507,620	298,340
<i>(in %, compared to total)</i>		38.52	38.40	38.38	39.08	39.10	38.40	37.39	35.93	34.35	37.18
<i>Non-State</i>		212,879	230,247	256,413	284,963	327,347	382,804	444,560	527,432	694,083	373,414
<i>(in %, compared to total)</i>		48.20	47.84	47.86	46.45	45.76	45.61	45.63	46.12	46.97	46.53
<i>Foreign investment sector</i>		58,626	66,212	73,697	88,744	108,256	134,166	165,456	205,400	276,014	130,730
<i>(in %, compared to total)</i>		13.27	13.76	13.76	14.47	15.13	15.99	16.98	17.96	18.68	16.29
<i>Total</i>		441,646	481,295	535,762	613,443	715,307	839,211	974,266	1,143,715	1,477,717	802,485
		100	100	100	100	100	100	100	100	100	100
Growth rate of GDP	%										
<i>State</i>		9.82	8.64	11.26	16.57	16.67	15.21	13.04	12.80	23.54	14.17
<i>Non-State</i>		8.58	8.16	11.36	11.13	14.87	16.94	16.13	18.64	31.60	15.27
<i>Foreign investment sector</i>		19.75	12.94	11.30	20.42	21.99	23.93	23.32	24.14	34.38	21.35

Size of enterprise based on average of employees	person									
<i>State</i>		362.66	394.83	421.38	467.48	489.53	498.69	512.67	504.61	456.48
<i>Non-State</i>		29.74	30.00	30.90	31.77	29.47	28.33	27.31	26.70	29.28
<i>Foreign investment enterprise</i>		267.26	243.31	299.43	325.73	331.07	330.16	342.51	339.82	309.91
Size of enterprise based on average of capital	billion Dongs									
<i>State</i>		116.38	145.98	160.09	192.56	245.56	326.46	425.25	560.06	271.54
<i>Non-State</i>		2.81	3.21	3.66	4.49	5.03	5.77	6.93	9.79	5.21
<i>Foreign investment enterprise</i>		150.72	130.34	126.14	130.49	131.43	132.41	143.27	152.94	137.22
Size of enterprise based on average of fixed asset	billion Dongs									
<i>State</i>		39.91	49.14	57.63	68.54	78.31	119.08	214.30	257.75	110.58
<i>Non-State</i>		0.97	1.15	1.32	1.60	1.75	1.87	2.42	4.01	1.89
<i>Foreign investment enterprise</i>		97.01	80.71	73.91	79.70	75.21	72.94	79.93	78.65	79.76
Size of enterprise based on average of investment	billion Dongs									
<i>State</i>		15.53	19.04	21.39	26.12	30.42	39.56	49.95	56.67	32.33
<i>Non-State</i>		0.99	0.87	0.92	1.15	1.31	1.24	1.25	1.39	1.14
<i>Foreign investment enterprise</i>		17.82	14.92	15.08	14.50	13.10	13.82	15.55	26.08	16.36

Source: based on data from GSO

Table A2.2: FDI project registrations and average sizes*(Million dollars and number of projects)¹⁷*

Year	Number of projects	Registered capital	Average registered capital per project
1990	107	735	6.9
1991	152	1291	8.5
1992	196	2208	11.3
1993	274	3037	11.1
1994	372	4188	11.3
1995	415	6937	16.7
1996	372	10164	27.3
1997	349	5591	16.0
1998	285	5100	17.9
1999	327	2565	7.8
2000	391	2839	7.3
2001	555	3143	5.7
2002	808	2999	3.7
2003	791	3191	4.0
2004	811	4548	5.6
2005	970	6840	7.1
2006	987	12004	12.2
2007	1544	21348	13.8

¹⁷ Registrations are based on total project cost over the entire duration of the investment cycle, including parts financed by third-party debt.

Table A2.3: Source countries of FDI, 1988-2006*(Number of projects, percentage of total and million dollars)*

Home economy	Number of projects	Share of total number of projects (per cent)	Registered capital (million dollars)	Share of total registered capital (per cent)
European Union	727	8.8	10,935	14.0
Singapore	543	6.6	10,003	12.8
Taiwan Province	1743	21.2	9,502	12.1
Republic of Korea	1438	17.5	9,252	11.8
Japan	838	10.2	8,398	10.7
China	508	6.1	1243	1.6
Hong Kong	548	6.7	6400	8.2
ASEAN	540	6.6	4,397	5.6
US and Canada	459	5.6	3,630	4.6
Other	893	10.8	14,385	18.4
Total	8237	100	78,248	100

3. A Survey of Theoretical and Empirical Analyses for Determinants of Foreign Direct Investment

3.1. Introduction

Foreign Direct Investment (FDI), currently, is a generally accepted economic concept, since this word appears quite often in newspapers, magazines, and on television, even in advertisements. As a matter of course, academic researchers are widely involved in the study of FDI in several contexts, such as economics, as well as the political, and social sciences. The more FDI grows, the more numerous researchers are likely to be. Therefore, a review of FDI theories to gather its scattered dimensions and to establish the current status FDI research is considered necessary at this point in this study.

What is FDI? Different schools offer different interpretations of FDI. Hymer (1966) writes in his PhD dissertation “Direct investment is capital associated with the international operations of firms and movements of direct investment are determined by the extent of international operations” (p.3). Hymer examines the multinational enterprise (MNE) as an institution for international production, rather than international exchange. Meanwhile, McClintock (1988) presents “MNE as an enterprise involved in the control and management of production facilities located in two or more nations”, and “direct foreign investment is defined as financial, physical, and human capital movements directed at control over the management and pecuniary [control] of the MNE” (p.477). According to Buckley and Brooke (1992), FDI is a package of capital, managerial and technological knowledge and other skills, which takes place internally within multinational corporations (MNCs). From these points of views, one may observe that FDI and MNEs are mutually dependent on each other and maintain strong ties in practice. Therefore, it may also be concluded that FDI theories are similar to theories of MNE in general, and furthermore, that MNE research, where it discusses FDI, is relevant and applicable to FDI research as well.

Why does FDI occur? What factors determine FDI's initiation, establishment, and benefits? Both theoretical and empirical research has been conducted to respond to these questions. Theoretical researchers have tried to explain FDI's initiation, while empirical researchers have provided evidence and case studies of how FDI is established. Because FDI is often very dynamic in character, presentation, and performance, it is common for it to present itself in a state of growth in several import sectors of its economy; therefore, FDI theories are continuously challenged with new empirical evidence requiring reassessment of their current status quo. To add strength to the ongoing academic debate over such theories, researchers have relied on empirical evidence to determine the importance of various candidate FDI determinants that may be involved in its life cycle. Empirical research has generally been conducted, either in several groups of countries, or a specific region, or country. This paper aims to survey FDI theories including both theoretical and empirical modalities. Through theoretical research, this research has determined (1) *what are the most widely accepted theories for explaining the generation of FDI*. Conversely, by reviewing empirical research, we want to find (2) *what factors determine FDI's establishment at a general destination as well as in a particular country*.

Specific countries have their own history, culture, language, natural resources, education levels, and geographical territories; therefore, research results would be necessarily different between studying a specific country and a given region within that the country. For that reason, three aspects of theoretical analysis, empirical evidence, and specific country cases is addressed in the literature review in this chapter. In terms of theoretical analysis, theories related to industrial organization, internalization, internationalization, financially-oriented theory as well as institutional theory are represented to in this analysis to provide a wider scope of information related to the path and development of FDI. The review of theory supplies critical points of current knowledge related to FDI's founding and establishment. Empirical studies provide knowledge concerning methodological approaches as well as a general view of widely applied variables for quantitative analysis. Country case studies, experiences from developing countries in Africa, Latin America, and Asia, including studies of Vietnam have been selected and documented as part of this study. Generally, this chapter aims to identify and understand FDI's founding and course for its further development and maturation. These are the basic grounds for formulating and constructing this research

study's conceptual framework. Specific theories corresponding to specific research methodologies are represented in each empirical chapter (Chapters 4, 5, and 6). This chapter is further organized as follows. The second section is a theoretical review of literature with economic and political connections and explanations. The third section reviews empirical evidence gleaned from empirical studies and country case studies from: Africa, Asia, and Latin America. The fourth and last section summarizes Chapter 3.

3.2. Theoretical studies

3.2.1. Overviews

Certain surveys of FDI theories have been conducted applying different models. Agarwal (1980), Lizondo (1991), Twimukye (2006) mentions about perfect and imperfect market paradigms; while Brewer (1992) reviews the theoretical economic and political aspects of FDI. Subsequently, Blonigen (2005) highlights available empirical literature exploring FDI determinants from a partial equilibrium viewpoint of MNEs. This current survey draws on and emphasizes economic and institutional explanations. This research begins by discussing widely accepted theories, which involve trade and markets, comparative advantage, innovation, finance, and government policies. FDI theories evolving since WWII were reviewed by observing the movement of U.S. firms, Japanese firms, and other developed countries abroad since the end of WWII, and the emergence of TNCs in developing countries in more recent years.

3.2.2. Theories of FDI

3.2.2.1. Trade/ Industrial Organization theory

These theories argue that FDI is a result of an imperfect global market environment, and were developed by authors, such as Ohlin (1933), Hymer (1966), Kindleberger (1969), Caves (1971), Helpman (1984), Markusen and Venables (1996), and Markusen and Strand (2009). Heckscher (1919) and Ohlin (1933), are the earliest authors who laid the groundwork for substantial development in international trade theory. They constructed a factor–proportions model, which focuses on relationships between countries' factor-endowment composition and commodity trade patterns, as well as the consequences of free trade for a functional distribution of income within countries. The Heckscher-Ohlin theorem states that: a capital-

abundant country will export the capital-intensive good, while the labor-abundant country will export the labor-intensive good. Capital flows are attracted from capital abundant to capital scarce countries as a means of improving returns on private capital. Consequently, FDI is motivated mainly by the possibility of risk assessed, higher profitability in growing markets. Relatively low rates of interest in source countries allow for financial leveraging opportunities in higher return foreign ventures. There is also the necessity to overcome trade barriers to secure sources of raw materials from host countries for home country processing and manufacturing. Such procurements may not be based on cost savings at all, but simply the lack of access to arguably strategic natural resources not available in their respective home countries; even banned or heavily restricted in export from other countries possessing these raw materials due to political alliances or treaties.

Although FDI theory was first developed by Heckscher and Ohlin, Hymer (1966) is the first researcher to systematically analyze issues relating advantages of large multinationals, market imperfections, and control. He successfully splits the theory of FDI into industrial organization from neoclassical international theories of trade and finance. In his PhD dissertation, Hymer studies FDI based on market conditions, because MNEs present one or more advantages, such as internal or external economies of scale, managerial expertise, and imperfect competition in the factor market (technological or knowledge/ skill advantages), monopoly status, imperfect competition (product differentiation), financial strength, governmental intervention, and restriction on imports. Two conditions must be fulfilled for FDI to take place in this scenario. First, if MNEs are able to compete with local firms that have a better knowledge of the local market and environment, then considering these advantages, MNEs would prefer to supply the foreign market by investing directly (in developing countries) instead of through exports. Second, the market for this advantage must be imperfect. Applying the same concept, Razin (2003) concentrates on the superior advantage of a source country's intangible know how. The author states "Equipped with superior managerial skills, foreign direct investors' outbid portfolio investors for the top productivity firms in a particular industry in which they have specialized in the source country. Consequently, FDI investors would place investments in projects requiring larger sums and with higher productivity rather than domestic investors (p. 423). Instead of MNE behavior determining the market structure, Kindleberger (1969) slightly modified Hymer's

analysis that market structure will determine the conduct of a firm, by internalizing its production. He argues that FDI exists because of imperfections in either goods (e.g., a differentiated product or marketing proficiency), or market factors (e.g., distinctive technology, access to capital, and/or managerial excellence), and that MNEs are based on certain monopolistic advantage(s) held by their parent firm. Their monopolistic advantage might be the results of achievements in internal economies of scale, through horizontal internalization of other external economics, or through vertical integration.

Continuing the theme of market factors, Cave (1971) explains that FDI occurs mainly in industries characterized by certain market structures in both the "lending" (home) and "borrowing" (host) countries. FDI will be made basically in sectors that are dominated by oligopolies. With product differentiation, corporations make "horizontal" investments (specialized intangible assets with low marginal costs of expansion) to produce abroad the same lines of goods as they produce in their home market. If there is no product differentiation, "vertical" investments (reduction of uncertainty and building of barriers to entry) will be made to produce abroad a raw material or other input in the production process at home, in sectors that are behind in the firm's productive chain. According to Caves (ibid), FDI is liable to involve market conduct that extends the recognition of mutual market dependence - the essence of oligopoly - beyond national boundaries. Likewise, it tends broadly to equalize the rate of return on (equity) capital throughout a given industry in all countries, where production actually takes place. In the same vein of the vertical model, Helpman (1984) postulates that FDI flows from skill abundant countries to countries lacking such skills. Markusen and Venables (1998) have the same general idea regarding horizontal direct investment in which an MNE produces the same product in multiple plants; where FDI arises from an interaction between firm-level economies of scale and trade costs. Their general finding is that multinationals become more important relative to trade as countries become more similar in size, relative endowments, and as world income grows. (Parenthetically, this was also understood as an important rationale for colonialization and colonial competition among world powers in earlier periods. However, foreign investments during those periods are generally not treated by scholars and part of FDI's early history; perhaps they should be, but such comparisons lie outside the scope of this study, and remain an item for possible future research). Later, Markusen (2002) combines the horizontal and

vertical model into a knowledge-capital model that allows for both multi-plant economies of scale and exploitation of factor-price differences. Furthermore, this model is developed to connect FDI with business services (J. R. Markusen, 2006; J. R. Markusen & Strand, 2009; Ramasamy & Yeung, 2010). The authors confirm specific properties of knowledge-based assets in FDI services.

In summary, based on the theories of Heckscher (*ibid*) and Ohlin (*ibid*) concerning the relationship between countries' factor-endowment and trade patterns, the authors of this theory state that FDI flows are determined by market conditions as well as market structure. Market condition provides details of certain MNE advantages derived from internal or external economies of scale, managerial expertise, imperfect competition in the factor market, monopoly status, imperfect competition, financial strength, governmental intervention, and restriction on imports; and with these advantages, an environment for FDI project selection and funding is more likely to occur. (Hymer and Razin, *ibid*). Market structure alludes to imperfections in either goods, or market factors. MNE is based on some monopolistic advantage, which might be achieved with internal economies of scale through horizontal or internalization of other external economies through vertical integration (Kindleberger, Helpman, Markusen & Venables, Markusen, *ibid*). Notably, market/ industrial organization theory requires that FDI only may occur under specific market and trade conditions.

3.2.2.2. *Internalization theory*

Internalization theory as addressed by such scholars as Buckley and Casson (1976, 1985), Rugman (1981, 1986), Dunning (1973, 1981, 1993, 2000), UNCTAD (1998, 2006, 2007), and Nocke and Yeaple (2008) state that FDI emerges due to certain factors of ownership, location, and internalization advantages. Buckley and Casson (1976) extend Coase's (1937) explanation as to why multinationals internalize intermediate markets. These authors begin their analysis with the concept that intermediate product markets are imperfect, having higher transaction costs, if managed by different firms. There are two decisions that a firm must make concerning either an FDI's location or mode of control. A firm exports, if production and control are located in their home country. If the production and control take place in a host country; then an FDI project decision is undertaken. Therefore, the internalization of

intermediate production processes reduces uncertainty by circumventing market imperfections. Rugman (1981; , 1986), relates a transaction cost approach in which hierarchical organizational structures replace markets, he argues that the theory of FDI is in effect an MNE theory instead. According to Rugman (*ibid*), there are three possible avenues for a firm to consider that relate explicitly the relative costs of servicing foreign markets: (1) exporting to foreign markets, (2) engaging in FDI, (i.e., set up an overseas subsidiary to produce for a local market), and (3) granting franchise licenses for servicing a foreign market. The author also establishes conditions under which foreign markets can be serviced by a firm endowed with distinct advantages, such as technology, proprietary product or service knowledge, and other types of significant firm-specific advantages (e.g. managerial skills, strong capital, and strong competitive capacity). Rugman also holds that, generally, if there are no barriers to free trade, then exporting takes place. If, on the other hand, there are existing barriers, then that opens the way for FDI. He considers licensing to be an inferior method compared to FDI, since an MNE loses control of its firm-specific advantages. Thus, MNE firm-specific advantages are best explained by a new concept of internalization. Nocke and Yeaple (2008) joined in this discussion by submitting that FDI's production-cost differences between countries motivates increasing FDI.

This FDI phenomenon is explained under its various aspects; however, here relevant theoretical constructs require further maintenance, since research up to now has been generally scattered and disorganized without a common system of organization and methodological approach. Dunning (1973; , 1981) was the first to provide a more comprehensive analysis based on an integration of ownership advantage, location advantage, and internalization theories. Dunning's paradigm may be schematically presented as follows: Foreign firms hold assets related to ownership advantages ('O' or FSA – firm specific advantages) over domestic firms in a given sector. Product advantages include patents, blueprints, software and databases, and trade secrets, and confer market power or cost advantage; therefore, a foreign firm has two choices that are either internalized or sold in its ownership advantage. In the case in which the firm holds an internalizing advantage ('I'), a foreign firm will decide to produce in the host country, which offers a sufficient location advantage ('L' or CSA – country specific advantages) that makes it profitable. Based on the 'OLI' paradigm, Dunning (1993, 2000), and UNCTAD (1998) state four reasons that a firm

invests abroad. The firm wants to search for resources, for markets, for efficiency, and for new strategic assets. Singh and Jun (1995) write that Dunning's eclectic theory provides some answers regarding the geographic distribution of FDI by analyzing location factors. Furthermore, the emergence of transnational corporations (TNCs), ergo, a firm that own or control manufacturing facilities in more than one country through FDI, investing in developing countries and transitional economies has provided a significant factor for FDI growth. It creates a new investment channel or corridor and imparts greater momentum for South – South cooperation (UNCTAD, 2006). These investment phenomena also lead to new developments in the theory of FDI. UNCTAD classifies *drivers* that trigger company's internationalization in terms of “pull” – “push” and “policy” factors demonstrated in table 3.2.2.2.

Table 3.2.2.2: Push - Pull factors

Condition	Push - Home Country	Pull - Host Country
1. Market and Trade	Limited home market asks company to find a new market	Large/ growing market are good conditions to attract investors
2. Cost of production	Scarcity of resources/ inputs, high labor cost causes overseas investment	Available required resources/ low cost of labor are good inputs for cost seekers
3. Local business	Global and local competitive pressure forces company to pre-empt competitor by being the first move into a foreign market	Bilateral, multilateral trade, investment treaties facilitate FDI
4. Institution	Supportive policies such as cost-cutting, upgrading of capabilities	Incentive policies such as liberalization and privatization policies, political stability, transparent governance, investment in infrastructure, property rights, etc.

Source: Based on UNCTAD (2006)

Push factors incentivate a source country's company to spread their operations abroad, whilst pull factors encourage a company to invest in specific host country economies. Each driver consists of four main types, quite similar in nature to each other.

In fact, the theory of internalization is based on transaction cost theory, which states that transactions are made within an organization, if the transaction costs in the free market are higher than its internal costs would be for performing the same transaction internally. In financial management this type of similar analysis is also referred to as a "Make versus Buy" decision. This process is called internalization (Falkenhahn & Stanslowski, 2001).

In relation to FDI, this theory starts by explaining how the FDI phenomenon is based on location and control. FDI occurs when production and control takes place in a host country (Buckley & Casson, *ibid*). After that, conditions of foreign market advantages and firm-specific advantages are given to rationalize FDI (Rugman, *ibid*). Later on, the eclectic paradigm presents details that FDI is a result of Ownership + Location + International advantage, where ownership advantage is a firm-specific advantage, location advantage is a country-specific advantage, and international advantages are embodied in options of entry mode (Dunning, *ibid*).

3.2.2.3. Product Internationalization theory

The product internationalization theory explains that FDI arises from the life cycle of products, as delineated by Vernon (1966, 1979), Kojima (1978), Jeon, Tang, and Zhu (2005), Qu, Huang, Zhang, & Zhao (2007) and Gersbach and Schmutzler (2008) for example.

Vernon (1966) develops an international product life cycle theory that is an extension of the monopoly advantage theory, to explain why a manufacturing firm shifts from exporting to FDI. The author builds upon the technological advantage theory, analyzing strategic market implications of the product life cycle. Vernon's model can be summarized as follows. Innovations initially appear in countries, which are more capital intensive. Gradually, production is relocated to less capital intensive countries, then capital is shifted to a developing country; concurrently, new products incorporate innovations in products and processes, which are developed in a capital rich country. Depending on which route is selected, firms would initially supply the export market. At this stage, a firm may gain a monopolistic advantage. Subsequently, if there are intensive competitive products in the

same market, then the firm might establish trade representatives abroad, to maintain profitability, a firm may have to reduce costs by investing in production facilities abroad, eventually setting up a subsidiary. Later, Vernon (1979) re-evaluates his own theory by indicating that multinational firms are now more geographically diffused than product cycles should warrant, and thus, product life cycles have shortened considerably.

Also along a similar production internationalization line of thinking, Graham (1978) raises a new hypothesis based on rivalry behavior among firms. This theory examines U.S. multinational firms in Europe, which preceded the entry of European firms into the U.S. The findings suggest that high levels of industrial concentration are positively associated with high rates of investment in research and development (R&D) in the same country. High rates of investment in R&D also positively correlate to high degrees of product differentiation. Subsequently, high degrees of product differentiation are positively correlated to high levels of industrial concentration. Qu, Huang, Zhang, & Zhao (2007) and Gersbach and Schmutzler (2008) also find that R&D investment by MNEs is affected by the R&D intensity of a domestic firm. In the same vein, Saggi (2002) examines the role technology plays in encouraging FDI. A demand for advanced technology might lead host countries to import more efficient foreign technologies than are even available in home countries, that is often associated with the so called “leap-frog effect”, where vested interests in home industries may act as a barrier to the introduction of newer, advanced technologies. Leap-frogging may avail a host country of not having to go through older steps in developing new technologies, services and ultimately new products, as has occurred often in the past, especially in Japan directly after WWII. In addition, Jeon, Tang, and Zhu, (2005) present the same idea with Saggi while finding that the growth of information technology has encouraged FDI.

Even though there is only a slight difference, the Kojima (1978) approach is considered a part of the product-cycle approach of Vernon (*ibid*) that examines how U.S. firms choose to go abroad. Kojima examines in similar ways Japanese movements abroad. A major difference is that Japanese FDI is ‘trade-oriented’, while US FDI is ‘anti-trade oriented’. Kojima discusses whether FDI complements trade, or substitutes for it. The core of his analysis is that firms must consider comparative costs between home and host countries. The thrust of his argument is: ‘Japan should undertake direct foreign investment in an industry becoming comparatively disadvantageous in Japan which at the same time has the potential

of becoming comparatively advantageous in the host country'. Furthermore, 'Japan should enlarge an industry in which it has comparative advantage so that its industrial capital and labor force, which undertook direct investment abroad are transferred to this promising industry'. Thus, both the investor and the recipient country can enhance harmonious trade without reference to its industrial structure, and subsequently create more complementary and more profitable trade, so that both will grow *pari passu*, bringing about prosperity to both of the trading partners' international economies. It is often referred to as the Japanese style.

Generally, internationalization theory explains FDI in terms of movement of innovation, technology advantage, and R&D from high to low innovation country (Vernon, Graham, Saggi, Jeon, Tang, & Zhu, *ibid*). Additionally, comparative advantages between the home and the host countries are studied for a further explanation of FDI growth (Kojima, *ibid*).

3.2.2.4. Finance-Oriented theory

Aliber (1970; , 1993) emphasizes the variables of interest rates, exchange rates, and finance. He suggests that the theory of FDI must cover dynamic events, such as the source of FDI advantages. A substantial amount of FDI has been placed by U.S. firms abroad since WWII, a different pattern of direct investments occurs by industry, companies established abroad, and foreign firms often investing in the U.S., while U.S. firms are investing abroad. According to this author, a perfect competition model does not explain why firms engage in FDI. The theory of industrial organization cannot predict a country pattern for FDI or its industrial pattern either. Therefore, Aliber explains FDI as a custom-area phenomenon or a currency-area phenomenon. The author wrote that 'long-term interest rates on securities denominated in currencies of specific countries are lower than the interest rates on comparable securities denominated in the currencies of another country'. Aliber confirms that the key factor in explaining the pattern of FDI involves capital market relationships, exchange rate risk, and market's preferences for holding assets denominated in selected currencies.

Similarly, Froot and Stein (1991) focus primarily on the positive effects of exchange rate depreciation in the host country on FDI inflows. When the real exchange rate goes down, the cost of production reduces at the same time raising FDI's profitability. Therefore,

depreciation of Forex exchange rates could raise FDI profits locally, but depress them when repatriated to a home country. Nonetheless, if the main purpose of a specific FDI is to lower the cost of imported raw materials, components, or finished products, then a reduction or even devaluation of a host country's currency would result in lower import prices of such items for the home country's FDI investor. In another research, Choi and Tsai (2007) introduce financial factors in addition to strategic factors as determinants for FDI. They state that foreign exchange rates, profiles of internal and external financing, risk and diversification variables, as well as agency costs are significant financial variables to be taken into consideration for FDI decisions. They conclude, "FDI is the consequence of interaction between a stronger internal capital market and internal corporate governance" (p.55).

3.2.2.5. Institutional theory

Since the 1970's, many authors have concerned themselves with political factors, when examining FDI theory. According to Brewer (1992), there are some researchers that study governmental roles in reference to FDI flows. Vernon (1971), when applying his "sovereignty at bay" model views governments as sources of "ineffective obstacles" to FDI. Gilpin (1975), with his "neo-mercantilist" model, opines that governments are largely ineffective in their efforts to restrain FDI and harness it to serve their own national security interests. Moreover, the "dependency" model of Barnett and Muller (1974) underpins the concept that industrialized home country governments endorse, facilitate and support outbound FDI from their industrial home countries to developing host countries. New theories are incomplete if they do not consider political factors. The 'Eco-political' model of Schneider and Frey (1985) confirms that both factors impact FDI inflows into developing countries. By combining the factors of politics and economics, these two authors develop an effects matrix of government policies on market imperfections and relative attractiveness of FDI. In general, they find that government policies can affect market imperfections and FDI. Some government policies, such as anti-predatory dumping measures and countervailing duties to reduce subsidies can reduce market imperfections through greater competition, which can make FDI more attractive to both the home and host countries. On the contrary, restrictions placed by host countries on inward FDI flows and by home country on outward

FDI flows increase market imperfection, and decrease FDI over time. For instance, antitrust (competition) policies and pollution control policies can induce a reduction of both market imperfections and FDI. On the same theme, Saggi (2002) determined that “in countries that historically emphasized import substituting industrialization – such as most of Africa, Latin America, and Southeast Asia – FDI was either completely prohibited or multinational firms had to operate under severe restrictions” (p.221). In considering other institutional aspects, Razin and Sadka (2007) emphasize tax policy. They offer that a “home country’s corporate tax rates impact on discretionary decisions of whether to establish foreign affiliates, but not their magnitude of investment, while a host country’s corporate tax rates affect both discrete decisions and magnitude of inflows” (Russ, 2007) (p.8). The influence of political economy variables on FDI are confirmed in a research of Kolstad and Villanger (2008). There is a link between democracy and FDI in services. They find that FDI is affected by the degree of democracy in developing countries while general political risk and institutional quality are deciding factors in developed (democratic) countries. UNCTAD has strongly emphasized the role of government policies in boosting inflows and outflows of FDI, especially with the emergence of TNCs. Host country political policies have been able to trigger significant changes in the role of TNCs in the extractive industries since the 1960’s (UNCTAD, 2007). The Chinese strategy, ‘China’s going global’ in 2000”, is among the most explicit recent policy initiatives taken to boost FDI from overseas (UNCTAD, 2006). UNCTAD’s 2008 survey of Changes to National Laws and Regulations related to FDI indicates that 110 new FDI-related measures were introduced by a total of 55 UN affiliated countries. Most of these measures were more favorable to FDI by continuing the trend of more openness towards FDI, while some were less favorable measures for FDI by either scrutinizing foreign investments for national security reasons or taking further steps to nationalize strategic industries, particularly extractive industries (UNCTAD, 2009).

In summary, the above literature review has provided explanations surrounding the condition necessary for FDI to arise. Since there are several theoretical models attempting to explain FDI; therefore, FDI should be analyzed using a combination’s model (Faeth, 2009). This research takes into account that FDI is born by both push and pull factors in terms of market conditions, cost of production, local business conditions, and governmental policies. This knowledge provides positive support for raising specific hypotheses for improved

understanding what are the optimal environmental circumstances for FDI's conception and initiation (Chapter 4) and identifying specific determinants for FDI's establishment (Chapter 5) into a particular country.

Figure 3.2 Illustrates a Review of the Theories examined above (see p.67).

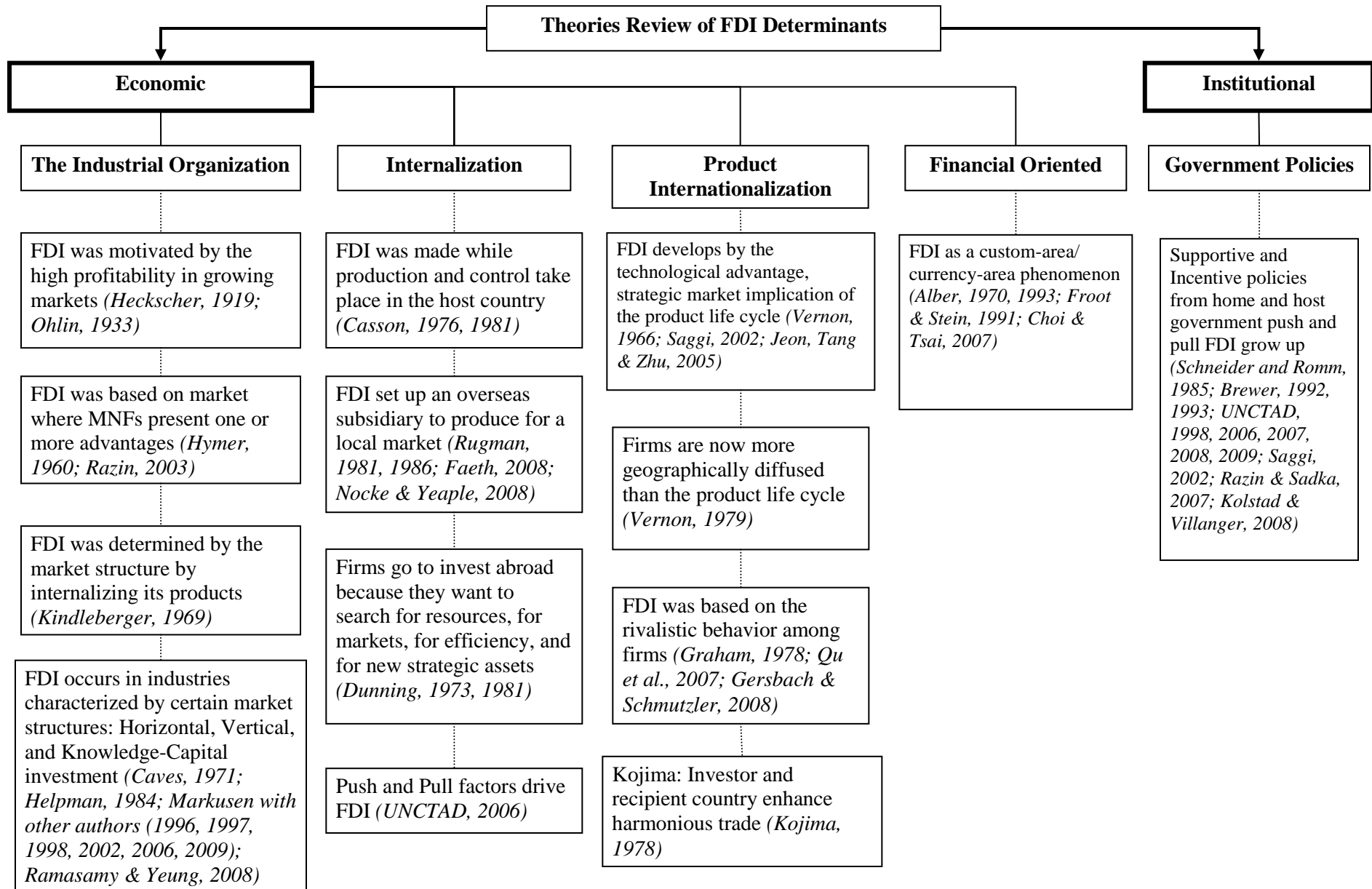
3.3. Empirical works

3.3.1. Empirical evidence

As mentioned above, several theories have been developed to explain FDI flows. However, an overall accepted theoretical framework that accounts for all of the different aspects of FDI does not exist. This absence has led researchers to rely on empirical evidence (Ioannatos, 2001) in an attempt to estimate the importance of the different determinants of FDI. These empirical measures concentrate more on attraction or pull factors from a destination country, than push factors from a home or source country. The main variables normally used are the size of the market, the growth rate of the market, labor costs, amount of skilled labor available, degree of openness of the economy, economic stability, as well as several institutional variables e.g. political factors, investment climates. Some previous researchers are being reviewed in this study such as Schneider and Frey (1985), Singh and Jun (1995), Ioannatos (2001), and Genvilaité (2010).

It is significant that since 1985, Schneider and Frey (1985) mention political factors in addition to economic factors as an additional categorical determinate for FDI. In their research, the authors develop four econometric models, which are (a) political, (b) economic, (c) amalgamated, and (d) politico-economic to test for politico-economic determinants of FDI inflows into 54 developing countries in the three different years of 1976, 1979, and 1980. The results obtained demonstrate that both economic and political factors affect FDI inflows in developing countries. The most important economic factors that found by Schneider and Frey are real per capita gross national product (GNP), the balance of payments, followed by the growth of GNP and the workers' skill levels. For political aspects, they find that the amount of bilateral aid coming from Western countries has the strongest effect, followed by multilateral aid, while political instability reduces FDI.

Figure 3.2: Summary of theoretical review



Researchers have expanded Schneider and Frey's model to include economic, political, and social features (Singh & Jun, 1995; Ioannatos, 2001), and a relevant series development derived from UNCTAD data taken in 1998, 2001, and 2006. Singh and Jun (1995) attempt to fill a gap in current literature by testing three groups of hypotheses on what influences direct investments and FDI inflows have on host countries. The authors divide their variables into three categories: sociopolitical instability, business operating conditions, and export orientation. By using a pooled model, and an analysis that covered 1970-1993 for thirty-one countries, they find that the determinants of FDI flows are different for high and low FDI countries. For the high-FDI group, there is a higher qualitative political risk index. Size of exports has the strongest correlation with FDI flows. Business conditions and manufacturing exports are also significant factors for FDI inflows. For the low-FDI group, production efficiency is the more significant variable. Ioannatos (2001) investigates determinant factors that host countries demanded for U.S. FDI by model specification that are consistent with theories of international production. The author tests three hypotheses that concentrated on economic, social, and political aspects. The economic factors include some domestic factors such as market size, trade balance, the cost of labor, financial performance such as inflation, and effectiveness of the service sector. The social attributes identified are human capital, extent of urban development, quality of life, and extent of the health care system. In addition, four related factors with political considerations are identified as the political system, government ethics, investment climates, and the geographical proximity. In order to broaden the existing knowledge on the demand structure of FDI, the author uses cross-sectional data in his analysis. The research affirmed that economic, social, and political determinants are equally important for the ability of the host country to attract FDI; no single factor could sufficiently explain this phenomenon.

Illustrative of a typical situation, UNCTAD (1998, 2009) categorizes host country determinants of inward FDI into three groups. *Policy frameworks* for FDI include economic, political, and social stability; rules and regulations on FDI; policies on the functioning and structure of markets; international agreements on FDI; privatization policy, as well as tax and trade policies. *Economic determinants* consist of three aspects. The market – seeking FDI incorporates market size, market structure, per capita income, market growth, assessment of regional and global markets, and country-specific consumer preferences. The resource/asset -

seeking FDI takes in raw materials, low-cost, unskilled labor and availability of skilled labor, technological innovation and other intangible assets such as brand names, and physical infrastructure (ports, roads, power, and telecommunications). The efficiency – seeking FDI takes account of resources/ asset and input costs, logistics access to regional and global markets for exports. The third group is *business facilitation*, which includes investment promotion (including image-building and investment-generating activities, investment-facilitation and after-investment services), investment incentives, and hassle or unnecessary costs of delays derived from excessive bureaucracy or corruption, social amenities (availability of bilingual schools, quality of life). In front of fast growing FDI between South and South countries, UNCTAD (2006) mentions four drivers of internationalization by developing-countries' transitional companies (TNCs). The first driver is a combination of market and trade factors, such as large markets: the growth of markets is likely to be the foremost determinant of FDI in particular host economies. The second driver relates cost factors: host countries with low costs of labor or other required resources are more likely to receive inward FDI. The third driver is business conditions and can include competition from low-cost producers, liberalization and privatization policies, low cost of entry, and a positive reception. The fourth driver concerns government policies and the macroeconomic framework that includes transparent governance, investment in infrastructure, property rights, minimal exchange-rate regulations, strong currencies and political stability in host countries. Also included in this framework is macroeconomic uncertainty in the home economy and common monetary areas (e.g. the Euroland zone). UNCTAD (2001) also points out that to attract high quality FDI, a host country must actively draw upon international competitive advantages such as proximity to markets, low cost factors of production, and productive synergies derived from a network of producers-competitors, demanders, and suppliers. This is genuine new attitude towards FDI attraction, especially for developing host countries. However, there is a lack of empirical research, which accounts for FDI in terms of comparative advantages between a home and host country. With reference to the level of FDI attractiveness and absorptive capacity of a country, UNCTAD has used twelve variables to measure FDI potential and performance of all countries in the world since 1988. These variables are listed as following:

- *GDP per capita*, an indicator of the sophistication and breadth of local demand

- *The rate of GDP growth* over the previous 10 years, a proxy for expected economic growth
- *The share of exports in GDP*, to capture openness and competitiveness
- *The average number of telephone lines per 1,000 inhabitants and mobile telephones per 1,000 inhabitants*, as an indicator of modern information and communication infrastructure
- *Commercial energy usage per capita*, for the availability of a traditional infrastructure
- *The share of R&D spending in GDP*, to capture local technological capabilities
- *The share of tertiary students in the population*, indicating the availability of high-level skills
- *Country risk*, a composite indicator capturing some macroeconomic and other factors that affect investors risk perception
- *The world market share in exports of natural resources*, as a proxy for the availability of resources for extractive FDI
- *The world market share of imports of parts and components for automobiles and electronic products*, to capture participation in the leading TNC integrated production systems
- *The world market share of exports of services*, to seize the importance of FDI in service sectors that accounts for some two thirds of world FDI
- *The share of world FDI's inward stock*, a broad indicator of attractiveness and absorptive capacities for FDI, and the investment climate

More to the point, a restricted number of researchers focus entirely on the effects of political issues. It is very interesting to note that Adam and Filippaios (2007) demonstrate that democracy discourages FDI and MNEs tend to invest in countries with low civil, but high political liberties. The authors employ panel data, a fixed-effects model and use a log-linear equation in order to test the relationship between FDI and thirteen independent variables deemed to be FDI flows from US firms normalized by GDP (FDIP). Their sample involves 105 developing and developed countries for the time period 1989–1997. The results express that there are positive correlations between FDI and civil liberties repression, gross domestic product per capita, lower levels of expropriation risks, and higher levels of bureaucratic quality as an economic variable, whilst political liberties repression, real GDP per worker, and corruption level of the economic variables are negatively correlated.

Focusing on the linkages among political risk - institutions - FDI, Busse and Hefeker (2007) apply cross-country analysis and Arellano–Bond GMM to run a dynamic estimator with a sample size of 83 developing countries covering 1984 to 2003. Their results confirm that government stability, internal and external conflict, law and order, ethnic tensions, bureaucratic quality and, to a lesser extent, corruption and democratic accountability are important determinants of foreign investment inflows.

Besides research that examines FDI from economic, political and social perspectives, there is an enormous amount of research focused on identifying determinants of FDI from several subjective observations. In a group of developed and developing countries, Chakrabarti (2001) applies Leamer's (1983a; , 1985) Extreme Bound Analysis (EBA) to assess which explanatory variables from existing cross-country studies on FDI determinants can be classified as either "robust" or "fragile". This study involves 135 developed and developing countries in 1994. His result reveals that there is strong correlation for the explanatory power of market size affecting host countries' FDI. For the other variables examined, tax, wage, openness, exchange rates, tariffs, and growth rates, these confirm a lower and less significant correlation than the variables that have been reported in previous empirical literature. Reviewing the same theme, Moosa and Cardak (2006) study determinants of inward FDI by applying Leamer's EBA technique. Based on a sample of cross-sectional data taking from 138 countries over the period 1998–2000, these authors work with eight variables extracted with the UNCTAD method. These variables are GDP, growth rate of GDP (GDG), export as percentage of GDP (EXP), telephone lines per 1000 inhabitants (TEL), country risk (CRK), students in tertiary education as a percentage of total population (TER), commercial energy use per capita (ENR) and domestic gross fixed capital formation as a percentage of GDP (DIG). The empirical results confirm that GDP, GDG, EXP, TEL, CRK, and TER are explanatory factors of FDI. In addition, the authors find countries that are more successful in attracting FDI are developed countries with large economies, a high degree of openness and low country risk.

In this group of selected developing countries, Nunnenkamp and Spatz (2002), studying a sample of 28 developing countries during the 1987-2000 period, find significant Spearman correlations between FDI flows and per capita GNP, risk factors, years of schooling, foreign trade restrictions, complementary production factors, administrative bottlenecks and cost

factors. Population, GNP growth, firm entry restrictions, post-entry restrictions and technology regulation all prove to be non-significant. However, when regression analyses are performed separately for non-traditional factors, in which traditional factors are controlled (population and per capita GNP), only factor costs produce significant results and, even then, only for the 1997-2000 period. Likewise, Nonnemberg and de Mendonça (2004) confirm new correlations for FDI determinants in developing countries. Using an econometric model based on panel data analysis for 38 developing countries and transition economies for the period of 1975-2000, their results demonstrate that both GDP and the average rate of growth strongly and positively affect the rate of inflow of FDI. The level of schooling for skilled workers is highly significant as an important determinant of FDI. The degree of openness, as a proxy for the willingness of a country to accept foreign investment, is also highly significant. As an indicator of macroeconomic stability, inflation reflects a negative correlation in the larger sample, but appears insignificant in the smaller sample, as a risk variable. In their model, they also use a DOW JONES indicator, which relates to source countries' direct investment. They indicate that capital market growth in developed countries is a strong determinant of the outflows of these investments. Recently, Kinda (2009) examine physical infrastructure, financial development and FDI. The author uses data from enterprise surveys in 77 developing countries conducted by the World Bank during 2000-2006. The explanatory variables are physical and financial infrastructures in transport, internet, electricity, and constraints of access for financing projects. Additionally, this model includes certain control variables, such as institutional problems, skilled workers, firms' age and size. The result indicates that physical and financial infrastructure and institutional problems discourage FDI.

In a group of transitional economies, Garibaldi et al (2001) using a dynamic panel of 26 transitioning economies between 1990 and 1999, analyze a large set of variables that are divided into macroeconomic factors, structural reforms, institutional and legal frameworks, initial conditions, and risk analyses. Their results indicate that macroeconomic variables, such as market size, fiscal deficit, inflation and exchange regime, risk analysis, economic reforms, trade openness, availability of natural resources, barriers to investment and bureaucracy, all have anticipated correlations that are significant. Similarly, Campos and Kinoshita (2003) use panel data to analyze 25 transitioning economies between 1990 and

1998. They reach the conclusion that economy clusters, market size, a low cost of labor and abundant natural resources influenced FDI. In addition to all these factors, the following variables presented significant results: sound institutions, trade openness and lower restrictions on FDI inflows.

In a grouping of regions, with a sample of 71 developing countries (half of them are in Sub-Saharan African (SSA)), Asiedu (2002) examine whether there are different FDI determinants between SSA and non-SSA countries (Asia, Latin-America, and other African countries that are not located in SSA). The period of analysis is from 1988 to 1997. The econometric model includes a dependent variable, FDI, and eight independent variables: return on investment, infrastructure development, openness, political risk, and financial depth, size of government, economic stability, and attractiveness of the market. From his findings, the author states that SSA countries receive less FDI than others by virtue of their geographical location. SSA countries are not affected by open policy, since their openness to trade increases FDI to both SSA and non-SSA countries. Furthermore, it is of importance that FDI elicited no higher return on capital and infrastructure development than occurred in non-SSA countries, while these factors positively correlate with FDI inflow to SSA countries. Continuing on the same regional topic, Twimukye (2006) develops a panel data model using annual data from 1990 to 2003 for 45 African countries. Twice he applied least square methods with and without the population size included to estimate FDI in Africa. Results of his generalized least squares without including a population variable, demonstrated that gross domestic product, literacy rates, and exchange rates are positively correlated influencers of FDI. The remoteness and inflation rates are negative indicators as was expected. Results including population variables confirm that paved roads do not have a significant correlated relationship with FDI in Africa, while openness and population are positive as was expected. As the previous researchers, Bartels et al. (2009) also find that the quality of infrastructure is one of obstacles identified in attracting FDI. The authors take a survey with 758 foreign investors and find that the quality of infrastructure, economic stability, and transparency of investment climate influence FDI inflows into SSA. However, the findings reaffirm that low labor cost and skilled labor are not relevant factors for MNEs' location decisions.

Different situations generate different FDI determinants. While these researchers mention infrastructure, remoteness, and openness, for instance in Africa, other scholars discuss macroeconomic reforms in East European countries. Gentvilaitė (2010) applied a cross-sectional, fixed effects panel regression analysis to test FDI determinants inflow levels for 10 Central and Eastern European countries regarding their macroeconomic perspective. The author finds that high R&D expenditures, high share of private sector, high share of trade in GDP and a well-functioning infrastructure attract higher levels of foreign direct investment, while GDP and cost of labor effect are yet to be determined. Marginally, Botrić and Škuflić (2006) highlight the relationship between privatization and FDI in Southeast European countries. They find that privatization, trade regime, and density of infrastructure are robust under different specifications, while market variables such as GDP, GDP per capita, GDP growth, population results in asymmetric findings. Interestingly, instead of testing determinants of FDI, Vadlamannati, Tamazian, and Irala (2009) identify and examine determinants of barriers to FDI in South East Asian economies. The potential barriers are categorized into four groups, namely macroeconomic policy factors, political factors, institutional factors and socioeconomic factors. They use cross-sectional time-series data for 17 South East Asian economies from 1996 to 2005. The authors find that poor socioeconomic conditions and labor-related issues are major determinants. Labor-related issues consist of both labor unionism and labor regulation reforms. The potential macroeconomic risk index is insignificant, while institutional factors expose a mixed result.

Instead of concentrating on investigating attractive host country factors, some authors isolate interactive effects between home and host country on FDI flow; therefore, these researchers scrutinize determinants of FDI in mutual gravity terms (more details in Chapter 4). Based on the concept that FDI is impacted by home and host country characteristics, Frenkel, Funke, and Stadtmann (2004) expand a theoretical model for gravity-like forces first developed by Brainard (1993; , 1997). These authors observe movements from the five largest industrialized countries, G-5 (USA, Japan, Germany, the United Kingdom, and France) to 22 emerging economies in Asia, Latin America, and Central and Eastern Europe for the period 1992 – 2000. A panel approach is used to analyze a compiled data set of bilateral FDI flows. From these results, they determine that distance plays a significant role, and that GDP growth rates and extent of risk are additionally important factors. Inflation and

type of exchange rate systems used are less significant in determining FDI flows (more details later in Chapter 4). By focusing on testing labor costs in Central and Eastern European countries, Bellak, Leibrecht, and Riedl apply a panel gravity model approach to test the impact of market-related and cost-related location factors on MNEs' location decision determination. The results confirm that higher labor productivity is positively correlated with FDI, while higher unit labor costs and higher total labor costs impact negatively on FDI.

From another point of view regarding FDI relationships, Tsai (1991) addresses an endogenous problem between FDI and growth by developing a system of simultaneous equations for the 1970s and 1980s. FDI is alternately measured as a flow, and as a stock balance. The findings demonstrate that market-size turns out to be more important for FDI inflows than market growth. Trade surpluses confirm a negative correlation and are significant for FDI, while the flow of FDI decreases as nominal wages decrease. The author also finds that the impact of FDI on economic growth is quite limited. Likewise, Bengoa and Sanchez-Robles (2003) explore the interplay between economic freedom, FDI, and economic growth. By using panel data analysis for a sample of 18 Latin American countries for 1970–1999 and running multiple regressions, they find several factors that influence FDI inflows, including: the index of economic freedom, the level of GDP, and public investment, all correlate positively, while debt service and inflation are negatively correlated with FDI.

Table 3.3.1 is a summary of the previous empirical studies. The first column presents factors most commonly used. The second column reflects statistical results. Those are of either positive significance, or negative significance, or insignificance with FDI. Generally, most researchers agree on which FDI related characteristics provide significant correlations either way. For example, market size and growth rates are the most attractive factors leading towards increased FDI inflows. However, there are certain differences between these variables. In Genvilaitė (2010), GDP and cost of labor effects do not provide any significant correlations with FDI. The author explains that this problem might be caused by a high correlation between labor costs and GDP. Nunnenkamp (2002) reports, “correlations with GDP growth do not reveal a clear trend, irrespective of how FDI flows are measured” (p.31). Adam and Filippaios (2007) find that the coefficient of wages is negative, but statistically significant. For these authors, it mirrors efficiency-seeking motives for FDI formation. In

Twimukye's (2006) research, infrastructure (paved road) and political stability variables are negative and statistically insignificant.

Table 3.3.1: Summary of certain observed factors used in selected empirical studies

Determinants of FDI	Statistical Significance		
	Positive	Negative	Insignificance
Market Size	Schneider and Frey, 1985 Tsai, 1994 Singh and Jun, 1995 Ioannatos, 2001 Chakrabarti, 2001 Nunnenkamp and Spatz, 2002 Campos and Kinoshita, 2003 Moosa and Cardak, 2006 Adam and Filippaios, 2007 Kolstal and Villanger, 2008		Gentvilaitė (2010)
Growth Rates	Schneider and Frey, 1985 Tsai, 1994 Nonnemberg, 2002 Bengoa and Sanchez-Robles, 2003 Twimukye, 2006 Moosa and Cardak, 2006		Nunnenkamp and Spatz, 2002
Openness	Singh and Jun, 1995 Ioannatos, 2001 Nonnemberg, 2002 Campos and Kinoshita, 2003 Bengoa and Sanchez-Robles, 2003 Twimukye, 2006 Moosa and Cardak, 2006 Gentvilaitė (2010)		
Infrastructure	Moosa and Cardak, 2006 Botric' and Škuflic', 2006 Kinda, 2010 Gentvilaitė, 2010		Twimukye, 2006
Labor Skills & Education	Schneider and Frey, 1985 Ioannatos, 2001 Nonnemberg, 2002 Nunnenkamp and Spatz, 2002 Twimukye, 2006 Moosa and Cardak, 2006 Vadlamannati et al., 2009		
Cost of Labor	Singh and Jun, 1995 Ioannatos, 2001 Nunnenkamp and Spatz, 2002 Campos and Kinoshita, 2003 Bellak et al., 2008 Vadlamannati et al., 2009	Adam and Filippaios, 2007	Gentvilaitė, 2010
Remoteness		Ioannatos, 2001 Asiedu, 2002 Twimukye, 2006	

Determinants of FDI	Statistical Significance		
	Positive	Negative	Insignificance
Country Risk		Ioannatos, 2001 Nonnemberg, 2002 Nunnenkamp / Spatz, 2002 Twimukye, 2006 Moosa and Cardak, 2006 Adam and Filippaios, 2007	
Political Stability	Schneider and Frey, 1985 Singh and Jun, 1995 Ioannatos, 2001 Busse and Hefeker, 2007 Vadlamannati et al., 2009 Kinda, 2010		Twimukye, 2006
Public Investment	Bengoa and Sanchez-Robles, 2003		

3.3.2. Evidence from country cases

With FDI becoming an emerging phenomenon, there have been a variety of empirical studies focused on FDI determinants in a range of countries, especially in developing countries, from a macroeconomic perspective. Each country has its own history, comparative advantages, geographic location, and especially incentive policies towards FDI formation; therefore, FDI inflows in one country could be different in comparison with other countries, even between two neighboring countries. For that reason, evidence obtained from individual country case studies needs to examine separately from group country research evidence. In this section, selected developing country cases that focus on the attractiveness of a particular host country to foreign investors are presented. These cases are selected from Sub-Saharan, South Africa, West Africa, Caribbean and Latin America, China, Thailand, Pakistan, Malaysia, and Vietnam.

3.3.2.1. Africa

Although Africa has generally received less FDI than Asia or South America, FDI still flows to Africa. A number of researchers are attempting to identify factors that determine FDI inflows there. Bende-Nabende (2002) provides an empirical assessment of factors that significantly influence decision making processes for long run investments in Sub-Saharan Africa (SSA). The empirical evidence based on a co-integration analysis of 19 countries suggests that the most dominant long run FDI determinants in SSA are market growth,

export orientation policy, and FDI liberalization. These are followed by real exchange rates and market size. At the end of this list is openness. However, because of data limitations, no definite conclusion could be drawn from the results for real wage rates or human capital. As a part of Sub Sahara Africa, Udo and Obiora (2006) use annual data from 1980 to 2002 to test for FDI determinants in five countries (Nigeria, Sierra Leone, Ghana, the Gambia, and Guinea). These five countries are grouped together and referred to as the ‘West African Monetary Zone’ (WAMZ) countries. Their results demonstrate that FDI has a positive correlation with public investment, a negative correlation with macroeconomic instability and external debt service, and no significant relationship with their growth rates, or to the high cost of domestic capital.

In the case of South Africa, Fedderke and Romm (2006) inspect determinants of FDI. The authors use a vector error correction model technique (VECM) to analyze annual time series data from 1960 to 2002. They conclude that FDI is dominated by horizontal rather than vertical investment in South Africa. FDI has a positive correlation with market size, and openness of their economy, and a negative correlation with corporate taxes, and wage costs. They also identified opposite influences on FDI from imports and exports, being that ‘increased imports lower FDI, and increased exports raise FDI’. With political institutional factors, they recognized that ‘both improved property rights’, as well as ‘improved political stability’ serve to raise the attractiveness of South Africa as a destination of foreign investment’.

3.3.2.2. *Caribbean and Latin America*

This region is found to be fairly dynamic compared to Asia in terms of economic growth and FDI attractiveness. When applying a multivariate regression model, testing the effects of political and economic determinants, Tuman and Emmert (1999) set out to explain variations in Japanese FDI in Latin America between 1979 and 1992. Their analysis focuses on twelve countries: Argentina, Brasil, Chile, Colombia, Costa Rica, El Salvador, Honduras, Mexico, Paraguay, Peru, Uruguay, and Venezuela. Their findings suggest that potential market size, adjustment policies, and political instability have influenced the behavior of Japanese firms in the region; while the exchange rates and skilled workforces do not play a significant role in Latin America. While Tuman and Emmert (*ibid*) turn their attention to Japanese FDI, Lall,

Norman, and Featherstone (2003) evaluate two groups of economic and structural/ location variables associated with U.S. short and long-run FDI in the Caribbean area over the 1983–1994 period. In the long-run, monetary policy, exchange rates, market size, square of GDP, growth rate differentials, cost differentials, fiscal policy, education, physical infrastructure, and distance are positively related to FDI in the Caribbean, whilst market size, square of GDP, growth rate differential, physical infrastructure, political right, and distance are statistically significant in Latin America. In the short run, monetary policy, exchange rates, market size, cost differentials, education, physical infrastructure, and distance determine FDI inflows into the Caribbean. In their Latin American model, market size compared with GDP, square of GDP, and growth rate differentials, physical infrastructure, and political rights are significant in both economic and structural/location related groups. Differing from previous researchers' findings, Nunes, Oscategui, and Peschiera (2006) do not apply factors such as political stability, judiciary, and finance to test determinants of FDI in 15 Latin American countries during 1991-1998. These authors focus primarily on macroeconomic policy, privatization, and a country's absorptive capacity. Beside those factors under control of a country's government, such as inflation, openness, market size, and a country's capacity to absorb FDI, capital maintains a significant relationship with FDI, while privatization is confirmed as being an insignificant factor. Lately, Fukumi and Nishijima want to investigate the interaction between FDI and institutional quality in 19 countries in Latin America and the Caribbean. The authors find positive correlating effects of institutional quality and trade openness on FDI, while macroeconomic instability and host country's market power possess insignificant effects.

3.3.2.2. Asia

Since the 1990s, China has occupied top FDI ranking for individual country attractiveness. China enjoys many competitive advantages where other countries could not compete, such as the World's largest market and its fastest growing economy. Studying FDI in China yields important findings. Dess, Gupta, Hennart, and Hill (1995) address such questions as "...why had China become one of the largest recipients of FDI in the world?"; "what were the most important determinants of FDI in China?". To obtain answers to these questions, these authors conduct empirical work, which covers 11 source countries: Hong

Kong, Taiwan, United States, Japan, Singapore, South Korea, Thailand, United Kingdom, France, Canada, and Italy in the period from 1983 to 1995. These authors are cognizant of the fact that GDP levels have a significant positive effect on the accumulated stock and flow of inward investments. Other positive factors are trade relationships between the home countries and China, and degree of innovation that pull FDI inflows inward. To the contrary, the effect of the real exchange rate is negative as anticipated, as the Chinese government controls their currency's exchange rate. In addition, real wages yield a negative correlation coefficient. The Tiananmen Square incident is included in their testing, and their result reflects that this event had a negative significant impact on FDI's inflow into China, but only in the short-term. As a summary of scholarly research on FDI in China over 30 years, Fetscherin, Voss, and Gugler (2010) examine 422 journal articles published between 1979 and 2008. FDI inflows into China can be explained by applying internalization theory, an eclectic paradigm, and various macroeconomic analysis techniques. Besides, regulatory changes and reforms have improved China's location specific advantages. Establishments of special economic zones, local-bound endowments, development of both infrastructure and industry bases are positive determinants. In addition, economic development and prosperity, levels of education, wage costs, institutional environment and support in Chinese provinces are important factors in attracting FDI. In the case of Thailand, Chandprapalert (2000) uses primary data based on survey results. The scope of this study covers U.S. firms operating in Thailand. The author obtains 100 usable responses out of 360 questionnaires. His integrated model is based on Dunning's eclectic paradigm and Behrman's (1972) strategic motivation model. The factors included are firm size, firm's multinational experience, market potential, host government policy, investment risk, resource seeking, and market seeking behaviors. The results confirm that FDI possesses strong positive relationships with market potential, resource seeking and market seeking behavior; and strong negative relationships with investment risk; and is not statistically significant with firm size, and firm's multinational experience. In the same purpose of identifying FDI determinants, Brahmairene and Jiranyakul (2002) find that neither low cost of labor nor foreign exchange rate nor inflation, but domestic income influences FDI in Thailand from 1973 to 2000. In an empirical investigation of FDI determinants in Pakistan, Shah and Ahmed (2003) use time-series data for the period 1960-1961 to 1999-2000. Their results suggest that cost is effective in

determining FDI flows into Pakistan. The governmental role in providing infrastructure has positive effects on inward FDI, as well. An increase in tariffs encourages more investment to produce locally to avoid import tariff expense. Their market size coefficient reveals a highly positive correlation. This reflects that an increase in per capita income leads to further country investments. Finally, a political indicator (binary) variable also confirms a highly significant and positive correlation as well. It indicates that a democratic regime is more likely to attract FDI, as investors considered it the most favorable factor for their corporate goals. Recently, Malaysia has been recognized as a country of sustainable economic growth. Ang (2007) uses annual time series data for the period 1960–2005 to examine the determinants of FDI in Malaysia. Following the two-stage least squares method (2SLS) of Bewley (1979), by using the first lags of the variables as instruments for current differentiated terms to account for specific problems of endogeneity bias, results indicate that FDI is attracted to Malaysia through higher financial development, real GDP, growth rate of GDP, infrastructure development, and trade openness. On the other hand, a higher statutory corporate tax rate and appreciation of the real exchange rates appeared to discourage FDI inflows. The author finds that higher macroeconomic uncertainty induces more FDI inflows in this Malaysian case. By providing a comprehensive empirical comparison analysis, Zheng (2009) identifies determinants of FDI in China and India. The variables applied reflect both home and host countries' characteristics. The author uses a national level panel data set, covering 28 home countries and regions in the period 1984 – 2002 for China, and 15 home countries in the period 1991 – 2002 for India. The findings confirm that market growth, imports, labor costs, and country political risk/ policy liberalization are FDI inflow determinants into these two countries. However, there is a marginal difference. While exports, market size, and borrowing costs are important to China's FDI, geographical and cultural distance re significant to India's FDI.

In regard to FDI in Vietnam, most researchers discuss FDI based on national and regional determinants. In terms of national determinants, Nguyen and Haughton (2002) develop a model for 16 Asian countries from 1991-1999 and state that the openness, real exchange rates, government budget deficits, and domestic savings are important factors in attracting FDI. Hafiz and Giround (2004) do a survey of subsidiaries of transnational corporations (TNC) in ASEAN countries, and recognize that political stability, government policies, size

of the local markets and quality of the labor forces are strong factors in attracting FDI into the area. Hsieh (2005) analyze FDI inflow determinants in Southeast Asian transitioning economies, including Cambodia, Laos, Myanmar and Vietnam from 1990 to 2003. The results indicate that the most important determinants are GDP per capita, and the degree of openness. Parker et al (2005) prove that the effect of the US-Vietnam Bilateral Trade Agreement (BTA) on FDI inflows for clothing, furniture and fisheries is positive. For regional determinants, Nguyen (2002) use cross-provinces of Vietnam data for 2000. The author states that the regional factors that determine FDI are provincial GDP, human capital, GDP per capita, and number of industrial zones. For the same purpose, Pham (2002) finds that local markets, wage rates, labor forces, infrastructure and incentive government policies are important factors as well. In their relationship between economic growth and FDI, Nguyen (2006) confirms there to be a that positive and statistical significance between economic growth and FDI, and vice versa. Moreover, their results suggest that FDI complements domestic investment. Similarly, Nguyen and Nguyen (2007) also examine the impact of location choice on FDI, and the impact of FDI on the Vietnamese economy. The results indicate that markets, labor, and infrastructure are determining factors in attracting FDI. From this author's detailed literature review, as most current and previous researchers are involved in Asian countries, an empirical research for FDI inflows for Vietnam in particular has not been studied yet.

Determinants of FDI inflows into a specific country are not significantly differentiated from theoretical explanations and collective empirical research findings. GDP, growth rate of GDP, cost of labor, political stability are among the most normative attraction factors associated with FDI variances. However, different countries possess varying attraction factors and obstacles. For instance, Africa attracts FDI due to its rich natural resources; FDI is attracted to Asia because of its significant potential markets, while institutional policies influence FDI flows into Latin-Caribbean countries. A summary of empirical factors applied to country case studies is presented in Table 3.3.2. A plus (+) sign reflects positive statistical significance while the minus (-) reflects negative statistical significance or correlation with that variable. NS signifies no significance. Factors are divided into four groups of market conditions, cost of production, business condition, and government policy. These four perspectives represent a foundation for the model developed in Chapter 5.

Table 3.3.2: Summary of empirical factors applied in country case studies

FACTORS	<i>Nabende, 2002</i>	<i>Fedderke and Romm, 2005</i>	<i>Udo and Obiora, 2006</i>	<i>Lall et al., 2003</i>	<i>Fukumi et al., 2010</i>	<i>Chandrapalert, 2000</i>	<i>Shah and Ahmeh, 2003</i>	<i>Ang, 2007</i>	<i>Zheng, 2009</i>	<i>Fetscherin et al., 2010</i>	<i>Vietnam case studies</i>
<i>Market and Trade</i>											
Market size GDP per capita	+	+		+	+	+	+	+	+	+	+
Economic Growth	+		ns	+				+	+	+	
Openness/ Trade	+	+		ns	+			+	+		+
Balance of Payments			-	-							-
<i>Cost of Production</i>											
Infrastructure				+			+	+		+	+
Labor Skills/ Human Capital				+						+	
Resources for Extractive FDI						+					
Cost of Labor		-							+	-	+
Production Efficiency											
Cost of Domestic Capital			ns		+						
Exchange Rates	+			ns				-			+
<i>Business Conditions</i>											
Share of R&D Spending in GDP										+	
Industrial Zones										+	+
Remoteness				-					-		
<i>Government Policies</i>											
Country Risk/ Inflation					-	-					
Political Stability		+	+					-	+	+	+
Tax Policy		-					+	-			
Multi/Bilateral											+
Liberalization	+	+									
Political Regime/ Right				ns/+			+				
Domestic Savings											+
Incentive/ Institutional Policies					+					+	+
Public Investment/ Support			+							+	

3.3.2. Gaps in the literature

The above literature in the Section 3.3 has provided evidence concerning FDI determinants. Through this review, specific voids in FDI literature are identified. Previous research focused predominately on host country attraction factor, although FDI is found to result from an interaction of multiple effects. In fact, few researchers examined both home and host countries' collateral effects. Additionally, the literature examined pinpoints the existence of comparative advantage as an integral factor in examining determinates relating to FDI; however, there is no empirical research recognizing comparative advantage factors concerning FDI determinants. In this part, the UNCTAD method is introduced as a professional method for assessing countries FDI potential and performance; though, there is no known research available for testing it. In respect to FDI in Vietnam, most studies involved research about FDI in specific Vietnamese regions; therefore, there is no research for the whole of united FDI Vietnam in particular. All these voids are taken into account in empirical researches presented later in subsequent chapters.

3.4. Research conceptual framework

By studying the above theories, we understand that the macroeconomic drivers that influence FDI flows can be categorized in four major groups: market and trade conditions, costs of production, local business conditions, and government policies. Additionally, the empirical works have provided evidence concerning FDI determinants that are authentically based on these theories. As mentioned earlier, FDI should be understood as a comprehensive perspective, which combines multiform dimensions. Thus, these four driving forces rest as a foundation of this research's conceptual framework.

Furthermore, through this review, specific voids in FDI literature are identified.

Firstly, the literature demonstrated that FDI emanated from two driving forces: push factors from source countries and pull factors from investment destination countries. This evidently required a model which coalesces and synthesizes both push and pull drivers coterminously. In fact, some research has mentioned this argument previously; however, most existing research has focused on FDI determinant inflows instead of FDI initiating

sources. This gap is taken into account in an empirical research that applies the Gravity Model approach to observed factors that push and pull FDI initiation discussed in Chapter 4.

Secondly, previous research focused predominately on host country attraction factors, although FDI is found to result from an interaction of multiple, bilateral effects. In fact, few researchers examined both home and host countries' collateral effects. Additionally, the literature examined pinpoints the existence of comparative advantage as an integral factor in examining determinates relating to FDI; however, there is no empirical research recognizing comparative advantage factors concerning FDI determinants. In this part, the UNCTAD method is introduced as a professional method for assessing countries FDI potential and performance; though, there is no known research available for testing it. This void is filled by an empirical study which identifies determinants of FDI establishment under comparative advantage constraint in Chapter 5.

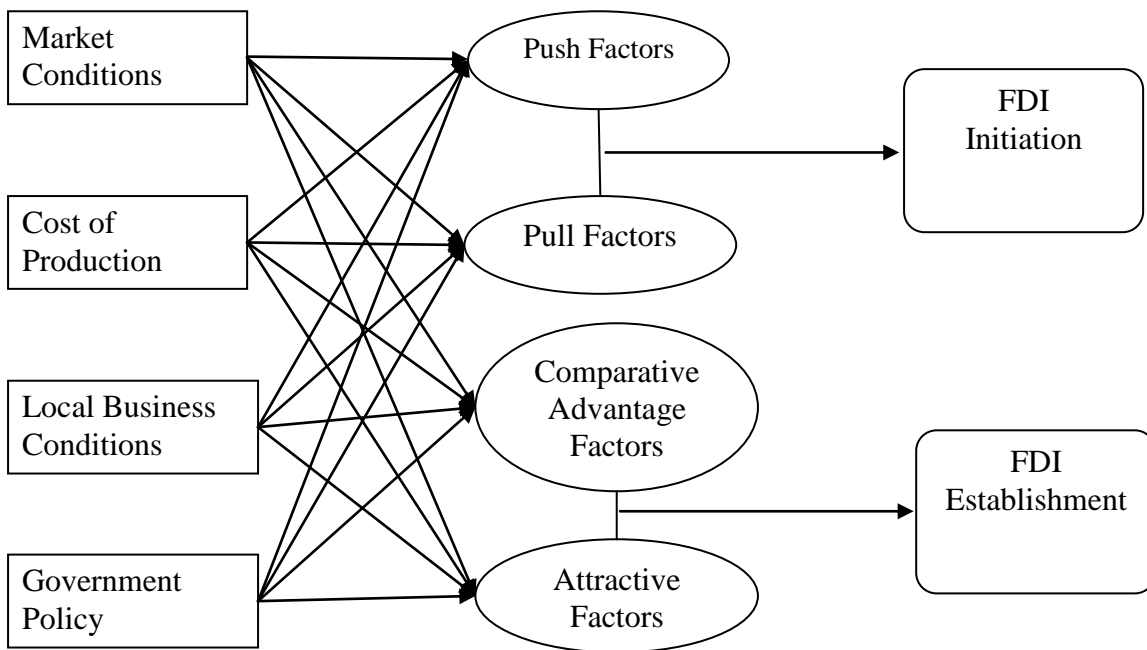
In response to the above indicated theoretical gaps, my basic conceptual framework is amended to lead and direct specific empirical research in filling these voids. Figure 3.4 describes four groups of market conditions, cost of production, local business conditions, and government policy forming an elementary foundation. Subsequently, each group contains factors that particularly convey nominated variables to specifically related empirical research. Different variables are applied to various model-building approaches to coincide with different research purposes.

To fill the first gap, this research adopts the Gravity Model's approach, which observes influences of push and pull factors on FDI initiation. Basic variables relate to the size of both home and host countries' economies, and physical distances between each country pair. Push factors enclose a home country's characteristics, such as its growth rate of GDP ($gGDP_i$), wages ($WAGES_i$), R&D (RD_i), and risk ($RISK_i$). Similarly, related pull factors include a host country's characteristics, such as its growth rate of GDP ($gGDP_j$), wages ($WAGES_j$), infrastructure (TEL_j), tertiary students in its population (TER_j), risk ($RISK_j$), and its state investment outlays (SIO_j).

To fill the second gap, this research employs a differences model approach, which is used to identify determinants of FDI establishment under comparative advantages between

country pairings. Variables applied are differentials in GDP (GDP_{ij})¹⁸, wages ($WAGES_{ij}$), distance ($DIST_{ij}$), R&D (RD_{ij}), and risk ($RISK_{ij}$) between home and host countries. In addition, most variables use in the UNCTAD method, such as GDP per capita (GDP_{cj}), telephone lines (TEL_j), mobile phones (MB_j), commercial energy use per capita (ENG_j), tertiary ($TERS_j$), world market share of natural resource exports ($EXPNS_j$), share of world FDI inward stocks ($FDIS_j$), share of exports in GDP ($EXPS_j$), and world market share of export of services ($EXPSER_j$). These are applied to test factors influencing FDI inflows under the aspect of host countries' attractiveness as well as to test the suitability of UNCTAD's methodology.

Figure 3.4: Research's conceptual framework



¹⁸ We modify UNCTAD variables by making differential values of variables which are representative of the four dimensions. $GDP_{ij} = GDP_i - GDP_j$ (minus). It is similar for $WAGES_{ij}$, RD_{ij} , $RISK_{ij}$

3.5. Conclusion

The purpose of this chapter is to review FDI literature to understand why FDI occurs (FDI initiation), what factors drive FDI inflow (FDI establishment), methodologies used in empirical research, as well as to pinpoint gaps in the literature. The author's literature review examines both theoretical and the empirical factions. Figure 3.5 charts this chapter's framework of reviewed literature.

FDI theory explains why and how FDI occurs. Widely accepted theories hinge on two fundamental economic and political sets of factors; economic perspectives, such as market conditions (industrial organization), comparative advantage, transaction cost (internalization theory), innovation/ technology (internationalization/ product cycle theory), and financial concerns (financial-oriented theory), and the central political perspective of government policies. Importantly, empirical evidence confirms that most significant FDI determinant factors are based on existing political and economic theories, appropriately adapted to specific countries and situations involved. From both theories and empirical evidence, we gain knowledge that there is a mutual interaction between host and home countries. FDI originates in one country and is driven to another country by push and pull factors; then, it is established in a particular destination country due to interactions between host and home countries' characteristics. FDI literature demonstrates that both phases of FDI life are directed under exact conditions that can be categorized and grouped into four dimensions: market conditions (demand new market vs. growing market), cost conditions (reduce cost vs. cheap cost), business conditions (competition vs. liberalization), and government policies (supportive vs. incentive policies). These four dimensions form a foundation for research's conceptual framework, which is developed further in the subsequent empirical Chapters 4 and 5.

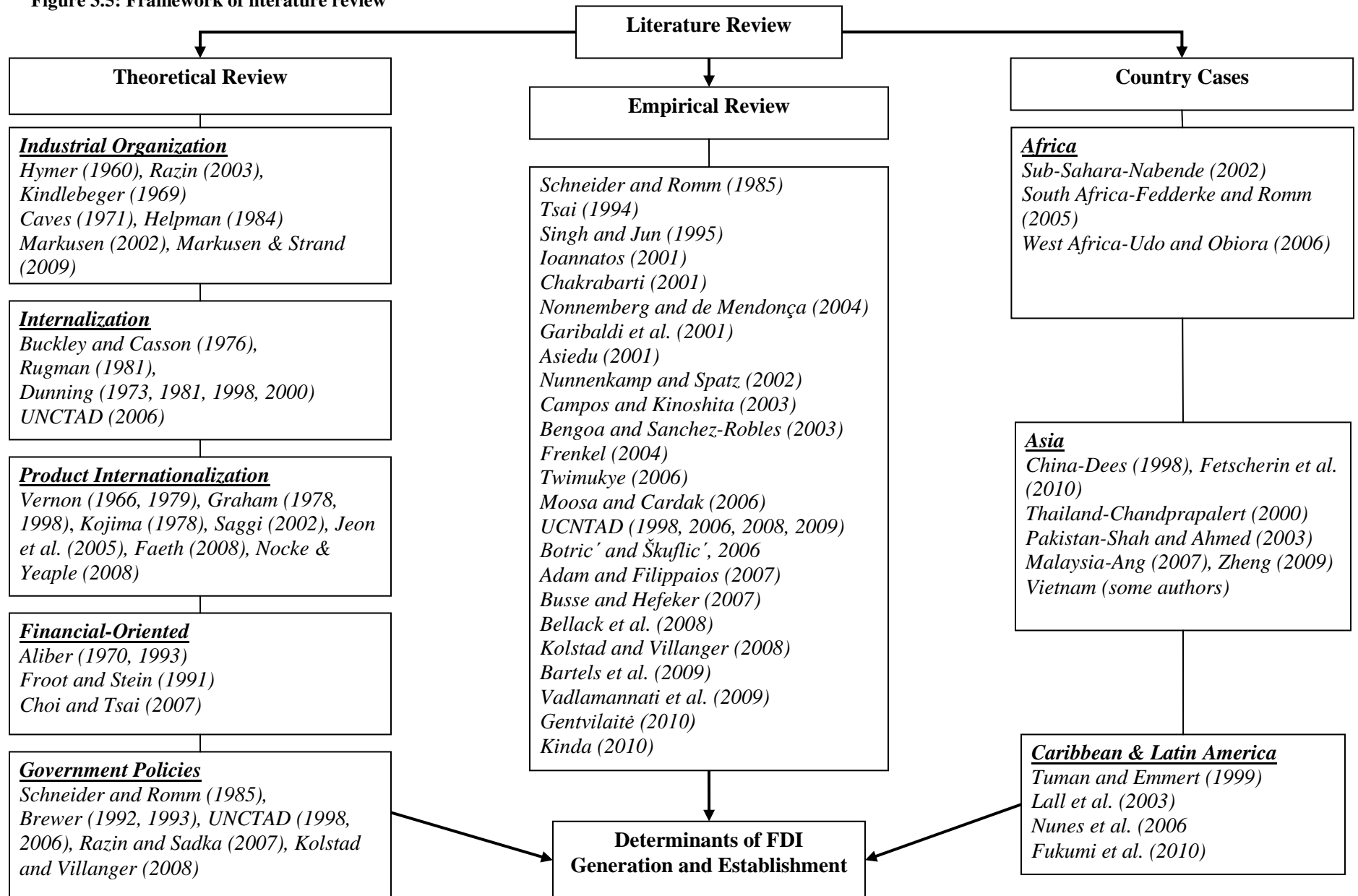
By reviewing literature, certain research voids are identified. Because the literature describes FDI as an interaction effect between home and host countries; consequently, FDI initiation should be understood as mutually gravitating forces, initially unbalanced and not in a state of equilibrium. However, there are unknown research studies directed at the examination of FDI initiation from a perspective of push and pull forces. This void profoundly leads FDI research into applying a gravity approach methodology (Chapter 4). In respect to FDI establishment, UNCTAD (2001) declares that host countries must fully

comprehend their comparative advantages in order to optimally attract high quality FDI. To date, there is no current research that identifies FDI determinants based on the comparative advantage approach. Moreover, there is no known current research that tests the suitability of UNCTAD's method for ranking all UN countries in terms of FDI attractiveness levels. To fill this void, this research continues with further analysis of comparative advantages' unique and unexplored role as an absorptive factor in FDI research (Chapter 5). Additionally, as FDI is increasingly flowing into Vietnam, no discrete FDI study in Vietnam has as yet been conducted. As mentioned in Chapter 2, there are specific academic grounds, mainly a lack of countrywide prior research, for examining FDI in Vietnam at this time.

Additionally, the literature reviewed also provides methodologies for collecting data and analyzing data. Most previous researchers build econometric models based on macroeconomic panel data (e.g. (Bellak, Leibrecht, & Riedl; Nonnemberg & Mendonça, 2004) and apply multiple regression to analyze data. Specific techniques, such as OLS (Shah & Ahmed, 2003; Singh & Jun, 1995), GLS (Lall, Norman, & Featherstone, 2003; Twimukye, 2006); gravity approach (Bellak, Leibrecht, & Riedl; Frenkel, Funke, & Stadtmann, 2004); differential approach (Hogenbirk, 2002) are adopted as charted in detail in Table A3.1.

In general, FDI is a product of demand and supply, or supply and demand, depending on each economist's preference for either a demand or supply side primary transaction causality. On the side of investor, source, or home country that seeks a new market, or reduced transaction costs, for instance, to improve its firm's profitability through expanding its revenues, lowering its costs, or a combination of the two. These demands can be supplied from a potential growth market and/ or low costs of production in another country (destination country). The other side of recipient or host country that seeks additional capital to underwrite new projects and advanced technology to improve its international competitive advantages for national development and economic security, which foreign investors can supply. It is clear that both investor and recipient countries may potentially benefit from FDI. Increased FDI may also result from exploiting comparative advantages in production, technological levels, managerial skills, and financial ability between both parties. Obviously, FDI forms a mutual relation between demander – supplier, investor – recipient, and home country – host country. Understanding FDI involves knowledge of these interacting effects.

Figure 3.5: Framework of literature review



Appendices

Table A3.1: Related discussion

Author(s), Title, Year	Methodology	Aims	Sample
Some new evidence on determinants of FDI in developing countries Harinder Singh and Kwang W. Jun <i>The World Bank International Economics Department International Finance Division, 1995</i>	A pooled model, estimated with ordinary least squares, based on Leamer's (1985) approach. The time series portion of the data captures intra country variation	The analysis focuses on attempting to explain variations of FDI flows over time and across countries: types of sociopolitical instability, the business operating conditions, the type of exports	The analysis covers 1970-93 for thirty one countries
FDI in China: determinants and effects Stéphane Dees © 1998 <i>Kluwer Academic</i>	Running a regression with both stationary and non-stationary variables, estimate equation in an error correction model	This paper attempts to assess the determinants of Foreign Direct Investment (FDI) in China and its effects on the whole economy	The empirical work is based on a panel data. The flows coming from 11 countries in the period 1983 – 1995
Explaining Japanese FDI in Latin America Tuman & Emmert <i>Social science quarterly, 1999</i>	Multivariate regression model is used. The effects of the independent variables are estimated using ordinary least squares (OLS) with panel corrected standard errors	This study seeks to explain the variation in Japanese in Latin America	Data set includes observations from 12 countries received at least \$10 million of Japanese FDI for a 14-year period, 1979-1992
The determinants of U.S direct investment in Thailand: A survey on managerial perspectives Adisak Chandpralert <i>Multinational business review/ Fall 2000</i>	Simple and multiple regressions, SPSS version 9.0	This research study explored the motives and determinants of FDI and MNEs activity in Thailand.	This study used a 7 point a Linkert scale survey instruments were mailed to top executives of US firms in Thailand. A total of 100 companies' responses

Author(s), Title, Year	Methodology	Aims	Sample
<p>The determinants of FDI: Sensitivity analyses of cross-country regression Avik Chakrabarti <i>Kyklos</i>, vol.54 – 2001</p>	<p>Use a variant of Leamer’s (1983, 1985) Extreme Bound Analysis (EBA)</p>	<p>It systematically evaluates the robustness of the partial correlation between the level of FDI and a wide assortment of economic indicators</p>	<p>135 countries for the year 1994</p>
<p>Determinants of inward FDI: The case of the Netherlands Anne Elisabeth Hogenbirk <i>PhD, dissertation 2002</i></p>	<p>Generally used to evaluate these hypotheses are multivariate regressions. This present study, particular attention is therefore paid to the differentials in cost factors between the home country and the Netherlands</p>	<p>The study finds out the determinants of FDI in a single developed country in aspect of macroeconomic.</p>	<p>The data are pooled time-series, cross-section observations of foreign direct investment flows in the Netherlands from 28 home countries during 1987-1999.</p>
<p>Determinants of US direct foreign investment in the Caribbean Pooran Lall, David w. Norman and Allen M. Featherstone <i>Applied Economics</i>, 2003, 35, 1485–1496</p>	<p>The estimation procedure used was generalized least squares, which enabled adjustments to be made for the effect of heteroscedasticity, by weighting each variable by the standard deviation of the error as suggested by Ramanattan (1989)</p>	<p>The objective of this paper is to determine the factors influencing US. FDI in the Caribbean in short- and long-run, and determine the differential impact of these factors on FDI in the Caribbean and Latin America.</p>	<p>These included eight Caribbean countries and 14 Latin American countries in 1983–1994 period</p>
<p>The determinants of FDI in Pakistan: An empirical investigation Zahir Shah and Qazi Masood Ahmed <i>The Pakistan Development Review</i> 42: 4 Part II (Winter 2003) pp. 697–714</p>	<p>The regression, OLS estimation and the Co-Integration, using Johansen-Juselius (1990) technique</p>	<p>This paper not only studies on the determinants of FDI but also focuses more to the public policies and their impacts on the inward FDI flows in Pakistan</p>	<p>Time-Series data for the period from 1960-61 to 1999-00</p>

Author(s), Title, Year	Methodology	Aims	Sample
<p>The determinants of FDI in developing countries Marcelo Braga Nonnemberg Mario Jorge Cardoso de Mendonça <i>ANPEC - Brazilian Association of Graduate Programs in Economics, 2004</i></p>	<p>Panel data regression, OLS with pooled data; and the RHO statistic and the Breusch-Pagan test revealed the importance of the individual component</p>	<p>The objective of this study is to shed light on the determinants of FDI in developing countries</p>	<p>A econometric model based in panel data analysis for 38 developing countries for the 1975-2000 period</p>
<p>Determinants of FDI and economic growth in the West African monetary zone: A system equations approach Eli A. Udo and Isitua K. Obiora <i>University of Ibadan, 2006</i></p>	<p>Using a simultaneous-equations method on a panel. The behavioral relationships of the model were estimated using Weighted Two Stage Least Squares (WTLS) estimation technique, and another estimation technique - the General Method of Moments (GMM)</p>	<p>This study specifically analyzes the candidate determinants of FDI in the West African Monetary Zone (WAMZ) and investigating the cause-effect relationship between FDI and growth</p>	<p>05 countries of the West African Monetary Zone 1980 to 2002</p>
<p>An econometric analysis of determinants of FDI: A panel data study for Africa Evarist Twimukye <i>PhD dissertation, 2006</i></p>	<p>Applied the Feasible Generalized Least Squares Estimation Technique with Lagged Value of GDP</p>	<p>The objective of this study is to evaluate the determinants and regional distribution of foreign direct investment in Africa</p>	<p>Annual time series data for forty six African countries, 1990 - 2003</p>
<p>A panel analysis of bilateral FDI flows to emerging economies Michael Frenkel, Katja Funke, Georg Stadtmann <i>Economic Systems 28 (2004) 281–300</i></p>	<p>Using the Gravity Model for FDI Flows</p>	<p>The paper examines the determinants of FDI flows to emerging economies by analyzing a compiled data set of bilateral FDI flows</p>	<p>A panel analysis to annual FDI flows from each of the G-5 countries to 22 emerging markets, period 1992 – 2000</p>

Author(s), Title, Year	Methodology	Aims	Sample
Labor Costs and FDI flows into Central and Eastern European countries: A survey of the literature and empirical evidence Christian Bellak, Markus Leibrecht, Aleksandra Riedl <i>Structural Change and Economic Dynamics</i> 19 (2008) 17–37	A Panel-Gravity Model Approach	Paper analyses, determinants of Foreign Direct Investment (FDI) across selected Central and Eastern European Countries (CEECs) focusing on labor costs.	Using dataset comprises bilateral net-FDI flows between seven home and eight host countries for the period of 1995–2003
FDI in Sub-Saharan Africa: Motivating factors and policy issues Frank L. Bartels, Sadiq N. Alladina, Suman Lederer <i>Journal of African Business</i> , 10:141–162, 2009	Factor Analyses	To examine the perceptions of investors in SSA for policy insights	758 foreign investors in 10 SSA countries
Institutional quality and foreign direct investment in Latin America and the Caribbean Atsushi Fukumi and Shoji Nishijima <i>Applied Economics</i> , 2009, 1–8, <i>iFirst</i>	Using Simultaneous Equations approach	to investigate the interaction between FFDI and institutional quality	A panel analysis of 19 countries in Latin America and the Caribbean, periods from 1983 to 2000
Investment Climate and FDI in Developing Countries: Firm-Level Evidence Tidiane Kinda <i>World Development</i> Vol. 38, No. 4, pp. 498–513, 2010	Principal Component Analysis (PCA) and standardization methods to generate the aggregated indices	To assess the determinants of FDI with a focus on infrastructure, institution and human capital	Firm-level data across 77 developing countries

4. The Origin of FDI: Push – Pull Factors initiate FDI Flow

4.1. Introduction

Foreign direct investment has increased dramatically in the last two decades and is considered to be both, driven by and a driver of globalization. Since World War II research's understanding of FDI has changed remarkably, especially in developing economies. Developing economies are now fiercely competing for FDI inflows to support these countries accelerated growth and development. While companies headquartered in advanced countries were often stereotyped as investors seeking efficient and low waged foreign operations. We are now observing an increasing tendency towards FDI flows across and among developing countries. Notably, the more recent trend of emerging transnational corporations (TNCs) emanating from developing transitional economies, is attributed and related to their increased FDI growth rates. FDI establishes an investment channel with a potential to create greater momentum for South-South cooperation (UNCTAD, 2006). Moreover, South- South outsourcing via FDI is often regionally concentrated.

What factors cause FDI? Underlying all FDI transactions is the accepted fact that no country or nation, even China, India, or the United States, can claim to be entirely self sufficient or autarkic in meeting 100% of its industrial, commercial and consumer requirements in terms of both products and services. Therefore, by deductive reasoning for any state to initiate fulfilling its requirements, it must necessary cross its own borders to obtain what is not possible to be produced or serviced in their home country. Simple bilateral trading is a necessary initial step in this development process. At some point in time, individuals and concerns come to realize that their wealth of comparative advantages may produce greater profit returns, if financially underwritten and placed outside their own national borders. Once it becomes obvious to other investors that home profits can be achieved at a faster pace abroad, than at home, the “race is on” to identify any and all foreign locations where the rate of return on investments are found to be both feasible and superior.

Thus, the “laws of supply and demand” take a quantum leap forward in terms of both complexity and activity, as soon as the “Glass Ceiling” of limiting capital investments to one’s home business operations and markets is shattered.

In concise terms, an owner of certain assets (e.g., capital, advanced technology) under certain circumstances is amenable to investing them (supply) to increase profits. While a recipient (host country) has raw materials, products or service to offer in meeting these extraterritorial demands (e.g., lower cost of production) as well as demands for capital, technology and other specific requirements. These are often referred to as FDI ‘determinates’, to enhance their national economy. The source and host countries become economic agents for demand and supply forming a tense, dynamic, and even ritualistic liaison with each other, not unlike human courting behaviors in certain cultures. This pairing creates an environment poised to go into action within a certain range of conditions, or ‘determinates’. When these determinate conditions are present under mutually acceptable terms, the FDI conception process can take place; and barriers fall away and investment’s way is cleared to allow for a host country’s penetration. FDI benefits are later born after a given gestation period. Seeing their investments grow and thrive in number as with cellular mitosis, FDIs expand in number as long as country specific, comparative advantages exist that are able to deliver profits beyond transaction cost barriers. This process continues to evolve motivating home country businesses to continue investing in foreign locations; while nearly simultaneously engaging host countries with this new bond and relationship.

This is how FDI is first conceived and initiated. This paper aims at an in-depth empirical analysis of the so-called push and pull-factors preceding FDI’s conception and generation or initiation to examine which determinate factors push enterprises to invest abroad, which capacities host countries possess and have to offer, and which characteristics of both home and host country ultimately shape FDI.

Vietnam is a case in point. The country is developing rapidly and very successful in attracting FDI, not only from advanced countries, but also from other developing countries; especially from those, which are relatively proximate or mutually well connected by transport logistics. The thrust of this study is, however, that the interaction of home and host country characteristics is important in explaining FDI initiation after controlling for the (physical and cultural) distance between home and host country. We, therefore, hypothesize

the existence of a regional bias in causing FDI flows to break loose from their foreign shores, allowing emerging economies to insert themselves into breaking down the structural barriers of global-regional divisions of labor, provided the appropriate combination of FDI push and pull factors is present. As such, a gravity model of FDI, which explicitly controls for the role of (physical) distance, offers an appropriate framework for this study.

Various theories of FDI that explain FDI initiation have been put forward, often highlighting different aspects. On a more general level, industrial organization theories describe FDI as a result of an imperfect global market environment (Helpman, 1984; Hymer, 1966; J. R. Markusen & Strand, 2009). Internalization theory hypothesizes that FDI emerge because of the simultaneously presence of ownership, internalization, and locational advantages (John H. Dunning, 2001; Nocke & Yeaple, 2008; Alan M. Rugman, 1986). Product internationalization theory holds that FDI appears in the later stages of the product life cycle (Gersbach & Schmutzler, 2008; Kojima, 1978; Vernon, 1966). Such theories can easily be complemented with political explanations put forward in the literature to argue the role of supportive and incentive policies for FDI (Brewer, 1992; Gilpin, 1975; UNCTAD, 2009).

These various (and often deliberately eclectic) theories are directly calling for in-depth empirical analyses of FDI. One strand of empirical literature focuses on estimating the relative importance of different FDI determinants. Many empirical studies concentrate on attraction factors in host countries, such as GDP and GDP per capita, economic growth, openness, labor cost, infrastructure and human capital, available natural resources, political stability and country risk among others (Kinda, 2009; Schneider & Frey, 1985; Singh & Jun, 1995). However, FDI involves a flow from a source country to a recipient country. As such, what needs to be explained is the mutual effects interacting between both partner's country-specific behavior. We require a theory which combines both push (= home country) and pull (= host country) factors, which has not been fully developed yet. This setting seems to be an ideal case to study within the framework of a gravity model. In fact, the gravity model is rooted in Newton's law of universal gravitation (1687) that states that the attraction between any pair of objects is proportional to the product of their respective size and inversely proportional to the (square) of the distance separating them. These models allows for testing both, push and pull drivers of FDI, while at the same time controlling for separation factor,

usually approximated by physical distance. For example, Frenkel, Funke, and Stadtmann (2004) found that a gravity approach could indeed successfully be applied to FDI, while Hattari and Rajan (2008) reported that an augmented gravity model fit the FDI data well. However, as Homer understood, the beauty of Helen could also launch a thousand ships to the far foreign shores of Troy. Therefore, from a behavioristic standpoint, an aesthetic or luring perception of a far of host country's assets and wealth may in certain cases override the hard logic of squared distances nuanced in Newtonian physics. Savvy Freud inevitably trumps virgin Newton much of the time, when it comes to deciding on FDI ventures.

In this paper, we contribute to FDI literature by initiating an in-depth examination of the push and pull factors by means of applying gravity model for analysis. We employ a panel data set comprising FDI flows from 42 source countries that have invested in Vietnam from 1990 to 2006. We show that economic geography still matters as distance still plays a much stronger role than usually anticipated. Moreover, their results also indicate that not simply a few, single variables are required to initiate FDI interaction, but rather a more complicated series of events with multiple (observable and unobservable) variables responding in a dynamic manner to each other.

The remainder of this paper is arranged as follows. Section 4.2 provides a specific FDI literature review concerning gravitational forces. Section 4.3 presents data and its various specifications of the empirical model employed. Section 4.4 discusses the analyzed results. Section 4.5 concludes and summarizes the finding of gravity forces related to FDI's attraction behavior.

4.2. Gravity approaches to FDI: A brief review of literature and variables applied

In previously mentioned literature (Section 4.1 as well as Chapter 3), FDI is general initiated by push and pull factors in terms of markets, costs of production, local business conditions, and incentive policies. Our conceptual framework is based on these four dimensions. More to the point, we apply a gravity model approach; therefore, the following part has to deal with our gravity model's application to FDI.

The gravity model is based on Newton's law of universal gravitation which was readily applied in various types of social science.¹⁹ The first who introduces the Newtonian gravity model into social sciences is Carey (1858) in his study on human behavior. After more than one century, Stewart (1948) popularized this model. Stewart relied on a canonical version of the gravity model that states that the gravity between two objects i and j is proportional to their masses and inversely proportional to the square of the distance separating them. Some years later, Isard (1960) adjusted Stewart's model by not using the squared distance part of Newton's law. From here on, the gravity model has been widely and successfully applied to explain international trade (Anderson, 1979; Bergstrand, 1985; Heuchemera, Kleimeierb, & Sander, 2009; Huang, Ates, & Brahmašrene, 2006; Tinbergen, 1962).

The gravity model has more recently also been adopted to explain FDI flows. Generally, the basic model that has been frequently used includes the FDI flows between a home country i and a host country j , the GDP of the countries i and j respectively, and the geographical distance between capitals. Some scholars (e.g., Aficano and Magalhães, 2005; Chaisrisawatsuk & Chaisrisawatsuk, 2007; Gopiath and Echeverria, 2004) apply a gravity approach to observe the relationship between FDI and trade. Trade facilitation is a key factor for inducing FDI inflows to host countries from home countries (Chaisrisawatsuk & Chaisrisawatsuk, 2007). In the other words, FDI is positively related to trade suggesting the existence of complementary relationship between the two (African & Magalhães, 2005).

Some researchers attempt to identify determinants of FDI through a gravity approach, and their attempts are successful. Indeed, Hattari and Rajan (2008) use the gravity model to examine the determinants of FDI flows to developing Asia, using bilateral FDI flows for the period 1990–2005. They conclude that an augmented gravity model (which involves measures of trade openness and financial openness of host countries as well as bilateral imports between two countries) fits the data well. Frenkel et al. (2004) argue that the gravity approach can successfully be applied to FDI. Consequently, they examine the determinants of FDI flows into emerging economies using gravity model approaches. They start with a

¹⁹ Early application in social sciences start with Carey (1858), Carrothers (1956), Tinbergen (1962), and Olsson (1965b). Applications are – among others – migration (Flowerdew & Aitkin, 1982), international trade [Mátyás,(1997), Bayoumi & Eichengreen (1997)], consumer services (Goodwin & Ross, 1992), medical services (Lowe & Sen, 1966), international trade [Tinbergen (1962), Pöyhönen (1963), Anderson (1979), Bergstrand (1985, 1989) Oguledo & MacPhee (1994), Egger & Pfaffermayr (2002)] as well as more recently FDI [Frenkel et al. (2004); Tamalo (2005), Chaisrisawatsuk & Chaisrisawatsuk, (2007), Hattari (2008)].

generic model using the GDP of both the home and host countries and the distance between their capitals as a generally accepted country locus point. This model is then successively extended to investigate home and host country characteristics. They find that economic characteristics like risk and economic growth in host countries as well as in home countries were crucial in influencing FDI flows, while market size and distance also play an important role. Talamo (2005) wants to discover new factors determining decision processes of multinational firms for establishing new affiliates abroad. Their results indicate that quality of corporate governance institutions and mechanisms, shareholder protection and openness to FDI have positive effects on FDI flows. Table 4.2 (see p.115) gives a synopsis of gravity model specification used in the literature discussed above.

With respect to the explanatory variables used, we classify the above-discussed literature into two groups. The first group uses variables in terms of relationships between the home and the host countries, such as similarity of country size (African & Magalhães, 2005) or relative factor endowment (Marchant & Peng, 2004). The second group uses variables reflecting home and host country specific effects, respectively. For instance, their variables are the growth rate of GDP of the home country, growth rate of GDP of the host country (Frenkel et al., 2004), population of the home country, population of the host country (Talamo, 2005), GDP per capita of the home country, GDP per capita of the host country (Chaisrisawatsuk & Chaisrisawatsuk, 2007). The latter group of papers focus on either FDI flows into emerging economies in general (Frenkel et al., 2004), or factors determining decisions of multinational firms to establish new foreign affiliates abroad (Talamo, 2005), or a bi-directional effect between trade and investment. Hence, there is no studies that emphasizes interactions of push and pull factors for initiating FDI. We address this gap by developing a gravity model for an in-depth investigation of joint workings of push and pull factors in an emerging economy after foreign trade and investment liberalization has taken place, and argue that both host and home countries' characteristics will shape FDI.

Table 4.2: Gravity approaches to FDI: A literature synopsis

Variable	Frenkel et al (2004)	Gopinath & Echeverria (2004)	Marchant & Peng (2004)	Talamo (2005)	Chaisrisa -watsuk (2007)	Hattari & Rajan (2008)
FDI flows from country i to country j	x		x	x	x	x
Trade and FDI flow from country i to country j		x				
Value of trade between two countries					x	
GDP of home country	x		x	x	x	x
GDP of host country	x		x	x	x	x
Size of GDP of home and host country			x			
Distance between two countries	x	x	x	x	x	x
Growth rate of GDP of home country	x					
Growth rate of GDP of host country	x					
GDP per capita of home country					x	
GDP per capita of host country					x	
GDP per capita of home and host country		x	x			
Openness of home country					x	
Openness of host country	x			x	x	x
Import of home and host country			x			x
Population of home country				x	x	
Population of host country				x	x	
Population of home and host country		x				
FDI inflows between home and host country						
FDI outflows between home and host country						
Country risk rating of host country	x					
Inflation of host country	x					
Accountability between home and host country		x				

	Frenkel et al (2004)	Gopinath & Echeverria (2004)	Marchant & Peng (2004)	Talamo (2005)	Chaisrisa -watsuk (2007)	Hattari & Rajan (2008)
Corporate Tax between home and host country				x		
Shareholder Protection of host country				x		
Difference in time zone						x
Number or regional trade					x	
Fixed exchange rate of host country dummy	x					
Home country dummy	x	x				x
Host country dummy	x					x
Time dummy	x			x		x
European Union ship/ border/ region dummy		x			x	
Language dummy				x		x
Geography dummy						
GSP dummy					x	
Asian financial crisis dummy			x			

Concerning this select case study, Vietnam as one of the most dynamic emerging economies of Asia and the World, may thus provide valuable lessons for other emerging economies. However, inward FDI into Vietnam is less, not only in quantity, but also in quality compared to its neighboring countries. It is under pressure to improve incentives for increased FDI growth. One of the best ways to improve this policy is to better understand FDI per se in terms of its mutual effects. Therefore, studying push and pull factors are an improvement in the appropriate direction. This investigation is conducted on a step by step basis. Step one is the baseline model. Step two is to test push factors. Step three is to examine pull factors. Step four is to scrutinize the joint working of push and pull factors in combination. Details are introduced in the next section.

4.3. Data and an empirical model

Following the above literature, it is hypothesized that FDI is initiated by both push and pull factors from both partner countries. Therefore, we apply a gravity model approach which includes both supply factors of home countries and demand factors from host countries (Egger & Pfaffermayr, 2002) as well as being successfully applied to related FDI data (Frenkel, et al., 2004; Hattari & Rajan, 2008). We take into account two aspects of FDI flows. One aspect is home country characteristics with respect to push factors. The second aspect is host country characteristics which reflect pull factors. We examine country-specific factors for both home and host countries that could influence FDI generation. We employ a panel for FDI flows into Vietnam from 42 source countries²⁰ with annual observations for the period of 1990-2006. Our sample time is limited because the most recent data for 2007 and 2008 are available only with a longer time lag. On the other hand, we start only in 1990 to focus on the period after the Foreign Investment Law was introduced in Vietnam in 1988. The data is supplied by United Nations Conference on Trade and Development (UNCTAD), Ministry of Planning and Investment of Vietnam (MPI), and General Statistics Office of Vietnam (GSO)²¹.

Our empirical model starts with a generic gravity model, which is successively expanded to allow for the inclusion of the push and pull driving factors. This basic model includes

²⁰ Population: 76 source countries have invested in Vietnam since 1988-2006

²¹ The authors wish to thank UNCTAD, MPI, GSO for supplying the data.

products from GDPs of both home and host countries and geographic distance between home and host countries. The second specification explores push factors by home country characteristics, while the third specification examines pull factors by host country characteristics. The fourth and final specification investigates interactions of both push and pull driving factors. The dependent variable is the log of annual amounts invested in Vietnam from each home country i in period t . Initial data analysis has shown that our FDI data is stationary and that no panel co-integration analyses is required. For independent variables, we use certain explanatory variables that are proxies for country-specific factors. Detailed data descriptions and sources can be found in Table A4.2 in the appendix. Table A4.3, A4.4, and A4.5 in the appendix provide descriptive statistics of these variables as well as the results of the panel unit root test for FDI.

In the first baseline gravity model, the dependent variable is FDI_{ijt} standing for FDI flows from a home country i into Vietnam j during period t . Independent variables are products of GDPs from home and host countries (Marchant & Peng, 2004), and physical distances between each country pair. The size of GDP ($GDP_{it} * GDP_{jt}$) of home countries and Vietnam in year t measures (market) sizes of country pairs involved. A high volume of GDP normally reflects a country's wealthy economy. It is a potential resource for pushing FDI. Heckscher (1919) and Ohlin (1933) state that capital flows occur from capital abundant to capital scarce countries. This creates FDI. Besides, a high volume of GDP also respects and is attracted to value based markets, i.e. quality of health care, income growth and educational standards of host countries, which are important attractions for pulling international investors. It is hypothesized that the size of GDP is a positive factor for initiating FDI. Distance is an important variable for gravity modeling. The $DIST_{ij}$, which measures the physical distance between the home country i and Vietnam j can be transaction costs, whether caused by transportation cost, or reflecting a necessity for physical proximity in regional production networks, or affected by differences in cultural and business customs. Hence, a shorter distance can be correlated with lower cost and closer business customs, which can be good conditions for conducting business in foreign destinations. Therefore, we expect that distance is an important factor for generating FDI. The simplest empirical specification is:

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln(GDP_i * GDP_j) + \beta_2 \ln DIST_{ij} + \varepsilon_{ijt} \quad (1.1)$$

This specification ignores, however, individual characteristics of different home countries, for not only home countries, but also timing effects reflecting the influence of individual years' economic performance on FDI flows. Hausman's specification (see appendix A4.6) test clearly favors a fixed over a random effects model. This is also in line with the majority of the empirical FDI literature reviewed. Thus, we add home country fixed effects, α_i , and time fixed effects, γ_t , to our generic gravity model, first separately and then testing for both effects.

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln(GDP_i * GDP_j) + \beta_2 \ln DIST_{ij} + \alpha_i + \varepsilon_{ijt} \quad (1.2)$$

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln(GDP_i * GDP_j) + \beta_2 \ln DIST_{ij} + \gamma_t + \varepsilon_{ijt} \quad (1.3)$$

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln(GDP_i * GDP_j) + \beta_2 \ln DIST_{ij} + \alpha_i + \gamma_t + \varepsilon_{ijt} \quad (1.4)$$

In our second step, we try to identify which specific home country factors push FDI flows forward. We do so by replacing home country dummy variables with explanatory variables that are characteristics of the selected home countries. In line with literature, growth rates of GDP embody market aspects. Wages, research and development (RD_i), and risk ($RISK_i$) symbolize costs of production, business conditions, and government policy aspects.

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln(GDP_i * GDP_j) + \beta_2 \ln DIST_{ij} + \ln \sum_{k=1}^{n=1} \beta_k X_{kit} + \gamma_t + \varepsilon_{ijt} \quad (2)$$

A GDP growth rate for a home country ($gGDP_i$) is included as a proxy for economic development in home countries. It measures rates of change in GDP. High growth rate brings more GDP and contributes to home countries' economic development and wealth. Similar to GDP, it is a preferential condition to push companies to venture abroad for conducting business. Hence, it is anticipated that $gGDP_i$ is a positive relationship with the FDI initiation. International investors are maximizing their profitability; therefore, higher wages at home ($WAGES_i$) will push them to search for cheaper labor resources outside their home country. We include wages here to test whether their higher cost in home countries is a substantial determinate for generating increased FDI. The expected sign would be a positive

correlationship. In internationalization theory, Vernon (1966) developed an international product life cycle theory to explain trade and FDI. He indicated that innovations that initially appear in countries are more capital incentives; then gradually production is relocated to less capital-intensive countries. Thus, higher R&D spending in home countries could speed up the product cycle and act as a push factor for increased FDI outflows. Because of this, a positive coefficient is anticipated. Finally, rational investors are usually risk adverse. They often share risk in different investment packages. A higher risk in home markets would cause a source company to seek profits on investments in foreign destinations. Therefore, risk is proposed as a factor to push FDI initiation. Again, a positive coefficient is expected.

In the third specification (3) we inspect pull variables that are characteristic of host countries. To control for home country heterogeneity, we employ country fixed effects. However, we drop time fixed effects as we are particularly interested in economic and regulatory changes that made the Vietnamese economy more attractive for foreign investors over time, i.e. we try to identify causal factors behind any time fixed effects.

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln(GDP_i * GDP_j) + \beta_2 \ln DIST_{ij} + \ln \sum_{k=1}^{n-1} \beta_k Z_{kjt} + \alpha_i + \varepsilon_{ijt} \quad (3)$$

We take into account the influence of GDP growth rate in Vietnam (gGDP_j) on FDI as proxy for its potential market size and increased revenue development. Since this rate measures recent dynamics of its economy; thus, high growth is often associated with high dynamics in the future (Frenkel et al., 2004). We expect a positive and significant influence on FDI initiation. Regarding costs of production, we select two variables for testing. First and most common, costs of labor (WAGES_j) is selected, expecting that lower costs of labor in host countries would lead to the creation of increased FDI. Secondly, we hypothesize that an upgraded, modern infrastructure would also reduce production costs. Lower costs might be associated with higher profit; hence, developments in infrastructure can shape FDI. As a proxy for modern information and communication infrastructures, we use the average number of telephone lines per 1,000 inhabitants (TEL_j). Concerning the local business condition, we make use of tertiary variables (TER_j) as a share of tertiary students in this population indicates an availability of high-level skills. Higher skilled and educated labor

market, everything else being equal, could form FDI flows. With respect to government policy, we scrutinize the role of country risk ($RISK_j$) and state investment outlays (SIO_j). Country risk variable are applied as a composite indicator capturing some macroeconomic and other factors, which affect risk perception of investors. A stable situation in host countries might drag or delay FDI placement in a host country. We expect a positive value for risk coefficients in our regressions. Likewise, we anticipate that an effective investment from government in infrastructure, human resources and technology would catch the attention of international investors and assist in pulling their investments.

Our final specification (4) allows for both explanatory variables for home and host country characteristics and allows us to analyze the interaction of push and pull factors:

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln(GDP_i * GDP_j) + \beta_n \ln DIST_{ij} + \ln \sum_{k=1}^{n=1} \beta_k X_{kit} + \ln \sum_{k=1}^{n=1} Z_{ijt} + \varepsilon_{ijt} \quad (4)$$

4.4. Results

Our presentation of empirical results focuses on four specifications of our gravity model (see Table 4.4). The first four equations represent baseline models 1.1 to 1.4. While our preferred model here is clearly 1.4, because it includes all time and country fixed effects, we also report other estimations as they can be used as a benchmark for models (2)-(4). The results confirm an emerging consensus in literature that gravity models perform very well for FDI. In particular, we confirm that FDI elasticity in respect to sizes of their economies is practically equal to 1 and highly correlated and significant. In our preferred model (1.4), where GDP of home and host countries and their distances apart serve as sufficient explanation; all coefficients are significant and have an anticipated correlation. A 1% increase in the size of GDP would lead to 0.97% increase in FDI. The role of distance is very strong. If we take Model 1.4 as theoretically correct, we are confronted with a coefficient of -1.47 which is higher than the distance coefficient usually estimated in trade models, which is typically found to be near unity. This suggests that FDI generation may; therefore, be influenced by home and the host country GDP levels and distances between home and host country.

Table 4.4: Push and pull factors of FDI initiation

		Specification						
		1.1	1.2	1.3	1.4	2	3	4
β_0	C	7.94*** (0.00)	5.29*** (0.00)	6.98*** (0.00)	5.85*** (0.00)	4.75*** (0.00)	18.73 (0.15)	30.59* (0.07)
β_1	ln Size _{ij}	1.04*** (0.00)	0.38*** (0.00)	1.21*** (0.00)	0.97*** (0.00)	1.09*** (0.00)	-0.02 (0.95)	1.09*** (0.00)
β_2	ln DIST _{ij}	-1.87*** (0.00)	-0.65*** (0.00)	-1.92*** (0.02)	-1.47*** (0.00)	-2.35*** (0.00)	-0.07 (0.87)	-2.37*** (0.00)
β_3	ln gGDP _i					0.49** (0.04)		0.45* (0.06)
β_4	ln WAGES _i					0.93*** (0.00)		0.92*** (0.00)
β_8	ln WAGES _j						-10.19*** (0.00)	-11.54** (0.00)
β_9	ln RISK _j						9.12*** (0.00)	10.65*** (0.00)
β_{10}	ln SIO _j						-1.49* -0.06	-2.99*** (0.00)
β_{12}	ln TERS _j						2.54** (0.02)	3.39*** (0.02)
	R ²	0.33	0.67	0.39	0.71	0.48	0.69	0.47
	Root MSE	3.31	2.37	3.2	2.28	2.98	2.31	2.98
	Observations	714	714	714	714	575	714	575
	Home country fixed effects	No	Yes	No	Yes	No	Yes	No
	Time effects	No	No	Yes	Yes	Yes	No	No

(*)(**)(***) denote significance at 10%, 5%, 1% level, respectively. P-values are shown in parentheses. A reported p-value of 0 is of course actually greater than zero

From here on, we first include home country variables and then host country variables and finally both combined. It should be stressed that our objective is to present rather parsimonious or concise specifications for our final model. This is partly required because some of the potentially explanatory variables are highly correlated, and may otherwise cause multicollinearity problems²². In the second step, we, therefore, attempt to identify the so-called push factors. To do so we replace home country fixed effects with variables describing important home country characteristics. After some experimentation with the UNCTAD variables, we focus on four variables: GDP growth (gGDP_i), wage (WAGES_i), research and development (RD_i), and risks (RISK_i) for individual home countries. We first test each

²² Table A4.4 in the Appendix give a correlation matrix for our variables.

variable individually before allowing for interactions to transpire (for details see Table A4.7 in the appendix). It should be noted that in all specifications, economic size remains positive and significant and close to 1; distance also possesses expected signs and exercises a significant influence as a critical FDI determinate. However, for all specifications the distance coefficient is now higher than in the fixed effect model. Obviously, there are more unobserved and unobservable factors, which would make distance important, such as cultural proximity, *et al.* Then, when introduced alone, all variables except GDP growth are significant and have the expected correlations. However, given high correlations between certain variables, some of these results could simply be statistical artifacts. When we include all four variables in gravity equations, RD_i and $RISK_i$ are not statistically significant. This could indicate that the life cycle of R&D and risk are not major drivers in pushing FDI, once we control for economic growth and wages in corresponding home countries. We, therefore, settle for a more concise and parsimonious specification concentrating on wages and growth as push factors (see Equation 2 in Table 4.4). This estimation suggests that for each 1% increase in home country wages FDI increases by 0.93%. As such, wage costs at home appear to be a rather strong push driver. With respect to economic growth, we find an elasticity of 0.49 only when we control for wages alone. This evidence confirms that investors from rapidly growing economies would be inclined to be lead to destinations where home country wage costs are under pressure.

Our next specification of gravity equations analyzes specific pull factors by adding variables describing host countries' economies and their development over time. We employ the variables: $gGDP_j$, $WAGES_j$, TEL_j , $TERS_j$, $RISK_j$, and SIO_j to our generic model. Before arriving at our results, shown in column (3) of Table 4.4, we have tried to select relevant variables using a model with a country dummy, but without a time dummy in order to be able to capture important changes in the growth and development process of Vietnam. In doing so, we pay a price for not being able to control for growth and (wage) developments in source countries which were found to be of high importance for FDI initiation. This "misspecification" is reflected in insignificant coefficients for size and distance. However, one task of this exercise is merely to identify relevant push factors and their interaction with pull factors. After some experimentation, (see Table A4.8 in the appendix) we settle for four

relevant and simultaneously significant push factors: $WAGES_j$, $TERS_j$, $RISK_j$, and SIO_j ²³. In terms of cost of production efficiency seekers are encouraged by low costs of labor in combination with an educated and skilled labor force located in destination countries, since Vietnam has established a high level of tertiary education in its populace. This estimation supports similar results by Schneider and Frey (1985), Ioannatos (2001), Nonnemberg and de Mendonça (2004), Nunnenkamp and Spatz (2002), and it also coincides conformingly with previous findings that high wages in home countries push FDI. With respect to government policy, we find a significant and highly positive relationship of FDI with $RISK_j$. As a higher value of this variable represents a more stable investment environment, we find that a 1% lower perceived country risk triggers a 9.12% increase in FDI. This result confirms the extreme importance of creating a stable investment environment. Finally, we find a 1.49% decrease in FDI for each 1% increases in SIO_j . The negative sign for SIO_j may not necessarily indicate only a marginal negative effect of too much state involvement, but rather that a retreat of the state from a previously high involvement in the economy resulted in investment opportunities for foreign corporations.

Finally, we combine push and pull factors into one specification by using both home and host country characteristics identified above. As for model development, we added host country variables successively to baseline models for host country characteristics (3). Details of these estimations are reported in Table A4.9 in the appendix. Equation (4) in Table 4.4 reports our preferred final model. The statistical fit of this model, which uses no fixed effects, is remarkable with an R^2 of 0.47. Almost alike in their benchmark fixed effect model (1.4) we obtain an almost unitary FDI elasticity with respect to economies', i.e., as economies involved in FDI expand, so will their FDI. Likewise, the role of push factors is confirmed in our final specification with coefficients being remarkably similar to the one obtained in Model (2). We, therefore, find that accelerated development in home countries parallels with higher wages, and are a major trigger of FDI initiation; while pull factors are reaffirmed by the role of an educated, but still rather inexpensive workforce. Again, coefficients for host country wages and tertiary education found in our final model are remarkably close to those found in our pull-driver-only Model (3). The same is true for FDI's

²³ Because of the high correlation between wages and GDP growth, we concentrated on wages and added the other variables successively.

promoting a role of low country risk perception and lower involvement by the state in investment transactions. Finally, importance of distance is again stressed here, pointing to the fact that regional economies are extremely important as a factor for initiating FDI. In sum, we find that FDI origin is strongly driven by outsourcing needs of its rapidly developing neighbors. With states increasingly making room for private investments, a low perception of country risk and an educated and still relatively cheap labor force it is among the first country candidates to consider for outsourcing,

4.5. Conclusions

The main objective in this paper is to understand push and pull factors that initiate FDI flows between source countries and a particularly developing country, evidenced from Vietnam. Some different specifications of gravity models are applied to analyze panel data of 42 home countries in the period of 1990-2006. The results confirm an emerging consensus in FDI literature that gravity modeling performs very well for FDI. This analysis has confirmed that interactions between both home and host country characteristics under conditions of a favorable economic geography support the initiation of FDI flows. In respect to push factors, FDI outflows would be increased by an increase in the growth rate of GDP and wages of home countries. These findings fit well with previous literature. FDI can be summarized as a movement of assets and capabilities from a capital-intensive country to a capital scarce country; investors are seekers of profitability, and as quoted from the newly released film, “Wall Street II: Money never sleeps”. In terms of pull factors, increases in the educational level of a given population, stability in a country’s economic atmosphere, and low costs of labor will shape FDI flows. The result is very appropriate given previous findings. Educated and skilled labors, low cost of production, socio-economic and political stability are attractive factors. We, thus, arrive at five conclusions with respect to Vietnam.

First, we find that geographical distance is significant for FDI, even more so than in trade, at least for certain countries. With a coefficient of -2.38 FDI is almost twice as sensitive to distance as the usual estimates for trade indicate. Thus, a regional bias in cross-border investments is much higher than one in physical trade. Second, elasticity with respect to joint GDPs approximates, but is not statistically variance from one. In other words, pulling FDI can be expected to grow proportionally to countries’ economic growth. Third, elasticity

related to any given home country's FDI and in respect to its wage development in relation to Vietnam is approximately one or unity, suggesting that FDI is strongly driven by labor cost differentials. Additionally, outsourcing is also driven by home country economic growth. Fourth, FDI's labor cost oriented character is also underlined by host country characteristic results by strongly negative correlations for wages in Vietnam. This effect is particularly strong after controlling for country risk, which is found to be a strong FDI incentive. Fifth, education tends to promote FDI while oversized government sectors act as a deterrent. However, to identify the effects of these developments (as well as those of other indicators of infrastructure) all depend crucially on interactions between assigned determinate variables.

Generally, our findings support the hypothesis that origins of FDI are initiated by push factors from home countries and pull factors from host countries. From this analysis, host countries should understand how push and pull factors maximize externalities and internalities while attracting FDI. Actively, host countries should aim at certain target countries to "create" dynamic pushing effects (demand); and then combine these effects with available attractive factors (supply) to direct (pull) FDI inflows back to their host base.

On a more general level, our analysis suggests that FDI is in essence a "bilateral affair", driven by a unique combination of home and host countries in a particular geographic and historic setting. This suggests that there is no blueprint for a successful investment promotion policy. Rather, a country eager to attract foreign direct investment should seek to create an absorptive capacity for a particular setting into which they find themselves locked.

Appendices

Table A4.1: FDI by countries and economies, 1988-2006²⁴

No.	Country & Region	No. of Projects	Total Capital	Legal Capital	Disbursements
1	Australia	124	686,204,248	312,538,623	351,443,658
2	Austria	10	12,075,000	4,766,497	5,245,132
3	Bahamas	3	18,850,000	5,850,000	8,181,940
4	Belarus	1	400,000	400,000	400,000
5	Belgium and Luxembourg	27	80,349,379	38,607,606	60,730,558
6	Brunei	26	76,360,000	27,490,000	1,950,000
7	Bulgaria	1	720,000	504,000	-
8	Canada	55	339,638,658	149,909,028	20,851,321
9	China	399	834,768,012	461,381,090	207,741,469
10	Czech	7	36,528,673	14,098,673	9,322,037
11	Denmark	36	179,094,364	87,798,929	83,580,669
12	Finland	3	16,335,000	5,350,000	6,006,758
13	France	176	2,197,145,735	1,339,357,010	1,116,701,148
14	Germany	77	367,279,832	151,334,445	160,110,013
15	Hong Kong	375	4,599,265,576	1,864,072,945	2,140,519,315
16	Hungary	3	1,806,194	1,007,883	1,740,460
17	India	16	123,543,710	101,081,891	607,535,845
18	Indonesia	13	130,092,000	70,405,600	127,028,864
19	Israel	5	7,560,786	4,170,786	5,720,413
20	Italia	22	55,968,988	26,080,826	27,439,591
21	Japan	724	7,110,330,416	3,244,728,594	4,810,494,127
22	Korea	1246	6,153,865,751	2,604,530,440	2,584,127,725
23	Malaysia	202	1,642,451,050	762,695,421	969,906,037
24	Netherlands	73	2,160,539,122	1,298,573,674	1,942,554,165
25	New Zealand	12	32,597,000	13,167,000	4,356,167
26	Norway	13	32,031,918	19,957,307	9,607,806
27	Panama	6	16,882,400	7,185,000	3,528,815
28	Philippines	25	240,658,899	118,563,336	85,564,058
29	Poland	7	33,500,000	16,654,000	13,903,000
30	Russia Federation	47	278,323,841	164,351,086	609,046,458

²⁴ Only for valid projects. (Unit: \$US. million). Source MPI

No.	Country & Region	No. of Projects	Total Capital	Legal Capital	Disbursements
31	Singapore	447	8,037,186,155	2,972,549,453	3,634,945,624
32	Slovakia	1	850,000	300,000	-
33	Spain	5	6,889,865	5,249,865	195,000
34	Sri Lanka	4	13,014,048	6,564,175	4,174,000
35	Sweden	11	36,693,005	17,285,005	14,091,214
36	Switzerland	41	744,371,029	357,097,032	530,619,721
37	Taiwan	1547	8,050,841,996	3,552,555,203	2,906,606,007
38	Thailand	141	1,315,458,904	506,303,245	823,836,713
39	Turkey	6	63,450,000	19,185,000	6,085,800
40	Ukraine	6	23,954,667	13,085,818	14,092,291
41	United Kingdom	77	1,346,671,531	488,599,051	642,586,433
42	United States of America	307	2,186,648,447	1,224,767,613	756,809,009

Table A4.2: Data description and sources

Variable	Acronym	Expected Influence	Measurement	Rationale	Source
Inward FDI	FDI _{ij}		FDI inflow from country <i>i</i> to Vietnam <i>j</i>		Ministry of Planning and Investment of Vietnam (MPI) UNCTAD
Economic size	GDP _i * GDP _j (ln size _{ij})	+	GDP of home country and Vietnam	Market size and wealthy of economies	UNCTAD
Physical distance	DIST _{ij}	+/-	The distance between capital of Vietnam and the home country	Farther distance means higher costs, differences in culture	http://www.indo.com/cgi-bin/dist UNCTAD
Economic growth of the home countries	gGDP _i	+	GDP growth rate of the home country	High gGDP – fast growing home country's market	UNCTAD
Economic growth of Vietnam	gGDP _j	+	GDP growth rate of the host country	High gGDP – fast growing host country's market	UNCTAD
Cost of production of the home countries	WAGE _i	+	Wages rate of the home country	high wages, higher FDI outflows	International Labor Organization (ILO)
Cost of production of Vietnam	WAGE _j	+	Wages rate of the host country	Low wages, higher FDI inflows	ILO
Technological capabilities of the home countries	RDS _i	+	The share of R&D spending in GDP of the home country	High share of R&D, quickly business cycle	UNCTAD
Modern information and communication infrastructure of Vietnam	TEL _j	+	The average number of telephone lines	High demand, high FDI attraction	UNCTAD
The availability of high-level skills of Vietnam	TER _j	+	The share of tertiary students in the population	High literacy rate – high productivity	UNCTAD
The risk perception of investors of the home countries	RISK _i	-	The country risk of home country	Higher value represents more stable economic atmosphere, and thus, less FDI outflows	UNCTAD
The risk perception of investors of Vietnam	RISK _j	+	The host country risk in ratings	Higher value represents more stable economic atmosphere, and thus, high FDI inflows	UNCTAD
Public investment of Vietnam	SIO _j	+	Public investment flow in Vietnam	Productive public investment, higher FDI inflows	General Statistics Office of Vietnam (GSO)

Table A4.3: Summary statistics

	ln FDI _{ij}	ln SIZE _{ij}	ln DIST _{ij}	ln GGDP _i	ln WAGES _i	ln WAGES _j	ln RISK _j	ln SIO _j	ln TERS _j
Mean	0.37	8.33	8.67	2.97	6.53	3.73	4.12	8.18	-0.53
Median	1.13	8.46	9.07	3.01	7.17	3.81	4.19	8.66	-0.07
Maximum	8.07	13.61	9.78	3.33	8.82	3.99	4.29	9.37	0.47
Minimum	-4.61	3.00	6.63	-4.61	2.07	3.56	3.75	6.13	-1.85
Std. Dev.	4.06	1.90	0.82	0.41	1.41	0.14	0.16	1.04	0.73
Skewness	-0.10	-0.13	-1.10	-11.62	-0.79	-0.20	-1.03	-0.89	-0.60
Kurtosis	1.48	2.88	2.97	189.90	2.55	1.87	2.88	2.43	1.81
Jarque-Bera	69.47	2.60	143.05	1047872	72.59	42.45	127.27	103.41	85.37
Probability	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	267.07	5946.65	6193.33	2102.99	4229.13	2662.43	2944.11	5842.04	-380.54
Sum Sq. Dev.	11746.93	2583.28	480.33	116.37	1289.13	13.05	18.27	764.68	379.80
Observations	714	714	714	709	648	714	714	714	714

Table A4.4: Correlation matrix

	ln FDI _{ij}	ln SIZE _{ij}	ln DIST _{ij}	ln gGDP _i	ln WAGES _i	ln RD _i	ln RISK _i	ln gGDP _j	ln WAGES _j	ln TEL _j	ln TERS _j	ln RISK _j	ln SIO _j
ln FDI _{ij}	1	0.44	-0.36	0.23	0.26	0.12	0.32	0.07	0.07	0.08	0.08	0.12	0.09
ln SIZE _{ij}		1	0.20	0.16	0.36	0.44	0.41	0.31	0.37	0.39	0.40	0.39	0.41
ln DIST _{ij}			1	-0.42	0.21	0.55	0.07	-0.02	-0.01	0.01	-0.01	0.00	0.00
ln gGDP _i				1	0.18	-0.16	0.21	-0.03	0.00	0.00	-0.01	-0.03	-0.02
ln WAGES _i					1	0.48	0.73	0.05	0.10	0.11	0.10	0.10	0.11
ln RD _i						1	0.38	-0.01	0.00	0.02	0.01	0.01	0.01
ln RISK _i							1	0.12	0.16	0.19	0.18	0.22	0.20
ln gGDP _j								1	0.86	0.82	0.92	0.76	0.85
ln WAGES _j									1	0.81	0.94	0.82	0.88
ln TEL _j										1	0.91	0.87	0.94
ln TERS _j											1	0.88	0.97
ln RISK _j												1	0.94
ln SIO _j													1

Table A4.5: Result of the unit root test (Levin)

Levin-Lin-Chu unit-root test for lfdi_{ij}

Ho: Panels contain unit roots Number of panels = 42
 Ha: Panels are stationary Number of periods = 17

AR parameter: Common Asymptotics: N/T -> 0
 Panel means: Included
 Time trend: Included

ADF regressions: 1 lag
 LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-17.2889	
Adjusted t*	- 4.7973	0.0000

Table A4.6: Result of a specifications test (Hausman test)

Hausman's fe_model re_model

---- Coefficients ----				
	(b) fe_model	(B) re_model	(b-B) Difference	sqrt (diag(V_b-V_B)) S.E.
lsize	.3878658	.5370977	-.1492319	.0418169

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(1) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 12.74$$

Prob>chi2 = 0.0004

Table A4.7: The role of home country characteristics: Push factors

		Specification					
		2.1	2.2	2.3	2.4	2.5	2.6
β_0	C	6.32*** (0.00)	6.70*** (0.00)	14.9*** (0.00)	-13.1*** (0.00)	1.73 (0.79)	4.75*** (0.00)
β_1	ln Size _{ij}	1.13*** (0.00)	1.15*** (0.00)	1.11*** (0.00)	1.08*** (0.00)	1.15*** (0.00)	1.09*** (0.00)
β_2	ln DIST _{ij}	-1.82*** (0.00)	-2.27*** (0.00)	-2.76*** (0.02)	-1.95*** (0.00)	-2.83*** (0.00)	-2.35*** (0.00)
β_3	ln gGDP _i	0.25 (0.25)				0.38* (0.09)	0.49** (0.04)
β_4	ln WAGES _i		0.57*** (0.00)			0.70*** (0.00)	0.93*** (0.00)
β_5	ln RDS _i			0.83*** (0.00)		0.24 (0.21)	
β_6	ln RISK _i				4.96*** (0.00)	1.91 (0.21)	
	R2	0.38	0.45	0.44	0.42	0.52	0.48
	Root MSE	3.24	3.05	3.05	3.14	2.85	2.98
	Observation	641	648	688	714	551	575
	Home country fixed effects	No	No	No	No	No	No
	Time effects	Yes	Yes	Yes	Yes	Yes	Yes

(*)(**)(***) denote significance at 10%, 5%, 1% level, respectively. P-values are shown in parentheses. A reported p-value of 0 is of course actually greater than zero.

Table A4.8: The role of host country characteristics: Pull factors

		Specification												
		3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.1	3.11	3.12	3.13
β_0	C	1.95 (0.35)	14.86*** (0.006)	-19.65*** (0.00)	14.34*** (0.00)	1.95 (0.35)	15.15*** (0.006)	-5.47 (0.43)	34.83*** (0.00)	4.69 (0.65)	12.46 (0.35)	16.88 (0.21)	14.37 (0.27)	18.73 (0.15)
β_1	ln Size _{ij}	0.18 (0.25)	0.71*** (0.00)	-0.55** (0.021)	-0.11 (0.7)	-0.22 (0.45)	0.17 (0.51)	-0.31 (0.29)	0.26 (0.26)	-0.29 (0.3)	-0.17 (0.61)	-0.07 (0.82)	-0.11 (0.72)	-0.02 (0.95)
β_2	ln DIST _{ij}	-0.36 (0.22)	-1.11*** (0.00)	0.68* (0.07)	0.05 (0.9)	0.22 (0.64)	-0.36 (0.4)	0.34 (0.45)	-0.48 (0.21)	0.3 (0.48)	0.13 (0.78)	-0.001 (0.99)	0.06 (0.9)	-0.07 (0.87)
β_7	ln gGDP _j	1.62** (0.04)												
β_8	ln WAGES _j		-2.45* (0.06)		-4.88*** (0.00)	-4.46*** (0.00)	-3.02** (0.03)	-4.29*** (0.00)	-7.74*** (0.00)	-6.63*** (0.00)	-4.29 (0.11)	-9.61*** (0.00)	-4.88* (0.06)	-10.19*** (0.00)
β_9	ln RISK _j			5.75*** (0.00)		6.25*** (0.00)		6.15*** (0.00)		6.03*** (0.00)		9.11*** (0.00)		9.12*** (0.00)
β_{10}	ln SIO _j				1.04*** (0.00)	0.16 (0.65)					0.93* (0.07)	-1.59** (0.04)	1.03** (0.04)	-1.49* (0.06)
β_{11}	ln TEL _j						0.44*** (0.00)	0.19 (0.24)			0.15 (0.45)	0.14 (0.46)		
β_{12}	ln TERS _j								1.51*** (0.00)	0.75 (0.13)	-0.15 (0.86)	2.38** (0.03)	0.002 (0.99)	2.54** (0.02)
	R2	0.68	0.68	0.68	0.68	0.69	0.68	0.69	0.68	0.69	0.68	0.69	0.68	0.69
	Root MSE	2.37	2.37	2.34	2.34	2.32	2.35	2.32	2.35	2.32	2.35	2.31	2.34	2.31
	Observation	714	714	714	714	714	714	714	714	714	714	714	714	714
Home country fixed effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time effects		No	No	No	No	No	No	No	No	No	No	No	No	No

(*)(**)(***) denote significance at 10%, 5%, 1% level, respectively. P-values are shown in parentheses. A reported p-value of 0 is of course actually greater than zero.

Table A4.9: The role of home and host country characteristics: Push and pull factors

		Specification						
		4.1	4.2	4.3	4.4	4.5	4.6	4.7
β_0	C	20.13 (0.00)	18.82*** (0.00)	23.79*** (0.00)	0.34 -0.97	30.59* -0.07	30.84* -0.07	30.59* -0.07
β_1	ln Size _{ij}	1.10** (0.00)	1.07*** (0.00)	1.08*** (0.00)	1.09*** (0.00)	1.09*** (0.00)	1.09*** (0.00)	1.09*** (0.00)
β_2	ln DIST _{ij}	-2.40*** (0.00)	-2.38*** (0.00)	-2.37*** (0.00)	-2.38*** (0.00)	-2.37*** (0.00)	-2.37*** (0.00)	-2.37*** (0.00)
β_3	ln gGDP _i	0.47* (0.1)	0.43* (0.08)	0.45* (0.07)	0.43* (0.08)	0.45* (0.06)	0.46* (0.06)	0.45* (0.06)
β_4	ln WAGES _i	0.92*** (0.00)	0.91*** (0.00)	0.92*** (0.00)	0.91*** (0.00)	0.92*** (0.00)	0.92*** (0.00)	0.92*** (0.00)
β_7	ln gGDP _j			2.44 (0.13)				
β_8	ln WAGES _j	-3.95*** (0.00)	-6.36*** (0.00)	-8.38*** (0.00)	-4.01* -0.08	-11.5*** (0.00)	-11.9*** (0.00)	-11.5*** (0.00)
β_9	ln RISK _j		2.50* -0.09	1.97 -0.2	6.74*** (0.00)	10.65*** (0.00)	10.59*** -0.003	10.65*** (0.00)
β_{10}	ln SIO _j				-0.96*** -0.04	-2.99*** (0.00)	-2.78*** -0.01	-2.99*** (0.00)
β_{12}	ln TERS _j					3.39** -0.02	3.47** -0.02	3.39*** -0.02
β_{11}	ln TEL _j						-0.18 -0.5	
	R ²	0.45	0.46	0.46	0.46	0.47	0.47	0.47
	Root MSE	3.01	3.00	3.00	2.99	2.98	2.98	2.98
	Observation	575	575	575	575	575	575	575
	Home country fixed effects	No	No	No	No	No	No	No
	Time effects	No	No	No	No	No	No	No

(*)(**)(***) denote significance at 10%, 5%, 1% level, respectively. P-values are shown in parentheses. A reported p-value of 0 is of course actually greater than zero.

5. FDI Establishment under Comparative Advantage Constraints

5.1. Introduction

Foreign Direct Investment (FDI) has brought to host countries not only capital, but also advanced technology, materials, and skills in the form of education and training, and competition. In addition, FDI has made contributions to overall economic growth, prosperity, and the general well being of a nation. That is why most recipient countries attempt to attract FDI using various incentive policies. However, the vast majority of these policies focus only on host countries' internal advantages, or advantages when compared to neighboring countries. Host countries' policy makers have inadequately addressed and oftentimes failed completely to advance other, seemingly obvious comparative advantages, which exist between host and home countries, even though this is confirmed to be an important criterion in encouraging external investment²⁵. Hence, FDI policies may not be optimized, if host countries plan to strategically attract FDI to present only their internal advantages, while completely ignoring the comparative advantages that exist between the two partners. By not emphasizing comparative advantages, they are often ignored, sometimes completely, greatly handicapping host countries in ways they should not be. Despite the fact that the comparative advantage issue is mentioned in relation to FDI theory, such as OLI eclectic (J.H. Dunning, 1973), "*pari passu*" of Japanese FDI style (Kojima, 1978) and trade patterns of domestic economies with FDI (Claro, 2009); there is no empirical research to identify determinants of FDI from comparative advantage approaches. We take up this challenge in this research. The objectives of this paper are, thus at once to uncover, capitalize and emphasize comparative advantages, which exist between host and home countries, while bringing to light perhaps previously unreported attractiveness factors that could further expand a host country's competitive edge. Consider the following: *which comparative advantage factors between*

²⁵ Generally, the decision to invest in a particular country is determined by both economic and political factors. What needs to be recognized and incorporated into models of decision making is that these factors come not only from host countries, but also come from home countries as well.

home and host countries' influence inward flows of FDI the most, as well as which attractive factors of host countries' influence inward FDI. In addition, since 1988, UNCTAD has ranked all countries and economies in the world in terms of FDI potential and performance. For host countries, their given position is very important, since it must impress foreign investors' perception regarding the investment climate of that destination country. However, there is no study to test the adequacy of this ranking methodology. We assess UNCTAD's characteristics scheme for classifying FDI's potential, and address *whether this method is suitable to apply to all countries.* The UNCTAD method is introduced in Section 5.2.

We fill in the gaps detailed above through a careful analysis of UNCTAD data, incorporating specifically the concept of comparative advantage into our developed models. Our conceptual framework includes four facets of market conditions, factors for costs of production, local business conditions, and government policy provided for by FDI theories (in Chapter 3). We test our theoretical model by applying comparative advantage theory using UNCTAD's provided variables. Vietnam is selected for case study, as Vietnam could be a good example for other developing countries (as presented in Chapter 1). Data consists of 42 FDI inflows into Vietnam during the period 1990 to 2006.

The next section describes comparative advantages between Vietnam and investing (home) countries concerning inward FDI potential. This information is useful for posing hypotheses regarding comparative advantage factors that determine FDI inflow. Section 5.3 provides a brief literature review of comparative advantage theory and UNCTAD methodology used in ranking FDI potential and performance of all UN countries. Section 5.4 describes empirical models used in this research. Section 5.5 gives an interpretation of these results. Conclusions are given in the final section.

5.2. The comparative advantages between Vietnam and source countries

Vietnam is located on the Indochina peninsula. The country borders China to the North, Laos and Cambodia to the West, and sea to the East. In addition, Vietnam has three fronts bordering the sea: East, South and Southwest. With its central location in Southeast Asia, it is accessible to China and to the other ASEAN countries. For these reasons, it is a rigorous trade production partner for both parties. Vietnam's geographic location lies in one of the most dynamic economic growth areas of the world, among such countries as China, South

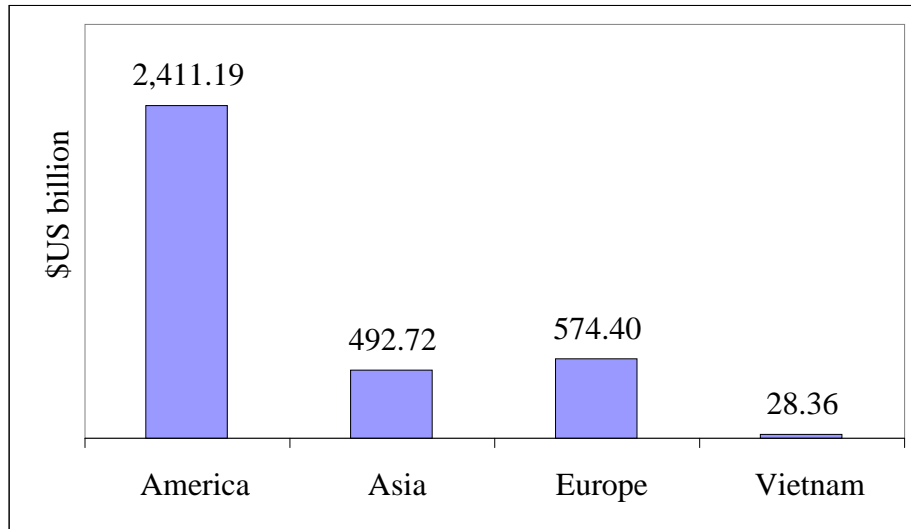
Korea, Japan, Singapore, Malaysia, Taiwan, and Thailand. This is an outstanding advantage that Vietnam possesses of luring FDI flows into its shores while comparing to other ASEAN countries. In general, Vietnam is considered to have a more stable socio-political environment and fewer problems related to religious and racial differences than other countries in its region. Since initiating economic reform, the country has achieved a stable GDP growth rate. Real GDP has increased at an annual rate of 7%. In 2007, the growth rate was the highest in the past ten years at 8.5%. This results in Vietnam being assessed as a secure destination for foreign investment. Through August 2009, there were 10,670 licensed projects with a total registered capital of US\$ 166.03 billion from 38 countries and economies (FIA website)²⁶.

To give some sense of the success that a comparative advantage approach might have recently, Vietnam, as an emerging economy, has witnessed well over average growth. Beginning twenty, thirty, or even forty years ago, Vietnam started from an extremely anemic economic base. Its previous economy was agricultural, using only hand labor and little or no automation. Even this primitive method of production was heavily destroyed during the War in Vietnam beginning in the early 1960s and ending in the mid 1970's. This beginning point might be a good example for other developing countries to consider as they move from labor-based and in-ruin economies to more progressive ones. These improvements are even more remarkable when you consider that Vietnam shares a land border with China, currently the leading destination for FDI in terms of invested capital. Thus, even though local competition for attracting FDI is high and Vietnam is a small market with relatively few natural resources, the country has prospered quite well under some very intense competition. Vietnam's recent economic performance can serve as an example for others to demonstrate the potential of a comparative advantage approach.

In this research, we examine 42 source countries that implemented their registered projects. Some comparative advantages between Vietnam and their source countries are introduced based on four facets of our conceptual framework.

²⁶ Accessed on 2009-09-21

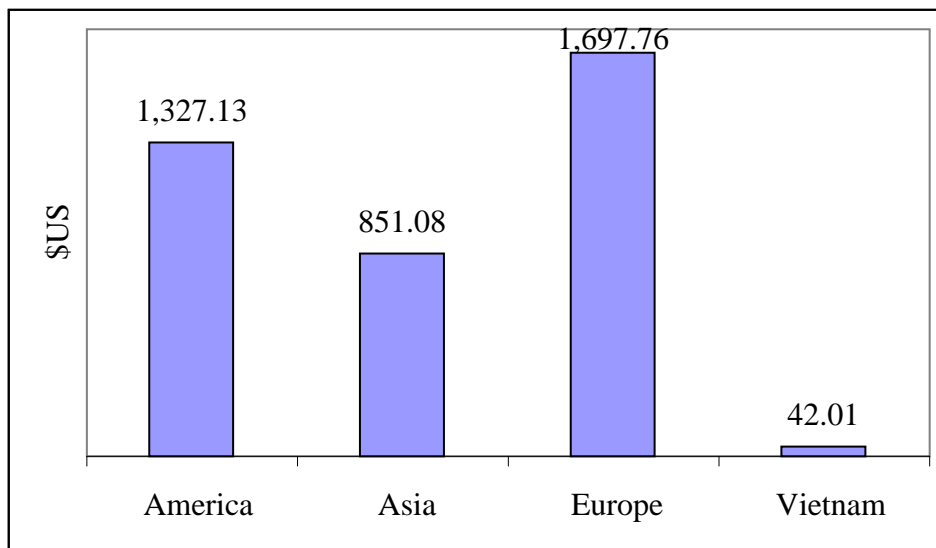
Figure 5.2.1: Average GDP between Vietnam and source countries in 1988-2008



Source: based on World Bank data

Heckscher (1919) and Ohlin (1933) indicate that capital flows occur from capital abundant to capital scarce countries. In this case, GDP size of home countries is larger than Vietnam's. This indicates home countries are wealthier (see Figure 5.2.1). These home countries have an advantage of abundant capital, while host countries by definition require capital. This relationship might lead to possibilities for investing in Vietnam.

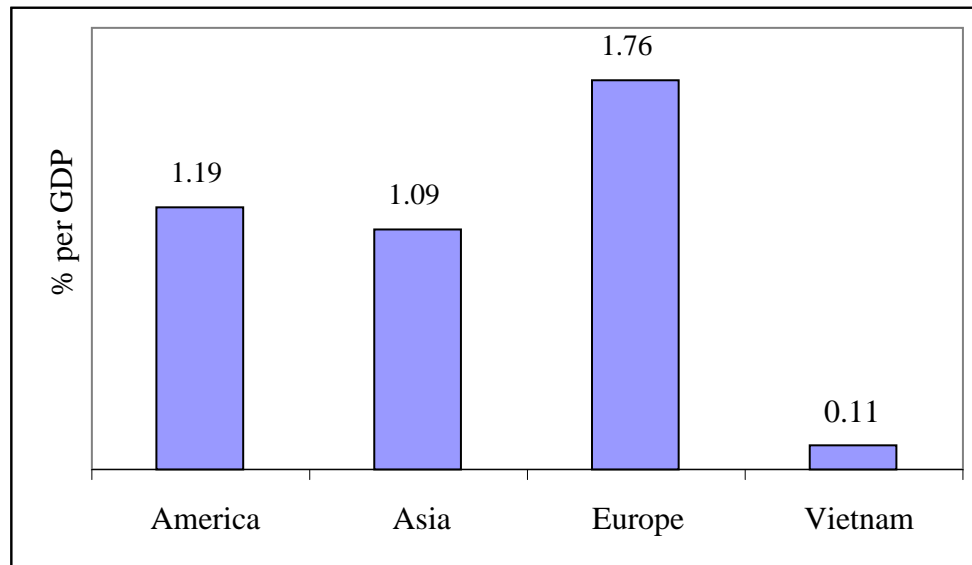
Figure 5.2.2: Average monthly wages between Vietnam and source countries from 1988-2006



Source: Based on World Bank data

Efficiency seekers are likely encouraged by low costs of labor or other required resources in host countries to look beyond their own borders for profit opportunities. The amount of Vietnamese wages is the minimum amount stipulated by the government. Although it is not an actual market price, it is; however, still significantly lower than wages in the home countries (qua economic groupings) listed (see Figure 5.2.2). As international investors want to gain increased profit by reducing costs of production, they would logically prefer investing in countries with low labor cost, everything else being equal. Vietnam could be one choice.

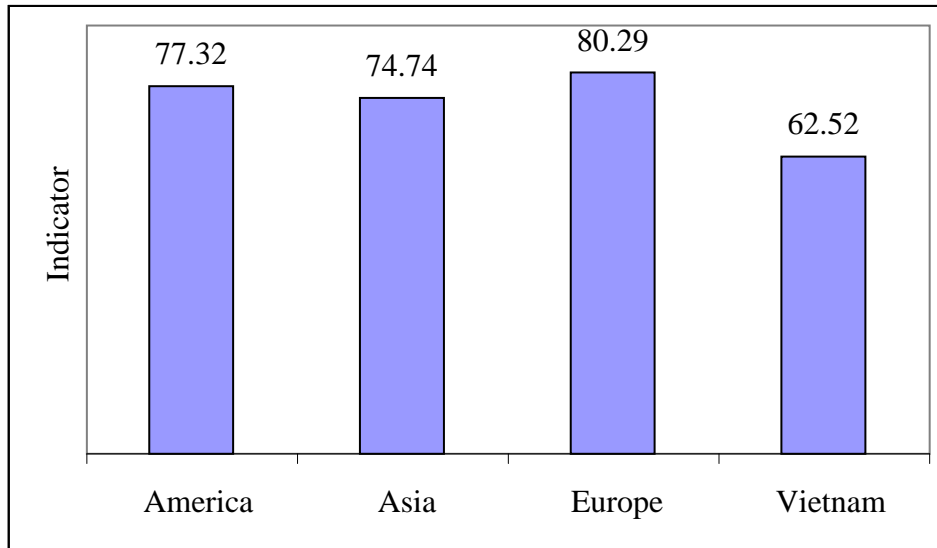
Figure 5.2.3: Average share of R&D spending as a % of GDP for Vietnam and its source countries from 1988-2008



Source: Based on UNCTAD data

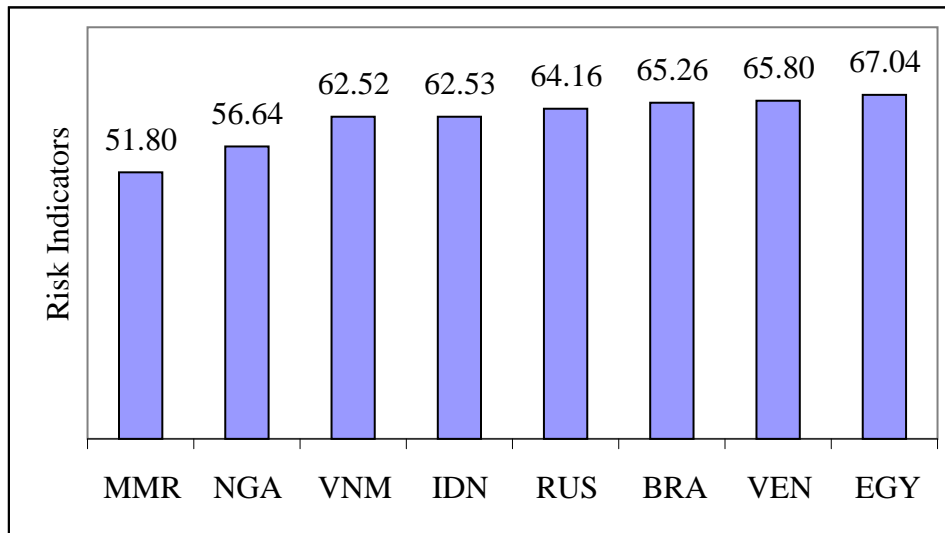
As a developing country, Vietnam has insufficient capital resources to spend on large R&D budgets (see Figure 5.2.3). Fu (2008) opines that the globalization of R&D may provide an opportunity for developing countries to catch up with home countries' advanced technology frontiers. As technological transfers from more to less developed countries increase (Keller, 1996), Vietnam can take advantage of advanced technology through host based FDI research.

Figure 5.2.4: Average risk indicators²⁷ for Vietnam and source countries from 1988-2008



Source: based on UNCTAD data

Figure 5.2.5: Average risk indicators for Vietnam and emerging economies from 1988-2008



Source: Based on UNCTAD data

²⁷ Country risk is a composite indicator capturing some macroeconomic and other factors that affect risk perception of investors. This variable is measured in such a way that high values indicate less risk. This risk indicator is assessed by UNCTAD.

From investors' perception, Vietnam is not a high-risk country (see Figure 5.2.4). Although Vietnam has lower risk indicators than source countries, it is not too low when compared to other emerging countries such as Myanmar (MMK: 51.8), Nigeria (NGA: 56.64), Indonesia (IDN: 62.53), Russia (RUS: 64.16), Brazil (BRA: 65.26), Venezuela (VEN: 65.8), and Egypt (EGY: 67.04) (see Figure 5.2.5). With an advantage of a stable socio-economic and political situation, Vietnam is a good destination for international investors' capital, assets, and other resources.

5.3. Determinants of FDI with respect to comparative advantage theory and UNCTAD methodology

This section is structured to discuss FDI literature further under comparative advantage constraints and the UNCTAD methodology used in ranking FDI's potential and performance for all UN countries. This theoretical platform is used to develop our general conceptual framework into specific differential models.

5.3.1. Determinants of FDI in respect to comparative advantage theory

Robert Torrens (1815) is the first person to mention comparative advantage by comparing trade between England and Poland for grain. He determines that England could gain advantage by trading grain with Poland, although it might be possible to produce that grain more inexpensively in England than Poland. David Ricardo (1817), however, is the main contributor to comparative advantage theory. In the text "Principles of Political Economy and Taxation", Ricardo expresses a view that countries should specialize in producing what they produce most efficiently. With respect to FDI, one of these theories used to explain FDI phenomena is international trade theory or industrial organization theory. These theories postulate that FDI is a result of an imperfect global market environment. Heckscher (1919) and Ohlin (1933) are the earliest authors who laid a groundwork for substantial development in the theory of international trade. They construct a factor proportion model, which focuses on relationships between composition of a country's factor endowments and commodity trade patterns, as well as the consequences of free trade for functional distribution of income within countries. Their research indicates that factor-endowments differ between countries. This means that factor prices cannot be equalized

internationally. Capital flows occur from capital abundant to capital scarce countries. Consequently, FDI is motivated mainly by the possibility of higher profitability in growing markets, at relatively lower rates of interest in the host country, and a necessity to overcome trade barriers and to secure sources of raw materials. This theory goes to the root of comparative advantage's economic incentives. Comparative advantage forms a basis for modern trade theory, reformulated as the Heckscher-Ohlin theorem, which states that a country has a comparative advantage in the production of a product, if that country is relatively well-endowed with inputs that are used intensively in producing a product (Case & Fair, 1999). The most comprehensive theoretical attempt to link advantage with FDI decisions has been made by Dunning (1973; , 1981; , 2001). He describes comparative advantage theory in his eclectic paradigm, which explains why firms internalize their cross-border markets for these advantages, rather than sell them or their rights to independent firms (J.H. Dunning, 1998). He explains that 'O' is the ownership advantage of firms over domestic firms in a given sector. Product advantages include patents, blueprints and trade secrets, and confer market power or cost advantage. 'L' is countries' vocational advantage. Country specific advantages may come from factor endowments and the size of their domestic markets, while location advantages might refer to physical distances, primary products and quality of labor in recipient countries.

Specifically, FDI and comparative advantage have been studied under several points of view. On a time line of "source country" longitudinal positions, Kojima (1978) studied Japanese outward FDI. The author describes how Japanese investors carry out FDI for an industry becoming comparatively disadvantageous in Japan, while at the same time has a potential for becoming comparatively advantageous in a host country. He explains that FDI outflows should be undertaken by firms producing intermediate products. This requires resources and capabilities in which home countries have comparative advantages, but also generates value-added activities. These require resources and capabilities in which those countries are comparatively disadvantaged. According to Kojima, FDI acts as an efficient conduit for trading intermediate products, but that the timing and direction of such investment is best determined by market forces rather than by hierarchical control (J.H. Dunning & Lundan, 2008) (p.110). Similarly, in the "UK, FDI and the comparative advantage of the UK", Nachum, Dunning and Jones (2000) focus on the link between

outward FDI and comparative advantages of home countries investing firms. Their analysis is based on two factors. First, a line connects multinational enterprises' (MNEs) location decisions, and comparative advantages and disadvantages available in their home countries, and second, ownership advantages of their investing firms reflect these advantages and disadvantages. They conclude that the largest shares of the UK's outward FDIs are concentrated in sectors in which the UK is comparatively disadvantaged. The authors state that there are different characteristics in sectors between the UK's industrial structure FDI and comparative advantages of the UK. The former are distinguished by low levels of R&D expenditure, high capital intensity and low labor intensity, while the latter tend to be more technologically intensive.

In respect to a "recipient country", Qiu (2003) constructs a theoretical model to examine the implications of comparative advantage for FDI incentives. His model includes two parties, host country and multinational enterprise, and two sectors, autos and textiles. This theory emphasizes the differences between the two sectors in their market and export opportunities. He finds that a host country's comparative advantage sector is more attractive to inward FDI than its comparative disadvantaged sector. A better market and export opportunity in a host country's textile sector makes this sector more attractive to inward FDI compared to the auto sector. Park and Lee (2003) do investigate in comparative perspective the behavior and strategies of FDI firms in China from South Korea, the United States, and Hong Kong. These hypotheses are based on explaining explicitly and comprehensively the characteristics of FDI from these three home countries in comparative perspective. This study produces four major findings responding to four major issues. In keeping with firms' motivations for FDI, Korean FDI firms aimed at China as an export-processing base, whereas US, FDI firms tend to target local Chinese markets. Hong Kong FDI firms target both export and local markets. With respect to sectoral distribution of FDI and ownership advantages, Korean FDI firms focus on labor-intensive sectors, low labor cost and raw materials, while U.S and Hong Kong firms concentrate on capital-intensive sectors. Concerning forms of corporate governance and ownership of FDI firms, Korean FDI firms choose foreign-owned FDI, whereas Hong Kong firms prefer contractual joint ventures. In regards to linkages with local Chinese firms, Korean FDI firms lightly rely on backward linkage with local firms, whereas U.S and Hong Kong firms demonstrated a strong tendency for backward linkage

with local firms. Still in China's case, Claro (2009) compares its trade pattern within the domestic economy, both with and without FDI integration. The model focuses on segmented factor markets and capital and technology flows. The research maintains that FDI liberalization enhances movements of capital-intensive goods from capital-abundant country to labor abundant country with lower wages.

In view of this interaction, Li (2008) examines the connection between international trade and FDI of European countries (EU) and China. In terms of comparative advantage and FDI, the author states that China offers very low labor costs, a large potential market and a convenient geographical position, while EU countries' FDI supplies management expertise, brands and technology. More specifically, Li classifies China as possessing a comparative disadvantage in agricultural resource-intensive goods (relative to France and Netherlands), in mineral resource-intensive goods (Netherlands and Italy), in human capital-intensive (France and Italy), and in technology-intensive goods relative to all EU countries. Oppositely, China possesses a comparative advantage in labor-intensive products relative to all EU countries and in human capital-intensive with Netherlands. Hogenbirk (2002) does not mention comparative advantage while investigating the determinants of FDI inflows in the Netherlands. However, the author identified determinants of FDI by using variables as differences between home and host countries. For example, their GDP growth variable is the annual difference between Dutch GDP growth and home economy GDP growth. Political risk is defined as the annual difference between home countries' credit ratings and the Netherlands'. The wage rate is the annual difference in real hourly compensation costs in US dollars for production workers in manufacturing between the Netherlands and the source country. The findings provide some evidence that the most important factors determining FDI inflows into the Netherlands include greater trade flows between a home countries' economy and the Netherlands, cultural differences between the Netherlands and home countries, home country population size, differences in the wage level, in political risk, and home country GDP. To some extent, differences variables in Hogenbirk's research reflect comparative advantage factors between home and host countries.

Generally, the above literature confirms that FDI establishment might be lead by comparative advantage factors such as capital abundance, high potential market, low cost of production, less risk, and shorter geographic distance. These factors are correlated closely

with four dimensions of this research’s conceptual framework. The explanation regarding FDI in respect to comparative advantage examined in previous research resides either in the viewpoint of a “source country” or a “recipient country”, or “interaction” between the two. However, there is little research available regarding the latter. We fill this void by incorporating comparative advantages into our model. By examining FDI inflows from the perspective of comparative advantages, host countries can realize their national advantages to improve their capacity to attract as well as recognize their home countries’ advantages to maximize their benefit spillovers.

5.3.2. UNCTAD’s method

UNCTAD (since 1988) has ranked all (more than 140) UN countries according to their capacity for attracting investment based upon FDI performance and potential criteria. The UN’s category designations are charted in Figure 5.3.2.

Figure 5.3.2: Four-fold matrix of inward FDI performance and potential

	LOW FDI PERFORMANCE	HIGH FDI PERFORMANCE
HIGH FDI POTENTIAL	<u><i>Below potential</i></u>	<u><i>Front-runners</i></u>
LOW FDI POTENTIAL	<u><i>Under-performers</i></u>	<u><i>Above potential</i></u>

Source: Adapted from UNCTAD, 2006

E.g., Front-runners: Countries with high FDI potential and high FDI performance

According to UNCTAD, and as anticipated, most developed nations are grouped as *front-runners*, with high FDI potential and high FDI performance²⁸. A few developed countries, however, are categorized as being mixed *below potential* performers with high FDI potential. In the group of *under-performers* we find the vast majority of developing countries. A few,

²⁸ Year-to-year changing of rank for a country in the UNCTAD scheme is established by a group of planning professionals at the United Nations. This ranking obviously affects the perception of international investors toward a recipient country. Currently, there is no research to evaluate this methodology.

however, are grouped as *below potential*, meaning if their FDI *performance* could improve, they too could be *front-runners*. Using this classification scheme and input rankings, one can see the importance of identifying factors, which influence positively/ negatively rankings or groupings of a country's performance/potential. Such analysis and grouping factors can be used to improve countries' prospects for improving FDI inflows.

To assess a country's FDI potential and performance, UNCTAD applies twelve (12) factors to rank an economy's attractiveness to foreign investors, such as GDP per capita, growth rate of GDP, tertiary education levels²⁹, energy usage per capita, country risk, share of world's FDI inward stock, and so on (see appendix A5.5). While some researchers have applied factors similar to those used by UNCTAD to identify important determinants of investment inflows, none have included terms allowing for the inclusion of comparative advantages between the home and the host countries. Moosa and Cardak (2006) study determinants of inward FDI flows by applying extreme bounds analysis (EBA). The authors use eight (08) variables extracted from UNCTAD data to perform their investigation. The empirical results demonstrate that GDP, growth rates of GDP, exports, infrastructure, country risk, and education are key explanatory factors of FDI. Nonetheless, there is no known research to apply UNCTAD method in terms of comparative advantage to observe FDI flows into a specific country.

There is no doubt that a countries' rank influences foreign investors' perception regarding the investment environment of a given country; therefore, it is necessary to test the suitability of UNCTAD's method. We take on this challenge in this paper.

5.4 Data and empirical model

Following an analysis of the above literature, it is hypothesized that the establishment of FDI in a particular country is directed by not only attractiveness factors (of host countries), but also comparative advantage factors (between home and host countries) which initially is based on four above-mentioned driving dimensions. Therefore, we apply two tests for further analysis. First, we examine comparative advantages between home and host countries. Then, we investigate only the attractiveness component of host countries.

²⁹ Tertiary education is an educational status level following completion of a school providing a secondary education. Colleges, universities, institutes of technology and polytechnics are the main institutions that provide tertiary education (Wikipedia).

We use panel data of 42 FDI flows³⁰ into Vietnam from home countries during the period 1990-2006. This sample period was constrained by a current lack of data for 2007 and 2008, and the implementation of Vietnam's Foreign Investment Law first promulgated in 1988. UNCTAD, the Ministry of Planning and Investment in Vietnam (MPI), and the General Statistics Office of Vietnam (GSO) supplied this data. Table A5.1, A5.2, and A5.3 in the appendix provide descriptive statistics of these variables. We are prone to employ panel data analysis as Yaffee (2003) states that panel data analysis is a method of studying a particular subject within multiple sites, periodically observed over a defined time frame. We also apply ordinary least squares (OLS) and double logarithms as one type of panel analytic modeling. OLS statistics are usually used in studies examining FDI macro-economic determinants. OLS assumes a constant slope and intercept parameters across time and country variations.

We start from a model, which indicates differences between the home and host countries' characteristics to test for comparative advantages. This basic model includes four dimensions of market conditions, cost of production, local business conditions, and government policies. Subsequently, we add additional factors mirroring the attractiveness of the host country to measure either the positive or the negative effects of inward FDI flows. The dependent variable in our models is the logarithm of the annual amount invested in Vietnam j from each home country i in the period t - FDI_{ijt} . For independent variables, we utilize variables from UNCTAD's database that have been used to rank all UN countries and economies in terms of potential and performance of FDI inflows. The employment of these variables is not only for examining factors that influence FDI establishment, but also for testing the suitability of each variable's usage. UNCTAD variables are classified into four dimensions of our conceptual framework. In the first dimension, the focus of analysis is on market conditions such as gross domestic product (GDP_{ij}), an indication of market size, and GDP per capita (GDP_{cj}), a proxy for purchasing power of the market and Vietnam's development levels as well. In the second dimension, costs of production include wages ($WAGES_{ij}$), an indication of the labor cost, average number of telephone lines (TEL_j) and mobile phones (MB_j), an indication of modern information and communication infrastructure, and commercial energy use per capita (ENG_j) to indicate availability of traditional infrastructure. In the third dimension, we include local business conditions with a share of R&D spending in GDP (RDS_{ij}) to capture local

³⁰ Population: 76 source (home) countries have invested in Vietnam since 1988-2006

technological capabilities, geographical distance ($DIST_{ij}$), an indicator of home country characteristics (culture, business customs, languages and cost), and share of tertiary students in population ($TERS_j$), to indicate availability of high-level skills. A world market share of exports of natural resources ($EXPNS_j$) is a proxy for availability of resources for extractive FDI, and a share of world FDI inward stock ($FDIS_j$) is a broad indicator of an attractiveness and absorptive capacity for FDI and investment climate. The fourth dimension consists of indicators of various government policies. We concentrate on country risk ($RISK_{ij}$), a composite indicator capturing macroeconomic and other factors that affect risk perception of investors. A share of export in GDP ($EXPS_j$) is proxy for an openness policy in our model, and a world market share of export of services ($EXPSER_j$) serves as an indicator for an importance of FDI in service sectors are considered to be signs of the host country policy of openness in trading. Detailed data descriptions and sources can be found in Table A5.4 of the appendix.

For modeling, we start our first step with a basic structure and organization, which examines both country-specific advantages of the host and home countries. In this specification, influences of FDI inflows are tested by variables of differentials in GDP (GDP_{ij})³¹, wages ($WAGES_{ij}$), distance ($DIST_{ij}$), R&D (RD_{ij}), and risk ($RISK_{ij}$) between home and host countries. These variables obviously embody the four aspects presented above. The generic model is:

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln GDP_{ijt} + \beta_2 \ln WAGES_{ijt} + \beta_3 \ln DIST_{ijt} + \beta_4 \ln RD_{ijt} + \beta_5 \ln RISK_{ijt} + \varepsilon_{ijt} \quad (1.1)$$

Variable ij substitutes as a proxy for the differences between the home countries (i), and Vietnam (j). For instance, $\ln GDP_{ijt}$ indicates $\ln(GDP_i - GDP_j)$ in year t .

Most previous researchers have included various market factors in their studies (e.g. Tsai, 1991; Bende-Nabende, 2002; Gentvilaitė, 2010). These factors have been widely accepted as factors influencing FDI. Market factors could include market size, market structure, per capita income, market growth (UNCTAD, 1998). However, UNCTAD (2006) confirms that large market size is the foremost attractive factor towards pulling inward FDI. In theoretical

³¹ We modify UNCTAD variables by making differential values of variables which are representative of the four dimensions. $GDP_{ij} = GDP_i - GDP_j$ (minus). It is similar for $WAGES_{ij}$, RD_{ij} , $RISK_{ij}$

research, Heckscher (1919) and Ohlin (1933) indicate that capital has moved from abundant countries to scarce countries. Hymer (1966) states that one of advantage of multinational enterprises is internal or external economies of scale. This advantage may lead to outward FDI. Whereas, most empirical research finds that market size, large home countries' GDP strongly and positively affect rates of FDI inflow (e.g. Hogenbirk, 2002; Frenket et al., 2004). This suggests the hypothesis that

H.1.1: The larger the market size (GDP) in the home country, the higher FDI inflows into the host country

Groose's vocational advantage theory (1980) suggests that host countries must possess a definite advantage over home countries. Differential costs between host and home countries influence FDI decisions. This advantage can arise from such factors as lower wages, lower price of raw materials, and availability of natural resources. Lall, Norman, and Featherstone (2003) find that cost differentials have a positive relationship with FDI in the Caribbean. UNCTAD (1998, 2009) confirms that FDI takes in raw materials from lower-cost destinations. Many researchers agree that host countries with low costs of labor or other required resources are more likely to encourage "efficiency-seeking" FDI flows (Ioannatos, 2001; Singh & Jun, 1995; WIR, 2006). In the same vein, Hogenbirk (ibid) reports that differences in wages influence FDI inflows into the Netherlands. The hypothesis is:

H.1.2: The higher the wage rate (WAGES) in the home country, the higher FDI inflows into the host country

Distance represents shipping time delays, transportation, extended inventory periods, and managerial costs. If distances are significant, firms must cover greater expenses compared with shorter distances. In addition, it is more difficult for firms to acquire necessary information regarding host markets (Hogenbirk, 2002). Thus, firms are less likely to invest in host countries at greater distances compared to countries that are closer, unless returns on investment are sufficient to compensate for marginal extra costs (Lall, Norman, & Featherstone, 2003). For those researchers who apply a gravity approach to examine FDI determinants, geographical distance inevitably demonstrates an inverse relationship with FDI inflows (e.g. Frenkel et al, 2004; Hattari and Rajan, 2008). Asiedu (2002) reports that Sub

Saharan Africa countries receive less FDI than others by virtue of their geographic location, whilst Twimukye (2006) posits that remoteness has a negative relationship with FDI as well. Whether longer distances are a barrier should be tested.

H.1.3: The greater the geographical distance (DIST) between the home and host country, the smaller FDI inflows

In point of fact, level of technology and science in a developed country is higher than in developing countries virtually by definition. For instance, Japan, France, Germany and others countries have been operating high-speed trains, while most developing countries are running older trains operating with eclipsed technologies that were produced in the 1950s or earlier. According to Graham (1978), higher rates of investment in R&D are positively associated with higher degrees of product differentiation. Vernon (1966) states that innovation initially appears in developed countries; then in a subsequent phase that generation of technological production shifts to developing countries. Concomitantly, new products and processes were born in capital intensive countries as an initial phase in their product life cycle. Therefore, source countries that attain shorter innovation cycles transfer their former technology to host countries rather than applying their latest or state-of-the-art technologies there. In contrast, Dess, Gupta, Hennart, and Hill (1995) realize that the degree of innovation is a positive factor to pull FDI inflow into China. Genvilaité (2010) finds that high R&D expenditures attract higher levels of foreign direct investment. It is supposed that:

H.1.4: The higher the technological capacities (R&D) in the home country, the higher FDI inflows into the host country

Many studies incorporate risk into their model when testing factors that influence FDI. Inflation, political risk, corruption, and transparent government policies are some examples. From an investor's perspective, risk indicates higher potential possibilities for additional and arguably avoidable costs and expenses. Few, if any, investors are likely to invest in countries with unstable political climates. A country's risk rating is more directly associated to its credit worthiness, and thus, influences inward FDI flows (Nonnemberg & Mendonça, 2004). Singh and Jun (1995) find that determinants of FDI flows are different for high and low FDI countries. For the higher-FDI group, there is a higher qualitative political risk index. Hafiz

and Giround (2004) recognize that political stability is a strong factor in attracting FDI into ASEAN countries. Similarly, country political risk/ policy liberalization is one of the determinants attracting FDI inflows into China and India (Zheng, 2009). From this evidence, we hypothesize that:

H.1.5: The lower the country's credit rating in the home country, the lower FDI inflows into the host country

To capture time effects reflecting influences of individual years FDI flows, we add a time dummy variable to our basic model.

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln GDP_{ijt} + \beta_2 \ln WAGES_{ijt} + \beta_3 \ln DIST_{ijt} + \beta_4 \ln RD_{ijt} + \beta_5 \ln RISK_{ijt} + \lambda_t + \varepsilon_{ijt} \quad (1.2)$$

The second step requires us to test those specific factors that attract FDI flows, as well as test the suitability of UNCTAD's methodology. We add certain explanatory variables that are characteristic of the host country to our generic specification (1.2). These variables have been used by UNCTAD to measure inward FDI performance and potential of all UN countries and economies. Specific factors that signify the four aspects of attractiveness forces are embraced in further explanation of host countries' comparative advantages. Notably, because $RISK_{ij}$ is not a significant factor, and Vietnam's R&D data of the period 1990-1995 is missing, we exclude both $RISK_{ij}$ and of RDS_{ij} variables in building our set of determinant specifications (2). Due to high correlations among estimators (see A5.2), we decided to split our model into sub-equations by adding factors one-by-one into our individual specifications. Time effects are captured in each sub-equation.

$$\ln FDI_{ijt} = \beta_0 + \beta_1 \ln GDP_{ijt} + \beta_2 \ln WAGES_{ijt} + \beta_5 \ln DIST_{ijt} + \ln \beta_k Z_{kjt} + \lambda_t + \varepsilon_{ijt} \quad (2)$$

UNCTAD describes per capita GDP (GDPc) as an indicator of sophistication and breadth of local demand. Shah and Ahmed (2003) define GDPc as a level of profits from sale, or total demand from consumers of host countries. Therefore, GDPc reflects the size of a potential market. This hypothesis works efficiently according to previous studies indicating a positive correlation of GDPc with FDI inflows. In other aspects, GDPc represents examined

countries' economic development (e.g., Ethier, 1982; Frankel, Wei, & Stein, 1995; Aficano & Magalhães, 2005). A corresponding variable is expected to have a positive sign with inward FDI. GDPc is as an explanatory variable that reflects purchasing power, as well as market potential and economic development. Some empirical researchers, such as Nguyen (2002) state that one of the regional factors that determines FDI is GDP per capita. Hsieh (2005) supported this finding by confirming that GDP per capita is one of the most important determinants in Southeast Asian transition economies. We shall test this hypothesis as a positive reaction to FDI.

H.2.1: Per capita GDP is in a positive relationship with FDI inflows into the host country

Infrastructure, for purposes of this research in the determination of FDI, consists of facilities and services that include traditional physical infrastructure and modern infrastructure. Traditional infrastructure such as surface and overland (roads, bridges), airways, railways, waterways, etc., facilitates production and distribution processes of goods and services. Modern infrastructures e.g., telecommunications, information networks, and so on are of higher quality and offer many more advantages, such as lower operational costs and an accelerated and more pleasant business environment. Firms are more likely to invest in countries with improved physical infrastructure, since physical infrastructure positively influences productive efficiency, and thus, reduces costs of production and increases market competitiveness (Lall et al., 2003). While Baden-Nabende (2002) finds that under-investment in infrastructure deters FDI in South Africa, Lall et al. (2003) and Ang (2007) states that FDI is attracted to Caribbean and Malaysia, respectively, through higher infrastructural development. Likewise, Gentvilaitė (2010) finds that well-functioning infrastructures attract higher levels of FDI. We prefer suggesting that:

H.2.2.: The traditional infrastructure and modern information and communication infrastructures stand in a positive relationship with FDI inflows into the host country

It has been argued that the degree of human capital development has a favorable impact on FDI inflows in terms of ensuring an adequate supply of skilled labor (Ioannatos, 2001). Firms are likely to invest in countries with a higher level of educated populace, since this

reflects higher learning and decision-making capabilities and levels of skills (Lall et al., 2003). Both Nunnenkamp and Spatz (2002) and Nonnemberg and de Mendonça (2004) find highly positive significant correlations between FDI flows and years of schooling. Correspondingly, Hafiz and Giround (2004) indicate that the quality of a labor force remains a strong factor in attracting FDI. With this empirical evidence, it is hypothesized that:

H.2.3: The level of schooling of labor forces is indicative of a positive relationship with FDI inflows into the host country

A large number of FDI have invested in countries which are rich in natural resources, but especially petroleum, e.g., Nigeria, Algeria, Sudan, Venezuela, Bolivia, Ecuador, Qatar, and the United Arab Emirates. Garibaldi, Mora, Sahay, and Zettelmeyer (2001) indicate that availability of natural resources is a significant positive determinate in regard to FDI. Similarly, Campos and Kinoshita (2003) conclude that abundant natural resources influence FDI. UNCTAD (1998) also states that low costs of labor or other required resources are more likely to receive inward FDI. From this evidence, this suggests that:

H.2.4: The world market share of exports of natural resources is positive correlation with FDI inflows into the host country

Attractiveness and absorptive capacity of FDI and its related investment environment with a proxy of the world's share of FDI's inward stock are factors that UNCTAD has used to measure inward FDI potential of a country. Chudnovsky, López, and Rossi (2004) find that host countries (domestic firms) with high absorption capabilities reap positive spillovers from transitional corporations' presence while those with low absorption capabilities were more likely to receive negative spillovers. In fact, there is very little research that examines these factors of their world's share FDI's inward stock while examining FDI determinants. It is suggested that:

H.2.5: The world's share FDI's inward stock maintains a positive relationship with FDI inflows to the host country

Many previous researchers have included export's share of GDP in their studies as an indicator of openness, which reflects a willingness of a country to accept FDI. According to

UNCTAD, export's shares of GDP are poised to capture openness and competitiveness, while world market shares of exports or services are geared to seize FDI's importance in service sectors. Most empirical researchers find that countries that are more successful in attracting FDI own higher degree of openness (e.g. Garibaldi et al., 2001; Moosa and Cardak, 2006). More specifically, FDI has found positive correlation with the openness of the economy in Africa (e.g. Bende-Nabende, 2002; Fedderke and Romm, 2006). Likewise, degrees of openness have a positive relationship with FDI in Asia and Central and Eastern European countries (e.g., Hsieh, 2005; Ang, 2007; Genvilaitè, 2010). There is no hesitation on our part to hypothesize that openness factors lie in a positive relationship with inward FDI inflows.

H.2.6: The export's share of GDP and the world market share of exports of services are in a positive relationship with FDI inflows into the host country

5.5 Results and Interpretation

The first specification tests the influence of determinant variables of FDI inflows producing differentials between host and home countries' GDP (GDP_{ij}), wage ($WAGES_{ij}$), distance ($DIST_{ij}$), R&D (RD_{ij}), and risk ($RISK_{ij}$). Results in Column (1.1) of Table 5.5 indicate that GDP_{ij} , $WAGES_{ij}$, RD_{ij} , and $RISK_{ij}$ are positively related to FDI inflows. This confirms our hypothesis that FDI establishment in a particular country is determined by four comparative advantages driving dimensions: market condition, cost of production, business condition, and government policies.

Specifically, the importance of market variables as determinants of FDI flows is displayed in our results. Normally, previous studies discuss seeking-market motivation that leads FDI to a larger market size (Zheng, 2009), where it provides better opportunities for business (Lall, Norman, & Featherstone, 2003). In contrast, using our models, a 1% increase in GDP_{ij} would lead to a 0.80% increase in FDI. This is a strong confirmation of the important role for larger home country market sizes in triggering FDI. This indicates that a wealthier economy usually can pursue higher international expansion via FDI. This result is consistent with previous research (Hogenbirk, 2002; Liu & White, 1997; Thomas & Grosse, 2001). The larger the home country's market, the wealthier the capital-intensive host country's opportunity is for achieving these advantages. Therefore, the conclusion is that FDI

inflows are piloted by comparative advantages of market conditions between home and host countries.

In the same sense, the higher labor costs in home countries translate into higher FDI inflows into host countries. Contrarily, the lower the wages in host countries are an advantage leading to inward FDI flows. FDI theory generally states that the lower labor costs in host countries are, an attractive factor, since international investors normally want to take advantage of less expensive resources (Hogenbirk, 2002; Liu & White, 1997). Our result suggests that FDI increases 0.20% for each 1% change in differential $WAGES_{ij}$, between the home and host countries. This mirrors efficiency seekers' economic motivations that are likely encouraged by low costs of labor or other target resources in host countries. Lower local wages completes a linkage for producing products at lower costs (Adam & Filippaios, 2007); therefore, home countries where labor costs are high tends to motivate relocation of labor-intensive production to host countries where labor costs are lower (Zheng, 2009). For that reason, the lower the wage rate compared to wage rates in home countries, the higher FDI flows into host countries. Hypothesis 1.2 is confirmed.

In terms of business conditions, we examine next both distance and R&D variables. Our result indicates that the impact of the distance on FDI inflows into the host country is significant; a 1% increase in the distances between the home and host countries translates into a 1.66% decrease in FDI. This finding compares well with the results of previous research, such as Ioannatos (2001) and Twimukye (2006). This distance is not only geography distance but also cultural distance as well. A greater distance geographically usually also means a greater difference in culture, and in business customs (Hogenbirk, 2002), and an increase in costs of transport and managerial activity (Lall, Norman, & Featherstone, 2003); therefore, home country investors prefer investing in host countries with closer distance. For that reason, the hypothesis 1.3 is confirmed. FDI inflows are driven by comparative advantages of production costs between home and host countries. In fact, comparative advantages of distance and culture would, on the surface, tend to draw FDI away from Asia and the U.S. for Western European investors, and in favor of more recently independent Eastern European countries. However, in these cases lower Asian labor costs may trump Eastern European countries comparative advantages of distance and culture.

We also examine R&D as a representative variable of business conditions. On the one hand, high rates of investment in R&D are associated with higher degrees of product differentiation (Graham, 1978) whereas product differentiation could encourage FDI outflow (Caves, 1971; Assaf Razin, 2003). On the other hand, demand for advanced technology from host countries might either lead (Jeon, Tang, & Zhu, 2005; Saggi, 2002) or influence FDI inflows (Gersbach & Schmutzler, 2008; Qu, Huang, Zhang, & Zhao, 2007). The result in this specification is in line with the above cited previous studies; an increase of 1% in differential RDS_{ij} increases FDI by an anticipated 0.71%. It demonstrates that the higher the technological capacity (R&D) is an advantage for the home countries for extending more investment into the host country. Therefore, it can be concluded that inward FDI is led by advantages of the business conditions between the home and host countries.

In reference to government policy, mainstream FDI theory concludes that FDI is likely to flow into countries with low risks and high rates of return; therefore, the less the risk level of host countries is an advantage factor to influence investors' location decisions (Ioannatos, 2001; Moosa & Cardak, 2006; Zheng, 2009). From investors' perception, high risk associates itself with high potential additional costs; thus, they prefer selecting risk reduction strategy (within their limits of risk tolerance) (Nonnemberg & Mendonça, 2004) and do not blindly pay for additional costs of doing business (Kolstad & Villanger, 2008; Lall, Norman, & Featherstone, 2003). Counter intuitively, our research result confirms that $RISK_{ij}$ is not a comparative advantage factor leading to FDI's establishment. Although differential risk variables play a positive role, it is not a finalizing determinant for FDI decision making in our specification. This finding is more in line with the findings of (Lall, Norman, & Featherstone, 2003) for Caribbean region. Their research takes the view that inward FDI is not influenced by either high risk in home countries or lower risk level in host countries. In such situations, neither home countries nor host countries obtain greater advantages than the other. Positive correlations of the $RISK_{ij}$ variable can be interpreted that the value of lower risk in both economies is similar, although it is preferable advantage. However, statistically insignificance confirms that there is no impact on FDI establishment from perceived risk.

These results are not altered in any significant ways under the effects of time (Table 5.5, Column 1.2). These results confirm our hypotheses that comparative advantages for both the home and host countries influence FDI inflow. In the case of Vietnam and other developing

countries as well, healthier home countries, indicate lower costs of production in the host country and higher technological levels that home countries possess, correlate positively with FDI flows into Vietnam. In contrast, greater distances between the home and host countries negatively impacts FDI. At the same time, the country risk is not significant, but an encouraging variable.

Specification (2) was constructed to assess specific attractiveness factors by adding host country effects to the generic model with evidence from Vietnam. Because Vietnam's R&D data in the period 1990-1995 is missing, we exclude RDS_{ij} variables, as well as $RISK_{ij}$, as these are insignificant in our basic model. Therefore, the basic specification in this step includes factors of GDP_{ij} , $WAGES_{ij}$, and $DIST_{ij}$. Results are shown in Column (2.1) of Table 5.5. Due to high correlations among explanatory variables, we are obliged to further test individual specifications by adding one factor at a time. In general, R^2 , a constant slope, and intercept coefficient values for these equations are nearly unchanged. Most explanatory variables added result in positive and significant values, except for mobile phone (MB_j) variable. These results are consistent with generally accepted theory and our hypotheses.

Sub-specifications start with GDP per capita variables. Results indicate that a 1% increase in $GDPc_j$ would emit a 0.54% increase in FDI. This corresponds well with Schneider and Frey (1985), and Tsai (1991). These findings confirm that FDI flows into Vietnam are able to root themselves due to high market demand there. Appropriately supporting the first hypothesis, the larger home countries markets are, the more FDI comes to their corresponding host countries. No conflict exists, if we look at Vietnam under market size perspectives, not FDI amounts. With a population of more than 80 million, Vietnam makes for an ideal potential consumers' market. Additionally, $GDPc$ is a proxy, not only for purchasing power, but also for development levels. Objectively, combining $GDPc$ development levels with developments in education, infrastructure, and host countries' FDI absorptive capacity affects FDI establishment. Accordingly, presence of a well-functioning, modern infrastructure contributes to high FDI inflows, while FDI also reacts positively to an increase in energy use per capita (0.25% and 3.31% increases in FDI for each 1% increase in TEL_j and ENG_j in Vietnam over the period measured). These results support a conclusion of Moosa and Cardak (2006) and Twimukye (2006). Importantly, development of infrastructure associates itself with lower operational costs; therefore, it meets resource seekers'

requirements. This is strongly supported by the fact that as world market shares in exports of natural resources are positively correlated, this has a significant influence on increased FDI inflows. A 1% increase in $EXPNS_j$ yields a 3.48% expected increase in FDI. There can be little doubt as to conclude that good infrastructure and availability of natural resources encourage FDI inflows into particularly targeted destinations. In view of demand, traditional infrastructures not only attract FDI, due to better quality, but also affect potential profitability by investing in aviation, seaports, roads, and bridges. In keeping a line of countries' development levels, it is not surprising that investors choose Vietnam for their educated and skilled labor force, since Vietnam enjoys a high level of tertiary students; a 1% increase in $TERS_j$ would be expected to lead to a 1.33% increase in FDI. This result is supported by findings of previous studies, such as Schneider and Frey (1985), and Nunnenkamp and Spatz (2002). An educated and skilled workforce is an indicator of high productivity as well as it stands for higher labor quality. A host countries educational and skill levels can be a determining attraction factor for international investors, especially when these investors can take advantage of using an educated workforce with lower wages as confirmed in our third hypothesis. Because of FDI developments' synergistic growth effects on education and infrastructure, host countries become more attractive and obtain higher absorptive capacities. Research results demonstrate that a 1% increase in world share of FDI inward stocks ($FDIS_j$) could be expected to lead to a 3.21% increase in future FDI. This confirms that Vietnam's investment climate is an attractive factor for FDI inflows. In terms of government policy, Vietnam government's open-door policy is a special policy, since it transformed itself from a centrally planned economy into a market economy. One indicator of its openness is the relative size of its exports sector. In this current research, we apply both shares of exports in GDP and world market shares of exports of services; both of them are positively correlated with FDI (1.22% and 5.06% increases in FDI for each 1% increase in $EXPS_j$ and $EXPSER_j$ in Vietnam over the period measured). This provides a positive indicator for an open door policy to foreign investment in Vietnam. This also demonstrates Vietnam's willingness to accept FDI leaning towards favorable investment terms. Our conclusion is that government openness policy positively attracts inward FDI.

Table 5.5: Summary of regression outputs

		1.1	1.2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10
β_0	C	9.93	9.75	7.55	4.75	7.12	8.12	-12.39	6.96	6.9	6.89	3.21	7.07
β_1	GDP _{ij}	0.8***	0.8***	0.78***	0.78***	.078***	0.81***	0.78***	0.78***	0.78***	0.78***	0.78***	0.78***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
β_2	WAGES _{ij}	0.18***	0.2***	0.32***	0.32***	0.32***	0.34***	0.32***	0.32***	0.32***	0.32***	0.32***	0.32***
		(0.02)	(0.02)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
β_3	RDS _{ij}	0.67**	0.71**	x	x	x	x	x	x	x	x	x	x
		(0.02)	(0.01)										
β_4	RISK _{ij}	0.13	0.08	x	x	x	x	x	x	x	x	x	x
		(0.60)	(0.74)										
β_5	DIST _{ij}	-1.65***	-1.66***	-1.42***	-1.42***	-1.42***	-1.44***	-1.42***	-1.42***	-1.42***	-1.42***	-1.42***	-1.42***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
β_6	GDPc _j				0.54*								
					(0.05)								
β_7	TEL _j					0.25*							
						(0.05)							
β_8	MB _j						-0.2						
							(0.57)						
β_9	ENG _j							3.31*					
								(0.05)					
β_{10}	TERS _j								1.33*				
									(0.05)				
β_{11}	EXPNS _j									3.48*			
										(0.05)			
β_{12}	FDIS _j										3.21*		
											(0.05)		
β_{13}	EXPS _j											1.22*	
												(0.05)	
β_{14}	EXPSER _j												5.06*
													(0.05)

		1.1	1.2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10
	R^2	0.52	0.54	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
	A_R^2	0.51	0.52	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
	Dt	<i>No</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>

(***) (**) (*) denote significance at 1%, 5%, 10% level, respectively. P-values are shown in parentheses. A reported p-value of zero is, of course, actually greater than zero. When time-specific effects are included in these specifications, estimated constants reflect the years 1990 and 1999.

Broadly stated, besides obvious comparative advantage factors, FDI is now firmly established in Vietnam by its potential purchasing power, potential profitability of investing in its infrastructure, high level of tertiary education with lower wages, availability of natural resources, attractiveness and absorptive capacity of FDI, and the country's openness policy. These findings confirm that FDI's establishment is driven by market conditions, cost of production, and doing business, as well as government policy.

5.6 Conclusion

Although FDI's theoretical literature cites comparative advantage dilemmas, while explaining FDI, there is a lack of empirical research focused on comparative advantages from both source and recipient country sides. The purpose of this research is to build a theoretical model to address this issue. In addition, we desired to test the suitability of UNCTAD's methodology applied in ranking position of all UN countries in terms of FDI attractiveness. By applying UNCTAD's methodology, we developed different specifications to analyze FDI inflows' panel data from 42 home countries into Vietnam during the period 1990-2006. Our results give strong indication that FDI establishment is not only influenced by host country attractiveness factors, but also comparative advantages interrelated with many of these factors operating in dynamic modulation between home and host countries. This represents a significant contribution to filling in a gap in research literature and prompts for new awareness by policy makers considering future FDI from both home and host country's participants.

When evaluating host and home countries' comparative advantage characteristics, FDI inflows should be expected to increase according to larger degrees of difference in market sizes (GDP_{ij}), wider differences in wages ($WAGES_{ij}$), and R&D (RDS_{ij}), and shorter distances between home and host countries. Consequently, home countries have advantages of high capital stocks and advanced technology, while host countries have advantages of lower labor costs. Home countries can produce products in a host country at lower labor costs instead of importing labor, which often spawns ancillary political challenges. Thus, host countries may stipulate promotion policies, which are expected to lead to an increase in FDI as well as improve the status of its current competitive advantages. However, host countries should not fully rely on low labor costs as a rationale for attracting FDI. In an

interview, Michael Porter stated: “Falling wages are not a measure of competitiveness, but rather a sign of a lack of competitiveness” (Snowdon & Stonehouse, 2006) p.165). On the other hand, our results confirm that as budget and time limitations allow, Vietnam should be purchasing advanced technology, while concurrently developing its own R&D. This approach focuses on exploiting national dominant advantages, in such areas as agricultural biotechnology, aquaculture, information technology, and pharmaceutical and medical equipment industries.

In terms of attractiveness factors, increases in per capita GDP, modern and traditional infrastructural developments, a better educated labor force, share of exportable natural resources, improving FDI attractiveness levels, share of GDP exports, and share of export services, will lead to an anticipated increase in FDI inflows. Remarkably, this study highlights positive effects of Vietnam’s tertiary education. This means that Vietnamese capacity in skilled and educated labor and high technology levels are remarkably dynamic in terms of enhancing FDI inflows. Vietnam needs to continuously reinforce its human resources and technology to earn increased benefits from FDI. Consequently, one of Vietnam’s most attractive or drawing factors is their share in exports of natural resources. Understanding the attractiveness of such resources, provides Vietnam with a leading indicator as to which of its natural resources requires improved economic analysis of related global demands, so as to better and more effectively market and manage these resources in tandem with FDI policies. Simply relying upon home countries to determine how host countries natural resources are chosen will not optimize their potential utilization. Our results indicate further studies are necessary to assess the total impact of improvements in Vietnam’s promotion policies and their long-term organization in managing future FDI inflows. Assessment of FDI’s forecasted contributions should lead to better anticipation of economic futures for host countries’ improved standards of living.

In addition, based on these results, we conclude that those factors used by UNCTAD to rank FDI’s attractiveness levels for all UN countries are neither completely appropriate nor applicable for each country. In the case of Vietnam, some factors are not considered to be statistically significant. This implies that certain corresponding factors are not contributive to a better understanding of FDI’s attractiveness levels. In addition, there is significant multicollinearity among these factors. These aspects provide grounds for reiterating our

explanation of FDI determinants. Certain specific factors should be replaced. For example, the internet is supplanting traditionally used systems in communication, instead of older telephony technologies. Therefore, the factor presence of telephone landlines might not be as appropriate for indicating degrees of modern infrastructure development as it was previously. Pertaining to this issue, we wonder why both telephone and mobile phone indicators are used, as they are basically functionally similar indicators of infrastructure. Energy use per capita also depends on countries' sizes (large vs. small, long vs. short), style of using transport (car vs. bike, private vehicle vs. public vehicle), and public transport system. As a result, energy use per capita might also not be a good indicator of traditional infrastructure for FDI development. Varying energy and transportation country profiles may relate differentially to other determinate factors that still need to be more fully researched. Especially, share of world FDI inward stocks is too broad a category to serve as proxy for countries' attractiveness and absorptive capacities. Simultaneously, FDI volumes do not reflect FDI quality. To be fair and precise, applying a specific model for a specific region and/or income levels or different variables should be considered as a more suitable factor replacement for FDI inward stocks.

Appendices

Table A5.1. Summary of statistic

	FDI _{ij}	GDP _{ij}	WAGES _{ij}	RDS _{ij}	RISK _{ij}	DIST _{ij}	GDP _{cj}	TEL _j	MB _j	ENG _{Sj}	TERS _j	EXPNS _j	FDIS _j	EXPS _j	EXPSER _j
Mean	2.13	5.49	6.51	0.81	3.52	8.67	5.63	2.53	1.66	6.10	0.52	0.26	0.23	3.75	0.13
Median	1.41	5.39	7.17	0.80	3.58	9.07	5.85	2.75	1.41	6.11	0.66	0.24	0.27	3.76	0.16
Maximum	8.07	9.48	8.82	1.78	4.27	9.78	6.45	4.81	4.26	6.38	0.96	0.40	0.32	4.25	0.17
Minimum	0.01	0.05	0.66	0.03	0.02	6.63	4.56	0.28	0.01	5.91	0.15	0.08	0.09	3.25	0.02
Std. Dev.	2.19	1.35	1.44	0.43	0.41	0.82	0.58	1.34	1.40	0.16	0.24	0.11	0.08	0.31	0.05
Skewness	0.61	0.42	(0.87)	(0.07)	(1.83)	(1.10)	(0.59)	(0.23)	0.34	0.26	(0.25)	(0.05)	(0.64)	(0.01)	(0.95)
Kurtosis	2.00	3.38	2.96	2.12	11.87	2.97	2.10	1.96	1.79	1.80	1.79	1.47	1.76	1.67	2.18
Jarque-Bera	73.73	25.46	82.53	13.40	2,740.31	143.05	65.86	38.60	51.16	51.32	50.90	69.84	94.49	52.31	126.39
Probability	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	1,518	3,922	4,221	334	2,513	6,193	4,022	1,807	1,044	4,359	371.15	186.96	167.32	2,676.80	91.67
Sum Sq. Dev.	3,426	1,295	1,338	75	119	480	237	1,286	1,224	17.39	42.47	8.19	5.05	68.16	1.87
Observations	714	714	648	410	714	714	714	714	630	714	714	714	714	714	714

Table A5.2. Correlation matrix

	FDI _{ij}	GDP _{ij}	WAGES _{ij}	RDS _{ij}	RISK _{ij}	DIST _{ij}	GDP _{cj}	TEL _j	MB _j	ENG _{Sj}	TER _{Sj}	EXPNS _j	FDIS _j	EXPS _j	EXPSE _{Rj}
FDI _{ij}	1.00	0.47	0.23	0.22	0.25	(0.38)	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.06)	0.06
GDP _{ij}		1.00	0.28	0.54	0.25	0.25	0.06	0.02	0.04	0.06	0.05	0.03	(0.04)	0.05	(0.06)
WAGES _{ij}			1.00	0.58	0.60	0.20	0.15	0.11	0.14	0.15	0.08	0.11	(0.09)	0.14	(0.15)
RDS _{ij}				1.00	0.40	0.44	0.12	0.09	0.11	0.12	0.09	0.11	0.01	0.12	(0.11)
RISK _{ij}					1.00	0.05	(0.04)	(0.02)	(0.05)	(0.04)	0.01	(0.09)	0.04	(0.06)	0.04
DIST _{ij}						1.00	0.04	0.05	0.05	0.05	0.02	0.04	0.00	0.04	(0.04)
GDP _{cj}							1.00	0.68	0.86	0.98	0.79	0.86	0.04	0.97	(0.96)
TEL _j								1.00	0.94	0.73	0.26	0.77	0.32	0.75	(0.75)
MB _j									1.00	0.91	0.49	0.92	0.23	0.92	(0.88)
ENG _{Sj}										1.00	0.75	0.89	0.07	0.98	(0.93)
TER _{Sj}											1.00	0.63	0.18	0.75	(0.69)
EXPNS _j												1.00	0.32	0.96	(0.84)
FDIS _j													1.00	0.17	(0.05)
EXPS _j														1.00	(0.94)
EXPSE _{Rj}															1.00

Table A5.3. Time dummy effects

		1.1	1.2	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10
λ_2	D_91			0.07	0.38	0.38		0.47	0.47	0.31	0.43	0.35	0.35
λ_3	D_92			0.46	0.70**	0.72**	-0.19	0.84**	0.81**	0.61*	0.79**	0.57*	0.69**
λ_4	D_93			0.50	0.62*	0.68**	-0.14	0.83**	0.82**	0.57*	0.77**	0.62*	0.65**
λ_5	D_94			0.68**	0.67**	0.75**	0.04	0.92***	0.94***	0.72**	0.83**	0.75**	0.72**
λ_6	D_95			1.17***	1.04***	1.10***	0.54	1.29***	1.30***	1.15***	1.19*	1.25***	1.04*
λ_7	D_96		0.82**	1.09***	0.86***	0.91***	0.52	1.09*	0.99***	1.05*	0.97*	1.02***	0.72**
λ_8	D_97		0.33	0.70**	0.39	0.44	0.20	0.55	0.59*	0.62	0.45	0.53	0.33
λ_9	D_98		0.27	0.62**	0.28	0.31	0.19	0.33	0.25	0.44	0.29	0.34	0.26
λ_{10}	D_00			0.53*	0.15	0.12	0.27	0.11	0.25	-0.01	0.19	0.07	0.18
λ_{11}	D_01		0.30	0.64**	0.24	0.19	0.48	0.16	0.35	-0.01	0.30	0.10	0.30
λ_{12}	D_02		0.43	0.77**	0.34	0.27	0.71	0.14	0.46	0.08	0.42	0.18	0.43
λ_{13}	D_03		0.15	0.56*	0.08	0.01	0.56	-0.23	0.22	-0.13	0.22	-0.07	0.20
λ_{14}	D_04		0.38	0.72**	0.20	0.06	0.82	-0.29	0.38	0.01	0.45	0.02	0.39
λ_{15}	D_05		(0.33)	0.09	-0.51	-0.70	0.30	-0.93	-0.26	-0.61	-0.14	-0.70	-0.23
λ_{16}	D_06		(0.17)	0.15	-0.51	-0.12		-1.04	-0.54	-0.59	-0.02	-0.73	-0.18

(***) (**) (*) denote significance at 1%, 5%, 10% level, respectively. When time-specific effect is included in the specifications, the estimated constant reflects the year 1990 and 1999.

Table A5.4. Data resources

Variable	Acronym	Expected influence	Measurement	Rationale	Source
Inward FDI	FDI _{ij}		FDI inflow from country <i>i</i> to Vietnam <i>j</i>		Ministry of Planning and Investment of Vietnam (MPI)
Market size	GDP _{ij}	+	Differential in GDP between home country and Vietnam (GDP _i -GDP _j)	Higher GDP – wealthy country	UNCTAD
Cost of differential	WAGE _{ij}	+	Differential in wage rate between the home country and Vietnam (WAGES _i -WAGES _j)	Low wages, higher returns to investment	International Labor Organization (ILO)
Local technological capabilities	RDS _{ij}	+	The differential in the share of R&D spending in GDP between the home country and Vietnam (RD _i -RD _j)	High share of R&D, quickly business cycle	UNCTAD
Risk Perception of Investors	RISK _{ij}	+	Difference between the host and home country in ratings (RISK _i -RISK _j)	Higher value represents more stable economic atmosphere, and thus, less investment risk	UNCTAD
Remoteness	DIST _{ij}	+/-	Differential in distance between capital of Vietnam and the home country	Greater distance means higher transportation and management costs	The distance calculation is done using http://www.indo.com/cgi-bin/dist
Purchasing Power Economic Development	GDP _{cj}	+	GDP per capita	Great GDP _c – fast growing host country's market, high attractive FDI	UNCTAD

Variable	Acronym	Expected influence	Measurement	Rationale	Source
Modern Information and Communication Infrastructure	TELj	+	The average number of telephone lines	High demand, high FDI attraction	UNCTAD
Traditional Infrastructure	ENGj	+	Commercial energy use per capita	High volume used – high demands	UNCTAD
Availability of High-Level Skills	TERj	+	The share of tertiary [sic] students in the population	High literacy rate – high productivity	UNCTAD
Attractiveness and Absorptive Capacity for FDI, and Investment Climate	FDISj	+	The share of world FDI inward stock	Better investment climate, higher FDI attraction	UNCTAD
Resources for Extractive FDI	EXPNSj	+	The world market share in exports of natural resources,	More natural resources, more extractive FDI	UNCTAD
Openness Degree	EXPSj	+	The share of exports in GDP	High openness, more FDI inflow	UNCTAD
	EXPSEj		The world market share of exports of services		

Table A5.5. The inward FDI potential index – UNCTAD methodology

The Inward FDI Potential Index captures several factors (apart from market size) expected to affect an economy's attractiveness to foreign investors. It is an average of the values (normalized to yield a score between zero, for the lowest scoring country, to one, for the highest) of 12 variables (no weights are attached in the absence of *a priori* reasons to select particular weights):

1. GDP per capita, an indicator of the sophistication and breadth of local demand (and of several other factors), with the expectation that higher income economies attract relatively more FDI geared to innovative and differentiated products and services.
2. The rate of GDP growth over the previous 10 years, a proxy for expected economic growth.
3. The share of exports in GDP, to capture openness and competitiveness.
4. As an indicator of modern information and communication infrastructure, the average number of telephone lines per 1,000 inhabitants and mobile telephones per 1,000 inhabitants.
5. Commercial energy use per capita, for the availability of traditional infrastructure.
6. The share of R&D spending in GDP, to capture local technological capabilities.
7. The share of tertiary students in the population, indicating the availability of high-level skills.
8. Country risk, a composite indicator capturing some macroeconomic and other factors that affect the risk perception of investors. The variable is measured in such a way that high values indicate less risk.
9. The world market share in exports of natural resources, to proxy for the availability of resources for extractive FDI.
10. The world market share of imports of parts and components for automobiles and electronic products, to capture participation in the leading TNC integrated production systems (UNCTAD02).
11. The world market share of exports of services, to seize the importance of FDI in the services sector that accounts for some two thirds of world FDI.
12. The share of world FDI inward stock, a broad indicator of the attractiveness and absorptive capacity for FDI, and the investment climate

6. Foreign Direct Investment's Absorptive Capacity Theory

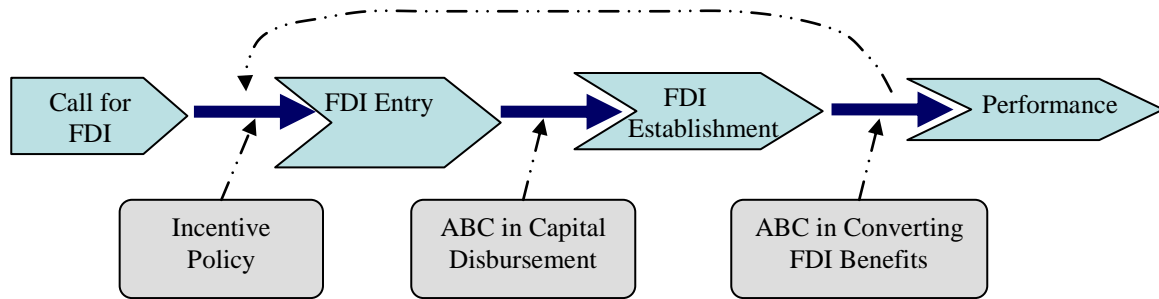
6.1. Introduction

In general, FDI can be described as a flow of capital, technology and know-how from one country to another. Notably, international investors usually receive returns on their investments, while host countries may have difficulties in quantifying related FDI benefits. FDI per se can bring important benefits, such as capital, advanced technology and improved managerial skills to a destination. However, *those benefits do not automatically convert to host country spillovers*. This process requires host countries to have sufficient absorptive capabilities. Many developing countries seek to attract and enlarge their FDI placements, but do not recognize that certain initial conditions or 'FDI host country critical mass' must be in place to absorb FDI benefits. Nunnenkamp (2004) argues that countries should obtain a minimum level of economic development before they are capable of benefiting from FDI. If not, they should not expect FDI investors to respond. There is an apparent need to study national absorptive capacity and begin to generate FDI benefits in host countries.

In which phase of FDI life do absorptive capacity conditions need to be reached to begin benefit emissions? Historically, a majority of poor countries having least per capita GDP income have made consistent efforts to push their national development through establishment of government run, FDI attraction centers. One 'leapfrog' method for enabling them to catch up with developed countries, in terms of capital and advanced technology, is to attract investments from foreign countries. Host countries offer incentive policies such as reductions on import and corporate income taxes, tax exemptions and free land leases and other types of grants, subsidies, and low interest loans. Their goal is to attract greater sums of FDI; thus, host countries provide international investors with prospects of higher returns on their investments as compared to home investment opportunities. After FDI projects have been approved, host countries continue to motivate investors to disburse capital and implement contracted projects. This stage is a demanding challenge for host countries'

officials concerned with FDI placement. If projects are still on the table without contract finalization, neither investors nor recipient countries can expect returns on their investments or benefit disbursements. The challenge is how to obtain commitments from investors by them registering official FDI host country projects, placing letters of credit or transferring stipulated funds to host country banks, so that local contracts can be signed to undertake initial project formation steps. It is understandable that it takes time to prepare for project feasibility studies, design plans, final construction and implementation processes, like mobilizing capital, receiving site approvals, building permits, environmental studies, and recruiting labor. However, time lags between registering FDI and fund disbursement also reflects on the lack of absorbability of host economies due to inadequate physical infrastructure, shortage of skilled workers, and underdeveloped financial systems. FDI benefits, however, are not only related to capital, but also access to advanced technology and knowledge. These externalities need to be transferred and converted into host countries' internal competences through an absorptive process; initially this requires recipient countries to have sufficient levels of absorptive capacity. This is definitely a forbidding, but necessary challenge for host countries to perform sufficient economic analysis to be able to assure themselves that they have attained full absorptive capacity. Again, host countries can only achieve FDI benefits through first building sufficient absorptive capacity before allowing or encouraging projects to be launched. In straightforward terms, a host country must achieve a certain level of confidence that sought after or contracted FDI projects have a reasonable prospect for successful implementation and continuation before beginning the initiation phase of an FDI life cycle. By reassuring investors that a detailed absorptive capacity analysis will be undertaken for each and every FDI investment, this will encourage further FDI projects beyond those currently in the pipeline.

For this reason, absorptive capacity is obviously more essential than attractiveness, as FDI absorptive capacity directly and decisively influences economic growth. In turn, the absorptive capacity will enhance the attractiveness of quantity and quality of FDI inflows. Figure 6.1 illustrates the path of FDI inflow into the destination country and position of absorption in the step of FDI establishment and achievement.

Figure 6.1: Position of absorption in FDI inflow analysis

The first objective of this study is to address the vital role of absorptive capacity in relation to inward FDI processes; and then call host countries attention to improving their internal absorptive capacity, instead of concentrating only on attracting FDI. Furthermore, the foremost purpose of this study is to pinpoint factors that help secure absorptive capacity in host countries.

What is absorptive capacity (ABC)? What factors do host countries need to absorb FDI benefits? These questions are addressed in this study. In fact, previous studies have mentioned FDI's absorptive capacity, but prior theorization is either ad hoc, or not a well-established, theoretical paradigm (Blomström, Globerman, & Kokko, 1999). For instance, while Borensztein, De Gregorio, and Lee (1998), and Blomström and Kokko (2003) reveal that FDI provides a positive growth-effect once host countries have a minimum threshold stock of human capital, that reflects a sufficient status for absorptive capability of advanced technologies. Hermes and Lensink (2003) point to a necessity for a well-developed *domestic financial system* for processes of technological diffusion associated with FDI to be transacted. Fu (2008) mentions that globalization of *R&D* may provide opportunities for developing countries to catch up with technological frontiers by leapfrogging over current status quos. Evidently, it is necessary to develop an overall model embracing these individual aspects, if an FDI competitive advantage theory is to be advanced. We take on this challenge by building up a so-called FDI photosynthesis model. The model is not only a combination of factors identified in research literature, but also new factors collected from experimental situations. We propose that to absorb FDI spillovers, host countries should have minimum absorptive capacity attainment levels for educated and skilled labor (human capital), absorptive capacity of local firms, financial systems, physical infrastructures, technological levels, and institutions. Moreover, FDI absorbability is clearly split into two stages in this

study. One is the phase of disbursing capital investment and the other is the phase of converting FDI benefits into host countries' competencies. Drawing this distinction heightens host countries' awareness of absorptive capacity in different stages of FDI flow.

To support these arguments, a survey was conducted in Vietnam in 2008 to gather points of view from authorities and international investors. Vietnam provides a multifaceted case. While FDI's registered capital is dramatically increasing, disbursed amounts are sharply decreasing. This country has faced bottle-necks of inadequate power supply, shortages of qualified personnel, and site clearance. Government has vowed to speed up FDI disbursements to help ensure continued involvement of local FDI participants. Specific information is available in Section 6.4.

This paper is organized as follows. Section 6.2 provides an overview of research literature on channels for FDI transfer and FDI absorptive capacity. Section 6.3 expresses arguments for building absorptive capacity methods. Section 6.4 provides some empirical reflections from a country case study; i.e., Vietnam, to illustrate our arguments. Section 6.5 concludes and provides policy recommendations and suggestions for further research.

6.2. The path of spillovers

6.2.1. Channels

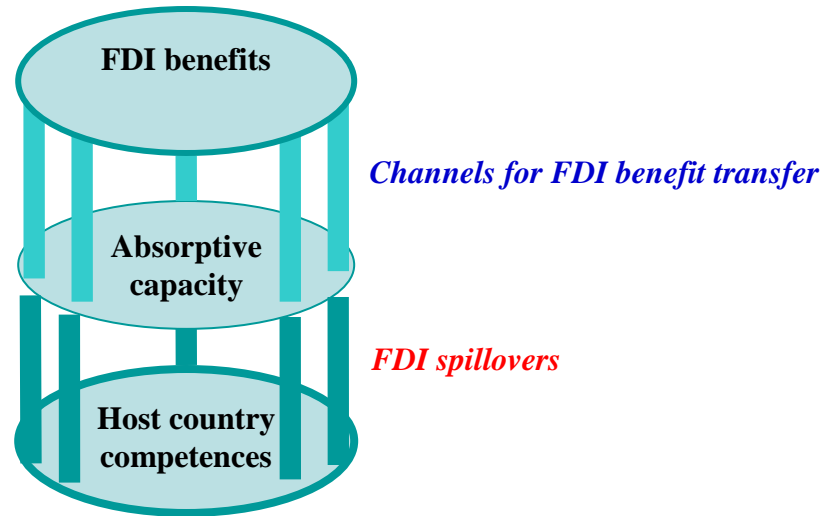
Previous studies have defined benefits that FDI can bring to a host country. Similar to physical capital, advanced technology, managerial experience, and competition as well, embody potential FDI benefits. Indeed, De Mello (1997) states that FDI is often thought of as a composite bundle of capital stocks, knowhow, and technology. Along the same line, Borensztein et al., (1998) recognizes that FDI is an important vehicle for transfers of advanced technology to developing countries as well as enhancing levels of human capital in host countries. Furthermore, the Organization for Economic Co-operation and Development OECD (2002a) reports that "FDI triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps create a more competitive business environment and enhances enterprise development". In this report, they also assert that "cleaner" technologies transferred by FDI might lead to improvement of environmental and social conditions in host countries.

Although, FDI benefits are often invisible yet measurable by those channels along which FDI transfers its benefit to recipient countries. Kokko (1992) indicates four ways that FDI might transfer technology to other firms, namely: demonstration - imitation effects, competition effects, foreign linkage effects, and training effects. More specifically, Damijan, Kell, Majcen and Rojec (2003) provide information on different channels of international technology transfer to local firms in transition countries. One channel flows from parent firms to local affiliates. The other channel flows from foreign affiliates to domestic firms. Technology is transferred through horizontal and vertical spillover effects. They also classify the vertical spillover into backward and forward linkages. By evaluating theories on productivity, wages, and export spillovers in developing, developed, and transitioning economies, Görg and Greenaway (2004) identify a range of possible spillover channels that might boost productivity in host countries. Four channels are listed: imitation, skills acquisition, competition, and exports. In this study, they also mention empirical evidence of horizontal spillovers effects that have occurred from multinational firms to domestic firms. Nunnenkamp (2004) supports the idea that local companies might benefit by hiring workers who were previously trained by multinational corporations. Moreover, Fu (2008) finds that FDI can contribute to regional innovation. He categorizes four ways, namely: R&D and other forms of innovation; knowledge transfer through supply chains, skilled labor turnovers, demonstration effects; competition effects; and advanced practices and experiences in innovation management effects. In summary, FDI benefits can be transferred to recipient country through two levels: macro-economic (national) and micro-economic (firms) levels. On the macro level, FDI benefits will be transferred to host countries by several channels. Technological learning can take place through competition, imitation, foreign linkages, and by doing business with local firms. The second channel is associated with training, learning by doing, and accumulating experience. On the micro level, domestic firms are seen as main channels for receiving FDI benefits involving horizontal and vertical spillovers effects, training effects, skills acquisition, knowledge transfers, and labor turnover.

6.2.2. The FDI absorptive capacity

As mentioned earlier, FDI naturally contains some benefits. However, these benefits need to go through a conversion process before becoming host countries' spillovers. This process requires sufficient absorptive capacity at host country levels. "Absorption" in FDI context means assimilation of FDI in a given host economy. Thus, "absorptive capacity" denotes maximum amounts of FDI that host economies can assimilate or integrate into their economies in a meaningful manner (Kalotay, 2000). Specifically, there are two stages of absorbability. One is to bring FDI proposal projects into practices and the next one is to convert FDI benefits into host countries' competencies. In another sense, Cohen and Levinthal (1990) point out that organizations need prior related knowledge in order to be able to assimilate and use new knowledge. Succinctly put, in order to absorb new knowledge and optimally utilize FDI benefits, host countries need to have a certain degree of development of related knowledge and capacities. The capacity mentioned most frequently in previous studies is *technology factors at both national and domestic firm levels*, proxies for technological gaps between host and home countries' FDI. The larger the technological gap, the smaller is the impact of FDI on economic growth (De Mello, 1997). The second most often mentioned factor are labor forces described in terms of *human capital* and education, which are found to be essential for absorbing and adapting foreign technology, and to generate sustainable long-run growth (Blomström & Kokko, 2003). The third capacity is the *R&D* factor, which are firms' ability to exploit external knowledge (Cohen & Levithal, 1990). These three factors work through FDI transfer channels, presented earlier. In order to fully benefit from FDI inflows host countries most likely require more factors for benefit absorption. The fourth factor is a *financial system*. A better developed financial system positively contributes to the process of technological diffusion associated with FDI (Hermes & Lensink, 2003). Finally, *institutional development* seems to play a role. Kalotay (2000) defines institutions as an investment-friendly policy and administrative framework, while Durham (2004) uses the regulation of business, the protection of property rights and anti-corruption measures as institutional indices. Figure 6.2.2 demonstrates that FDI transfers benefit to host countries through given channels. Before becoming host country' spillovers, it is recommended that host countries obtain its absorptive capacity first.

Figure 6.2.2: Absorptive process



Generally, previous studies describe absorptive capacity of host countries on two levels: absorptive capacities of domestic firms involving technological intensity and quality of labor (e.g. Cohen & Levithal, 1990; Girma, 2005) and national absorptive capacity, including technological levels, human capacity, financial and institutional development (e.g. Borenzstein et al., 1998; Hermes & Lensink, 2003; Fu, 2008) (more details in A6.3).

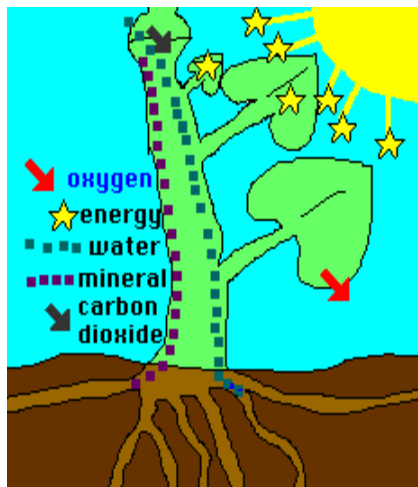
6.3. The FDI photosynthesis model

Green plants are the only plants that produce oxygen and make food. This process is called photosynthesis. Photosynthesis means “combining with light”. More specifically, this takes place in chloroplasts, containing chlorophyll. Chlorophyll absorbs sunlight. From sunlight, green plants combine carbon dioxide and water to make sugar and oxygen³². Broadly, to convert light energy into chemical energy and store it in bonds of sugar, green plants absolutely need to have leaves, stems, stalks, and roots. In a similar way, we propose that to assimilate FDI spillovers, recipient countries unquestionably need to have absorptive capacities, which are developments of domestic firms’ absorptive capacity, human capital, sound financial infrastructures, physical infrastructures, technology and R&D, and institutions. This model is a *simulation of green plant photosynthesis*, since both of them are concerned with absorptive capacity. Plants absorb sunshine and water, while countries absorb

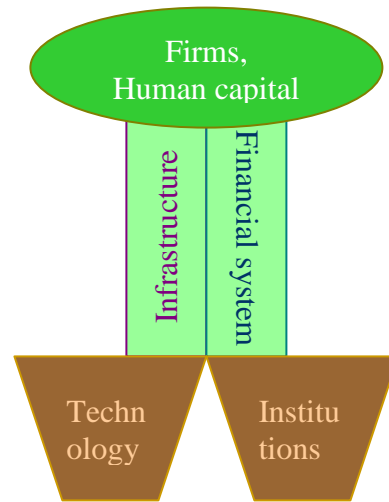
³² <http://library.thinkquest.org/3715/photo3.html>

benefits from FDI. Sunshine, water, and FDI's benefits are exogenous sources. As plants or countries absorb and transfer their corresponding benefits for internal capacity to grow up and mature. By creating this analogy, this model integrates FDI absorptive capacity theories, transforming them into an organic parallel with photosynthesis. Figure 6.3 reflects the parallel shapes of our FDI qua Photosynthesis models. Both models have structures similar to a green plant.

Figure 6.3: Photosynthesis



Source: Thinkquest



The model is first grounded with literature related to FDI's absorptive capacity at both micro and macro levels. This deductive approach application uses research literature as a foundation to pose propositions and construct this model (Aqil Burney, 2008; Nachum, Dunning, & Jones, 2000). Furthermore, this model is developed based on theories related to FDI benefit transfer channels and factors that capture FDI absorption.

Absorptive capacity of domestic firms

As mentioned earlier, researchers have defined two levels at which host countries absorb FDI benefits. One is the micro level proxies by domestic firms and the other is concerned with the macro level indicated by human capital, financial systems, technological levels, and institutional developments. Local firms represent themselves at the micro level, at the same time, they are a component of the macro level. Underwriting direct investments abroad,

investors can either establish economic organizations in the form of 100% capital ownership by foreign investors, or a joint venture, legal structure, for capital organizations with domestic firms, or invest in various contractual forms of BCC³³, BO, BTO, and BT, or other legal entity forms of organization. In whichever form, foreign business needs to co-operate with local businesses either as partners, sub-contractors, or suppliers. Therefore, domestic firms are not only main channels for transferring FDI benefits, but also constitute a bridge for connecting foreign investors and host countries. In cooperation with international enterprises, host country domestic firms should have at least an initial level of development in technology, qualifications of workers, and managerial skills. In such cases, domestic firms can learn and easily absorb advanced technology and business skills from foreign companies. Kalotay (2000) states absorption processes depend on the skills and capabilities of local firms and on an affiliate's commitment to their host country partner. FDI benefits can be transferred to local firms by either vertical or horizontal channels, as presented above. No matter what channel is used, domestic companies are required to have initial technological levels needed to assimilate or copy advanced technology from FDI. Greater technological levels that are supported by greater R&D expenditures, derives greater gain from FDI (Blalock & Gertler, 2009; Suyanto, Salim, & Bloch, 2009). Moreover, firms with a higher educated labor force are better situated for absorbing FDI's advanced technology (Adams, 2009; Blalock & Gertler, 2009).

In a similar vein, Chudnovsky, López, and Rossi (2004) and Kolasa (2007) find that domestic firms with higher absorption capacities reap positive spillovers from transitional corporations presence, while those with low absorption capacities were more likely to receive negative or lower spillover benefits. From another aspect, to be a supplier to a foreign company, local firms' capacities need to be able to satisfy their requirements, which often relates to quality and technological issues and not stock quantities alone. Host countries' development should not only rely on foreign firms' presence, but also strongly on domestic firms' integral participation in FDI local resources as well. We argue that absorptive capacity of domestic firms is the most important factor in determining degrees of absorptive capacity of host countries. Nunnenkamp (2004) states capabilities of local firms to absorb superior

³³ BBC: Business co-operation Contract, BO: Build-Operate Contract, BTO: Build-Operate-Transfer Contract, BT: Build-Transfer Contract

technology and knowledge is a decisive determinant in successful FDI related benefits transfer. Therefore, local firms retain an important role in determining absorptive processes in our model.

Proposition 1: Higher host country benefits derived from FDI can be tested by initial development of local firms' absorptive capacity

Labor force - Human capital

As described above, one channel in which FDI transfers its benefits to host countries is through its labor force. While studying FDI determinants' absorptive capacity, several studies have also described human capital as a crucial factor in promoting local firms' absorptive capacity and nations as well. Productivity spillover depends on human capital (L Alfaro & Charlton, 2007). With a well-educated workforce, host countries are able to catalyze FDI (Kemeny, 2010). Oppositely, those with low levels of education, can obtain significant negative FDI effects (Ayanwale, 2007). This means that host countries can only receive FDI advantages, if those countries build a well educated workforce (Lumbila, 2005). Consequently, labor remains a channel for transferring and receiving FDI benefits as long as its workforce is well educated. Certainly, one of benefit of possessing highly trained manpower is prospects of absorbing technology (Duysters, Jacob, Lemmens, & Jintian, 2009). Transfer of FDI benefits to labor takes place through training, learning by doing, and accumulating experience. Therefore, labor is a force and factor for implementing conveyed know-how. Better educated and skilled labor implies that better know-how is obtainable, and better performance is achievable. . Borensztein et al. (1998) state that FDI produces positive spillovers only in a country which has a minimum threshold stock of human capital with a sufficiently qualified labor force. In a similar vein, Van den Berg and van der Klaauw (2001) state that quality of the labor forces determines an economy's ability to create new ideas and adapt to old ones. In the disbursement stage, labor forces are indispensable for putting projects into practice. Shortages of qualified people might cause plans to be slowly implemented. Lower educated and skilled host country workers definitely impact disbursements of investment and reflect a negative image concerning host countries' ability and capacity for FDI promotion. Chen (1990) confirms that countries investing more in human capital will gain more benefits from FDI. Hence, to gain FDI benefits, host countries

certainly require well educated and trained human capital. Only human beings have the capacity to understand, assimilate and create new knowledge; thus, human capital is a vital factor needed to absorb FDI benefits.

Proposition 2: Higher host country benefits derived from FDI can be tested by initial development levels of educated and skilled labor forces

Financial systems

Financial systems are central to economies' functioning and modern day life. Modern financial systems embody a complex of institutions, including banks, government and international institutions. They regulate and facilitate payments and provide intermediation links connecting lenders to borrowers, and investors with assets to investment opportunities³⁴. Financial systems are therefore a key tool in FDI activities, such as disbursements of investment capital; transfers of money from overseas into recipient countries' bank accounts; payments for building materials, raw materials, labor costs; collecting money after selling, repatriation of funds to home countries, etc., and other fiduciary services. All such basic activities require a certain degree of financial development. If investment capital is not disbursed, projects' progress might be delayed, stagnant, or even closed down. If investments cannot be implemented, attractiveness of FDI is lost; hence host countries would receive no benefits from FDI. Lumbila (2005) concludes that host countries can only obtain benefits from FDI only with "depth and efficiency of financial system[s]". For that reason, financial development is a vital component to accelerate recipient countries' absorptive capacities and to facilitate FDI operation in host countries. Alfaro, Chandab, Kalemli-Ozcan, and Sayek (2004) and Alfaro & Charlton (2007) state that FDI is associated with accelerated growth in host countries with comparatively well developed financial markets. Countries with smooth functioning financial systems can exploit FDI more efficiently. Hermes and Lensink (2003) point out that more locally developed financial systems positively contribute to processes of technological diffusion linked to FDI. Durham (2004) also studies financial market development as an indicator of relationships between FDI effects and equity foreign portfolio investments (EFPI). He goes on to state that financial development is contingent on absorptive capacities of host countries. Sakik and

³⁴ <http://www-personal.umich.edu/~alandear/glossary/f.html>

Bolbol (2003) and Krogstrup and Matar (2005) find evidence in Arabic countries that poorly developed financial systems are not able to benefit from FDI. In our model, financial system acts as an integral factor in absorbing FDI spillovers occurring in host countries.

Proposition 3: Higher host country benefits derived from FDI can be tested by initial financial systems' development

Physical Infrastructure

According to O'Fallon (2003), physical infrastructures are described as service systems associated with energy, water supply (irrigation), transport, telecommunications, sanitation and waste facilities, as well as flood protection and drainage. In regard to transportation, infrastructures can include railways, roads, airways, and waterways, which can carry raw materials to manufacturing points and finished goods to consumers. Poor infrastructure can increase costs and waste time. Wasted time and increased costs probably return less profit to investors and host countries. In addition, outmoded or poorly maintained infrastructure systems can cause delays or even abandonment of investment projects. This means host countries cannot receive benefits from FDI, but also causes confusion in society. For instance, demand for electricity goes up as FDI increases. Once host countries' power fails to provide sufficient capacity to supply power, energy must be reserved for production first; thus residents have to suffer shortages of electricity and living standards are decreased. Similarly, Kessides (1993) concludes that infrastructures contribute to the quality of life by creating amenities, providing consumer goods (transport and communication services) and by contributing to macroeconomic stability. Regarding soft infrastructure, most information and communication go through internet, telephone, and digital communication networks. The development of both hard and soft infrastructure systems can effect countries' absorption of FDI benefits (Adams, 2009; Kemeny, 2010; Lumbila, 2005). There is no doubt that infrastructure is seen as an important factor pushing forward smoother convertibility of FDI's benefits increasing host countries' spillovers. A study by the Organization for Economic Co-operation and Development (OECD) (2004) reports that an inadequate infrastructure is a major impediment to entrepreneurial activity; while a well-developed information and communication technology system may lead to an upward shift in FDI activities. Physical infrastructure has been playing an imperative role in supporting FDI activities. Nunes,

Oscategui, and Peschiera (2006) take infrastructure as an indicator for capturing absorptive capacities of countries towards FDI. Similar to financial systems, a sound infrastructure system might enhance absorptive capacities of host countries.

Proposition 4: Higher host country benefits derived from FDI can be tested by initial developments of physical infrastructure

Technology and R&D

Technology is a broad concept and generally refers to knowledge and equipment which satisfies human needs or wants (Technology Guide, UNESCO). As technology can be transferred from more to less developed countries (Keller, 1995), most researchers agree that advanced technology can be one of the main benefits that host countries can expect from FDI. However, this transfer depends greatly on host countries' technological capacities. Nootboom, Van Haverbeke, Duysters, Gilsing, and van den Oord (2007) confirm that technological knowledge is a basic of absorptive capacity. Indeed, technological gaps between home and host countries determine host countries' absorptive capacities. In developing countries, such as Vietnam, new technology and R&D are mainly developed by its internal national institutions, such as universities, state owned companies and a few private companies. Borensztein et al. (1998) find that FDI contributes to economic growth only when a sufficient absorptive capacity of advanced technologies is available in host economies. Higher FDI efficiency rates would result from a combination of advanced management skills and more advanced technology. De Mello (1997) states that the larger the technological gap between host and home countries, the smaller is expected that FDI impacts on economic growth. The aim of host countries, when calling for FDI, is to utilize advanced FDI technologies to enhance their economies. This means that host countries require initial developments in technology to assimilate these benefits.

In a similar vein, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), (1984) reports that technological absorptive capacities of host countries have major impacts on the effectiveness of technology transfers. Regarding technology at firm levels, Kokko and Blomström (1995) write that domestic firms can benefit only if technology gaps are not too wide, so that domestic firms can absorb knowledge available from multinationals. Usui (1983) finds that transfers of technology will be effective only if

recipient firms already possess an adequate base to absorb acquired technologies without recourse to broad-ranged and long-term services from their foreign affiliates. As a part of innovation, levels of R&D for host countries are considered factors of absorptive capacity. Once levels of R&D for host countries are developed, the assimilation of advanced technology of FDI is easier. Fu (2008) offers that globalization of R&D may provide an opportunity for developing countries to catch up with various technological frontiers. Cohen and Levithal (1990) find that firms' ability to exploit external knowledge is often generated as a byproduct of its R&D, and R&D not only generates new knowledge, but also contributes to firms' absorptive capacity. Technology acts like the roots of green plants and is a foundation that can boost countries' development. Advanced technological levels provide a sound basis for absorption of FDI spillovers.

Proposition 5: Higher host country benefits derived from FDI can be tested by initial development levels of advanced technology and R&D

Institutional development

Some studies have also tested the importance of institutional factors for FDI's absorptive capacity and found a positive relationship. Concerning FDI, proxies for institutional development are FDI law/ regulations and host countries' administrative systems. When doing business in a particular country, initial considerations of international investors are potential profits and the right of repatriating or using those profits elsewhere. Once property rights are protected by the law, international investors feel more secure that their investment will not be nationalized or confiscated by some arbitrary or administrative means; they might expand and develop their investments further. Therefore, this possibility may bring additional benefits to host countries. On the other hand, opaque, fluctuating regulations will lead investors into a seeming maze of bureaucratic deadens. To escape such complicated situations, investors quickly move their investment elsewhere. While testing FDI's driving forces using local markets development factors, such as, availability of complementary factors of production, and institutional development. Durham (2004) defines institutional development as investment-friendly policies and administrative frameworks characterized by regulation of businesses, protection of property rights, as well as strict corruption regulation. He finds that regulation of business and protection of property rights are positively correlated

with FDI. Krogstrup and Matar (2005) also applied these indicators while investigating absorptive capacities in the Arabic world. Clearly, development of institutions will facilitate FDI businesses, and accelerate absorptive capacities of host countries. Durham (2004) and Kemeny (2010) cite those countries with higher legal standards as likely supporting FDI more efficiently. Similarly, Nunnenkamp (2004) concludes that institutional development seems first to be required before benefiting from FDI. Institutional development expresses social development and host countries' governance levels. Stronger institutional development could lubricate the increased rate of absorption into a smoother structured process. Institutional appropriateness will help host countries accrue FDI advantages (Adams, 2009). This situation resembles the roots of a plant. Healthy roots imply wealthy plants.

Proposition 6: Higher host country benefits derived from FDI can be tested by initial development levels of institutional policies

6.4. Opinions towards the Photosynthesis absorptive capacity model: Evidence from Vietnam

6.4.1. The aim of the survey

The survey aims to obtain practitioners' responses on specific academic findings (the FDI absorptive capacity model). The survey is conducted in Vietnam, since this country has been faced with a significant variance between FDI's registered capital and actual disbursed capital in recent years. At the Consultative Group Meeting for Vietnam in 2007, Vietnamese and international experts determined that shortcomings of infrastructure, human capital, and institutions caused this delay in internal FDI processing. In a similar vein, Mr. Nguyen, Huu Thang, Director of Foreign Investment Agency of Ministry of Planning and Investment explains that the Vietnamese economy did not have sufficient internal absorptive capacity to manage all registered FDI projects at the same time. Vietnam needs additional capacities to absorb more previously registered projects, and time to increase such capacities necessary to process contracted FDI commitments. Certainly, Vietnam's marketing efforts to attract FDI has outstripped its ability to perform, and in such cases, it is recommended that its marketing function more closely review its internal FDI processing capacity before committing to more projects that likely would be unable to move forward due to Vietnam's current backlog.

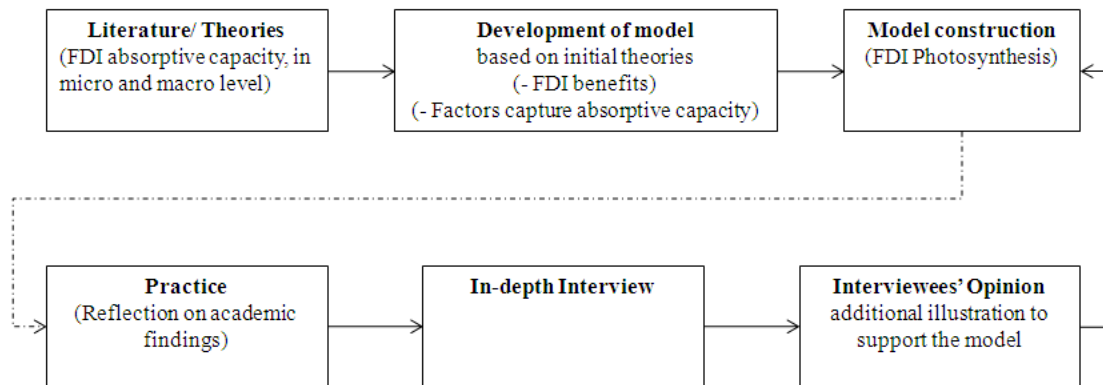
This seems to be a common problem for most developing countries, as they lack capacity (e.g. high level of technology, human capital), while eager to attract quality FDI (capital), (e.g. advanced technology projects), their registered FDI projects are seriously mismatched with their internal absorptive capacity to begin implementing these same projects in the field. Such delays caused by overoptimistic FDI planning, will negatively impact investors' willingness to commit to future FDIs, and likely lead to cancelations of projects currently registered due to contract infringements requiring such projects to begin after a given stipulated period of time, and demanding immediate repayment of related project deposits. However, FDI benefits are not only those of investment capital, but also others such as advanced technology, knowhow, and managerial skills. Perspectives of host country nationals involved in successfully attracting quantity FDI, but facing problems of disbursement and absorption of FDI's benefits related to absorptive capacity, are valuable for confirming details incorporated in our Photosynthesis model.

6.4.2. Methodology

As aforementioned, this survey is organized to investigate our selected survey partners' points of view concerning our theoretical FDI absorptive capacity model. This model is first established based on literature related to FDI's absorptive capacity applying a deductive approach. This manner is supported by Orton (1997) with "data-poor, theory-rich". This model is brought into practice to obtain not only opinions of practitioners regarding FDI academic findings, but also anecdotal accounts to support the model as well. We consider applying certain methods, such as the triple helix, national innovation system (NIS), and in-depth interviews. The triple helix deals with multiple reciprocal relationships, while the absorptive capacity model also involves multiple factors in multiple dimensions, such as number of domestic firms, educational structure, financial systems, and quality of infrastructures, technology, and institutions. However, our absorptive capacity model is not a spiral model for innovation, and there are not three different actors involved (Government – Industry – Institutions). Although there are relationships among determinate factors (not actors) in the absorptive capacity model, as a synthesis model; however, there are no factor influences between others determinates. Similarly, the NIS defines as "a historically grown subsystem of the national economy in which various organizations and institutions interact

and influence each other in carrying out of innovative activity” (Galli & Teubal, 1997). In our absorptive capacity model, it also includes all important factors required for capturing absorptive capacities; however, as mentioned above, interrelationships among factors is not influenced. On the other hand, in-depth interviews are a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular issue. This method can provide much more detailed information; offer a more complete understanding for a given research issue (Boyce & Neale, 2006; Guion, 2006). Additionally, in-depth interviews are open to debate and discussion concerning counter arguments as well as garnering policy feedback responses. For that reason, the in-depth interview method stands as a relevant research modality for this purpose. Figure 6.4.2 illustrates this research method.

Figure 6.4.2: Research methodology review



Central questions that require feedback are: What are interviewees’ or respondents’ perceptions concerning a given country’s capacity to absorb FDI benefits? This survey seeks to explore interviewees’ opinions on (1) awareness of relationships between a host country’s capacity and its absorption of FDI benefits, (2) factors capturing absorptive capacity of a host country, (3) the role of each determinate factor in capturing a host country’s absorptive capacity, and (4) future policies suggested or recommended to enhance host country’s absorptive capacity. Data and information collected was mainly based on selected in-depth interviews and reports, which are considered most suitable for our study. This survey was

conducted in July and August 2008 in seven provinces of Vietnam. Their locations were in Vietnam's northern, middle, southern, and delta regions, as well as mountain, border, and selected special areas. These provinces have differed significantly in their level of attracting FDI. Some provinces achieved high levels, such as Ho Chi Minh City, Ha Noi; others are at average levels, such as Da Nang, Quang Ngai, Can Tho, and the rest are low or very low level areas such as Ben Tre, Lang Son (see A6.4 Map for locations of Vietnam's business districts). Government agencies are at central and provincial levels. We invited 43 officials, who are leaders of Vietnamese institutions, holding office with central and provincial authorities, as well as professional experts, plus domestic and foreign investors (see A6.1).

To gather responses related to survey goals listed above, general questions are (1) do you think that a host country (Vietnam in this survey) needs to have certain capacities to absorb FDI benefits? (2) Our absorptive capacity model (the FDI photosynthesis model) argues that to absorb benefits from FDI, a host country needs to have initial (prior) development in human resources, domestic firms' absorptive capacities, financial systems, infrastructure, technology, and public institutions. What is your opinion about this argument? (3) Could you please describe the role of each factor in capturing absorptive capacity? (4) Could you please discuss future policies that could enhance a country's absorptive capacity?

In addition, specific questions were given to specific selected groups. Members of a group who are policy makers and investment promotion agents were asked for a general evaluation about FDI benefits in Vietnam, and future policies for improving absorptive capacities. Members of professional institutions did analyze the roles of their institution in this absorption process and reflected on the roles of other institutions. Then, they discussed future policies and measures to enhance absorptive capacity. Local businesses were asked to respond, as to how domestic firms managed improvements in their absorptive capacity and communicated their concerns to governments to assist in leveraging it, were progressing. Questions dealing with barriers, while doing business in Vietnam were asked of foreign investors. More details are available in the Appendix Table A6.2.

The data analysis is adopted from Creswell (2003) with 6 steps that include (1) organizing and preparing data for analysis, (2) reading all collected data in order to obtain a general sense of collected information and to reflect on its overall meaning and impact, (3) starting detailed analysis by coding and organizing the data, (4) shaping data into themes'

descriptions/ grouping of interviewees, (5) discussing interviewees' perceptions, and (6) interpreting the data. Because the aim of this survey is to perceive how practitioners respond to our theoretical model; therefore, interpretations of the interview's results are to reflect interviewees' opinions/ discussions/ and arguments about the model's components. This part of the survey is a kind of narrative description of the interviewees' reflections, categorized as qualitative research analysis (Casebeer & Verhoef, 1997). Conversation analysis (commonly abbreviated as **CA**), which is the study of interactive talking (Psathas, 1995) is used to interpret the interviews' results as well.

6.4.3. Reflections

In general, the interviewees express quite similar opinions regarding factors determining FDI's absorptive capacities. Human capital, physical infrastructure, as well as institutional policies are most often mentioned.

Regarding the firm factor, FDI literature has stated that a host country's absorptive capacity depends on its domestic firms' absorptive capacity in terms of assimilating advanced technology, knowhow and managerial skills from FDI. Domestic firms act as a channel for receiving FDI benefits; they also produce goods for society and support fair competition. Generally, there are two kinds of local firms. One is 100% owned through holdings of domestic equity capital and the other is a joint-venture with foreign investors, owning only a portion of its equity capital. Broadly speaking, Vietnamese local firms are weaker than multinationals in terms of capital, advanced technology and managerial experience; however pressures of competitiveness have forced local firms to improve their absorptive capacities.

Table 6.4.2: The factual situation of enterprises from 2000-2007

	State	Collective	Private	FIE
Enterprise size based on employees	442.46	33.98	28.89	314.91
Enterprise size based on capital	216.02	2.49	5.30	134.81
Enterprise based on fixed asset	82.31	1.05	1.81	78.52
Enterprise size based on investment	27.27		1.24	14.74

Source: based on data from GSO

Table 6.4.2 indicates that foreign investment enterprises are quite competitive with state enterprises, in terms of size of enterprise, number of employees and fixed assets; while very far removed from private and collective enterprise statistics. Many domestic businesses have been upgrading their technological levels in order to gradually become main suppliers to multinationals. Dominant industries, such as aviation, gas and petro chemistry, telecommunication, textile and garment production, banks and financial services reach almost the same level of development as the rest of the world. These companies cannot only compete with foreign companies, but also contribute to their national absorptive capacity, especially in carrying out FDI projects. On the other hand, private companies have often faced a loss of employees and a shortage of highly educated labor. Employees with higher education generally prefer to work for foreign companies, earning higher salaries and gaining more learning and advancement opportunities. Local firms need to have better promotion policies to retain labor. In addition, if local companies want to invest in advanced technology, they need a large amount of capital; therefore, they really need support from their government in order to upgrade their capacity. Weaknesses or shortcomings of local firms' capacity can pull national absorptive capacity down, according to Mr. Luu Van Hai, vice director of Techcovina group. For example, present and future employees are aware that the garment and textile industry is quite popular in Vietnam, because of its higher skilled labor and low operational costs. However, materials for producing cloth, such as, buttons, and zippers have to be imported into Vietnam from abroad, since local products do not meet foreign producers' quality requirements. As a result, Vietnam earns lower benefits from advanced technology, associated with this industry, and gained from FDI. Mr. Hoang, Anh Tuan, executive director of the One Connection Company, confirmed that only when the private sector is more fully developed, can it leverage the country's competitiveness and absorptiveness. Private companies can be either suppliers of foreign companies or their joint-venture partners. This is a salient factor in promoting FDI benefits' convertibility into national benefits. An example of a successful case is Vinamilk and Campina, a Dutch company. Worker productivity is improved by training, learning by doing and accumulating experience. Advanced technology, know-how and managerial knowledge are constantly being transferred. Again, the intensity of assimilating knowledge relies on the education of human capital and domestic firms' existing technological levels. In their projects,

Vietnamese farmers have learned how to organize a bio farm, how to breed cows to produce larger quantities of milk per cow, and maintain clean and fresh milk as well. The “clean technology” in farming is a new application in Vietnam and also the world. Mrs. Nguyen, Thi Thu Hang, deputy general director of Vinamilk said that cooperation with their FDI partner is well established, because Vinamilk often upgrades its applied technology, especially in processing milk. Furthermore, Vinamilk has retained strong human resources from its top management, through to middle management, and on to its front line workers. To some extent Vinamilk is no less developed than its foreign partner; therefore, Vinamilk is able to keep pace with new knowledge and technology that is transferred from Campina back in the Netherlands. Development of domestic firms’ capacity is one of the advantages of working in cooperation with its home country partner. In other words, to increase a nation’s absorptive capacity, domestic firms’ absorptive capacity first must be built up.

Most interviewees accept that the Vietnamese labor force is young, dynamic, and energetic as well as educated and endowed with well honed skills. However, unskilled labor is abundantly available there, while highly educated and skilled labors are scarce, especially in middle management levels. From international investors’ viewpoints, the shortage of skilled workers is the third most important operational constraint in Vietnam. Due to ongoing economic growth, the market demands a higher skilled and educated labor force. Nevertheless, changes in vocational training programs have not, as yet, caught up with workplace requirements. Vietnam is still focused on center-based training that does not provide up-to-date theoretical instruction and empirical training methods. The government has encouraged “the establishment of private education, training and vocational training institutions; fostering opening of high quality, accredited and 100% foreign-invested training institutions in science, technology, vocational skills, and economic management” (MPI, 2006b) (p.83). In respect to higher education levels, Vietnam is facing a main challenge to both satisfy the large number of enrolled student and achieve a better quality standard for education than in the past.

Currently the Vietnamese education system can supply either a large group of average educated laborers or a limited number of professionally educated workers, but not both concurrently. In fact, the light and food processing industries, which requires higher amounts

of unskilled labor, have obtained 20.33%³⁵ of FDI registered capital for industries in Vietnam. Such FDI flows have only brought in low tech industrial systems, which contribute only marginally to local learning and skills development. While investment projects applying higher technology require a consistent supply of educated and skilled laborers, those that the Vietnamese market is lacking. Mr. Hoang, Ngoc Vinh, Chief of the Professional Education Department, realizes that the shortage of human capital has been affecting the implementation of projects and limiting economic growth for some years. Additionally, Mr. Khalid Mumoods, Director of Apollo Vietnam, said that the absorptive capacity of individual labor is decisive. If labor absorbs new knowledge properly, then they are able to deliver better performance. Furthermore, they can transfer their accumulated knowledge to their colleagues. As a result, the absorption of new knowledge is pervasive. Because education and training is the ground floor for building up necessary absorptive capacity; therefore, this proves that levels of educated human capital are a first condition for enhancing the absorptive process. According to Mr. Phan Quang Dung, Deputy Chief of the Office and Secretary to the Minister of Education and Training, to fill this gap, the Vietnamese government has strongly pushed many projects to improve human capital, such as establishing higher quality foreign universities based in Vietnam, training 20,000 PhDs, professional experts and key managers, as well as by reforming the educational system.

In terms of its financial system, employees who have been working in the banking sector, as well as foreign investors, said that Vietnam's current financial system is quite well developed and therefore meets market demands. Vietnam's financial system can be categorized into three groups, banking, market securities (stocks and bonds) and insurance. In the Vietnamese market, there are seventy eight banks including six state banks, forty joint stock, commercial banks, and thirty two foreign banks. This system has enough capacity in terms of human resources, managerial skills, and advanced technology to handle intensive business activities. Banks and financial services institutions apply the International Standard Accounting Board (IASB) guidelines for their financial reporting systems. Furthermore, they have been using a multi-payment system among their banks since 2000. On the other hand, their legal system for relevant transactions is only tolerable for their domestic and foreign financial activities. Subsequently, the financial system in Vietnam is sound enough for the

³⁵ FDI in Vietnam from 1988-2007, MPI database

majority of business services. As regards, the role of the banking system involved in FDI processes, its services perform a crucial contribution to the absorption of FDI spillovers, Mr. Andrew Juang, of the Fusheng Group underlined. FDI operations could under certain circumstances become frozen due to financial systems' weaknesses. Generally, the financial system supports national absorptive capacity by transferring money and financial documents between its institutions. It is a channel where money from abroad comes to Vietnam. It is also a system that converts project capital into registered investments' actual available capital for disbursement to every sector and niche of Vietnam's economy. In addition, Mr. Le Quang Trung, PariBas Bank, stressed that banks provide to domestic as well as to international investors investment advice, by providing financial risk analysis; management and payment (including payroll) services; and offering solutions to minimize risk and maximize investment profits. In summary, based on sound development, the financial system has supported the Vietnamese economy in distributing capital from FDI investments and in absorbing primary and spillover benefits from FDI.

When discussing Vietnam's physical infrastructure, interviewees stressed that it is an inadequate system needing large scale improvements. This is considered to be a major obstacle for developing and expanding business investments and activities. In particular, roads and electrical power are major problems. Although the government has invested large amounts in Vietnam's infrastructural system, it still falls behind the demands required for socio-economic growth. The road system is small and narrow in urban areas causing severe traffic jams. Airport terminals are small and backward, while railways are slow in speed delaying the transport of passengers, raw materials and finished products. In the delta region, because of its vast river complex, passengers waste a great deal of time travelling by ferry (due to lack of bridges throughout the delta region); while in the middle region, local export/import shipping and forwarding firms have built so many seaport docks that they no longer have sufficient products for shipping. As a result, exporters have to either wait until ships' cargo tonnage is full or transfer products to other seaports in Ho Chi Minh City with added cost and expense. This has caused traffic jams between seaport locations, consequently production costs have risen and Vietnamese exports have become less competitive. Mr. Le, Huu Quang Vinh, Central Promotion Agency of MPI, stressed that this situation is not beneficial for the continued circulation of goods and services.

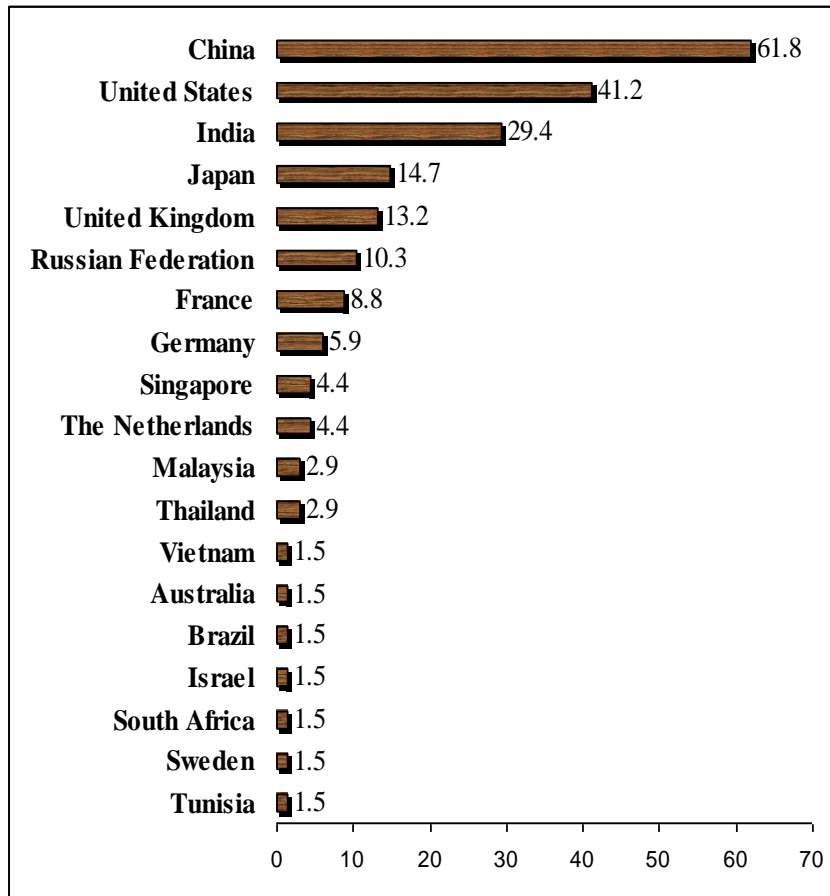
One problem that international investors have also complained about is the availability of cleared land. Mr. Cho Yeong Soo, General Director of Kum Woo Company, said that his company has been waiting for cleared land for a long period of time, even though all materials shipped from Korea have already arrived. He stated that this problem is heavily discouraging his further investment in Vietnam. It is a serious problem that the government faces as well. Compensation and resettlement of those affected by relocation initiatives always required tiresome negotiations extending times needed for clearing land. As a result, investors do not have available and committed land to build their factories. They are forced to wait; adding insult to injury, they must also pay pre-project costs and interest, while these types of Vietnam problems stand in the way of anticipated FDI benefits. This is becoming a serious obstacle for FDI project into practice implementation. In addition, an adequate energy supply is seriously lacking in Vietnam, because of its continuing higher demand. Vietnam has to import electricity from China. To solve its energy shortage, Vietnam has called for investing in hydro-electric and geothermal power plants, improving generation at existing plants, and upgrading transmission lines. In fact, electricity is currently prioritized for manufacturing; therefore, the availability of consumer electricity is cut back or available on an interrupted basis, according to Mr. Lam, Quang Son, of the Vietnam Electronic Group. Consequently, the general electricity consuming public is greatly affected, as living conditions and standards are lowered. With infrastructure in this condition, Vietnam does not benefit adequately from anticipated FDI benefits and spillover effects. However, it is fortunate that the communications, aviation and logistics industries are well and sufficiently developed to meet market growth demands. These industries obtain advanced technology and sound managerial strategy; therefore, their services have actually contributed to the absorption process. Vietnam is a country whose telecommunication system has developed rapidly. The density of telephones reached thirty five telephones per one hundred populations in 2007, and mobile network covered 100% of all districts throughout the country with over 12,000 operating BTS stations. After eleven years from the first day, Vietnam is connected to an international internet network (1997); 18 million Vietnamese are frequent users, and 5 million of them, or approximately 28% of these 18 million, are internet subscribers. In terms of Vietnam's total population 21.6% have access to the internet, at least as frequent users, if not internet subscribers, an above average rate for Asia and the rest of the world. This system

allows us to connect with FDI partners around the world on a real time basis, and for our businesses to communicate more smoothly, as confirmed by Mr. Teo Yak Long, of Sai Gon Logistics. Evidently, this initially developed infrastructure could well support the country in taking more optimum advantages from FDI.

When conducting these interviews, not many respondents raised technology as an issue. However, when we asked them, the interviewees confirmed that a sufficiently high level of technological knowhow is a very important factor for keeping pace with the advanced technology of FDI's home partners. "If we do not have similar experience, it is very difficult to understand new technologies from multinationals", said Mr. Le, Huu Minh, from the Ministry of Information and Communication. One of the reasons why some industries such as aviation, logistics and financial systems easily adapt or become familiar with international businesses is that much investment is spent on upgrading their technologies. Vietnam is still not an industrialized country; overall, technological levels have been upgraded, but not as high as in industrialized countries. In a UNCTAD (2005) survey of the world's largest R&D-spending among TNCs and in regards to the attractive prospective R&D, as many as 69% of the responding firms stated that their share of foreign R&D is set to increase, with a further shift towards specifically selected countries. For instance, China was an R&D destination that was mentioned most often, followed by the United States. India placed third, another significant rising location for R&D. In ASEAN countries, Vietnam was listed with 1.5%, while Thailand was 2.9% in terms of respondents' citations (Figure 6.4.2.1).

Figure 6.4.2.1: Most attractive prospective R&D locations, 2005-2009

(Per cent of respondents naming a location)



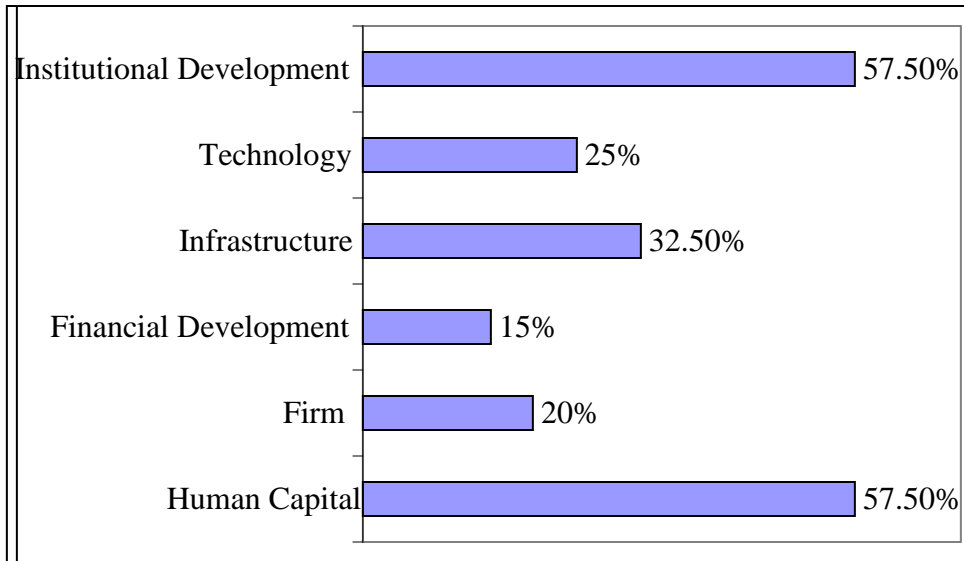
Source: UNCTAD, WIR 2005

As a result, Vietnam receives more FDI through small sized projects with low or backward technological applications. There are few projects involving hi-tech companies. Country A represents an example of an agriculturally oriented level of technological, with buffalo drawn ploughs and Country B with tractor-pulled ploughs. Clearly, B's technological level is higher than A's. If there is an FDI in bio technology, which country can learn and assimilate the higher technology more readily? The answer is, obviously, B, these farmers have already mastered mechanical technology associated with tractors, and Country A's farmers have had no contact with non-farm animal systems. This means the gap between national technological levels will affect overall national absorption.

The Vietnamese government has strongly pushed forward domestic technology and R&D development, while concurrently attracting FDI with its current higher technology facilities.

There are two high-tech centers in the North and the South of Vietnam used to promote this progress. By availing foreign investors to hi-tech, showcase installations, host countries can better absorb FDI benefits and also attract more hi-tech FDI.

Recently, the Vietnamese government has strategically moved forward public administrative reforms to build up and strengthen their institutions, to renovate the process of developing and issuing normative legal documents, to ensure strict and transparent laws, and to reform administrative procedures. This performance enhances business operations through use of a “one door” system. This process saves time and appears to be transparent to foreign investors. Moreover, Vietnamese investment law guarantees to protect investor’s property rights and to neither nationalize nor confiscate them by administrative means. All investors depend on the government; as a result, investors either expand their investments or re-invest their returns. However, some investors have complained about general rapid changes in regulations, complicated procedures, and bureaucracy in some places. In this case, investors have to either suffer the situation, as it is, in order to continue business or drop their businesses all together. When investors move their business to other countries, not only their registered capital balances become meaningless, but also Vietnam’s FDI promotion image is downgraded. Mr. Le, Thanh An, Deputy Director of the Can Tho Promotion Agency, asserts that this institutional issue exists everywhere and impacts all facets of economic life. Sound institutional development is a supportive force for socio-economic and political matters, such as education (human resources), R&D, business, finance, construction, and foreign investment as well. “Supportive government” is a concept that interviewees described with great emphasis. For them, at foreign locations where local governments are friendly, international investors do business with more convenience and less frustration; they, in turn, are willing to support the region by training their labor force, transferring know-how and even supporting charitable activities (e.g., Fusheng, Appolo, Kum Woo, and Bio Rat Vietnam). Perceptibly, the development of host country institutional system can influence FDI operations, either positively or negatively. In turn, positive or negative spillovers of FDI depend on host countries’ institutional development. Well developed institutions will lend support and drive along FDI; this means that host countries can absorb FDI benefits more readily and to a greater degree. Figure 6.4.2.2 Lists Interviewees’ Responses on Factors influencing Absorptive Capacity.

Figure 6.4.2.2: Response on absorptive capacity factors

These rates reflect interviewees' interest in each factor. It depends on their professional career as well as the impact of the factor on their own businesses and FDI in general. Although these rates do not imply corresponding factor rankings, they partly describe the current picture of Vietnam absorptive capacity. Through the interviewees' lens, the most prominent key factors are human capital, and institutional development, followed by infrastructure, technological levels, absorptive capacity of domestic firms, and financial development. Mainly, interviewees supported our proposition regarding the importance of absorptive capacity. They do recognize that host countries could not benefit from FDI with a weak absorptive capacity. They also strongly supported our FDI photosynthesis model, which argues that host countries can only absorb FDI benefits, if they achieve an initial level of development in human capital, absorptive capacity of domestic firms, technology, institutions, infrastructure, and finance.

6.5. Conclusions, policy recommendation and further research

The absorptive capacity theory, which is introduced in this study, is a synthesis of the most eminent features contained in previous literature. This new model contributes to existing literature as it offers an overarching model, which directly reflects the factors that a

host country needs in order to convert FDI benefits into its country's own spillovers. Furthermore, several avenues are identified for future research.

By combining the best features of literature and supportive responses from in-depth interviews, our research states that not all countries can benefit from FDI, although FDI per se is capable of emitting many benefits. We argue that to obtain benefits from FDI, host countries need to possess an adequate minimum level of absorptive capacity in terms of human capital, absorptive capacity of domestic firms, technological development, institutional development, infrastructure development, and financial systems development.

Previous literature has listed factors that reflect country's absorptive capacities. Those factors are national technological levels (e.g. Chen, 1994; Wu & Hsu, 2008), firm technological levels (e.g. Cohen & Levital, 1990; Girma, 2005), human capital (e.g. Keller, 1995; Blomstrom et al., 2003; Durham, 2004), financial development (e.g. Kalotay, 2000, Hermes & Lensink, 2003; Alfaro et al., 2004), and institutional development (e.g., Nunnenkamp, 2004; Krogstup & Matar, 2005). We start building our model by adopting those factors. Markedly, firm's technological levels and firms' human capacity is combined to be a new factor of firm's absorptive capacity. Additionally, from an actual situation in Vietnam, a shortage of 'clear land' use and inadequate physical systems are imposing barriers to FDI. Nevertheless, previous studies have not clearly raised this issue. For that reason, we added this factor to our model. With supportive results from 43 delegates who are authorities from professional institutes, domestic investors and international investors, there remains no doubt that our FDI photosynthesis model reflects consistent with existing literature on various FDI theoretical aspects as well as empirical circumstances. Specifically, human capital and absorptive capacity of domestic firms are vital elements for a nation in order to absorb FDI primary benefits and secondary spillovers. They are the main channels for FDI transfers to recipient countries. Educated labor can quickly absorb new knowledge and modern techniques. Labor is no longer defined as only the number of workers or employees, but also the quality of human capital, which necessitates adequate education and skills training. Ultimately, labor uses their techniques to produce goods for society. Better human capital can assimilate technology more productively, and providing improved and higher quality goods and services. Domestic firms are important actors in the assimilation of FDI. With higher educated and skilled laborers, and higher technology levels, local firms

might easily assimilate FDI's advanced technology. At the same time, domestic firms could rapidly keep pace with the know-how and managerial skills transferred from FDI activities. Infrastructure and financial systems exist to boost transport of goods, support business, and in particular disburse investment capital to all members of society. Domestic technology is the foundation for improving productivity and taking delivery of FDI's advanced technology. Thus, this factor cannot be ignored. Lastly, institutional development is also indispensable. It can be either a barrier or smooth conduit for the absorptive process assisted by public administrative systems and policies. Generally, current research suggested a comprehensive view of FDI's absorptive capacity. Beside factors used in the previous research, the new claim in this model is that domestic firms' absorptive capacity is involved as an integral component of national absorptive capacity. In addition, infrastructural development is added as another host country absorptive capacity component. Furthermore, absorptive capacity is explained clearly by screening it through two phases of project implementation and internal ability development. This paper develops a model that can guide research on absorptive capacity to normative and structural approaches as well as conduct surveys to capture a country's FDI's absorptive capacity.

The 'FDI Photosynthesis' model reifies a significant theoretical claim, since poor countries often focus on short term goals in order to quickly cover their shortages. They pay less consideration to absorptive capacity, because this process requires time and substantial efforts before achieving performance. Thus, FDI seems to present an optimal solution for back filling a lack of capital, create jobs, and collect taxes with few obvious downsides. However, beyond these advantages, FDI offers more benefits, such as advanced technology and knowhow. However, these benefits are insufficient for developing a country in a sustainable manner. Dornbusch, Fischer, and Startz, (2003) state economic growth is mainly supported and caused by resource size and availability in a changing economy. Growth's principal resources are **capital** and **labor**, and possibly improved changes in efficiency of production factors. Efficiency improvements are called productivity increases and productivity is increased through improved **technology**, and a more capable workforce. Seemingly, FDI provides sufficient conditions required for a country to foster economic growth. Nevertheless, it should be remembered that host countries could not obtain positive FDI spillover, if its external or primary benefits have not already converted themselves into

internal benefits. This is the most important central claim and message of this study. This benefit conversion process requires host countries to first identify absorptive capacity shortfalls and then target FDI projects to fill those voids. This paper emphasizes and underscores the recommendation that poor countries need to first carefully develop their minimum initial absorptive capacities, so that FDI benefits can be steadily absorbed into their economic structures before calling for massive FDI injections.

Kalotay (2000) argues that FDI absorption can only be successful, if recipient countries and domestic firms' capacities have risen to adequate levels. This means that developing countries should aim to improve their FDI reception abilities before attracting more FDI inflows. Our study invites investors and policy-makers to consider requirements for an effective strategic status analysis, before they call for FDI and develop new regulations.

First of all, host governments should introduce a promotion policy aimed at closing technological gaps between home and host countries. On the other hand, policies directed towards improvement of firm's absorptive capacity and competitiveness must be first formulated and issued. Governments should support firms in their R&D investments, in their efforts to increase their science and technology status levels (new technological process/equipment), and in training human capital. This process requires a large amount of capital and takes a long time to recoup related investments; therefore, firms fundamentally require financial support from their respective governments in further developing these fields at increased rates. Girma (2005) argues that firms need a certain level of absorptive capacity before they can benefit from technologies developed by other firms. In addition, science and technology at national level also needs to be upgraded.

Secondly, empirical evidence verifies that countries with low levels of human capital can only attract lower level technologies; vice versa, countries with high levels of human capital might be able to attract large amounts of knowledge intensive technologies. Obviously, advanced technology can contribute more to host countries' development. There is no doubt that a sound policy to improve education and human capital will enhance absorptive capacities and generate sustainable growth. Girma (2005) again states that education and training policies are the key to facilitating spillovers from FDI. Better education and training would add to the supply of qualified labor in developing host countries and improve their prospects of benefiting from technology transfers and spillovers (Görg & Greenaway, 2002).

Thirdly, host countries should aim to improve their financial and physical infrastructures as well as institutional developments to support a smooth absorption process. Normally, FDI flows come from countries that have abundant capital and have higher technological levels. Therefore, the quality and type of FDI are important for unleashing a significant innovation/promotion effects associated with FDI. As a result, if host countries want to obtain advanced technology, they should promote necessary conditions for receiving quality FDI.

These three policies should be applied in conjunction with each other to improve internal capacities of host countries. Last, but not least, host governments should have or create a policy to support external capacity building organizations. Nowadays, international investors do business abroad not only to earn money, but also to share their common responsibility for the betterment of developing countries willing to work intelligently and diligently to improve their standards of living. Increasingly more business associations have discussed their willingness to support recipient countries to achieve FDI benefit. If international investors would help host countries to absorb these benefits from FDI, they would lose nothing (because the benefits of FDI would still there). If investors spend efforts training workers, sharing their know-how, they could not only enhance host countries' absorptive capacities, but also make the absorption process go smoother; and thereby they would indirectly contribute to global development. Based on this thought, host countries should target and support public policies aimed at encouraging help for multinationals willing to assist developing countries in constructing adequate absorptive capacities.

In terms of future research, we strongly suggest testing our model by a national survey. More efforts are needed to create and design sound indicators to measure factors used in our model. It is crucial to recognize a country's current absorptive capacity by conducting an evaluation survey. Such an investigation should make a comparison between either a developing country and a developed country or similar regions to discover what the precise differences in absorptive capacities are, and what countries have done to improve their absorptive capacities.

Appendices

Table A6.1: List of agencies interviewed

	Agency	Level	Region	Attractive rank
G1	<i>Group of Policymakers</i>			
	Ministry and Department of Planning and Investment (MPI)	Central government		
	Investment Promotion Center of MPI in Central Region	Central government		
	Investment Promotion Center of MPI in Southern Region	Central government		
	Department of Planning and Investment of Can Tho Province	Provincial government	Southern	Middle
	Department of Planning and Investment of Ben Tre Province	Provincial government	Southern	Low
	Department of Planning and Investment of Ho Chi Minh City	Provincial government	Southern	High
	Department of Planning and Investment of Da Nang Province	Provincial government	Middle	Middle
	Department of Planning and Investment of Lang Son Province	Provincial government	Northern	Low
G.2	<i>Promotion centers</i>			
	Investment Promotion Center of Can Tho province	Provincial government	Southern	
	Investment Promotion Center of Ben Tre Province	Provincial government	Southern	
	Investment Promotion Center of Da Nang Province	Provincial government	Southern	
	Industrial Park, Can Tho Province	Provincial government	Southern	
	Industrial Park, Ben Tre Province	Provincial government	Southern	
	Thu Thiem New urban Area, Ho Chi Minh City	Provincial government	Southern	High
Dung Quat Economic Zone	Provincial government	Middle	High	

	Agency	Level	Region	Attractive rank
G.3	<i>Professional Institutions</i>			
	Ministry of Education and Training	Central government		
	Ministry of Information and Communication	Central government		
	Institute of Science and Technology Development	Central government		
	Vietnam Airlines in Central Region		Middle	
	Sai Gon Port		Southern	
	Vietnam Electricity Group		National	
	PACE, Education Institution		Southern	
	Asia Commercial Bank		National	
G.4	<i>Domestic Companies and Foreign Investors</i>			
	Dai Nam Long & Partner		Southern	
	Vinamilk		National	
	One Connection		Southern	
	Techconvina Group		National	
	Bio Rat Vietnam		Southern	
	Silvermill		Southern	
	SGN logistics		National	
	Fusheng Vietnam		Southern	
	Kum Woo		Middle	
	Friesian Foods		National	
	Appollo Vietnam		National	
	Foxconn		National	
	Paribas Bank		National	
	Bank of America		National	
	Esaote Europe BV.		National	
	PariBas Bank		National	

Table A6.2: Interview questionnaire guide

General question apply to all interviewees:

- Do you think that the host country needs to have some capacities to absorb the benefits from FDI?
- The absorptive capacity model (the FDI photosynthesis model) argues that to absorb benefits from FDI, the host country needs to have initial development in human resource, absorptive capacity of domestic firms, financial system, infrastructure, technology, and institution. What is your opinion about this argument?
- Could you describe the role of each factor in capturing absorptive capacity (ABC)?
- Could you discuss about future policies that can enhance the country's ABC?

Specific questions to each interviewee's group

1. Members who are Policymakers and Investment Promotion Agents

- Describe the role of each factor in absorption
- Assess the influence of each factor in absorption
- Evaluate the current absorptive capacity of Vietnam
- Give a general evaluation about FDI benefits in Vietnam
- Discuss about future policies for improving absorptive capacities

2. Members of Professional Institutions:

- Realize the institution's role in the FDI absorption
- Describe the role of the own institution in absorption
- Discuss about the role of another institutions in absorption
- Discuss about future policies to enhance absorptive capacity

3. Local Companies

- Realize the company's role in the FDI absorption
- Describe the role of domestic company in absorption
- Describe the absorptive capacity of domestic firms
- Give expectations of the government's ability to leverage firm's absorptive capacity

4. International Investors:

- Discuss about barriers while doing business in Vietnam
- Evaluate the current absorptive capacity of Vietnam give ideas about future policies for improving absorptive capacities

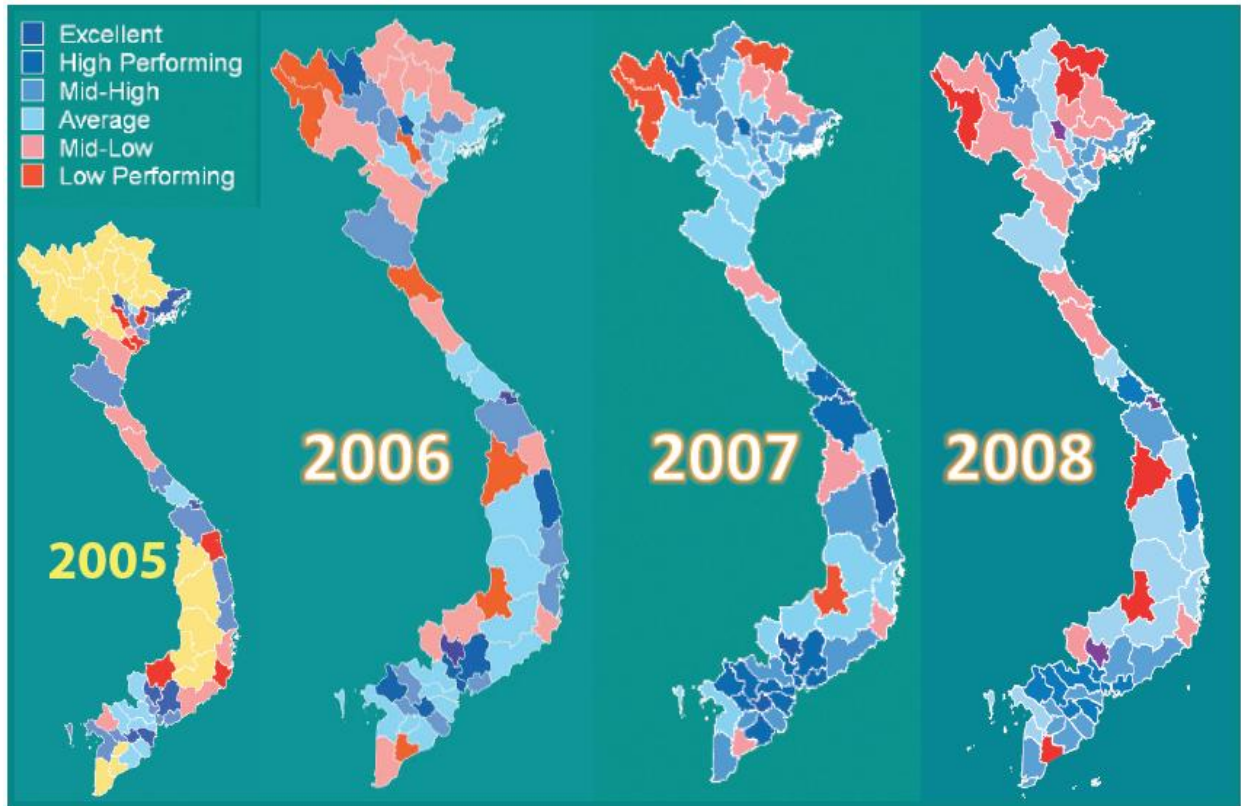
Table A6.3: Most absorptive capacity factors used in previous research

Author	<i>Cohen & Levital</i>	<i>Chen</i>	<i>Keller</i>	<i>De Mello</i>	<i>Borenzstein et al.</i>	<i>Kalotay</i>
<i>Year</i>	(1990)	(1990; , 1994)	(1995)	(1997)	(1998)	(2000)
<i>Level</i>	<i>firm</i>	<i>nation</i>	<i>nation</i>	<i>nation</i>	<i>Nation</i>	<i>nation</i>
Technology		•	•	•		
Human Capital		•	•		•	•
R&D	•					
Financial System						•
Institutional Development						•
Institutional Development						•

Author	<i>Narula & Marin</i>	<i>Hermes & Lensink</i>	<i>Blomstrom et al</i>	<i>Gorg & Greenaway</i>	<i>Nunnenkamp</i>
<i>Year</i>	(2003)	(2003)	(2003)	(2004)	(2004)
<i>Level</i>	<i>nation</i>	<i>nation</i>	<i>nation</i>	<i>review</i>	<i>Nation</i>
Technology	•			•	
Human Capital			•		•
R&D				•	
Financial System		•			•
Institutional Development					•

Author	<i>Durham</i>	<i>Alfaro et al</i>	<i>Chudnovsky et al</i>	<i>Girma</i>	<i>Krogstup & Matar</i>	<i>Fu</i>	<i>Wu & Hsu</i>
<i>Year</i>	(2004)	(2004)	(2004)	(2005)	(2005)	(2008)	(2008)
<i>Level</i>	<i>nation</i>	<i>nation</i>	<i>firm</i>	<i>firm</i>	<i>nation</i>	<i>region</i>	<i>Nation</i>
Technology			•	•	•	•	
Human Capital	•				•	•	•
R&D						•	
Financial System	•	•			•		
Physical Infrastructure							
Institutional Development	•				•		

Table A6.4: Map of business environment in Vietnam



Source: (Weeke, Parker, & Malesky, 2009)

7. Conclusion

7.1. The life of FDI

FDI has been increasing rapidly throughout the world. The value of inward FDI in 1970 was U.S. \$17.2 billion. After 28 years, it increased 131.275 times to U.S. \$1,858 billion (UNCTAD statistics database online) (see A7.1). What led to this FDI increase? The Solow-Swan (1956) model indicates that long-run growth of an economy is related to labor-time, capital goods, and investments, in which the role of technological change is crucial. According to this view, FDI is a flow of capital, advanced technology, and managerial skills, sufficient for fostering an economic growth. For that reason, most countries in the world seek FDI, especially developing countries where capital is less abundant, and technology levels are low. In fact, some countries successfully attract FDI (e.g., USA, EU, China), while some countries do not (e.g., African countries). Moreover, not all countries can benefit from FDI to anticipated levels. Blomstrom et al., (1994) argue that FDI only has a positive growth-effect when countries sufficiently rich. To understand how to attract FDI, how to benefit from FDI and how to utilize FDI to promote national development, it is necessary to understand FDI's origins.

This study investigates the life of FDI from birth (initiating) through growing up (establishing a destination), and to maturing (benefitting), evidenced in Vietnam. This research takes on a host country's point of view in respect to attracting FDI and earning benefits from FDI. For that reason, this study stretches out and details an entire FDI process to identify and examine answers to these questions:

- (1) What push and pull factors initiate FDI flows?
- (2) What are comparative advantages that trigger FDI establishment in a particular country?
- (3) What overall factors does a host country require to position it for absorbing FDI benefits?

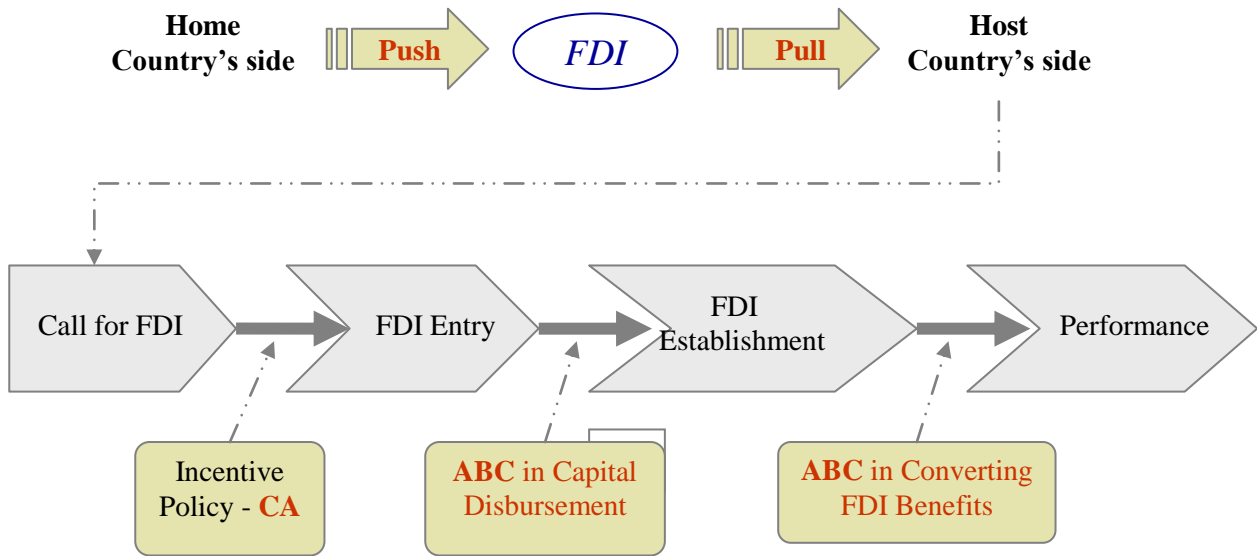
Our review of previous research revealed some gaps in literature such as:

- (1) There are few empirical studies examining push and pull factors concerning only one particular country.
- (2) There is not able to identify any empirical research, either on relative (development) differences in FDI or on testing the suitability of UNCTAD's method, when conducting our literature survey for this research.
- (3) There is a lack of an over-embracing, general model to capture absorptive capacities of host countries.

Moreover, there has been no empirical research identified on Vietnam's FDI, as an entire economic unit. The research conducted here has filled in research gaps found to be missing. This is the first study conducted on an entire FDI life, process as well as an originating study of FDI in Vietnam in particular.

Figure 7.1 presents general ideas regarding one path of research, which follows paths of FDI life. This study began with an economic examination of home countries, where investors generate FDI, and direct its transfer to host countries, where local officials decide where to place FDI funds. We conducted one of our studies was conducted on this phase to understand FDI initiation. It investigated whether FDI occurs due to the push and pull factors (Chapter 4). The thesis continued with another analysis to examine whether comparative advantage factors influence inward flows of FDI into a particular destination country (Chapter 5). Finally, this author conducted an analysis to explore by what means host countries benefit from FDI (Chapter 6). We proposed that host countries need a certain degree of initial economic development in order to disburse and absorb FDI capital and achieve minimum FDI performance levels and subsequent benefits including spillovers.

Figure 7.1: The inward FDI process



CA: Comparative advantage; ABC: Absorptive capacity

This final chapter summarizes and clarifies activities of this thesis. Section 7.2 is a summary of actions taken to solve identified problems and gaps in FDI literature. This section also points out major findings and contributions of this thesis. Section 7.3 recommends certain policies relevant to host country governments. Section 7.4 suggests model applications and additional research. Section 7.5 completes this thesis with an overall and final conclusion.

7.2. The life of FDI in Vietnam: Investigating and Findings

This thesis starts with a review of the Vietnamese economy and a list of existing problems facing the country. A study of FDI literature follows to gain background knowledge of relevant research issues, and to pinpoint certain research gaps or voids. Subsequently, we conducted several empirical studies were conducted to understand FDI initiation, to identify determinants of FDI establishment, and to discover factors capable of capturing FDI's absorptive capacity. Each empirical sub-section contains a statement of its research issue, methodology, findings, and contributions.

7.2.1. FDI in Vietnam

In this thesis, we selected Vietnam for its focus case study. Recently, Vietnam has impressed the world with its remarkable economic growth rate, sustainable society, and openness policy. Such conditions attract international investors. FDI inflows into Vietnam have been gradually increasing. The average growth rate of FDI was approximately 40% in the period of 1988 – 2008³⁶. Although FDI has been a phenomenon in Vietnam since the “open door” policy in 1986, there has not been a paucity of research on FDI activities in Vietnam. Therefore, this research attempts to contribute to FDI literature focused on this Vietnamese case. Even though there has not been any identifiable research done to measure the effects of FDI on Vietnam’s economy, yet, analyses regarding major global economic sectors has opened the door to confirming FDI’s important role in Vietnam. Remember, there was no FDI in Vietnam after the country’s reunion in 1975 through 1987, giving this country only 23 years to reach its present FDI stock status. Therefore, it is remarkable that Vietnam’s foreign investment sector contributed an average 13% to its GDP from 1995 to 2008³⁷. However, compared with neighboring countries, FDI inflows into Vietnam were lower in terms of capital stocks, smaller in scale, and less advanced in terms of technological levels. This raises questions about the attractiveness of Vietnamese FDI incentive policies. Scrutiny of these development challenges reveals different views concerning the Vietnamese economy’s strengths and weaknesses, especially as it relates to its FDI absorption capacity. Despite having an adequately developed financial system and reformed administration, shortages of professional human resources, cleared land, and a low level of technology led to an acknowledgement of a list of structural barriers impeding in bringing FDI proposal projects into practice and fruition. Vietnam’s rate of disbursed investment is only one-third of its funded registered capital. These problems raise an awareness of critical determinants required to smooth inward flows of FDI funding and their counterpart missing or insufficient absorptive capacities causing dysfunctional channel obstructions into Vietnam’s general economy. This chapter provides a critical review of existing problems facing Vietnam’s leadership. These problems are not only a low quantity and quality of FDI inflows, but also a low level of FDI capital disbursement as well. It strictly reflects not only the importance of

³⁶ GSO: FDI project licensed in period 1988-2008

³⁷ GSO: Structure of GDP at current prices by ownership and by kind of economic activity

an incentive policy for attracting FDI, but also the internal capacity of Vietnam, in terms of directly benefiting from FDI at all economic levels. The chapter also supplies documented information for grounding hypotheses for FDI determinants and constructing propositions regarding absorptive capacities (Chapter 2).

7.2.2. FDI Theory

In response to inquiries concerning Vietnam's current situation, it is necessary to first review previous research and theorizing. We reviewed both theoretical and empirical works concerning FDI since post World War II. Researcher may learn a great deal from reviewing accepted FDI theories that explain FDI phenomenon in economic, financial, and political contexts. FDI is a commonly recognized result of an imperfect global market environment. FDI emerges because of ownership, internalization, and locational advantages, as well as life cycles of product/ innovation. In addition, empirical research provides much evidence regarding attraction factors that could determine FDI inflows. By UNCTAD (2006) stating that FDI is driven by both push and pull factors, it is understood that FDI is generated in one country then moves to others. This means that there must be an interaction between two parties. This is an important understanding about FDI, since it impacts host countries' awareness for building FDI incentives to commence or remain in contact with home countries where potential capital may be available for critical local FDI projects. Normally, incentive policies focus only on host countries' internal advantages, such as low labor costs, availability of natural resources, as well as prospects of leases, and other subsidies. In summary, research literature has provided explanations for FDI occurrences, and determinants. Since there are many theoretical FDI models from which to choose; FDI may be best explained by a combination's model (Faeth, 2009). Four dimensions influence FDI's conceptual framework, namely: market conditions, costs of production, local business conditions, and governmental policies. This knowledge provides fertile ground for raising higher returns on investments, reductions on import and corporate income taxes, tax exemptions, free land hypotheses in understanding FDI's initiation phase (Chapter 4) and identifying FDI determinants for establishment in a particular country (Chapter 5).

Additionally, this author pinpoints certain theoretical gaps through reviewing FDI literature; this literature provides methodologies for doing research as well. For instance, we

successfully adapted the gravity law to test effects of home and host countries characteristics on FDI flows. However, there is no known research available to study FDI's initiation, based on this approach. Another pragmatic aspect of this two party exchange is that both investors and recipients seek out advantages from the other. This elicits the possibility that comparative advantages might also influence FDI inflows, whereas most empirical research, as well as host country's incentive policies, have only emphasized attraction factors stemming from host countries. In fact, there are numerous studies applying variable theories, but there is no such research pertaining to David Ricardo's famous theory applicable for identifying FDI determinants, based on participants' comparative advantages, or their source and related recipient country. Generally, research literature provides knowledge related to FDI flows from countries possessing available FDI resources to destination countries. We understand that push and pull factors affect FDI flows, as well as comparative advantage factors between home and host countries (Chapter 3).

7.2.3. FDI initiation: the origin of FDI

Based on literature guidelines, this research does review certain surveys in responding to documented problems and gaps, specific to understanding, attracting, and benefitting from FDI. Initially, to attract and benefit from FDI, it is very necessary to understand FDI origins, ergo, what factors generate FDI in the first place? As to the literature mentioned above, several known factors from home countries push FDI and other factors pull FDI to targeted host countries, concurrently. Both these driving forces are in line with gravity forces of mutual attraction. Indeed, some researchers successfully applied a gravity model's approach to investigate FDI (Chaisrisawatsuk & Chaisrisawatsuk, 2007; Frenkel, Funke, & Stadtmann, 2004). Convincingly, gravity model approaches are adopted to observe affects both home and host countries' characteristics on FDI flows in this research. Data used is a set of time series and cross sectional analysis data of 42 FDI inflows into Vietnam during the period 1990 to 2006. This author would like to acknowledge and express her special gratitude to the United Nations Conference on Trade and Development (UNCTAD), the Ministry of Planning and Investment of Vietnam (MPI) and the General Statistics Office of Vietnam (GSO) for supplying this data. In this research, follows certain procedures. The first step is to build a baseline model, which contains economic sizes of both home and host countries,

physical distances as explanatory factors, and dummy variables for time and country effects. The second step is to investigate the push factors by adding home country characteristics. Similarly, the third step is to examine pull factors by adding host countries' characteristics into this review. Finally, the fourth step is to scrutinize both push and pull factors by adding both home, and host countries' characteristics.

Interactions of both home and host countries' characteristics under conditions of a favorable economic geography prepare for FDI's initiation. The elasticity of any given country's FDI, with respect to its wage development in Vietnam approximates unity, suggesting that FDI is strongly driven by home and host countries' labor cost differentials. Additionally, educated populations, and stability of countries' economic atmosphere, tend to promote FDI, while oversized government sectors act as deterrents to FDI growth. Besides, home countries' economic growth drives outsourcing into Vietnam. However, to identify effects of these developments (as well as those of other infrastructural indicators) depends crucially on interactions of these variables. The other finding is that geographical distance determinates matter in FDI even more than in trade, at least in Vietnam's case. This analysis not only fits well with FDI's empirical evidence, but also confirms a theory that both push and pull factors have driven FDI initiation under conditions of market, costs of production, local businesses, and government policies. One country generates FDI and is pushed by desires to seek potential markets and higher profits in another country (host) on an ongoing mutual attraction. Conterminously, FDI (home) is pulled by supplying potential growth market and low costs of production, for instance into a destination country (host). In the same vein, demands for capital and advanced technology pull suppliers, as well. These suppliers own advantages of abundant capital and advanced technology that need to be invested abroad to attain higher returns and rotate innovation. Home countries are demanders, while host countries become suppliers. Moreover, vice versa, host countries are demanders, while home countries are potential suppliers. These relationships represent mutually dynamic attraction and interaction. There is no doubt that FDI is initiated by mutual effects or gravitational like forces between home and host countries. Since FDI must necessarily be initiated by home countries (the old adage goes: "S/he who has the money makes the rules!") Therefore, when, FDI transfers to another country, there is a possibility to "create" demands in home countries and then lead FDI into host countries by offering them

attractive factors. In addition, distance plays a significant role in FDI flows between the home and host countries; hence, distances between home and host also may take into consideration “neighbor” source countries, while calling for FDI importation. Generally, this chapter presents a view about FDI birth based on evidence from Vietnam. Research enhances FDI literature, a study with a focal point centering on a particular developing country, constrained by push and pull factors. Besides, a way to build up experimental gravity specifications for examining home country effects is to examine host country effects, and then combine them both as guidance for later research (Chapter 4).

7.2.4. FDI establishment

After understanding FDI flow sources, our research moves on to studying FDI’s establishment, that is, which factors determine FDI inflows into a particular country? Again, the above-mentioned literature states that FDI inflows might be caused by comparative advantages of home countries, as well as host countries (J.H. Dunning & Lundan, 2008; Kojima, 1978). This theory directs us to apply comparative advantage’s approach in this research. A panel data of 42 FDI inflows into Vietnam, since 1990 to 2006 is used. Two major specifications are developed. The first one is to recognize comparative advantage factors between home and host countries. The idea behind this hypothesis is that “the more different economic levels are, the more FDI inflows establish”. Differences in GDP, cost of labor, shares of R&D in GDP, and country risks are used as explanatory factors. The second step is to distinguish attractive factors of the host country by adding host country effects. Variables that UNCTAD has used to rank inward FDI potential and performance for all UN countries are applied. To some extent, comparative advantage characteristics of the host and home countries determine FDI establishment. These attractive factors influence inward FDI, but also comparative advantages between home and host countries. Those factors come from four economic and political functions: market conditions, costs of production, local businesses, and government policies.

From our findings, the wealthier home countries’ economies and the lower host countries’ costs of production are, the more direct FDI inflows will be. In addition, factors such as skilled and educated labor forces, consumer purchasing power, demands for improved infrastructure capacities, availability of natural resources, and the country’s

openness, all combined act to attract international investors. Consequently, home countries have advantages of capital wealth, and advanced technology, while the host country has advantages of low labor costs, availability of natural resources, such as agriculture land, water surface areas, and forests. Home countries can produce products in host countries with lower labor costs instead of importing labor. Thus, host countries can stipulate promotion policies, which lead to an increase in FDI as expected, as well as improve its advantages for further FDI accretion. Subsequently, while attracting FDI, host countries not only proclaim their areas of FDI determinate dominance, but also emphasize their strong points to source country investors. Within this perspective, officials focus incentive policies to be more efficient and effective. A crucial decision based perception for host countries is whether they should be FDI seekers, by aiming at specific target countries, which could be potential source countries, or simply let home country capital come to them. These source countries possess distinct advantages, which meet various host country demands, in term of enhancing their development in both the long and short terms. Furthermore, results advance evidence that UNCTAD's methods in ranking FDI's attractiveness levels for all UN countries is found to be to a certain extent, inadequate. Similar methodological UNCTAD applications might not be fully similar in other countries' testing. In the case of Vietnam, certain factors are not statistically significant; they may act as FDI determinants. This implies that corresponding factors are not always contributive to FDI attractiveness levels. Moreover, higher multi-collinearity among these factors requires reiterating explanations for FDI determinants. As a result, this method may generate biased results in specific cases. Generally, this chapter produces evidence of FDI establishment in a particular country, Vietnam. Findings are appropriate in light of existing literature. This research is a first examination that applies different development indicators, in terms of comparative advantage theory, to identify FDI determinants. Different specifications in this research confirm that comparative advantage theories are applicable for identifying FDI determinants. This finding maps a route for further way empirical research (Chapter 5).

7.2.5. FDI achievement

After initiation, FDI reached its achievement phase to bring benefits to both investors and recipient countries. The core nucleus of this research is to highlight absorptive capacities of

host countries: by what means host country can benefit from FDI. In essence, host countries pay most attention to attracting and maximizing (not necessarily optimizing) inward FDI, while overlooking national economic capacities. Those capacities are necessary to absorb FDI in terms of delivering investment and converting FDI benefits into positive spillovers. Host countries appear to disregard FDI absorption, and concentrate only on their FDI project count rather than concentrating on increasing the volume of FDI spillovers. FDI projects, in the end, are the foundation for sustainable development. To obtain germane findings, our research started with a concise literature review to form a basis for an FDI absorptive capacity model. Then, an in-depth interview is conducted to acquire opinions of people in practice regarding our academic findings. To absorb FDI, it is necessary to know what FDI benefits consist, as well as channels that transfer those FDI benefits into host countries' economies at all levels. For instance, technology goes through several phases including competition, imitation, foreign linkage, and doing business with local firms, while expertise transfers during training, learning by doing and accumulating experience and expertise. Concerning various aspects of FDI literature, some researchers have pointed out factors that capture absorptive capacity, such as technological levels, human resources, financial and institutional developments. However, previous arguments are either scattered or form an uncombined, fractured model; therefore, an overall-embracing or general method is now proposed. In practical situations, the inadequacy of an infrastructure's system is indicated as a barrier to FDI absorption. By combining not only the best features of theoretical and empirical research, but also pragmatic factors of actual situations based on a case study, a so-called FDI Photosynthesis model is constructed. The FDI Photosynthesis argues that host countries need to have initial development of absorptive capacity in domestic firms, human resource, financial system, physical infrastructure, technological level, and institutions to absorb FDI benefits, and to convert those benefits into host country spillovers. Eventually, research shifts over to fieldwork to gather evidence to prop up new models. We conducted in-depth interviews with authorities, professional institutions, domestic investors as well as foreign investors in selecting survey locations in Vietnam.

This survey's results supported the above propositions. Human capital and domestic firms' absorptive capacity are vital elements for determining a nation's ability to absorb FDI spillovers. Educated and skilled human capital can assimilate technology at an increased

pace, that leads to increased productivity; whereas domestic firms' human contacts with source countries act as bridges between FDI investors and host countries' project management. In similar fashion, adequate financial infrastructure is essential for channeling business transactions and supporting disbursements of investment capital in particular; while physical infrastructures is systems for transportation of goods and services. Technology and R&D are foundations supporting innovation, industrialization and modernization, and launching platforms for productivity. The smaller technological gap, the larger the spillover is. Additionally, institutional development can be either a barrier or an accelerating agent for the absorptive process. Our model should make a significant contribution to absorptive capacity theory. If and only if, host countries have sufficient absorptive capacities, they can convert FDI benefits into their own national benefits. The spirit of this model may influence project manager and government official's viewpoints in developing countries with economic situations similar to that of Vietnam.

FDI abundance is not precisely synonymous with economic growth. If a plant has plenty of sunshine, but no water it dies. Vice versa, if you pour a lot of water into it, it might also die, because its roots suffer from being flooded and have no sunshine. In addition, plants in either of these two situations cannot absorb proper nutrients, as well. As a result, plants either grow lamely or waste their resources, which are always limited. Thus, there is clearly a restriction of water, nutrition, and light levels in each phase of plants growth and development. Host countries are not as passive as plants. They can dynamically improve their internal capacities, when requesting cooperation of international investors. Similarly, host countries can prepare and organize themselves internally in anticipation of this push for accelerated and improved national growth. Furthermore, the name of our model, *Photosynthesis*, reminds the public to protect the environment before making FDI decisions that could affect negatively on a host countries' environment.

Generally, this chapter provides insight into absorptive capacity. We strongly recommend that host countries prepare and provide for absorptive capacities' initial development in order to benefit more completely from FDI. Confidently, this research finds that this research makes an important contribution to FDI literature by developing this FDI Photosynthesis model, which includes significant connections with important FDI theoretical concepts and empirical observations. Remarkably, this FDI Photosynthesis model claims to be an entirely

a new theoretical model; therefore, it provides a platform for formulating new empirical research on absorptive capacity (Chapter 6).

To the best of our knowledge, this author claims to have constructed the first dissertation, which carries out research on the entire FDI flows process from its founding, to establishing and achieving in situ performance. Furthermore, this dissertation claims to add value to FDI literature in Vietnam.

7.3. Policy recommendations

Our research clearly finds that host countries' attractiveness cause FDI inflows, but also by both push factors from the home countries and pull factors from host countries. This concept adjusts host countries' perceptions regarding FDI flows, while offering an incentive to further research to explore and quantify these factors. Significantly, the concept of absorptive capacity rouses host countries away from a dysfunctional attitude towards FDI benefits. Host country tries to attract FDI through incentive policies, but pays less attention to absorbing FDI spillovers. This research strongly recommends that only those countries that have enough capacity to absorb FDI should receive FDI benefits: otherwise, incomplete FDI projects waste home country funding and fail to meet planned project goals. This does harm to a country's reputation for attracting additional, scarce FDI funds in the future. Investors have a right to be concerned when host countries mismanage their funds through inadequate planning to fulfill their intended purpose, exact an opportunity cost from alternative projects that could have been successful, or ultimately be wasted and squandered generating little or no spillover benefits. Based on such a concerned spirit and seeking responsible future use of FDI capital, the study suggests specific recommendations that follow:

- 1). Mutual interactions create FDI. Host countries should understand the push and pull factors as well as comparative advantage factors in order to maximize externalities and internalities, while attracting FDI. On a more general level suggestion, FDI is in essence a "bilateral affair", driven by a unique combination of home and host countries in a particular geographic and historic setting. This suggests that there is no blueprint for a successful investment promotion policy. Rather, countries eager to attract foreign direct investment should seek to create conducive environments and absorptive capacities for each particular

setting or project conditions in which they find themselves locked. This is the most important recommendation. Actively, host countries should take to task initial communications with targeted home countries to “create” dynamic pushing effects (demand); and then combine these with available attraction factors (supply) to direct and manage FDI inflows.

2). Going along with “demand creation”, host countries should target a select number of source countries, while seeking FDI. Host countries should not seek any FDI project categorically without first examining whether its absorptive capacity is sufficient to harvest taut FDI benefits over the long term. National development strategies should target countries that provide benefits that match host countries’ absorptive capacity profiles and have a high confidence level of attaining through effective utilization. FDI occurs by push and pull factors as well as comparative advantage factors. Consequently, instead of passively awaiting for FDI to take the first contact initiative, host countries should target and initially contact source countries to “create” FDI outflows, and direct and manage FDI flows into their host countries as leading prime movers.

3). Although it may be an effective alternative strategy to “create” FDI in source countries, it is more vital to first recognize one’s country’s internal strengths and weaknesses in order to attract and benefit from FDI. Host countries should have a short-term and long-term strategy to build and develop its human capital. Host countries should not rely on the attractiveness of lower costs of labor factor alone, although lower costs are one of the most attractive factors for developing countries to market. However, low wages connected with a lower level of professional education or trade skills. One finds these labor attributes applied in processing industries such as textile, garment, and agriculture. Within such industries, technology transfers are almost nonexistent. Host countries earn little else than job creation. On the other hand, higher prevalence of tertiary education positively relate to FDI formation and accretion. This means that a skilled and educated labor force is the foremost attractive factor. Such an educated and skilled labor force is a key factor and channel for absorbing FDI benefits. Empirical evidence verifies that countries with low levels of human capital can only attract lower level technologies; vice versa, countries with high levels of human capital are better able to attract significant knowledge transfers from more intensive technologies.

4). In the same sense as improving internal capacities, host governments should have promotional policies aimed at closing technological gaps between home and host countries.

Larger differences in technological levels with home countries result in smaller host country benefits obtainable from FDI. Because of a limitation in budget and time, host countries should purchase advanced technology, while it conducts R&D focused on dominant country advantages, such as agro-biotechnology, aquaculture, information technology, and the medical and pharmaceutical industries.

5). Furthermore, development of absorptive capacity, policies directed towards improvement of a firm's absorptive capacity and competitiveness must be formulated and issued. Host governments should support firms in their R&D investments, in their efforts to increase their scientific and technological level (new technological process/ equipment), and in training human capital. This process requires a large amount of capital that takes a long time to recoup and repatriate these investments; therefore, firms must rely on financial support from their governments in these fields. In addition, government needs to upgrade science and technology levels at the national level.

6). In like fashion, there should be little doubt that institutional development should most likely support a smoother absorption process. Policy makers should make a "one door" policy stronger, pushing in both the central and the local level of authority. A well-designed procedure avoids "stepping on the feet" of concerned authorities. Authorities should also consider concepts of "friendly government" and "supportive government".

7). Likewise, host countries should aim to improve physical infrastructures. Inadequate systems may make barriers deterring FDI inflows as well as FDI benefit absorption. Authorities also need a well-designed master plan to allocate limited national resources, especially in land use.

8). One of the attractive factors of FDI projects is the mutual sharing of exported natural resources. This gives an idea of the importance of effective management and utilization of national natural resources.

9). In addition, host governments should have a policy to support the external capacity for building organizations. Currently, international investors conduct business abroad, not only to earn money, but also to share human needs responsibilities with poor countries. Based on this thought, host countries should target policies to encourage FDI project support from multinational corporations.

10). Based on research results, this study indicates that factors that are used by UNCTAD to rank FDI attractiveness level of all UN countries are not fully appropriate for every country. UNCTAD should strongly revise and improve its applied determinate factors. For example, the public commonly uses the internet in communications instead of telephones. Energy used per capita much depends on each country's size (large vs. small, long vs. short) and public transportation system quality and availability. Tertiary educational systems are not a perfect proxy or substitute for an educated and skilled labor force. Certain data sources may not be available for applying "new indicators"; however, UNCTAD could start creating new indicators, set up new formats, and take the lead in gathering more economic data.

This thesis stressed exploring existing internalities concurrently, while utilizing externalities, and then coalescing both of them into a synergy to improve country development. The message here is that host countries should better rely on its internalities to develop their country; FDI is an externality that can speed this process.

7.4. Model application, and suggestions for future research

Concerning FDI's absorptive capacity, FDI *Photosynthesis* is a theoretical model; therefore, it opens up possibilities for further future research. (1) This author strongly suggested that this model be tested through a national survey. (2) Researchers need to extend extra efforts to come up with sound indicators to measure the factors used in this model. (3) It is crucial to recognize and quantify a country's current absorptive capacity by conducting related surveys. Such investigations should make a comparison between either a developing country or a developed country or similar regions to discover what the precise differences are in absorptive capacities, and what countries have done to improve their absorptive capacities. (4) Incentive policy requires further study to improve promotion policies for FDI inflows better balanced with host countries' related absorptive capacities. (5) UNCTAD's method need, either applying a specific model for specific regions, and/ or income levels or other variables.

7.5. Overall conclusion

This thesis claims to make an important contribution to FDI economic literature, while providing a full picture of FDI life, from project founding, through its growth state, and to maturation. This approach supplies a profound and adequate understanding about FDI in terms of push - pull factors, comparative advantage factors, attractive factors, and absorptive capacity. This thesis has not only found logical answers for open FDI questions, but also conveys a message to host developing countries, especially those less developed ones. Host countries should not attempt to attract FDI at any price or any conditions; they should first define their comparative advantages, and then, based on their findings, determine a strategic direction for managing future FDI. Adjacently, host countries need to have fundamental development to absorb FDI benefits; in turn, their absorptive capacity will enhance their attractiveness for higher quality FDI. If host countries do not have these capacities available, they must recognize their weak points in order to improve these conditions, while they seek further FDI placements.

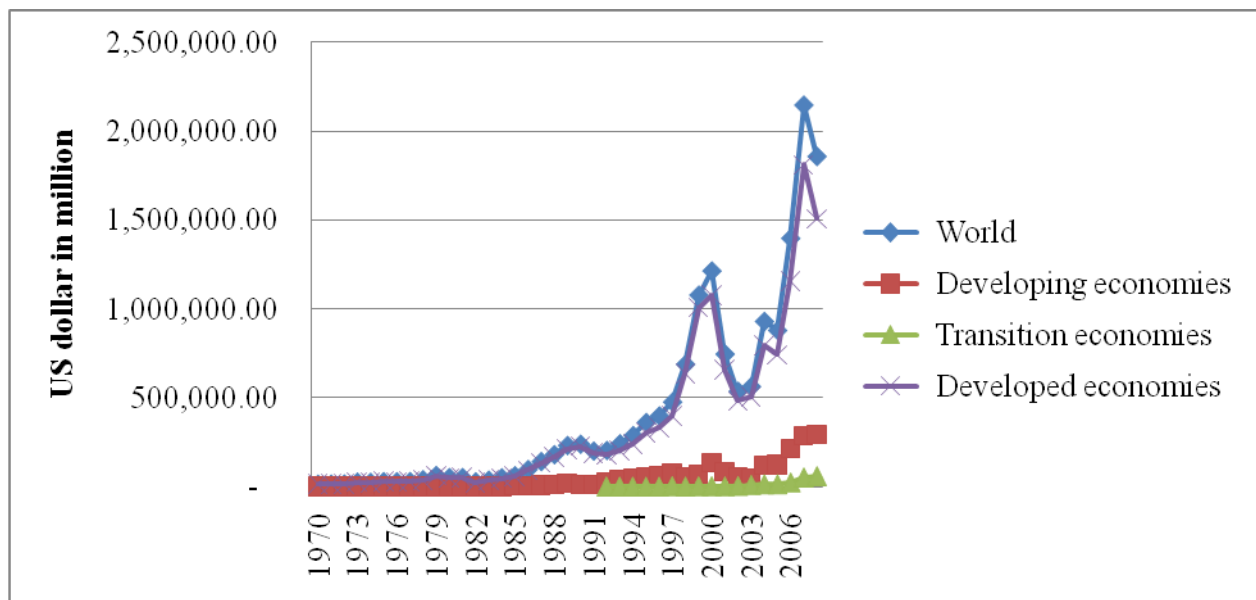
With respect to reality, this thesis presents and claims a significant and novel explanation of FDI. Stakeholders required greater understanding and awareness of FDI as a dynamic set of interacting factors and effects. Investors look for placement advantages, such as potential new markets, lower costs of production, and natural resources in host countries for obtaining higher investment returns to offset partially their increased investment risk inevitably incurred in foreign operations. Similarly, recipients look for healthy capital, advanced technology, and experienced managerial skills in FDI to leverage national development. Demands supplied from one side are required by the other side and vice versa. This discernment is supported by the literature and very important in promoting FDI inflow. Host countries can “create” demand inside home countries by offering them attractive factors as well as advanced comparative advantages. Therefore, host countries have the potential of attracting increased FDI project funding. On the other hand, accurately targeting the right home country could help to attract “correct” FDI that fits well with realistic expectations for host countries’ future development. Consequently, host countries can attract higher quality FDI. The foremost purpose of attracting FDI is to obtain FDI benefits. Research literature confirms that FDI benefits do not automatically convert to host country spillovers. This process requires a process of and capacity for absorption. Thus, only countries that have

initial economic development can logically anticipate FDI advantages. This perception is very vital for attracting FDI. Absorptive capacity becomes a bridge for leveraging national development, as well as promoting FDI inflows. Building absorptive capacity always must be a preliminary consideration before attracting and registering FDI placements.

FDI per se possesses many benefits that can enhance development of host countries, especially developing countries and the very least developed countries. However, countries must base sustainable development largely on internalities. FDI benefits are externalities. The most important thing is how to convert externalities into internalities. There is one thing that should be a crucial consideration. One coin (for instance one euro) kept in the safe is different from one coin that is kept in a bank, because of its interest rate profits. Similarly, “one” FDI can produce more profits, if host countries understand and recognize their potential FDI benefits and utilize their spillovers to lift all economic sectors of their economies. Maximizing externalities, utilizing internalities and then combining them to create synergy for national developments are the foremost positive utilities derived from this thesis.

Appendices

Table A7.1: Direct investment in reporting economies (FDI inward)



Source: Based on UNCTAD's database website
 (<http://stats.unctad.org/FDI/TableView/tableView.aspx?ReportId=3084>)

References

A

- Adam, A., & Filippaios, F. (2007). Foreign direct investment and civil liberties: A new perspective. *European Journal of Political Economy*, 23(4), 1038-1052.
- Adams, S. (2009). Foreign Direct investment, domestic investment, and economic growth in Sub-Saharan Africa. *Journal of Policy Modeling*, 31(6), 939-949.
- Aficano, A. P., & Magalhães, M. (2005). FDI and Trade in Portugal. *CEMPRE*.
- Agarwal, J. P. (1980). Determinants of foreign direct investment: A survey. *Weltwirtschaftliches Archiv*, 116, 739-773.
- Alfaro, L., Chandab, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of International Economics*, 64(1), 89-112.
- Alfaro, L., & Charlton, A. (2007). Growth and the Quality of FDI. *Harvard Business School Finance Working paper*, 07(072).
- Aliber, R. Z. (1970). *A theory of direct foreign investment*. Cambridge: The MIT Press.
- Aliber, R. Z. (1993). *The Multinational Paradigm*. Cambridge: The MIT Press.
- Anderson, J. E. (1979). A theoretical foundation for the gravity equation. *American Economic Review*, 69(1), 106-116.
- Ang, J. B. (2007). Determinants of foreign direct investment in Malaysia. *Journal of Policy Modeling*, *In Press, Corrected Proof*, 1325.
- Aqil Burney, S. M. (2008). Inductive & Deductive research approach: Department of Computer Science, University of Karachi.
- Asiedu, E. (2002). On the determinants of foreign direct investment to developing countries: Is Africa different? *World Development*, 30(1), 107-119.
- Ayanwale, A. B. (2007). FDI and economic Growth: Evidence from Nigeria. *African Economic Research Consortium*.

B

- Barnett, R., & Muller, R. E. (1974). *Global Reach*. New York: Simon and Schuster.
- Bartels, F. L., Alladina, S. N., & Lederer, S. (2009). Foreign direct investment in Sub-Saharan Africa: Motivating factors and policy issues. *Journal of African Business*, 10(2), 141-162.
- Bayoumi, T., & Eichengreen, B. (1997). Is regionalism simply a diversion? Evidence from the evolution of the EC and EFTA. *NBER Working Paper*(5283).
- Behrman, J. N. (1972). *Latin America; Economic integration; Automobile industry and trade; Petroleum chemicals industry* Lexington, Mass.
- Bellak, C., Leibrecht, M., & Riedl, A. Labour costs and FDI flows into Central and Eastern European Countries: A survey of the literature and empirical evidence. *Structural Change and Economic Dynamics*, *In Press, Corrected Proof*, 372.
- Bende-Nabende, A. (2002). Foreign direct investment determinants in Sub-Saharan Africa: A co-integration analysis. *Economics Bulletin*, 6(4), 1-19.

- Bergstrand, J. H. (1985). The gravity equation in international trade: some microeconomic foundations and empirical evidence. *Review of Economics & Statistics*, 67(3), 474-481.
- Blalock, G., & Gertler, P. J. (2009). How firm capabilities affect who benefits from foreign technology. *Journal of Development Economics*, 90(2), 192-199.
- Blomström, M., Globerman, S., & Kokko, A. (1999). *The determinants of host country spillovers from FDI: Review and synthesis of the literature*: The European Institute of Japanese studies.
- Blomström, M., & Kokko, A. (2003). *Human capital and inward FDI*: European Commission under the Training and Mobility of Researchers Programme.
- Blomstrom, M., Lipsey, R. E., & Zejan, M. (1994). What explains developing country growth? *National Bureau of Economic Research (NBER), Working paper 4132*.
- Blonigen, B. A. (2005). A review of the empirical literature on FDI determinants. *Atlantic Economic Journal*, 33(4), 383-403.
- Borensztein, E., De Gregorio, J., & Lee, J. W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45(1), 115-135.
- Botric', V., & Škuflic', L. (2006). Main determinants of foreign direct investment in the Southeast European countries. *Transition Studies Review*, 13(2), 359-377.
- Boyce, C., & Neale, P. (2006). Conducting in-depth interview: A guide for designing and conducting in-depth interview for evaluation input. *Pathfinder International tool series*.
- Brahmasrene, T., & Jiranyakul, K. (2002). Recent evidence of foreign direct investment in Thailand. *Journal of International Business Research*, 1(1).
- Brainard, S. L. (1993). A simple theory of multinational corporations and trade within a trade-off between proximity and concentration. *NBER Working Paper, N.4269*.
- Brainard, S. L. (1997). An empirical assessment of the proximity-concentration trade-off between multinational sales and trade. *Am. Econ. , Rev.*87, 520-544.
- Brewer, T. L. (1992). Effects of government policies on foreign direct investment as a strategic choice of firms: An expansion of internalization theory *International Trade Journal*, 7(1), 111-129.
- Buckley, P. J., & Brooke, M. Z. (1992). *International business studies: An overview*. Blackwell Publishers, Oxford, United Kingdom.
- Buckley, P. J., & Casson, M. (1976). *A Long-Run Theory of the Multinational Enterprise*. (Second ed.). London: Macmillan.

C

- Campos, N. F., & Kinoshita, Y. (2003). Why does FDI go where it goes? New evidence from the transition economies. *IMF working paper*.
- Carey, H. C. (1858). *Principles of social science* (Vol. II). Philadelphia: J.B.Lippincott & co.
- Carrothers, G. A. P. (1956). An historical review of the gravity and potential models of human interaction. *J Amer. Inst. of Planners*, 2, 94-102.
- Case, K. E., & Fair, R. C. (1999). *Principles of Economics* (5th ed.): Prentice-Hall.
- Casebeer, L. A., & Verhoef, J. M. (1997). Combining qualitative and quantitative research methods: Considering the possibilities for enhancing the study of chronic diseases. *Chronic Diseases*, 18(3).

- Caves, R. E. (1971). International corporations: The industrial economics of foreign investment. *Economica*, 38(149), 1-27.
- Chaisrisawatsuk, S., & Chaisrisawatsuk, W. (2007). Imports, exports and foreign direct investment interactions and their effects. *ARTNeT Working Paper*(4507).
- Chakrabarti, A. (2001). The determinants of foreign direct investments: Sensitivity analyses of cross-country regressions. *Kyklos*, 54(1).
- Chandprapalert, A. (2000). The determinants of U.S. direct investment in Thailand: A survey of managerial perspectives. *Multinational Business Review*, 8(2), 82.
- Chen, E. K. Y. (1990). Foreign direct investment in Asia: developing country versus developed country firms. *Foreign Direct Investment in Asia (Tokyo: Asian Productivity Organization)*, 1-27.
- Chen, E. K. Y. (1994). "Introduction: transnational corporations and technology transfer to developing countries", *Transnational Corporations and Technology Transfer to Developing Countries* (Vol. 18). London ; New York: Routledge.
- Choi, J. J., & Tsai, E. C. (2007). *Strategic and financial determinants of foreign direct investments* (Vol. 7): Emerald Group Publishing Limited.
- Chudnovsky, D., López, A., & Rossi, G. (2004). *Foreign direct investment spillovers and the absorption capabilities of domestic firms in the Argentine manufacturing sector (1992-2001)*: MERCOSUR Economic Research Network.
- Claro, S. (2009). FDI liberalization as a source of comparative advantage in China. *Review of Development Economics*, 13(4), 740-753.
- Coase, R. H. (1937). The nature of firm. *Economica*, IV, 386-405.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- CPV. (1986). *Communist Party Document VI, 1986*. Retrieved from http://www.cpv.org.vn/cpv/Modules/News/NewsDetail.aspx?co_id=30382&cn_id=83086#.
- Creswell, W. J. (2003). *Research design: Qualitative, Quantitative, and Mixed method approaches* (Second ed.): Sage.

D

- Damijan, P. J., Knell, M., Majcen, B., & Rojec, M. (2003). *Technology transfer through FDI in Top-10 transition countries: How important are direct effects, horizontal and vertical spillovers?* : The William Davidson institute, The university of Michigan business school.
- De Mello, L. R. (1997). Foreign direct investment in developing countries and growth: A selective survey. *Journal of Development Studies*, 34, 1-34.
- Dess, G. G., Gupta, A., Hennart, J. F., & Hill, C. W. L. (1995). Conducting and Integrating Strategy Research at the International, Corporate, and Business Levels: Issues and Directions. *Journal of Management*, 21(3), 357.
- Dunning, J. H. (1973). The determinants of international production. *Oxford Economic Papers*, 25, 289-336.
- Dunning, J. H. (1981). Explaining the International Direct Investment Position of Countries: Towards a Dynamic or Developmental Approach. *Weltwirtschaftliches Archiv*, 117, 30-64.

- Dunning, J. H. (1988). *Trade, location of economic activity and the multinational enterprise: A search for an eclectic approach*. London: Unwin Hyman.
- Dunning, J. H. (1993). *Multinational enterprise and the global economy*. Wokingham: Addison-Wesley
- Dunning, J. H. (1998). Location and the multinational enterprise: A neglected factor? *Journal of International Business Studies*, 29(1), 45-66.
- 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., & Lundan, S. M. (2008). *Multinational enterprises and the global economy*. Cheltenham, UK: Edward Elgar.
- Durham, J. B. J. B. (2004). Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European Economic Review*, 48(2), 285-306.
- Duysters, G., Jacob, J., Lemmens, C., & Jintian, Y. (2009). Internationalization and technological catching up of emerging multinationals: A comparative case study of China's Haier group. *Industrial and Corporate Change*, 18(2), 325-349.

E

- Egger, P., & Pfaffermayr, M. (2002). The pure effect of European integration on intra-EU core and periphery trade. *Working Papers in Economics 2002, 1*.
- Ethier, W. J. (1982). National and International Returns to Scale in the Modern Theory of International Trade. *American Economic Review*, 72(3), 389.

F

- Faeth, I. (2009). Determinants of foreign direct investment - A tale of nine theoretical models. *Journal of Economic Surveys*, 23(1), 165-196.
- Falkenhahn, A., & Stanslawski, R. (2001). Das eklektische paradigma des John Dunning: Seminar paper.
- Fedderke, J. W., & Romm, A. T. (2006). Growth impact and determinants of foreign direct investment into South Africa, 1956-2003. *Economic Modelling*, 23(5), 738-760.
- Fetscherin, M., Voss, H., & Gugler, P. (2010). 30 Years of foreign direct investment to China: An interdisciplinary literature review. *International Business Review*, 19(3), 235-246.
- Flowerdew, R., & Aitkin, M. (1982). A method of fitting the gravity model based on the Poisson distribution. *Journal of Regional Science*, 22(2), 191.
- Frankel, J. A., Wei, S., & Stein, E. (1995). *APEC and Regional Trading Arrangements in the Pacific*. Kingston-Canada: John Deutsch Institute.
- Frenkel, M., Funke, K., & Stadtmann, G. (2004). A panel analysis of bilateral FDI flows to emerging economies. *Economic Systems*, 28, 281-300.
- Froot, K. A., & Stein, J. C. (1991). Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach. *The Quarterly Journal of Economics*, 106(4), 1191-1217.
- Fu, X. (2008). *Foreign direct investment, absorptive capacity and regional innovation capabilities: Evidence from China*. Paper presented at the OECD Global Forum on International Investment.

Fukumi, A., & Nishijima, S. Institutional quality and foreign direct investment in Latin America and the Caribbean. *Applied Economics*, 42(14), 1857-1864.

G

Galli, R., & Teubal, M. (1997). *Systems of innovation: Technologies, institutions and organizations*. London: Pinter

Garibaldi, P., Mora, N., Sahay, R., & Zettelmeyer, J. (2001). What moves capital to transition economies. *IMF working paper*, 48.

Gentvilaitė, R. (2010). *Determinants of FDI and its motives in Central and Eastern European countries*. Lund, Lund.

Gersbach, H., & Schmutzler, A. (2008). Foreign direct investment and R&D-offshoring: University of Zurich, Socioeconomic Institute.

Gilpin, R. (1975). *U.S. Power and the Multinational Corporation: The Political Economy of Foreign Direct Investment* New York: Basic book.

Girma, S. (2005). Absorptive Capacity and Productivity Spillovers from FDI: A Threshold Regression Analysis. *Oxford Bulletin of Economics & Statistics*, 67(3), 281-306.

Godley, E. C. (1999). Pioneering foreign direct investment in British manufacturing. *Business History Review*, 73, 394-429.

Goodwin, C., & Ross, I. (1992). Consumer responses to service failures: influence of procedural and interactional fairness perceptions. *Journal of Business Research*, 25(2), 149-163.

Gopiath, M., & Echeverria, R. (2004). Does economic development impact the foreign direct investment - trade relationship? A Gravity model approach. *American Agricultural Economics Association*.

Görg, H., & Greenaway, D. (2004). Much ado about nothing? Do domestic firms really benefit from foreign direct investment? *World Bank Research Observer*, 19, 171-197.

Graham, E. M. (1978). Transatlantic investment by multinational firms: a rivalistic phenomenon? *Journal of Post Keynesian Economics*, 1(1), 82.

Groose, R. E. (1980). *Foreign Investment Codes and the Location of Direct Foreign Investment*. New York: Praeger.

Guion, A. L. (2006). Conducting an in-depth interview: Family Youth and Community Sciences Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida.

H

Hafiz, M., & Giroud, A. (2004). Regional Integration and Benefits from Foreign Direct Investment in ASEAN Countries: The Case of Vietnam. *Asian Development Economic Review*, 21 (1), 66-98.

Hattari, R., & Rajan, R. S. (2008). Sources of FDI flows to developing Asia: The roles of distance and time zones. *ADB Working Paper*(11).

Heckscher, E. (1919). The effect of foreign trade on the distribution of income. *Ekonomisk Tidskrift*, 497-512.

Helpman, E. (1984). A simple theory of international trade with multinational corporations. *Journal of Political Economy*, 92, 451-472.

Hermes, N., & Lensink, R. (2003). Foreign Direct Investment, Financial Development and Economic Growth. *Journal of Development Studies*, 40(1), 142-163.

- Heuchemera, S., Kleimeierb, S., & Sander, H. (2009). The Determinants of Cross-Border Lending in the Euro Zone. *Comparative Economic Studies*, 51(4).
- Hogenbirk, A. E. (2002). *The determinants of inward FDI: The case of the Netherlands*. Maastricht University.
- Hsieh, W.-J. (2005). *The Determinants of Foreign Direct Investment in Southeast Asian Transition Countries*, National Cheng Kung University.
- Huang, J.-C., Ates, A., & Brahmairene, T. (2006). Measuring emerging stock market correlations utilizing the gravity model. *Journal of Economics and Economic Education Research*.
- Hymer. (1966). The international operations of national firms: A study of direct foreign investment. *Mass. Inst of Technology*.

I

- IMF. (1993). *Balance of payments manual* (Fifth ed.): IMF.
- Ioannatos, P. E. (2001). The demand determinants of FDI: Evidence from nonnested hypotheses, *The research series: The Athenian Policy Forum* (AFP).
- Ironmonger, D. (2001). Household production. *International encyclopedia of the Social & Behavioral Sciences*.
- Isard, W. (1960). *Methods of regional analysis: An introduction to regional science*. New York: Technology Press of the Massachusetts Institute of Technology and Wiley & Sons.

J

- Jeon, B. N., Tang, L., & Zhu, L. (2005). Information technology and bilateral FDI: Theory and evidence. *Journal of Economic Integration*, 20(4), 613 - 630.

K

- Kalotay, K. (2000). Is the sky the limit? The absorptive capacity of Central Europe for FDI. *Transnational Corporations*, 9(3).
- Keller, W. (1996). Absorptive capacity: On the creation and acquisition of technology in development. *Journal of Development Economics*, 49(1), 199-227.
- Kemeny, T. (2010). Does Foreign Direct Investment Drive Technological Upgrading? *World Development*, *In Press, Corrected Proof*.
- Kessides, C. (1993). *The contributions of infrastructure to economic development – A review of experience and policy implications*. . Washington D.C.: World Bank.
- Kinda, T. (2009). Investment Climate and FDI in Developing Countries: Firm-Level Evidence. *World Development*, 38(4), 498-513.
- Kindleberger, C. P. (1969). *American business abroad*. Yale, USA: Yale University Press.
- Kojima, K. (1978). *Direct foreign investment: A Japanese model of multinational business operations*. London: Croom Helm.
- Kokko, A. (1992). *Foreign direct investment, host country characteristics, and spillovers*. Stockholm: Stockholm School of Economics, Economic Research Institute.
- Kokko, A., & Blomström, M. (1995). Policies to encourage inflows of technology through foreign multinationals. *World Development*, 23(3), 459-468.
- Kolasa, M. (2007). How does FDI inflow affect productivity of domestic firms? The role of horizontal and vertical spillovers, absorptive capacity and competition. *MPRA*, 8673.

- Kolstad, I., & Villanger, E. (2008). Determinants of foreign direct investment in services. *European Journal of Political Economy, In Press, Corrected Proof*, 348.
- Krogstrup, S., & Matar, L. (2005). *Foreign direct investment, Absorptive capacity and Growth in the Arab world*. Geneva: Graduate Institute of International Studies.

L

- Lall, P., Norman, D. W., & Featherstone, A. M. (2003). Determinants of US direct foreign investment in the Caribbean. *Applied Economics*, 35(13), 1485-1496.
- Leamer, E. (1983a). Let's take the con out of econometrics. *American Economic Review*, 73, 31-43.
- Leamer, E. (1983b). Reporting the fragility of regression estimates. *Review of Economics & Statistics*, 65, 306-317.
- Leamer, E. (1985). Sensitivity analyses would help. *American Economic Review*, 75, 308-313.
- Li, J. (2008). Trade interdependence, comparative advantage and FDI between China and EU. *Int. J. Trade and Global Markets*, 1(3), 223-238.
- Liu, X., & White, R. S. (1997). The relative contributions of foreign technology and domestic inputs to innovation in Chinese manufacturing industries. *Technovation*, 17(3), 119-125.
- Lizondo, J. S. (1991). *Determinants and systemic consequences of international capital flows*. Washington, D.C.: International Monetary Fund.
- Lowe, J. M., & Sen, A. (1966). Gravity model applications in health planning: Analysis of an urban hospital market. *Journal of Regional Science*, 36(3), 437-461.
- Lumbila, K. N. (2005). What makes FDI work? A panel analysis of the growth effect of FDI in Africa. *Africa Region Working paper Series*, 80.

M

- Marchant, A. M., & Peng, X. (2004). *Prospects for China's agricultural FDI inflows: A gravity model approach*. Paper presented at the Southern Agricultural Economics Association, Oklohama, the U.S.
- Markusen, J. R. (2002). *Multinational firms and the theory of international trade* Cambridge, MA: MIT Press.
- Markusen, J. R. (2006). Modeling the offshoring of white-collar services: From comparative advantage to the new theories of trade and FDI. *Brookings Trade Forum 2005: Offshoring White-collar Work*, 1-34.
- Markusen, J. R., & Strand, B. (2009). Adapting the knowledge-capital model of the multinational enterprise to trade and investment in business services. *World Economy*, 32(1), 6-29.
- Markusen, J. R., & Venables, A. J. (1996). The increased importance of direct investment in north atlantic economic relationships: a convergence hypothesis. In: *Canzoneri, M., Ethier, W., Grilli, V. (Eds.), The New Transatlantic Economy*. Cambridge University Press, London, 169-190.
- Markusen, J. R., & Venables, A. J. (1998). Multinational firms and the new trade theory. *Journal of International Economics*, 46(2), 183-203.
- Mátyás, L. (1997). Proper econometric specification of the gravity model. *World Economy*, 20(3), 363.

- McClintock, B. (1988). Recent Theories of Direct Foreign Investment: An Institutional Perspective. *Journal of Economic Issues*, 22(2), 477.
- MOFA. (2005). *Vietnam economic features*. Hanoi: Ministry of Foreign Affairs.
- Moosa, I. A., & Cardak, B. A. (2006). The determinants of foreign direct investment: An extreme bounds analysis. *Journal of Multinational Financial Management*, 16(2), 199-211.
- MPI. (2006). *The five year socio-economic development plan, 2006-2010*. Retrieved. from http://www.isgmard.org.vn/Information%20Service/Legal%20docs/General/sedp_edited_eng_16_3.pdf.

N

- Nachum, L., Dunning, J. H., & Jones, G. G. (2000). UK FDI and the comparative advantage of the UK. *World Economy*, 23(5), 701-720.
- Narula, R., & Marin, A. (2003). FDI spillovers, absorptive capacity and human capacity development: Evidence from Argentina. *MERIT - Infonomics Research Memorandum Series*.
- NAV. (2005). *Law on Investment, 59/2005/QH11 dated 29/11/2005*. Retrieved. from <http://www.mof.gov.vn/DefaultE.aspx?tabid=551&page=26>.
- Nguyen, A. N., & Nguyen, T. (2007). *Foreign direct investment in Vietnam: An overview and analysis the determinants of spatial distribution across provinces*: Development and Policies Research Center.
- Nguyen, B. N., & Haughton, J. (2002). Trade Liberalisation and Foreign Direct Investment in Vietnam. *ASEAN Economic Bulletin, Vol. 19(3)*, 302-318.
- Nguyen, H. T. P. (2002). Contribution of foreign direct investment to poverty reduction: The case of Vietnam.
- Nguyen, L. P. (2006). *Foreign Direct Investment in Vietnam: Impact on Economic Growth and Domestic Investment*. University of South Australia.
- Nguyen, T. (2004). *The poverty impact of Doha: Vietnam*. London: Oversea Development Institute (ODI).
- Nguyen, T. X., & Xing, Y. (2006). Foreign direct investment and exports: the experiences of Vietnam. *GSIR Working papers. Economic Development & Policy Series*(EDP06-11).
- Nocke, V., & Yeaple, S. (2008). An assignment theory of foreign direct investment. *Review of Economic Studies*, 75(2), 529-557.
- Nonnemberg, M., & Mendonça, M. d. (2004). *The determinants of FDI in developing countries*. Paper presented at the Proceedings of the 32th Brazilian Economics Meeting (ANPEC).
- Nooteboom, B., Van Haverbeke, W., Duysters, G., Gilsing, V., & van den Oord, A. (2007). Optimal cognitive distance and absorptive capacity. *Research Policy*, 36(7), 1016-1034.
- Nunes, C. L., Oscategui, J., & Peschiera, J. (2006). Determinants of FDI in Latin America, *Documento De Trabajo 252*: Pontificia Universidad Católica de Perú.
- Nunnenkamp, P. (2004). To what extent can foreign direct investment help achieve international development goals? *Blackwell Publishers, Oxford, United Kingdom*.
- Nunnenkamp, P., & Spatz, J. (2002). Determinants of FDI in developing countries: has globalization changed the rules of the game? *Transnational Corporations*, 11(2).

O

- O'Fallon, C. (2003). Linkages between infrastructure and economic growth. *Pinnacle Research*.
- OECD. (2004). *Improving the quality and cost-efficiency of public expenditure*: Organisation for Economic Cooperation & Development.
- OEDC. (2002a). *New horizons for foreign direct investment*. Paris: OECD.
- OEDC. (2002b). *Education at a glance - OECD indicators* (2002 ed.). Paris: OECD Publications.
- Oguledo, V. I., & MacPhee, C. R. (1994). Gravity model: A reformulation and an application to discriminatory trade arrangements. *Applied Economics*, 40, 315-337.
- Ohlin, B. (Ed.). (1933). *Interregional and international trade*. Cambridge, Mass: Harvard University Press, 1966.
- Olsson, G. (1965b). Distance and human interaction: a migration study. *Geografiska Annaler*, 47, 3-43.
- Oostendorp, R. H., Trung, T. Q., & Tung, N. T. (2009). The Changing Role of Non-Farm Household Enterprises in Vietnam. *World Development*, 37(3), 632-644.
- Orton, J. D. (1997). From inductive to iterative grounded theory: ZiRPing the gap between process theory and process data. *Scandinavian Journal of Management*, 13(4), 419-438.

P

- PAR. (2001). *Public Administration Reform (PAR) master program in the period of 2001 to 2010*. Retrieved. from <http://caicachanhchinh.gov.vn/PortalPlus.aspx?en-US/News/71//103//>.
- Park, B., & Lee, K. (2003). Comparative analysis of foreign direct investment in China: Firms from South Korea, Hong Kong, and the United States in Shandong province. *Journal of the Asia Pacific Economy*, 8(1), 57-84.
- PCHCMC. (2006). Thong tin lich su.
- Pham, H. M. (2002). Regional Economic Development and Foreign Direct Investment Flows in Vietnam, 1988-98. *Journal of the Asia Pacific Economy*, pp. 182-202.
- Pöyhönen, P., & (1963). A tentative model for the flows of trade between countries. *Weltwirtschaftliches Archiv*, 90(1), 93-100.
- Psathas, G. (1995). *Conversation analysis: The study of talk-in-interaction*: SAGE.

Q

- Qiu, L. D. (2003). Comparing sectoral FDI incentives: Comparative advantages and market opportunities. *Annals of Economics and Finance*, 4, 383-408.
- Qu, Z., Huang, C., Zhang, M., & Zhao, Y. (2007). R&D offshoring and technology learning in emerging economies: Firm-level evidence from the ICT industry, *UNU-MERIT, Working paper series*: UNU-MERIT.

R

- Ramasamy, B., & Yeung, M. (2010). The determinants of foreign direct investment in services. *World Economy*, 33(4), 573-596.
- Razin, A. (2003). FDI Flows and Domestic Investment: Overview. *CESifo Economic Studies*, 49(3), 415-428.

- Razin, A., & Sadka, E. (2007). *Foreign Direct Investment: Analysis of aggregate flows*. New Jersey: Princeton University Press.
- Ricardo, D. (1817). *Principles of Political Economy and taxation*: Londaon: John Murray.
- Rugman, A. M. (1981). *Inside the multinationals: The internal markets*. New York: Columbia University Press.
- Rugman, A. M. (1986). New theories of the multinational enterprise: An assessment of internalization theory. *Bulletin of Economic research*.
- Russ, N. K. (2007). The endogeneity of the exchange rate as a determinant of FDI: A model of entry and multinational firms. *Journal of International Economics*, 71(2), 344-372.

S

- Sadik, A., & Bolbol, A. (2003). Arab external investments: Relation to National Wealth, estimation, and consequences. *World Development*, 31(11), 1771-1792.
- Saggi, K. (2002). Trade, Foreign Direct Investment, and International Technology Transfer: A Survey. *World Bank Res Obs*, 17(2), 191-235.
- Schneider, F., & Frey, B. S. (1985). Economic and Political Determinants of Foreign Direct Investment. *World Development*, 13, 161-175.
- Shah, Z., & Ahmed, Q. (2003). The determinants of foreign direct investment in Pakistan: An empirical investigation. *The Pakistan Development Review*, 42(4), 697-714.
- Singh, H., & Jun, K. W. (1995). Some new evidence on determinants of foreign direct investment in developing countries. *World Bank Policy Research Working Paper*, 1531.
- Snowdon, B., & Stonehouse, G. (2006). Competitiveness in a globalised world: Michael Porter on the microeconomic foundations of the competitiveness of nations, regions, and firms. *International Business Studies*, 37, 163-175.
- Solow, R. M. (1956). A contribution to theory of economic growth. *Quarterly Journal of Economics*, 70(1), 65-94.
- Stewart, J. Q. (1948). Demographic gravitation: Evidence and application. *Sociometry*, XI, 31-58.
- Suyanto, Salim, R. A., & Bloch, H. (2009). Does Foreign Direct Investment Lead to Productivity Spillovers? Firm Level Evidence from Indonesia. *World Development*, 37(12), 1861-1876.
- Swan, T. W. (1956). Economic Growth and Capital Accumulation. *Economic Record*, 32, 334-361.

T

- Talamo, G. M. C. (2005). Institution, FDI and the gravity model. *University of Palermo*.
- Thomas, D. E., & Grosse, R. (2001). Country-of-origin determinants of foreign direct investment in an emerging market: the case of Mexico. *Journal of International Management*, 7(1), 59-79.
- Tinbergen, J. (1962). A Twentieth century fund study. *Shaping the World Economy*.
- Torrens, R. (1815). *An essay on the external corn trade*. London: Printed for Hatchard.
- Tsai, P. (1991). Determinants of foreign direct investment in Taiwan: An alternative approach with time-series data. *World Development*, 19(2-3), 275-285.
- Tuman, J. P., & Emmert, C. F. (1999). Explaining Japanese foreign direct investment in Latin America, 1979-1992. *Social Science Quarterly*, 80(3), 539-555.

Twimukye, E. (2006). *An econometric analysis of determinants of FDI: A panel data study for Africa*.

U

Udo, E. A., & Obiora, I. K. (2006). *Determinants of foreign direct investment and economic growth in the West African monetary zone: A system equations approach*. Paper presented at the The Center for Global Trade Analysis (GTAP).

UNCTAD. (1998). *World Investment Report (WIR)*. Geneva: United Nations.

UNCTAD. (2005). *World Investment Report (WIR)*. Geneva: United Nations.

UNCTAD. (2006). *World Investment Report (WIR)*. Geneva: United Nations.

UNCTAD. (2007). *World Investment Report (WIR)*. Geneva: United Nations.

UNCTAD. (2009). *World Investment Report (WIR)*. Geneva: United Nations.

UNCTC, E. (1984). *Cost and conditions of technology transfer through TNCs: A regional perspective*. Bangkok: United Nations.

Usui, M. (1983). *International transfer of industrial technology an appraisal of the Japanese performances in Latin American NICs*.

V

Vadlamannati, K. C., Tamazian, A., & Irala, L. R. (2009). Determinants of foreign direct investment and volatility in South East Asian economies. *Journal of the Asia Pacific Economy*, 14(3), 246-261.

Van den Berg, G., & van der Klaauw, B. (2001). Counseling and Monitoring of Unemployed workers: Theory and evidence from a controlled social experiment. *IZA Discussion Paper Series*(374).

Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80(2), 190-207.

Vernon, R. (1979). The product cycle hypothesis in a new international environment. *Oxford Bulletin of Economics & Statistics*, 41(4), 255-267.

Vu, T. B., Gangnes, B., & Noy, I. (2008). Is foreign direct investment good for growth? Evidence from sectoral analysis of China and Vietnam. *Journal of the Asia Pacific Economy*, 13(4), 542-562.

W

WB. (2007). *Vietnam development report (VDR)*: Wordbank.

Weeke, H., Parker, S., & Malesky, E. (2009). The dynamics of Vietnam's business environment: Complying with obligations abroad and competing at home. *Vietnam's Reform*.

WIR. (2006). *World Investment Report*. United Nations.

Wu, J., & Hsu, C. (2008). Does foreign direct investment promote economic growth? Evidence from a threshold regression analysis. *Economics Bulletin*, 15(12), 1-10.

Y

Yaffee, R. (2003). A primer for panel data analysis. *Connect information technology*.

Z

Zheng, P. (2009). A comparison of FDI determinants in China and India. *Thunderbird International Business Review*, 51(3), 263-279.

Curriculum Vitae

Nguyễn, Thanh Hoàng was born in Sài Gòn, Việt Nam on November, 07th, 1967.

She started studying at Youth Institute, Hà Nội in 1985, and received her Diploma in 1988. After graduation, she worked for the Youth's Union, Hồ Chí Minh City, and then Women's Union in Bến Tre province, where she began her married life in 1989, as International Project Officer. From 1994, she followed a bachelor program at the Faculty of Business Administration, Open University of Hồ Chí Minh City and earned B.Sc. degree in 1998. During her studies, she was employed by International Human Project Management Office, located in Hồ Chí Minh City, as Country Project Manager from 1996 to 2001. In the period of 2000-2002, she completed her Executive Masters of Business Administration degree (EMBA), at the Maastricht School of Management's Outreach Program in Vietnam. In 2001, she began working for the Investment and Construction Authority for Thủ Thiêm's new urban area. One year later, in 2002, she got the Third Award in a national contest "Project for setting up Private Enterprise", organized by Sai Gon Economic Magazine and Information - Foreign Economics Department, Ministry of Foreign Affairs of Japan.

In 2004, she was selected to be a member of the project of 300 Doctors and Masters, and was supported by People's Committee of Hồ Chí Minh City to come to the Netherlands for a PhD doctoral program in December 2005. The program started in Maastricht School of Management, and then Eindhoven University of Technology (TU/e) in September 2008. During this time, she has taken many opportunities to joint some international conferences to present her researches. Her most honour experience was being invited to the United Nations Conference of Trade and Development (UNCTAD XII) in Ghana (2008).

In regards to her working experience and career, she has been involved specifically in a research related to attracting and benefiting foreign direct investment, her dissertation theme. More indirectly, she has been carrying out a project appraisal and project management. Moreover, her favourite concern is knowledge transfer and absorptive capacity.



List of Papers

Nguyen, H., Brahmasrene T., “Factors capturing foreign direct investment absorptive capacity”, paper submitted to DEIM Conference, 2011 (UNU-MERIT)

Nguyen, H., Ma’ruf, and Stoffers, J. “A growth model for international education in developing countries”, paper was presented at the VIII Globelics Conference, Kuala Lumpur, Malaysia, November 2010, and submitted to Journal of Higher Education

Nguyen, H. “Indicators measuring FDI absorptive capacity”, paper was presented in the III International Conference on International Business, Thessaloniki, Greece, May 2010

Nguyen, H., Paterson, J., Duysters, G., and Sander, H. “Comparative Advantage – the determinants of foreign direct investment inflow in developing countries”, paper was presented in the Global value chains conference, Maastricht, Netherlands, November 2009, and submitted to Journal of Asia-Pacific Economy

Nguyen, H., Sander, H., Duysters, G., and Paterson, J. “The Origin of Foreign Direct Investment: Factors Trigger FDI Flow”, paper was presented in INFORMS conference, San Diego, USA, October 2009, and submitted to World Economy

Nguyen, H., Duysters, G., Sander, H., and Paterson, J. “Foreign direct investment: the absorptive capacity theory”, paper was presented in the VII Globelics Conference, Dakar, Senegal, October 2009 and presented in the 20th Jerusalem school in Economic theory, Jerusalem, Israel, June 2009, and submitted to World Development

Nguyen, H., Duysters, G., Paterson, J., and Sander, H. “A survey of theoretical and empirical analyses of determinant of foreign direct investment in emerging economies”, paper was presented in the XVII International Management Development Association (IMDA) conference, Paramaribo, Suriname, 2008, and submitted to Multinational Business Review

Nguyen, H. "Applying Hierarchy Process to verify and select successful projects for "Ideas of specific Design of resident areas in Thu Thiem’s new urban contest", Economic Development Magazine, 2003

Internal Manual Book: Guidelines for Project Management, Terre des Hommes Switzerland, 1995