F.D.I. through the imitation procedure The case of China: A Note

Metaxas, Theodore and Kechagia, Polyxeni

U. of Thessaly, Department of Economics, Greece

2012

F.D.I. through the imitation procedure

The case of China: A Note

Theodore Metaxas

Lecturer of Economic Development,

Department of Economics, University of Thessaly, Korai 43, 38333, Volos, Greece

Tel: ++30 24210 74917, Fax: ++30 24210 74772

Email: metaxas@econ.uth.gr

(Corresponded author)

Polyxeni Kechagia

PhD Researcher, Economist

Department of Economics, University of Thessaly, Korai 43, 38333, Volos, Greece

Email: kehagia@uth.gr

Key – words: imitation, China, developing countries

JEL: F21, O18, O33, R11

Introduction

Over the last years Foreign Direct Investment (F.D.I.) inflow has increased significantly. Countries such as China, India, Brazil and Mexico have become major recipients of F.D.I. inflows. At the present note paper the case of China has been selected because the country has been the greatest recipient of F.D.I. compared to other developing countries and it is very interesting because of the country's great variety among the regions, of the large geographical area it covers, of the great economic growth and of the country's large market.[1] The purpose of the present study is to examine whether neighbouring to China and developing countries can imitate China's attitude towards F.D.I. so as to attract foreign capitals.

So far there are only few studies worldwide connecting the imitation procedure and the F.D.I.[2] and most of them focused on the imitation cost.[3] The present study, examine the the factors that affect the developing countries'

[1] Qi Jianhong, Zheng Yingmei, Laurenceson James and Li Hong "Productivity spillovers from F.D.I. in China: Regional differences and threshold effects", *China and World Economy* 17 (4) (2009): 18-35

[2] Glass Amy and Saggi Kamal, "Foreign Direct Investment and the Nature of R&D", *Canadian Journal of Economics,* 32(1) (1999): 92-117; Glass Amy and Saggi Kamal, "Intellectual Property Rights and Foreign Direct Investment', *Journal of International Economics,* 56(2) (2002): 387-410; Glass Amy and Wu Xiaodong, "Intellectual Property Rights and Quality Improvement" *Journal of Development Economics,* 82(2) (2007): 393-415

[3] Mansfield Edwin, Schwartz Mark and Wagner Samuel, "Imitation Costs and Patents: An Empirical Study", *Economic Journal* 91(364) (1981): 907-18; Romer Paul, "Endogenous technological change", *Journal of Political Economy* 98 (1990): 71–102

attitude towards imitating China so as to attract F.D.I. Also, the developing countries that are possible to imitate China are categorized based on the region they are located in, that is to say into Asian, European and Latin American countries. Therefore, unlike previous studies[4] the case of China is not compared to a certain country, but to the countries of a region.

Imitation

There are two activities composing the production sectors of a country's economy; the innovation and the imitation procedure. Every firm has to learn the production technique for each product. This can be achieved by innovation, in case the product is brand new, or by imitation, in case the product is already produced and distributed. Either way, the enterprises have to dispose a certain amount of resources so as to produce in stable returns – to –scale production. Finally, imitation is considered the only channel through which the technological knowledge is diffused among countries worldwide.[5]

---

[4] Adams John, "Mexico vs China", *Economic Development Journal*, 2(4) (2003):36-45; Fung K.C., Garcia – Herrero Alicia and Siu Alan, "A Comparative Empirical Examination of Outward Foreign Direct Investment from Four Asian Economies: People's Republic of China; Japan; Republic of Korea; and Taipei, China", *Asian Development Review* 26 (2) (2009): 86-101

[5] Grossman Gene and Helpman Elhanan, "Endogenous product cycles", *Economic Journal* 101(408) (1991): 1214–29; Krugman Paul, "A model of innovation, technology transfer, and the world distribution of income", *Journal of Political Economy* 87(1979): 253–66; Segerstrom Paul, Anant T.C.A., Dinopoulos Elias, "A Schumpeterian model of the product life cycle", *American Economic Review* 80 (1990):1077–91

Imitation is the procedure through which mechanisms and processes are transmitted. *Reverse engineering* is the most commonly mechanism used in order to transfer technology from the acquiring to the acquired firm.[6] This mechanism allows firms to imitate not only the easier manufactures and processes, but also the managerial and organizational innovations. So, spillovers for the acquired firm derive from the technological upgrades and they lead to more productivity for the local firms.[7]

The imitation effect occurs in case there is a technological gap between the local and the foreign firm. The imitation effect is measured as the share of affiliate enterprises' R&D to the total R&D of a productive sector. Foreign firms' R&D affects indirectly the export capacity since local enterprises are enhanced to produce at high technological level and they become more productive so as to survive in foreign markets. Hence, it is more possible for foreign firms that use technology at high level to be imitated compared to other enterprises that do not use recent technological advances.[8] Also, the domestic market in developing countries is usually small; therefore it is important for the firms of these countries to sell to the markets of the

[6] Das Sanghamitra, "Externalities and technology transfer through Multinational Corporations: A Theoretical Analysis", *Journal of International Economics*, 22 (1987):171-82; Wang Jian-Ye and Blomstrom Magnus, "Foreign Investment and Technology Tranfer: A Simple Model", *NBER Working Papers* (no.2958/ 1992), National Bureau of Economic Research Inc

[7] Wang and Blomström, 1992, *ibid*

[8] Franco Chiara and Sasidharan Subash, "MNEs, technological efforts and channels of export spillover: An analysis of Indian manufacturing industries", *Economic Systems* 34 (2010): 270–88

developed countries so as to develop as well. However, high cost and demand factors make it block the developing countries' investment in R&D. Also, it is suggested that the imitation procedure leads to the reduction of the wage gap worldwide and developed countries have more incentives to innovate. However, when the transaction costs are low worldwide then it is possible that the imitation will affect negatively the wage inequalities and the development worldwide.[9]

Foreign enterprises use recent technological advances so as to enter to the new market and introduce these advances to the local firms of every sector. Hence, local firms imitate the way foreign enterprises operate and this gives them the opportunity to enhance the productivity. Apart from imitation, local firms are also affected by the additional competition foreign firms create. This competition makes local enterprises operate more efficiently and they become more innovating so as to preserve their market position. This imitation effect, as described above is more probable to occur at the intra-industry level.[10]

However, when developing countries adopt new technology, it is necessary to replace the old capital with new one. Therefore, F.D.I. is considered as an engine that promotes rapidly the technological development. The know-how is diffused from developed to developing countries via F.D.I., facing though

[9] Kind Hans, "Consequences of Imitation by Poor Countries on International Wage Inequalities and Global Growth", *Review of Development Economics*, 8(1) (2004):47-67

[10] Fosfuri Andrea, Motta Massimo and Ronde Thomas, "Foreign direct investment and spillovers through workers' mobility", *Journal of International Economics* 53 (2001): 205–22

various problems. Restrictions and barriers to the inflow investment, protection policies of the domestic firms ect., limit the technology transferred to developing countries.[11] Also, imitation is only profitable for developing countries when the trade is sufficiently liberalized because the imitation procedure has positive effects when the access to the markets of the developed countries is cheap. This means that there is a positive relationship between trade liberalization and the imitation procedure.[12]

Also, over the past 15 years developing countries have strengthened the intellectual property rights (IPRs.), thus restraining the imitation procedure. Developing countries have limited access to new technologies applied in developed countries because of the foreign enterprises' monopoly. However, it is difficult to determine which way the strengthening of IPRs affects the imitation procedure and the technology diffusion between developed and developing countries.[13] Especially over the past years, because of the recent financial crisis and the problems deriving from it, the need for imitation through F.D.I. has become more intense. That's because F.D.I. are used mostly for long – term production plans, so they are characterised by stability, they are more resilient compared to other types of capital flows and, finally, the cost of F.D.I. is lower compared to the that of external borrowing and

[11] Institute of Economic Affairs, *Towards a Liberal Utopia*?, The Institute of Economic Affairs, 2005, London

[12] Kind, 2004:47-67, *ibid*

[13] Ivus Olena, "Trade-related intellectual property rights: industry variation and technology diffusion", *Canadian Journal of Economics,* 44 (1) (2011):201-26

portfolio equity financing.[14] Besides, apart from the recent financial crisis, the Asian one has led to a discontinuity in the F.D.I. flows' story in the region and has caused the reduction of portfolio and short – term investments, rending the imitation procedure more important in facing this crisis.[15] In other words, an imitation procedure is considered successful only in case that the products used as input are intermediate and that these intermediate products are produced in developing countries. Thus, if the transaction costs are high, then it is expensive for the developing countries to imitate the developed ones. Also, the imitation procedure requires fixed investment in R&D and it is considered profitable only when the demand is sufficiently high.[16]

Over the past three decades the developing countries, as well as the transition economies have managed to receive an increasing amount of F.D.I. inflow. Therefore, in 1990 the amount of F.D.I. inflows for the developing countries was estimated at 17,8%; however in 2004 it reached at 36,61% and in 2005 at 35%. The F.D.I. inflows to the developing countries reached at $916 billion in 2005, increased by 27% compared to the inflows in 2004. These inflows were distributed in several sub – regions of the developing countries and they led these countries into economic development. As for the transition economies, the F.D.I. inflows rose from 0,04% in 1990 to 5,57% and 4,33% in

[14] Yan Liang, "Does Foreign Direct Investment Provide Desirable Development Finance? The Case of China", *China & World Economy*, 15 (2) (2007): 104 – 20

[15] Hill Hal and Athukorala Prema-Chandra, "Foreign Investment in East Asia: A Survey", *Asian-Pacific Economic Literature* 12(2) (1998):23-50

[16] Kind, 2004:47-67 *ibid*

2004 and 2005 respectively. Developed countries, mostly due to several mergers and acquisition (M&As) which led them to higher development rates, received $168 billion in 2000, a year that the total inflows reached their peak ($1,4 trillion).[17] The share of F.D.I. inflows from 1970 to 2005 by region are presented in the following table (table 1).

……[insert Table 1 about here]……

It is obvious that the capitals inflows reduced in 2000. In particular, the share of the developing countries reduced from 38,4% in 1996 at almost 18% in 2000 (Figure 1). This reduction has caused serious concern because some of the developing countries did not manage to attract the F.D.I. inflow, although they were in great need; thus it was suggested that these countries should be further liberalized.[18]

……[insert Figure 1 about here]……

Hence, the F.D.I. inflows, as presented in table 1 are mostly limited in the developed countries and they were higher compared to the ones in the developing countries, except for some countries such as China, Mexico and Brazil.[19]

In our study the case of China is examined because it is the greatest recipient of F.D.I. inflows nowadays. In particular, the case of China is chosen

[17] Cevis Ismail and Camurdan Burak, "The economical determinants of foreign direct investment (F.D.I.) in developing countries and transition economies", *e-Journal of New World Sciences Academy (NWSA),* 4 (3) (2009):110-223

[18] Nanda Nitya, "Growth Effects of F.D.I.: Is Greenfield Greener?", *Perspectives on Global Development and Technology* 8 (2009):26-47

[19] Nanda, 2009:26-47*, ibid*

because over the past three decades the country managed to become the second recipient of F.D.I. inflow worldwide, after the U.S.A., and the first recipient among the developing countries. The country's F.D.I. inflow rise significantly from 1992 up until today because China became more open – oriented to F.D.I. and repealed some special regimes that block the country's growth. The F.D.I. inflow and the exports and imports in China from 1985 to 2006 are presented in the following figure 2.[20]

……[insert Figure 2 about here]……

Therefore, it is noticed that the F.D.I. inflow in China reached at $ 45.463 million in 1998, they slightly dropped in 1999 mostly because of the Asian financial crisis and they were continued rising at a fast rhythm since then reaching at $ 60.63 billion (2004).[21] In 2008 the F.D.I. inflow in China reached $83, 5% billion and it is estimated that it will continue rising in the following years.[22] During these years China also augmented the amount of outward F.D.I. in several developed and developing countries, among which Hong Kong, the U.S.A., Russia, Korea, Germany etc.[23] Moreover, during the period 1980-2002 China managed to increase significantly both the exports and the

[20] Fu Xiaolan, "Foreign Direct Investment, Absorptive Capacity and Regional Innovation Capabilities: Evidence from China", *Oxford Development Studies* 36 (1) (2008): 89-110

[21] Fu, 2008:89-110 *ibid*

[22] U.N.C.T.A.D. *World Investment Report: Transnational Corporations and the Infrastructure Challenge*, United Nations, New York and Geneva, 2008

[23] Fung *et. al.,* 2009:86-101, *ibid*

imports. Thus, China became an open large market, while the trade turnover was estimated at approximately 40% of the country's G.D.P.[24]

The reforms chosen by the Chinese government in order to attract most F.D.I. inflow refer to the abolishing of the special economic zones, among which the economic, technological and exports zones, the free trade zones and to the so-called "deliberate ambiguity". The first reform lead to the necessary infrastructure, the economic activity was enhanced while some of the Chinese regions managed to attract huge amounts of F.D.I. capitals, creating city regions.[25] The second main reform includes the deliberate ambiguity, which change the China's attitude towards F.D.I. and made foreign capital inflow more acceptable.[26] These reforms were performed gradually. China became more opened to F.D.I. inflow through reducing the tariff levels and the non – tariff barriers, as presented in table 2. It has to be mentioned that nowadays most of the imports in China are duty – free.[27]

……[insert Table 2 about here]……

[24] Yang Yongzheng, "China's Integration into the World Economy: implications for developing countries", *Asian-Pacific Economic Literature* 20(1) (2006):40-56

[25] Zhao Simon and Zhang Ling, "Foreign direct investment and the formation of global city-regions in China", *Regional Studies* 41(7) (2007): 979–994

[26] Smart Alan and Hsu Jinn-Yuh, "The Chinese diaspora, foreign investment and economic development in China", *Review of International Affairs* 3(4)(2004): 544–566

[27] Yang, 2006:40-56*, ibid*

2. China's F.D.I. and the imitation procedure

China is situated in the Asian region, where the competition for F.D.I. has become very intense during the past decade.[28] China has a positive attitude towards F.D.I. because the country uses these capitals in order to supplement the Chinese savings, but mostly because the government of the country believes that this inflow of foreign capitals will lead to external benefits and to positive spillovers for the Chinese enterprises.[29] Besides, Chinese companies were left behind concerning the use of technological practises, compared to other enterprises worldwide. Therefore, China used imitation, skills acquisition, competition and export so as to generate positive spillovers.[30]

China has imitated other developed countries' policies so as to attract F.D.I. based on the export – oriented growth model applied by the Chinese government. Therefore, the country created export – processing zones, improved its infrastructures, applied duty exemptions policies for imported resources which were useful for the export enterprises, provided economical subsidies and tax exemption ect.[31] The capital inflow was distributed in several sectors as presented in the following table 3.

---

[28] Liu Ligang, Chow Kevin and Li Unias, "Has China crowded out foreign direct investment from its developing East Asian neighbours?", *China & World Economy* 15 (3) (2007): 70–88

[29] Qi *et. al.,* 2009: 18-35, *ibid*

[30] Gorg and Greenaway, 2004, *ibid*

[31] Lu Ding and Tang Zhimin, *State intervention and business in China: The role of preferential policies,* London: Edward Elgar, 1997 (cited in Abeysinghe and Lue, 2003)

……[insert Table 3 about here]……

It is therefore noticed that the real estate sector of China receives on average almost 30% and 10% of the total capital inflow during the period 1983-1995 and during the year 1995. Contrary to the real estate sector, the manufacturing one receives on average almost 70% of the total F.D.I. inflow. The F.D.I. inflow was significantly augmented during the period 1992-1993 and then declined.[32] Developing countries can use these four spillovers channels so as to imitate the Chinese policy and to attract more foreign capital inflows. Hence, the enterprises of the host countries can gain more knowledge on the products and the technology used from the foreign enterprises using the reverse engineering. Also, host countries can provide incentives to the skilled workers employed in Chinese multinational enterprises and to gain the technological know – how. Moreover, local enterprises can develop their R&D activity so as to develop new products and to improve the existing ones. The perceived risk of such an innovation procedure is lower for the local firms because the Chinese products and technologies have already been proven. Finally, the imitation procedure can be enhanced by the staff training, the vertical transfer of technological know – how ect.[33] In addition, Abeysinghe

---

[32] Yan, 2007: 104 – 20, *ibid*

[33] Cheung Kui-yin and Lin Ping, "Spillover effects of F.D.I on innovation in China: Evidence from the provincial data", *China Economic Review,* 15 (2004):25-44

and Lu[34] reached to the conclusion that over the past 15 years the multiplying effect of the Chinese economy towards its neighbouring economies has been magnified. Hence, China's policies regarding F.D.I. have positive effects on the country's growth as well as on the development of the region. Also, China influences other developing Asian and regional countries because of its economy size, its openness and its rapid development. The fact that the Chinese economy grows almost three times as rapidly as other economies worldwide makes it more probable that developing countries would imitate China's attitude towards F.D.I. It is believed that the developing countries of the region do not consider China a menace because these countries also develop rapidly.[35]

Besides, as presented in table 4, the bilateral F.D.I. flows among the Asian countries have been important so far. Moreover, approximately 60% of the F.D.I. flows from East Asia have been directed to South – East Asian countries that are characterised by high average income, such as Singapore, Malaysia and Thailand.[36]

……[insert Table 4 about here]……

However, Chinese companies were not absolutely capable of taking advantage of these spillovers channels. Because of the different absorptive

[34] Abeysinghe Tilak and Lu Ding, "China as an economic powerhouse: Implications on its neighbours", *China Economic Review* 14(2003): 164-185

[35] Das, 2008:57-62*, ibid*

[36] Hattari Rabin and Rajan Ramkishen, "Understanding bilateral F.D.I. flows in developing Asia, *Asian-Pacific Economic Literature* 23(2) (2009):73-93

capability, enterprises of some of the sectors or regions gain profit from these channels. Most of them used the spillovers channels to absorb knowledge on the first production stages, at which they lagged compared to the initial production stage of firms in other countries. Though, when the difference among the production stages was great, then F.D.I. generated negative spillovers, reducing their competitiveness.[37]

Also, spillovers effects have a positive influence on a country's economy in case there is a technological gap between foreign and local enterprises.[38] The countries that will reform their attitude towards F.D.I., such as China, in order to attract foreign capitals must be able to absorb the technological knowledge deriving from China.[39] So, it is recommended that this gap in technology is not quite large.

Moreover, the developing countries of the Southeast Asia develop a pessimistic attitude towards the economic development of China deriving from the F.D.I. Also, neighbouring countries fear that China will attract most of the

---

[37] Smeets Roger, "Collecting the pieces of the F.D.I. knowledge spillovers puzzle" *World Bank Research Observer* 23(2) (2008): 107 – 138

[38] Meyer Klaus, "Perspectives on multinational enterprises in emerging economies", *Journal of International Business Studies* 35 (2004): 259–276

[39] Kokko Ari, "Technology, market characteristics, and spillovers", *Journal of Development Economics* 43 (1994): 279–293; Kokko Ari, Tasini Ruben and Zejan Mario, "Local technological capability and productivity spillover from FDI in the Uruguayan manufacturing sector", *Journal of Development Studies* 32 (1996): 602–611

future F.D.I. inflow of the region, restraining their development.[40] Thus, the neighbouring countries have developed a competitive attitude towards China in certain categories of products because they consider that the development of China will reduce their market share both in these countries and in other countries as well.[41]

Besides, the economies of the Asian region are very different among each other. They are classified in different stages of development and not all of them have access to the same or to equal resources.[42] So far, the integrated circuit (IC) industry of certain countries, such as Taiwan, has imitated the attitude of Chinese enterprises towards F.D.I. Taiwanese enterprises were offered by China land at low cost, cheap labour force, preferential tax treatment and political enforcement. Also, China offered political stability to Taiwan, bureaucratic efficiency and administrative aid to the foreign firms.[43]

Finally, developing countries, especially the Asian ones, should consider the Chinese development an opportunity, not a threat. These countries are continually influenced by the development of China and it is possible that in

[40] Cheong Young-Rok, "The impact of China's entrance to the W.T.O. on neighbouring East Asian economies", *China Economic Review* 11(4) (2001): 419–422

[41] Roland-Holst David and Weiss John, "People's Republic of China and its Neighbours: evidence on regional trade and investment effects", *Asian-Pacific Economic Literature* 19(2) (2005):18-35

[42] Das, 2008: 57-62, *ibid*

[43] Taiwan Electricity and Electronic Manufacturer Association. *A Survey Report on the Evaluation of Investment Environment and Risks in China,* Taiwan Electrical and Electronic Manufacturers' Association (Chinese), Taipei, 2001

the future they will reinforce the growth of the region. However, over the past three decades China has become very competitive and managed to become the largest recipient of F.D.I. inflow worldwide. Thus, it is possible that the competition between China and the developing countries of the region will become more intense, enhancing the spillovers effects' diffusion.[44] Though, China has imitated the developed countries in order to attract F.D.I. and it is suggested for the rest developing countries to do the same. Besides, it is proven that the imitation of the products of the developed countries play an important role in the development of high performing countries, among which Japan and the rest recently industrialized economies of the region. Also, the imitation procedure of intermediate products produced in developed countries is the major source of productivity increase in developing countries.[45]

Therefore, it is suggested for the rest developing countries that wish to imitate China so as to attract F.D.I. to improve their investment environment, which refers to macroeconomic and governmental factors, as well as to the infrastructure. In particular, macroeconomic factors refer to the social and political conditions of the developing country, to its inflation and interest rates, to the competition conditions ect. The governmental and institutional factors refer to the regulation, financial and taxation conditions, as well as to the legal system and the work force of the developing country ect. Finally, the last factor

[44] Das, 2008: 57-62, *ibid*
[45] Kind, 2004:47-67, *ibid*

includes telecommunication, transportation and power infrastructure ect.[46] However, the multinational enterprises of the developing countries are definitely at a disadvantage because of the lack in the local knowledge and therefore it to necessary to own some ownership advantages to face this problem. Therefore by imitation the diffusion of this property of knowledge, either in technology, product or innovation process, or simply in organizing the management or administration, is considered one of the main channels through which domestic firms manage to improve productivity.[47]

Conclusion

The past decades there is a great flow of F.D.I. worldwide which has affected the interest developing countries show towards foreign capitals inflow. There are several advantages deriving from F.D.I. and developing countries can attract foreign capital inflows via an imitation procedure. China is the largest recipient of foreign capital nowadays and the present study examines whether other developing countries can imitate China so as to attract F.D.I. and it emphasizes on the benefits deriving from F.D.I. for the Chinese economy and on the conditions under which the spillovers effects are positive.

The study reached to the conclusion that the competition in the host country, that is to say in China, between local and foreign enterprises is

[46] Penia Ernest and Salas Ian, "Investment Climate, Productivity, and Regional Development in a Developing Country", *Asian Development Review*, 23 (2) (2006):70-89

[47] Krugman Paul and Helpman Elhanan. *Market Structures and Foreign Trade, MIT Press*, Cambridge, 1994, pp.32-45

affected by economical factors, such as subsidies. Hence, competition can affect positively the imitation procedure in case local enterprises are motivated to used the existing resources in the most efficient way or in case the apply R & D for the technologies used. This conclusion is in consistent with the findings of Blomstrom & Kokko[48], according to which, F.D.I. enhance positive competition as for the skills acquisition, and they can be improved via formal or informal contact of the local employees with foreign workers. Hence, the productive efficiency and the product can be also improved. Furthermore, direct observation of the technologies and the processes applies in production can be used, local firms can hire workers that were previously occupied in foreign firms and transactions with supplier of the host country can be performed. Similar findings have been presented by Motta and Ronde[49], according to which multinational enterprises contribute to the improvement of the local work force skills.

The present study reached to the conclusion that in order for the imitation procedure to be successful, two conditions must be guaranteed. The first one is the absorptive capacity of the developing countries that will imitate the China's example, which also affects the firms' operation of these countries. The second condition is sufficiency of the linkages regarding the activities between China and the developing countries' firms. These points are in consistent with the

[48] Blomström Magnus and Kokko Ari, "Multinational Corporations and Spillovers" *Journal of Economic Surveys*, 12 (1998): 247–277

[49] Motta Massimo and Ronde Thomas, "Foreign Direct Investments and Spillovers Through Workers' Mobility", Universidad Pompeu Fabra, *Economics Working Papers* no. 258/ 2000

finding of Cohen and Levinthal[50] and the findings of Balasubramanayam *et al.*[51] , who reached to the conclusion that these two conditions are necessary for a developing country so as to attract F.D.I.

By ending this note paper, we make clear that main aim was to present and discuss the imitation process based on China case. The study used secondary data and a variety of empirical studies in order to come up to valuable conclusions. However, this note paper faces several limitations. Firstly, it has not been examined the degree at which spillovers effects are affected by the share of the ownership in the foreign enterprises. Secondly, it has not examined how the absorptive capacity of the local enterprises affects the imitation procedure. Hence, future studies might examine the absorptive capacity, the ownership structure of the enterprises and the technological knowledge of the developing countries that is possible to imitate China so as to attract F.D.I. Finally, an interesting path for future research would therefore be to take into consideration these limitations so as to forecast F.D.I. in developing countries, as well as to examine the effect of the recent financial crisis on the imitation procedure.

[50] Cohen Wesley and Levinthal Daniel, "Innovation and learning: two faces of R&D" *Economic Journal,* 99 (1989): 569–596

[51] Balasubramanayam Vudayagiri, Salisu Mohammed and Sapsford David, "Foreign direct investment and economic growth in EP and IS countries" *Economic Journal,* 106 (1996): 92–105

Table 1: Share in global F.D.I. inflows by region

Year	1970	1980	1990	2000	2001	2002	2003	2004	2005
World	100	100	100	100	100	100	100	100	100
Developed economies	71,28	86,07	82,16	81,3	73,32	71,68	64,68	57,82	60,67
America	23,52	42,82	28,18	27,88	23,79	15,89	11,3	19,52	16,03
Asia	1,07	0,52	0,94	0,95	1,19	1,78	1,84	1,35	0,91
Europe	38,95	39,04	48,14	51,19	47,24	50,86	49,13	30,63	47,33
Nothern Europe	13,56	19,58	17,85	15,46	11,04	13,28	9,98	11,04	19,13
Southern Europe	7,13	5,45	11,64	4,43	6,32	9,38	9,76	6,8	5,36
Eastern Europe	.	0,02	0,44	1,35	2,03	3,19	1,72	3,34	2,98
Western Europe	18,26	13,99	18,21	29,95	27,85	25,01	27,68	9,45	19,86
Oceania	7,74	3,70	4,89	1,27	1,1	3,15	2,41	6,33	-3,6
Developing economies	28,27	13,88	17,8	18,06	25,3	26,23	30,98	36,61	35
Africa	9,44	0,72	1,4	0,68	2,39	2,1	3,32	2,42	3,35
Eastern Africa	0,6	0,36	0,2	0,1	0,18	0,24	0,37	0,27	0,18
Middle Africa	0,23	0,64	-0,17	0,09	0,44	0,52	1,14	0,64	0,5
Northern Africa	3,25	0,28	0,55	0,25	0,65	0,64	0,96	0,83	1,39
Southern Afric	2,49	0,24	0,05	0,09	0,87	0,24	0,23	0,22	0,78
Western Africa	2,87	-0,79	0,77	0,15	0,25	0,47	0,62	0,46	0,5
America	11,91	11,75	4,83	6,86	9,43	8,55	7,86	12,06	9,83
Caribbean	3,05	0,71	0,41	1,37	1,28	0,7	0,65	3,76	2,69
Central America	4,25	4,53	1,52	1,39	3,51	3,24	2,91	3,03	2,26
South America	4,61	6,51	2,9	4,1	4,64	4,61	4,3	5,26	4,88
Asia	6,36	1,20	11,23	10,5	13,46	15,56	19,74	22,04	21,78
Eastern Asia	1,33	1,72	4,36	8,25	9,47	10,9	12,94	14,78	12,9
Southern Asia	0,72	0,51	0,11	0,33	0,78	1,22	1,11	1,04	1,07
South – Eastern Asia	3,43	4,99	6,36	1,67	2,35	2,55	3,57	3,61	4,05
Western Asia	0,89	-6,02	0,41	0,25	0,86	0,89	2,12	2,6	3,76
Oceania	1,01	0,21	0,35	0,02	0,01	0,02	0,06	0,1	0,04
Economies in transition	.	0,04	0,04	0,64	1,39	2,09	4,34	5,57	4,33
Asia	.	.	.	0,13	0,43	0,73	1,09	1,24	0,47
Europe	.	0,04	0,04	0,51	0,96	1,36	3,24	4,33	3,86

***Source**: Cevis & Camurdan (2009)*

Table 2: Simple average tariffs rates in China

Year	Tariff rates
1982	55.6
1985	43.3
1988	43.7
1991	44.1
1992	42.9
1993	39.9
1994	36.3
1996	23.6
1997	17.6
1998	17.5
2000	16.4
2001	14.0
2002	12.7

Source: *Ianchovichina et. al. 2001 in Yang (2006)*

Table 3: The distribution of the F.D.I. inflow in China by sector

Year	Manufacturing	Real Estate	Subtotal
1983-1987	33	36	69
1988-1991	81	10	91
1992-1993	49	37	86
1994-1995	61	24	85
1983-1995	56	29	85
1997-2003	63	12	81
2004	71	10	81

***Source**: Yan (2007).*

Table 4: Top 10 bilateral F.D.I. flows among Asian countries

Source	Host	Average		In per cent to Asia	
		1997-2000	2001-2005	1997-2000	2001-2005
Hong Kong SAR	China	17,750.8	17,819.1	46.2	50.7
China	Hong Kong SAR	7,266.9	5,459.4	18.9	15.5
Singapore	China	2,706.3	2,136.7	7.0	6.1
Singapore	Hong Kong SAR	2,835.3	353.1	7.4	1.0
Singapore	Malaysia	844.1	1,133.8	2.2	3.2
Singapore	Thailand	441.7	1,381.9	1.1	3.9
Malaysia	China	290.8	316.7	0.8	0.9
Hong Kong SAR	Malaysia	272.3	296.5	0.7	0.8
Hong Kong SAR	Thailand	360.1	160.8	0.9	0.5
Korea	Hong Kong SAR	313.0	155.7	0.8	0.4

***Source**: UNCTAD in Hattari & Rajan, 2009:73-93*

**amounts in 100 million US $*

Table 5: Comparative World Economic Rankings

	U.S.A.	China	Mexico
Biggest economy	1	2	9
Economic purchasing power	1	2	12
Population ranking	3	1	11
Oil production	2	8	5
Coal production	1	2	n.a.

***Source**: The Economist in Adams (2003)*