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**The impact of globalization on FDI:
An empirical analysis of the FDI determinants in China**

by

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[Abstract]

The world under globalization is moving toward a single market, where national economies are becoming more integrated and interconnected. In this context, over the last decades, the perception of FDI positive spillovers has made developed and developing countries competing to attract foreign investors. This study analyses the determinants of FDI during the globalization process, both theoretically and empirically using China as a case of study. It hypothesizes that a change in five sets of factors, based on the recent literature and empirical studies on developing countries and China, has occurred. These hypotheses are empirically tested utilizing a Pooled OLS model for 30 Chinese provinces from 1996 to 2007. The results provide some evidence of a reconfiguration of the FDI determinants due to the globalization process.

Keywords: FDI determinants, China, globalization, Dunning's paradigm, empirical analysis

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Abbreviation

DCs Developing Countries

FDI Foreign Direct Investment

FIE Foreign Invested Enterprise

GDP Gross Domestic Product

GNP Gross National Product

JV Joint Venture

MNE Multinational Enterprise

NBS National Bureau Statistics

OECD Organisation for Economic Co-operation and Development

OLI Ownership, Location and Internalization

RMB Renminbi

SEZ Special Economic Zone

UNCTAD United Nations Conference on Trade and Development

WOF Wholly Owned Foreign Enterprises

WTO World Trade Organization

1 Introduction

International business is not a new phenomenon. But, it is especially in the past three decades that the world economy has witnessed an unparalleled opening and modernization of the economies of all regions, encompassing deregularization, demonopolization, privatization and private participation in the provision of infrastructures, and the reduction and simplification of tariffs (Cho, 2015). The consequent increasing flow of private capital between countries, in form of foreign direct investments (FDI), and the related strategies and policies to attract it, can be seen, without any doubts, as one of the main driving forces behind this whole reform process. For this reason, FDI have been considered "the peak" of globalization process (Donciu, 2013).

However, a core argument of debate in the last decade has involved whether globalization has gone too far and the "new" strategies to attract FDI play a central concern for policy makers as well as researchers (Rodrik, 1998). In the presence of a reshaped economic environment and with the raising competition, which the access to global market has led to, the scholars have questioned whether new rules of the game apply to the determinants of FDI or alternatively if the "traditional" determinants of FDI have respectively changed in importance (Cho, 2015; Dunning, 2002; Nunnenkamp, 2002; Vijayakumar, 2010; Ho et al., 2013).

China represents an interesting case of study having absorbed an enormous amount of FDI since the "opening-up" reform introduced in the late 1978. In less than 30 years China has become one of the largest recipient countries, among both developed and developing countries (DCs), with a flow of FDI reaching 136 billion of U.S. dollars in 2016 (UNCTAD, 2016). Therefore, it is not surprising that Chinese experience has attracted the attention of many scholars for the magnitude and fast growth of FDI the country received in such a short period of time.

But, China provides also a relevant example about the evolution pattern of FDI determinants. The country opened its borders in the period that precedes the globalization, but especially in the 2000s the pressure in maintaining its advantage as a favourite FDI destination has increased (Salike, 2015). This has represented a challenge for the country on how to remain

competitive in attracting FDI. It follows that investigating the Chinese experience is useful not only for understanding the composition of FDI determinants through the time, but also for testing whether globalization has altered the motivations for investments of multinational enterprises (MNEs) in the country under the new international environment.

1.1 Aim and Scope

Over the last decades the determinants of FDI have been extensively analysed through both qualitative and quantitative studies. However, to the author's knowledge, few attempts have been made to empirically test whether the globalization process has led to a reconfiguration of the determinants of FDI. This paper aims to fill this gap by testing the change in the factors attracting FDI using a China's 30 provincial data during the period 1996-2007. To this extent, five variables from Dunning's "Ownership, Location, Internalization" paradigm, which has represented for more than two decades the reference model in the studies related to FDI determinants, will be tested. In particular, on the base of the recent literature and empirical findings, the focus will be on the change in relevance of "traditional" variables such as market size and wage and the increase in the importance of factors such as human capital, infrastructure and openness, in order to reply to the following research questions: *What has been the impact of globalization on the determinants of FDI in China?* Furthermore, in order to test whether a change in the relationship among these five determinants and FDI can be observed in the Chinese experience after its formal joining the world economy, and thus its exposure to global competition, particular attention will be paid to the impact of China's accession to the World Trade Organization (WTO) in 2001.

1.2 Outline of the Thesis

The remainder of this paper is organized as follows. Section two presents a theoretical framework related to FDI determinants. Section three presents a literature review related to the increasing importance that FDI have received in the last decade, empirical findings about the determinants of FDI and the Chinese case as receiver of FDI. Data and empirical

methodology are described in Section four. Section five illustrates the model choice whose results are discussed in Section six. Section seven provides some final conclusions and directions for future work.

2 Theoretical framework

This chapter covers the theory related to the determinants of FDI. The first part of the chapter focuses on the theoretical background, and it will discuss the OLI paradigm formulated by Dunning, which represents the most applied theory on the studies of FDI. Followed by an outline of OLI paradigm classification of types of FDI: market-seeking, resource-seeking, efficient-seeking and strategic asset-seeking. The last section presents the background to the topic of globalization related changes in the policies connected to FDI and some recent theories that support this argument.

2.1 General theories and Dunning's paradigm

The strong growth of FDI has inspired extensive theories and perspectives on the behaviour of MNEs and determinants of FDI when the topic started to receive scholarly attention since the late 1950s. These theoretical perspectives range from the mainstream economic theories (Hymer, 1976; Kindleberger, 1969; Vernon, 1966; Caves, 1971) to internalization models (Buckley and Casson, 1976). These theories have represented significant steps toward the development of a systematic framework for the emergence of FDI but it is not possible to refer to a single theory in explaining all types of FDI (Faeth, 2009). As a consequence, a specific theory cannot be used to deduce an exact and well-defined (from a theoretical perspective) econometric model.

Even though there still exists no single overall theoretical framework capturing the various patterns and types of FDI, among the exceptions, Dunning's (1977, 1993) contribution is relevant. As a matter of fact, his theory has been often used as the starting point and the core of a lot of empirical models aimed to test the determinants of FDI. For this reason, Dunning's OLI paradigm has been considered the reference model in the studies related to FDI determinants in the last two decades.

The OLI paradigm integrates the existing theories (the Hymer-Kindleberger approach, the product-cycle theory, and the internalization theory) in a general and "eclectic" model around

the three main concepts of “ownership”, “location” and “internalization”. The main hypothesis is that these concepts can be seen as the advantages possessed by the MNEs. At the same time they represent also the *a priori* conditions that make firms investing abroad. MNEs must possess a competitive advantages (net of disadvantages) over firms located in the host country, perceive that internalizing the markets is of their best interest, while the choice of location depends on their relative advantages (Dunning, 1977, 1993). In other words, the larger the firms possess ownership advantages, the more these enable the firms to minimize the costs by internalizing, and the more possibility they have of location advantages to exploit their opportunities in a particular foreign location, the more FDI will be undertaken.

In relation to the first prerequisite, the “ownership advantages”, it addresses the question of why some firms decide to invest abroad, and it suggests that a successful MNE has some firm-specific advantages which allow to decrease the firm’s production costs and to compete with the firms already present in the foreign country (Dunning, 1993). The “location advantages” concept is used to explain where a MNEs should invest and it is related to the advantages that a firm possesses when decides to move the production in a certain area. These advantages depend on the characteristics of the home and the host country and the “physical” or “economic” distance between the two countries engaged in FDI activities. But, location advantages will occur only if the host economy can provide large markets or there is the possibility of creating them through trade liberalization, low cost inputs or good infrastructure (Dunning, 1993). The “internalization advantages” argument, redefined from the “internalization theory” and merged with the “eclectic approach”, explains how a firm should engage in FDI activities. The main reason is that in the presence of market failures or high transaction costs, such as searching and negotiating costs, or government intervention (quotas, tariffs, tax differences etc.), the firm can internalize the costs which otherwise will be externalized. For instance, when market failures impede the international transfer of assets, firms are more likely to establish strong ownership links in foreign market in order to facilitate the shift and reduce transaction costs (Dunning, 1993).

2.1.1 Determinants of FDI in the OLI paradigm

Based on the OLI paradigm, Dunning individuated and categorized four main types of determinants that can explain the willingness of MNEs to invest abroad: market-seeking, resource-seeking, efficient-seeking and strategic asset-seeking. Although a lot of

controversies have raised in relation of the adaptability of these determinants in the explanation of the reasons behind a firm's choice to invest abroad, as already mentioned, empirical analyses on the determinants of FDI have often used this categorization, either to support or critique his findings (Devinney, Midgley and Venaik, 2002).

The market-seeking determinants (or demanded oriented) stand behind the decision of a firm to replicate production and distribution facilities and operations on a foreign market, for this reason they are known as horizontal FDI (Dubovecky and Garoseanu, 2015). These factors are mainly related to the size of the domestic markets; competitiveness within the industry of the host country; the quality of national and local infrastructure; macroeconomic policies; proximity to customers; agglomerative spatial economies and local service support facilities; and promotional activities by regional or local development agencies (Dunning, 1998). Thus, the "market seeking" reasoning behind the decision of a MNE to start to invest abroad is related to the expectations of further increasing the profitability of its firm (Dunning, 1993).

The resource-seeking (or supply oriented) determinants can be instead explained as an opportunity for the firm to acquire factors of production either not available in the home country or more efficient in the host country such as: natural resources, raw materials or cheap labour (Dunning, 1998). For example FDI in resource sectors are attracted by countries that are abundant in natural resources (oil or natural gas), such as Sub-Saharan countries, or by countries that dispose of cheap labour, such as South-East Asian countries. These types of determinants are in particular related to certain sectors; for instance they are relevant in the manufacturing sector when MNEs directly invest in order to export.

The third type of FDI, efficiency-seeking, occur when: (i) firms "take advantage of differences in the availability and costs of traditional factor endowments in different countries"; or (ii) they "take advantage of the economies of scale and scope and of differences in consumer tastes and supply capabilities" (Dunning, 1993). In other words this kind of FDI takes place when the firm can acquire some profits from the common governance of geographically dispersed activities in the presence of economies of scale and scope.

Finally, the last category individuated by Dunning is the strategic asset-seeking FDI determinants. These, differently from the previous, allow a firm to acquire a new technological base, rather than exploiting an existing asset. This last category has been frequently used and applied in the current research on emerging economy MNEs.

Specifically, some cases of outward FDI from emerging economies involve the take-over of firms in advanced economies that are more advanced of technology, skills and even management capabilities than the investing firm (Yoo and Reimann, 2017). These acquired assets are strategic in the sense that they strengthen the capabilities of the acquirer not only in the local market, but in its global operations, providing assets such as advanced technologies or international brand names that strengthen the firm's competitive position (Cu, Meyer and Hu, 2015).

2.1 The globalization and the FDI determinants

Economic globalisation, and the subsequent growth of single world economic market, has affected the way in which international and domestic business activities are undertaken and organised (Cantwell and Narula, 2001). As mentioned in the introduction, globalization not only has increased the flows of investment between countries, but it also has led to a reconfiguration of the ways that MNEs pursue their objectives (UNCTAD, 1998). Therefore, it is important to question whether the previous expectations related to the overriding role of some clearly defined factors shaping the distribution of FDI, in line with the OLI paradigm, still hold in the new economic environment.

Estimating and explaining the change, however, is a complicated issue. The determinants are complex, and not always susceptible to measurement. One alternative is to gather together different kinds of information. In this way, the theory that explains the way the forces driving FDI have worked in the past can eventually be merged with more qualitative and speculative assessments of the changes related to the new global conditions (The Economist, 2001).

This is the approach that the recent theories related to the determinants of FDI have followed: some of the determinants of FDI have been reformulated and re-explained on the light of the new globalization process. In particular, five factors seem to stand out: the size and the degree of openness of the host market, the role played by the human capital, the level of the infrastructure and labour cost or wage. To this end, five potentially modified determinants of FDI will be explained by taking into account the recent evidence, and further empirically

tested using China as a case of study to reply the following research question: *What has been the impact of globalization on the determinants of FDI in China?*

MARKET SIZE

According to the location advantages of the OLI paradigm, previously described, one of the primary determinants of FDI is having better access to the host countries' markets especially for market-seeking FDI. The main reason is that MNEs in a larger market have been assumed to have a more efficient utilization of resources and exploitation of the economy of scale (Chakrabarti, 2001). Moreover, FDI by increasing the expansion of the market size of the host country have been predicted to allow MNEs to take advantage of regional gaps in demand and supply (Dunning, 1993). This argument does not appear to be true any longer after the globalization of the world economy. The globalization process, among other changes, seems to have had led to a shift from market-seeking to more efficient-seeking FDI. This means that MNEs are not attracted anymore by the advantages of exploiting the host market to sell their products, but mostly from the fact that FDI can allow them to export to third countries (Wadham, 2001). This seems to find confirm in the fact that the global economy has currently witnessed a new flow of investments also to small DCs such as Singapore, Costa Rica and Botswana (Singh et al., 2008).

OPENNESS

A change from market-seeking to more efficient-seeking motivations can be assumed, on the other way round, to have led to a reconfiguration of the ways MNEs perceive other kinds of advantages. One of the most quoted examples is the relevance that the determinant openness of the host country has recently acquired in attracting foreign investors. According to the OLI paradigm the degree of openness of the host country is related with a larger amount of FDI (Dunning, 1993). However, in the past this variable has been often associated in a negative relationship with FDI due to the "tariff jumping" argument: it is properly in the presence of trade tariff barriers or other kind of trade restrictions that MNEs decide to substitute exports in the host country by FDI (Markusen, 1995). The arrival of globalization, among other changes has led to a shift from "build-it- here, sell-it-there" model toward "in-country-for-country" production models in which companies innovate, source, produce and service in a globally integrated manner (Bahatia, 2013). In this context, FDI and trade are said to be complements because a country with a high degree of openness and integration into

international economy is likely to have a well-established international distribution network and international links and partnerships with other countries (Vogiatzoglou, 2007). Following this line of reasoning, trade openness is assumed to have acquired greater importance than “tariff jumping” in MNEs’ strategic thinking as regard FDI decisions.

HUMAN CAPITAL

Variables that have been considered in the past less important determinants seem to have recently emerged as primary motivations affecting FDI; this is the case of factors not directly correlated to “trade” advantages such as human capital and infrastructure that have recently taken the attention of foreign investors. In relation to human capital in the past it can be argued that MNEs decided to invest through FDI in countries to minimize the costs and thus exploit the cheap labour force, especially for FDI in manufacturing sectors that do not require any kind of advanced skills (Nunnenkamp, 2002). Nowadays, it seems that investors and MNEs are not only looking for a cheap workforce, but also for the quality of human capital. As already stated, the globalization and the concomitant shift of FDI toward more capital-knowledge and skill-intensive industries, has made the presence of a well-educated pool of labour increasingly attractive. Indeed, firms organize themselves functionally so that activities such as finance, research and development, accounting, training, parts production, distribution are carried out by affiliates in locations best suited to each particular activity (UNCTAD, 1994). Thus, host countries with more high-quality strategic assets are said to be more attractive for MNEs compared to low labour costs by themselves, particularly for the efficiency-seeking MNEs (Reisen and Soto, 2001). The improved human capital can have also an indirect effect on FDI by improving socio-political stability to the extent that increased human capital can contribute to civil liberties, political stability, health and reduced crime/corruption which are considered to be key determinants of any type of FDI (Muhammad and Ahmad, 2008).

INFRASTRUCTURE

Generally, the level of infrastructure has long played an important role in integrating markets across nations by reducing transaction costs or trade costs. The availability and quality of supportive infrastructure have been argued to be essential for the functioning of multinational’s affiliate production and trade activities. These arguments have gained particular importance in the globalization era that has witnessed a rise of FDI in the service

sector. Better infrastructure can significantly reduce overhead costs (Asiedu, 2002) and thereby positively affect investor's location decision (Shah and Ahmed, 2003). In addition, the presence of public infrastructure can also enhance the access to intermediate goods suppliers in neighbouring provinces, providing a positive incentive for FDI location strategies, where transnational companies locate different production activities in separate geographic regions (Baltagi, Egger and Pfaffermayr, 2007). In this context, in the last decade the presence and the quality of infrastructure it has been said to have acquired more consideration among the list of the determinants of FDI (UNCTAD, 1998).

WAGE

Finally, as already anticipated and as it can be deducted from the change in importance of the last two variables described, labour cost seems to be not so much relevant in comparison with the past. Labour cost has been always one of the most considered factors by the MNEs when deciding where to locate their investments, as described by the OLI paradigm. The reasoning behind has been linked to the opportunity to lower production costs through the utilization of low-cost factors of production in the host country (Dunning, 1993). Conversely, the natural expectation has been that a rise in the host country's wages would discourage foreign investors. An important trend in labour markets in the globalization of the world economies has been a steady shift in demand away from the less skilled toward the more skilled workers. Nowadays, MNEs that are engaged in investments in the service sector require more educated and thus more costly workers. In this regard, wages are seen as a guarantee of a better productivity and labour quality (Wei and Balasubramanyam, 2004). Furthermore, skilled workers are usually in a stronger bargaining position since foreign firms have less knowledge of the local labour market and thus they can negotiate higher wages than they would get in local firms (Moon, 2015).

From the description of the aforementioned factors it seems clear that globalization has changed to a certain extent the "traditional" way of thinking about the determinants of FDI. Therefore, it is possible to assume that some of the rules of the game in the competition among countries for attracting the flow of capital have recently changed. Traditional determinants such as market size have decreased in importance. Others, such as human capital and infrastructure, are considered more valuable than in the past while it is also possible to

notice a total reconfiguration of the previous expectations related to factors such as market openness and wages.

It follows that these changes would have significant implications for policy makers who would not rely anymore on the “traditional” theories on the determinants of FDI (Nunnenkamp, 2002). Boundaries between different types of FDI – whether market-, trade-, resource- or efficiency-seeking – become less evident as all FDI is seen as part of the general strategy of enhancing competitiveness (Noorbakhsh, Paloni and Youssef , 2001). MNEs that pursue integrated international production strategies may be attracted by countries that offer an adequate combination of determinants such as conditions for efficient operations, high-quality resources/assets, and access to markets (Dunning, 2002). Because FDI can affect growth and development, especially in DCs, when understanding the impact of FDI it is important to understand what attracts FDI, how this has changed over time, and what these changes in determinants and types of FDI mean for differential growth prospects (Welde, 2006).

3 Background and literature review

This chapter briefly describes the recent trend among the flows of FDI found in the literature. The second part of the chapter will describe previously empirical studies related to the determinants of FDI. Finally China, as a case of study, and the empirical findings about the determinants of FDI in the country will be presented.

3.1 FDI growth in importance

The role of FDI, in driving economic growth and development, has been crucial, although controversial, ever since the United Nations development decade of the 1960s (Welde, 2006). Despite the fact that the impact of FDI on economic growth through positive and negative spillovers has been widely studied, questions concerning the real effects of FDI, and also concerning the necessary conditions and the channels through which FDI lead to host country economic growth have been longly debated (Forte and Moura, 2013).

Nevertheless, the last three decades have seen a raise in the share of inward FDI flows as a share of the world GDP, following a change in attitude of the countries, especially DCs, toward FDI. Although in the 1960s and 1970s many DCs were suspicious of FDI and often took steps to actively discourage it, starting in the mid of the 1980s these attitudes began to change, and DCs increasingly sought to attract FDI as a mean of financing investment, creating jobs, importing technology and ideas (Perkins et al., 2013). For this reason, over time many countries liberalized their policies in order to attract more FDI flows and to become better integrated into the world economy.

It is especially in the 1990s that the change in the attitudes became more visible. Influenced by the recognition of the benefits of FDI, the global economy has witnessed an increasing removal of direct obstacles and use of FDI incentives. For example in the period that goes from 1993 to 2003, the 94% of the 1.718 regulatory changes made by the countries around the world has been in favour of foreign investors (UNCTAD, 2006). In the same way, bilateral

investment treaties, binding agreements that codify MNCs' legal rights, nearly quadrupled during 1990–1995 (Elkins et al., 2006).

These findings confirm that especially developing and transition economies have realized the importance of FDI inflows and have focused on FDI to a greater extent than trade relations (Dutta and Roy, 2009). Whether in the 1980s the global stock of FDI stood at around 500 billion of U.S. dollars, in 2014 it expanded to 26 trillion of U.S. dollars, with a 52 times increase over 30 years (UNCTAD, 2015). Interestingly, FDI to non-OECD countries more than doubled in absolute terms since 2012 and while OECD countries received around 70% of all FDI in 2007, this share dropped to around 40%, with inflows to non-OECD countries overtaking those of the OECD country grouping for the first time in 2012 (OECD, 2016). It can be therefore understood that during the globalization period, most of the DCs based their economic growth on the availability of foreign capital and predominantly FDI.

However, as already mentioned, this trend has been supported by a large amount of changes in the international environment. The integration of the countries in a single, but more dynamic environment, has increased international competitiveness with companies searching for better locations- lower cost, new markets, competitively high skills - in order to maximize the returns of their efficiency, strategic asset, market and/or resource- seeking strategies (UNCTAD, 2006). Even though the actual degree of global competition to attract FDI is not known, there is considerable evidence that the global competition is widespread, involving sub-national as well as national governments both in OECD countries and in developing and emerging economies (Oman, 1999). In this new setting, a central theme in the agenda of many countries has become understanding and finding a way to continue to attract FDI.

3.2 Empirical evidence about change in FDI determinants

The fact that FDI have been recognized as a key factor for economic growth has contributed to increase, apart the stream of theories related to the MNE's investments decisions, empirical studies on the determinants of FDI. A lot of econometric analyses, that use the OLI paradigm to empirical test what are the determinants of FDI have been published to find an explanation of FDI inflows with respect to certain factors. The main concern has been, in fact, to identify the key variables that cause variation in FDI among countries and hence can be used as

instruments for economic policies conducive for FDI attractiveness (Dorozynsky and Anetta, 2017).

Even though a lot of scholars have readjusted their theoretical hypotheses in the light of the globalization economic transformation, up to now only few empirical studies have focused on estimating whether the change of the world economic environment after the globalization has effected FDI motivations. Moreover, among them, almost all do not address this question explicitly. Nevertheless, some of these studies, which are usually related to DCs since they are currently the top receivers of foreign flows, offer at least tentative insights on the changes in the relevance of some variables.

Research papers that for instance have investigated the role played by the market size and the level of openness of the host country, in determining FDI, have showed interesting results that support the previously described changes. For example, a lot of studies analysing data on FDI determinants in the 1980s found a positive relationship between the market size and FDI in line with the argument that a bigger market implies better prospects for FDI in the host country, in particular for the market-seeking FDI (Culem, 1988; Tsai, 1994). In contrast, more recent studies have showed that the size of the market has decreased in importance or interestingly is negatively related to the FDI inflows because other factors are considered more important (Jaspersen et al., 2000; Coleman and Tettey, 2008; Asiedu, 2002). A large number of studies have been focused on understanding the role the openness of the country as a determinant of FDI showing that, contrary to the “tariff-jumping hypothesis”, a positive relationship exists between FDI and the degree of openness. As a consequence of the globalization of the world economy and the related shift toward more efficient-seeking FDI, MNEs engaged in export-oriented investments prefer to invest in a more open economy since increased imperfections that accompany trade protection generally imply higher transaction costs associated with exporting (Asiedu, 2002; Chakrabarti, 2001).

Studies that address “non-trade” related factors have empirically demonstrated, in line with the globalization-induced changes, an increasing importance of these factors in attracting FDI. Institutions of the host countries, level of human capital, quality of the infrastructure, are the most debated and analysed topics in the current studies on FDI. As a matter of fact, even though these variables have showed in some cases inconclusive results, because more sensitive to measurement choices, recent studies have stressed their significance in explaining the recent FDI inflow patterns (Biswas, 2002; Asiedu, 2006; Mhlanga et al., 2010;

Vijayakumar, 2010; Cleeve, 2008). The major differences in the results, compared with the previous empirical studies on “non-trade” related factors, come from the fact that more recent datasets contain relatively more high value-added manufacturing firms. Indeed, most MNEs operating in developing countries during the late 1980s and 1990s started to be efficiency-seeking types and/or subcontracting (Nunnenkamp and Spatz, 2004) and thus infrastructure and high skilled labour force have been demonstrated to be crucial.

A special reference needs to be made to the role of wages. While for the others variables, the more recent empirical studies seem to support the fact that a change has occurred through the time, the variable labour cost remains the most “controversial” in the studies related to FDI determinants (Chakrabati, 2001). Even though the theory, as suggested in the previous chapter, should support the fact that lower wages would not anymore attract FDI, the impact of wages on FDI in the recent econometric studies is not unanimous (Bala, 2010). Some studies support the fact that MNEs are attracted from the cheap labour (Pistoresi, 2000), and thus especially during the globalization process the increasing competition to provide cheap labour is thought to have extended, as each local labour market seeks to attract foreign capital through lower wages. Other studies instead do not find any statistical significant relationship between FDI and labour cost arguing that low wage is not necessarily a crucial factor for FDI (Demirhan and Masca, 2008). While, consistently with the previous finding, a third group of scholars have showed that wages are positive associated with FDI giving as explanation that higher wage can be seen as a guarantee of the productivity (Yang et al., 2000) and especially when cost of labour is relatively insignificant (when wage rates vary little from country to country), the skills of the labour force are expected to have an impact on decisions about FDI location (ODI, 1997).

Another approach, that is the one that will be used in this paper, has instead focused on analysing the change of FDI determinants due to the arrival of globalization. A list of potentially modified variables has been tested choosing relevant periods. While it can be argued that these studies have been more focused on the globalization-induced changes, the major limitation of their analyses has been the fact that they have focused only in the period that goes from 1980s to 1990s (Nunnenkamp, 2002; Amaro and Miles, 2006). In fact, even though this period coincides with the opening up of some DCs, as previously mentioned, it is especially between the 1990s and 2000s that it is possible to find the greatest changes in the

international economic environment. This supports the need of more updated empirical analyses.

Furthermore, almost all the cited studies are based on panel data or surveys that include a large number of DCs. This implies that their results and findings may have been biased by the fact that different countries have different characteristics and find themselves in particular stages in the international business integration. This could explain also the controversial results related to wages. Even though it can be argued that MNEs are more willing to pay higher wages, the type of the relationship with FDI depends on the comparative advantages of the country and thus on the underlying structure of the economy prior to trade liberalization (Pavnick, 2011). The same reasoning holds for the other determinants of FDI. This is the main reason why, in this paper, only China, as a case of study, will be taken into account as described in the following section.

3.3 China as a case of study

The story of China as an attractor of FDI formally started in the late 1970s in concomitance with the beginning of the reform era that marked a change of governmental policies from the “class struggle” to “economic development”. Specifically, whether the overall reform process has been characterized by two different “bottom-up” and “top-down” dimensions (Nee and Opper, 2012), the “opening-up” policy, and the consequent liberalisation of the country to FDI and trade, represented the explicit aim of the central government to make China part of the global economy.

In this regard, two main factors contributed to a change of strategy from a “self reliance” development policy to an “open door policy”. Firstly, the stagnant economic situation inherited from the Maoist period with a per capita GNP fixed at an average annual rate of 2.5-3% and a total factor productivity either stagnant or actually declined since the 1957 (Perkins, 1998). Secondly, the model of “export-led” growth pursued by its neighbours, Japan and the four East Asian Tigers, provided to Chinese leaders a successful example of economic

development strategy to follow to accelerate its economic development (World Bank, 1993). Foreign exchange and relative advanced technology, but also the demonstration effect of modern management techniques represented the main goals of attracting foreign investors in a country that was still undeveloped (Kamath, 1990; Kueh, 1992).

Nowadays, China represents one of the most interesting cases of study among DCs. The country has been not only the largest recipient of FDI among DCs since 1993, but from the 2000s China has even led the competition with the US as main attractor of FDI (UNCTAD, 2016). Furthermore, though US still retains its shares as the world's most attractive investment location, in 2016 according to the FDI Confidence Index its lead over China is shrinking (Kearney, 2017). Thus, it is not surprising that literature that deals with FDI has linked most economic and business journals worldwide in order to understand what is behind the exponentially growth of FDI inflows in the country. Also in this case, the majority of empirical studies have been focused on understanding the evolution pattern of FDI policies and the related factors that contributed to make the country the main destination for foreign investors, instead of questioning whether a change in FDI determinants has occurred through the time.

3.3.1 Features of FDI in different phases

According to the literature, China evolution in FDI policies has been categorized in different stages that through a “gradual and evolutionary” process have contributed in making the country one of the top receivers of FDI among both developed and DCs. The market transition from a “central planned economy” toward a “socialist market economy”, instead of following a “shock therapy” strategy, as the one pursued by Soviet countries, has been gone through an experimental process that is also possible to notice in the different set of policies and laws related to FDI and trade (Lin, Can and Li, 1996).

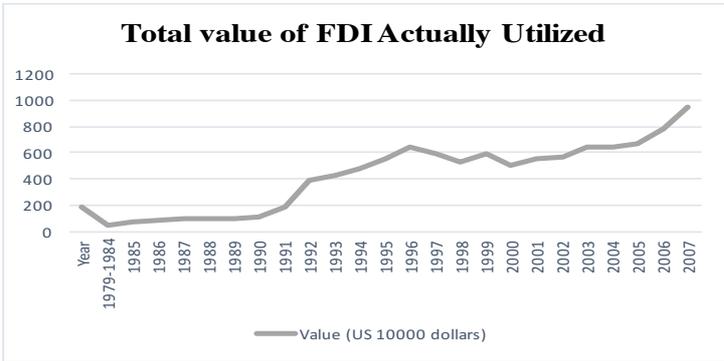
The first periods (1979-mid of 1980s and 1986 to mid of 1990s) have without any doubts represented significant stages in the “opening up” of the Chinese economy towards FDI and have witnessed important changes in the attitude of the country toward foreign investors. The establishment in 1980s of the four “special economic zones” (SEZs) Shenzhen, Zhuhai, Xiamen, and Shantou in which foreign firms (FIEs) were offered preferential tax and administrative concessions, the open of fourteen additional areas known as “open coastal cities” and the benefits granted with the issue of the “Law on Foreign Enterprises” in April

1986, formally giving legal rights to wholly owned foreign enterprises (WOFs) in China are among the most relevant policies (Sun, Tong and Yu, 2002).

Yet, it is mainly in the last period that covers the years from the mid of 1990s to 2000s that the country established itself as major attractor of FDI worldwide, but also in which the Chinese government has made the major adjustments to acquire and further retain its place as top receiver of capital flows, from both developed and DCs, in concomitance with the globalization process (See figure 1.). In fact, during this period there has been an evolution of the policies toward a further opening of the country to foreign investors and a gradual movement of FDI from manufacturing to service sectors (See Table 1.) and from market-seeking to more efficient-seeking FDI. Hence, consistently with the previous studies on DCs, it is possible to assume also in China a consequent change in the motivations that have attracted MNEs in the region.

For this reason, this essay will briefly describe and show the relevant findings from previous studies only related to the last period of Chinese “opening-up” (mid of the 1990s-2007) with particular attention to the Chinese entrance into WTO in 2001 that can be considered a relevant point because it signed the country formal integration into the global economy. This period (1996 to 2007) will be further used in order to empirical estimate whether it can be find any evidence of changes in the determinants of FDI due to the globalization process.

Figure 1. Total Value of FDI 1979-2008



Source: Computed from NBS, China Statistical Yearbook 1979-2008

Table 1. Sectoral composition of Actual Utilized FDI in China during 1997–2009

	1997-2000	2001-2005	2006-2009
Primary	1.51%	1.74%	1.24%
Secondary	69.25%	74.30%	56.21%
Manufacturing	58.33%	69.36%	52.95%
Tertiary	26.33%	22.28%	42.56%
Real Estate	12.46%	10%	18.10%
Other	2.92%	1.69%	/
Total Amount of Actually Utilized FDI	1751.16 (100%)	2748.81 (100%)	3356.17 (100%)

Note. Adapted from “Spatial polarization and dynamic pathways of Foreign Direct Investment in China 1990–2009” by Zhao, Chan, Chan, 2012, *Geoforum*, 43, pp. 836-850. Copyright 2012 by "Elsevier".

Mid of the 1990s to 2001

In the Chinese experience as a receiver of FDI, the 1990s represents one of the most prosperous decades. In the previous stages, even though a lot of adjustments had been done, some particular characteristics of Chinese policies still discouraged foreign investors. But, the 1992 Deng Xiaoping’s tour in southern costal areas and SEZs, made with the main intention of pushing China economic reform and emphasize China’s commitment to the open door policy, proved to be a success in garnering the confidence of foreign investors in China (Guruswamy and Singh, 2010).

The following period (from the mid of the 1990s to 2001) witnessed the greatest amount of FDI in China region in comparison with the past: by 1997, the 1992 level of flows had been

surpassed four times over, with a total of 283,575 foreign invested projects approved by central government (Coughlin and Segev, 2000). Moreover, foreign investment inflows became relatively more stable than in the past. After the issue of the “Foreign Investment Law” in 1996, direct foreign capital inflows continuously posted positive growth, averaging 45 percent per year, with a slight decline only in the years that followed the Asian financial crisis (Tan, 1999). In the same time, the number of foreign investors increased, even though the majority of them were still from Asian regions, to 150 countries. According to official sources, in the period 1992-96, FDI from developing Asian nations dominated total FDI flows into China, but since 1996 a growing portion of these flows came from other sources (Graham and Wada, 2001)(See Table 2.).

The unprecedented investment boom in the 1990s can be attributed to several factors aimed to integrate China into the world economy and to join the WTO. First, while China’s inconvertible currency was a major problem for joint ventures (JVs) in the mid-1980s, especially those producing for the domestic market and hence not earning foreign exchange, regulations related to foreign investors had been sufficiently codified by the start of the 1990s (Ianchovichina and Martin, 2001). Second, liberalization of the foreign exchange and financial markets continued gradually, and in 1994 the dual-currency system was abolished (Coughlin and Segev, 2000). Third, the restrictions on foreign direct investments were also loosened; for example WOFs became an increasingly popular investment vehicle during the 1990s, rising from 27 per cent of the total value of projects signed in 1992 to 37 per cent in 1996 (Ren, 2012). Besides, over the course of the 1990s China made substantial progress in reducing the number of nontariff barriers in its trade regime: the number of products subject to quotas and licenses fell from 1247 tariff lines in 1992 to 261 in 1999 (Ianchovichina and Martin, 2001). As a result, the average protective impact of the complete set of nontariff barriers in China was estimated to be 9.3 percent in the mid- 1990s (World Bank, 1997).

After the accession to WTO (2002-2007)

The entrance in the WTO represented the turning point in the Chinese history, as major destination of FDI, in 2001. This marked not only China’s joining the global economic world but also the exposure of the country to the benefits and treats of globalization. The period was characterized by greater trade liberalization and more transparent international trade with the

issue of amendments such as the “Wholly Foreign-Owned Enterprise Law”, the “Contractual Joint Venture Law” in 2000, and the “Equity Joint Venture Law” in 2001 removed earlier restrictions (Coughlin and Segev, 2000). China agreed to remove performance, trade balancing, foreign exchange balancing, and prior experience requirements, in order to grant permissions to invest, import licenses, quotas and tariff rates regardless of existing domestic demand (Cheong and Wu, 2003). Along these lines a lot of policies to lighten taxes were promoted in order to make the country more attractive; an example is China’s weighted average tariff (at 4 per cent) that is the lower according to developing-country standards and the lowest among large developing countries (e.g. compared with other BRIICS – Brazil, Russia, India, Indonesia and South Africa) (Sally, 2011). Several empirical studies have showed that it is especially during the 2000s that the degree of openness of the Chinese provinces, influenced more than in the past the MNEs location decision especially for export-led FDI with a consequent decrease in the importance of the size of the market as factor of attractiveness (Chen and Yeh, 2012; Na and Lightfoot, 2006; Sun, Yu and Tong, 2002).

At the same time the accession to the WTO reduced restrictions on FDI in China. Initially after accession, foreign investors could not control more than 49% of a firm, but restrictions on foreign ownership were reduced in the years after accession (Bhattachali et al., 2004). In addition, the Chinese government issued in 2002 a new “New Foreign Investment List” for which the Chinese government encourages, restricts or prohibits foreign investment. The list, along with other criteria, formed the basis on which the government approves or denies an application by foreign investors to establish a WOF or JVs. Nevertheless, China’s commitments in the services sector “represented the most radical services reform program negotiated in the WTO” and, in this sense, it has been said to be the most significant part of China’s WTO accession package (Mattoo, 2001). Since 2002 some industries (for example telecommunications, transportation, wholesale, insurance and finance service) opened for the first time to varying degrees of foreign investment, signalling the government’s commitment to open its market after becoming a member WTO (Walmsley et al., 2000).

In this context, following the predictions of the theoretical part, and the findings related to the others DCs, the level and the quality of infrastructure and human capital, gained a particular importance due to the shift from manufacturing to more service oriented FDI as showed by some recent empirical analyses focused on the late 1990s and 2000s (Teixeira and Heyuan,

2010; Belkhdja, Mohiuddin and Karuranga, 2016; Na and Lightfoot, 2006). Actually, these findings are corroborated by studies that assert an overall increase in the level and quality of infrastructure and human capital in the last two decades in China. For example, it has been shown that the spatial and sectoral distribution of FDI in China has changed dramatically in relation to the governments' priority oriented policies and improvement of infrastructures that accelerated the diversification of destination and sectors for FDI in China (Zhao, Chan and Chan, 2012). In the same line, a paper that investigates the level of human capital in China from 1985 to 2007 demonstrates that for 1985-2007, China's total human capital increased more than three times, with an annual growth rate of 6.66%, and especially after 1994 accelerated with an average annual rate of growth for the period 1995-2007 of 7.64% (Haizheng et al., 2010).

As it has been already noticed, the need of more educated and high-skill workers reduced the attractiveness of the cheap labour factor in the 2000s. Recent empirical analyses show that whether manufacturing wages declined relative to those of basic services throughout the 1990s, this trend was reversed beginning in 2001 after China's joining WTO for workers recruited by export-oriented manufacturing (Ge and Yang, 2014). In the service sector, in the high-tech manufacturing sector, but also in the low-tech manufacturing sector wage has been found to be an insignificant determinant during this phase (Liu, Dali and Varna 2012; Na and Lightfoot 2006).

Table 2. The proportion of selected Actual Utilized FDI origins in China during 1996–2007

Economies/year	1996-2001	2002-2007
East Asian Countries	69.36%	64.82%
Hong Kong	39.54%	37.49%
Japan	8.43%	8.05%
Macao	0.81%	0.59%
Malaysia	0.59%	0.61%
Singapore	5.42%	3.85%
Republic of Korea	3.67%	14.94%
Thailand	0.46%	0.23%
Taiwan	6.42%	4.52%
Western Economies	14%	18%
United Kingdom	2.81%	7.90%
Germany	2.00%	1.94%
France	1.60%	0.90%
Russia	0.04%	0.11%
Canada	2.25%	0.83%
United States	8.5%	6.05%
Total Amount (Unit: US\$ 10,000)	27,343,506	36,499,052

Source: Computed from NBS, China Statistical Yearbook 1996-2008

4 Data

This chapter will first present and discuss the data source and reliability. Afterwards, the methodology chosen for the empirical analysis will be described, and each variable will be explained and justified on the basis of the theory and the previous empirical studies.

4.1 Source Material

The dataset is composed by annual data accessed from various issues of China Statistical Yearbook for 1996-2008, published by the Chinese State Statistical Bureau (NBS). The NBS of China is an agency directly under the State Council of the People's Republic of China charged with the collection and publication of statistics, covering various kinds of census and survey data related to national economic and social development in the region. Among other duties, the NBS reviews and publishes the collected data in Statistical Yearbooks that provide a wide range of information about the overall aspect of Chinese economy at the national level and the local levels of provinces, autonomous region and municipality in various time frame.

The credibility of Chinese data has been under scrutiny in various studies (Young, 2003; Holz, 2008). For instance manipulation, especially during periods of economic and political instability, such as the Asian Financial Crisis in 1998, has been an important cause of unreliable statistics (He, 2011). Additionally, in the case of FDI due the special privileges enjoyed by foreign investors in China, it is likely that a presence of incentives exists for exaggerating the size of investments and for “round- tripping” FDI through Hong Kong or some other countries (Coughlin and Seven, 2000).

Nevertheless, it has been noticed that the recent improvements in statistical methodologies and reforms of FDI tax incentives should have reduced the scope of this problem in past years (Broadman and Sun, 1997). Furthermore, since the main purpose of the investigation is to evidence the globalization-induced changes on the determinants of FDI an overstatement of the amount of FDI should not significantly affect the results. Thus, despite not completely

reliable, the statistics from the China NBS are still the most used and referred data source on China and they are often considered the best data accessible.

4.2 Methodology

The present research objective is to provide an answer to the following research question: *What has been the impact of globalization on the determinants of FDI in China?* To this extent, five determinants of FDI, from Dunning's OLI paradigm, size of the market, openness, human capital, infrastructure and wage will be used as independent variables in order to test whether there has been a change in the importance or relationship between those factors and FDI due to the globalization.

In order to answer this question a panel data regression model will be used, which allow more efficient estimators than time series or cross-sections models. The panel data, also called longitudinal data allow observing both cross sectional dimension, referred with the subscript i , and time series dimension, referred with the subscript t . As a result, its multiple dimensions can capture more complex relations in comparison to a single cross-sectional or time series dataset. For this dynamic aspect, the panel data methodology had been largely adopted in empirical studies.

The panel dataset used for this analysis is focused on Chinese provinces, over the period that goes from 1996 to 2007. The panel dataset is balanced, which means that all variables included in the models contain the same number of observations. The total number of observations consists of 360.

Time frame

The time period of this study is from 1996 to 2007. As mentioned in the introduction, and for the reasons explained in the chapter related to China, this period represents the last stage of China's opening to the world economy, which finds the final act in the accession to the WTO in 2001. Thus, whether a change in the determinants of FDI has happened due to globalization process, this period represents the interval to take in consideration to estimate it. Besides, by narrowing down to 2007 it is possible to avoid capturing the impacts on Chinese FDI of the global financial crisis.

Provinces

For the purpose of this essay, yearly provincial data will be used covering four administrative cities (Beijing, Tianjin, Shanghai, and Chongqing) and 26 provinces for the period from 1996 to 2007. Tibet is excluded in the analysis because most of the relevant data for it is either not available or zero during the time period examined. In relation to the provinces, no geographical categorization has been added. The main reason is that, differently from previous studies focused mainly on the spatial distribution of FDI, the main objective of this empirical research is to analyse whether a change in the determinants of FDI can be found over time in China as a whole.

4.3 Variables

The variables have been selected based on the theoretical hypotheses related to a change on FDI determinants after the globalization and the empirical evidence, both in China and elsewhere. While there are many other variables from Dunning's OLI paradigm traditionally used to estimate what attracts FDI, market size, openness, human capital, infrastructure and wage should show the biggest variance in comparison with the past in the globalization era.

The variables GDP per capita, GDP, wage and FDI have been transformed in real value by using the relevant deflators. Because GDP per capita, and wage is denominated in RMB (Chinese currency) and FDI and trade volume in U.S. dollars, all the variables have been converted into RMB using the annual average RMB/dollar exchange rate accessed by the Chinese Statistical Yearbooks.

4.3.1 Dependent variable

The dependent variable is FDI. Whether the Chinese Yearbooks provide two figures of FDI, 'Signed Agreement' and 'Actually Utilized', in this paper the later one will be used which is the actual amount of FDI invested in the provinces. Indeed, even though China is the only large recipient of FDI flows worldwide to also release data on contracted FDI, the data on the value of FDI actually utilized is the only measure used in the previous empirical models. This variable is built on the information provided by the China Statistical Yearbooks titled "Foreign Trade and Economic Cooperation" on Chinese provinces.

4.3.2 Independent Variables

The first determinant that will be taken into account is market size (SIZE). Though different measures have been used in the research to estimate this variable, in this paper the proxy is GDP per capita. This measure is not only the most common in literature (Wei, 1995), but the risk of using other often cited variables such as GDP or GNP is the likely to mislead. The reason is that using GDP would rather reflect the size of the country, while GNP would either overestimate or underestimate the market opportunities taking into account earnings by national in foreign location and excluding earning of foreign located in the host country (Chakrabarti, 2001). On the other hand, assuming that size determinates the flow of FDI by giving the chance to expand the sales, GDP per capita is a more accurate proxy for the purchasing power of the population of the host country (Yueh, 2007). According to the previous discussion, the *a priori* expectation related to this variable is that the relation with FDI is negative or insignificant, because the globalization has pushed toward more efficient-seeking FDI.

The second possible determinant of FDI that will be tested is openness (OPEN). This variable has been argued very difficult to measure, because there is no independent measure of openness that can give a full picture of the extent of openness of an economy (Harrison, 1996). However this paper refers to openness by trade shares (outcome openness measure), which is exports plus imports divided by GDP. This is a very standard variable to measure openness because a province or a country with larger total trade share normally implies a higher degree of trade openness. In particular, this measure has been quite used in large number of studies on China region. As a matter of fact, the underlying data required, differently from other data such as those related to public companies or local government, have been argued to be fairly reliable. The import and export data are in general reliable as they can be cross-checked with data from the trading partners (Yan, Chong and Kwok, 2008). As for the GDP data, studies that examine the growth rate of each of its components conclude that the official GDP data are accurate (Chow, 2004). The presence of a new dynamic global environment as described in the theory chapter, the recent empirical studies, and the new role of China in the global economy suggest that a positive relationship should be associated with FDI.

The third variable is human capital (HC). Human capital is the main source of growth in several endogenous growth models as well as one of the key extensions of the neoclassical

growth model. Since the term ‘human capital’ refers principally to workers’ acquisition of skills and know-how through education and training, the majority of studies have measured the quality of human capital using proxies related to education. This proxy has been often measured by the illiteracy rate (Broadman and Sun, 1997; Coughlin and Segev, 2000), university student rate to population (Fung et al., 2000) senior, junior and primary school student education population (Cheng and Kwan, 2000). In line with the previous research, and the availability of the information, in this paper the proxy for human capital is the percentage of persons over the population who has accessed to the second level instructions. Following the current need of more skilled workers, especially in the presence of efficient-seeking FDI, a positive coefficient is expected.

The fourth variable that will be tested is infrastructure (INFR). Also in this case the proxy for infrastructure varies. For example in some research papers, government expenditure on transportation and communications (Billington, 1999) or the telephone mainlines (per 1000) (Asiedu, 2002) are used as a proxy for infrastructure. But the most frequently mentioned proxy for infrastructure is transport linkages (Belkhdja, Mohiuddin and Karuranga, 2016; Na and Lightfoot, 2006). For this reason the infrastructure density (km of railways and highways per square kilometre) is used as a proxy for infrastructure. The theory, and the recent empirical evidence related to DCs and China, suggest that infrastructure should enhance the location “advantages” of the MNEs and thus be positively related to the flows of FDI due to the fact that globalization has increased the share of FDI in the service sector.

The last variable that will be used to test the change in the determinants of FDI is wage (WAGE). The average annual wage of staff and workers in urban areas in each region is the primary labour cost variable in the model. The average income is calculated for each province, based on the average yearly disposable income for urban residents. On the base of the globalization-induced research results, the *a priori* expectation related to this variable is that a positive relationship should be found in the light of the fact that wage is assumed to indicate the quality of the labour force and that more specialized FDI require a more educated, and thus costly, workforce.

4.3.3 Descriptive statistics

All variables have been transformed into logarithmic form, this would help to interpret the models in several ways. In first instance, because one of the assumptions for the regression model is that variables are normally distributed. This is in particular necessary when conducting a longitudinal analysis. Secondly, natural logs are also very convenient for describing relations between economic variables. Finally, this transformation will help to interpret easily the result of estimated coefficients later on in this study: a one percentage change in the independent variable will result in a certain percentage change in the dependent variable. The table 3. below shows the summary of the above variables. Details and data sources are provided in Appendix A Table 1.

Table 3. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent Variable					
FDI (log)	360	15.29	2.29	10.22	20.87
Independent Variables					
Size (log)	360	9.13	0.68	7.53	12.14
Open (log)	360	3.96	2.23	-3.65	8.50
HC (log)	360	-5.38	0.52	-6.98	-2.82
Infr (log)	360	7.68	0.85	5.29	11.59
Wage (log)	360	9.25	0.52	7.37	10.72

5 Method

The choice of the model exhibits a large variety among the previous studies on the determinants of FDI. In this paper due to the limited number of observations and the restricted time period, the Pooled OLS model will be applied. In order to correct for heteroskedasticity White Robust Standard Errors will be used.

5.1 Benchmark specifications

In order to estimate the relationship during the globalization period (1996-2007) between FDI and the determinants individuated by Dunning, the following Pooled OLS model will act as the benchmark model for later comparison:

$$FDI_{it} = \beta_0 + \beta_1 size_{it} + \beta_2 open_{it} + \beta_3 human\ capital_{it} + \beta_4 infrastructure_{it} + \beta_5 wage_{it} + \varepsilon_{it}$$

*Where α is the common intercept for all host countries, β represents the corresponding coefficient estimates for each independent and control variables, ε_{it} is assumed to be random error (i.d.d.)

A problem with this dataset is the possible high correlation between the various proxies. It is quite obvious that the proxies listed may overlap with one another. This may lead to extreme multicollinearity. In order to ascertain the degree of multicollinearity, the correlation matrix between all the determinants have been calculated. The results are presented in the Table 4.

Table 4. Correlation Matrix

	FDI (log)	Size (log)	Open (log)	HC (log)	Infr (log)	Wage (log)
FDI (log)	1.00					
Size (log)	0.08	1.00				
Open (log)	-0.01	-0.11	1.00			
HC (log)	0.19	0.12	0.01	1.00		
Inf (log)	-0.47	-0.26	0.31	0.02	1.00	
Wage (log)	0.21	0.80	-0.02	0.02	-0.14	1.00

As expected, high degree of correlation (correlation coefficient of 0.7 or above, as highlighted) exists between the pair of proxies size and wage. The main explanation is the fact that these two proxies use a similar measure even though the two proxies, as previously specified, have been used to operationalize two different determinants. Indeed, the variable size in the previous specified regression shows the opposite sign than if taken alone in the regression with FDI. This seems to support the fact that not solving the problem of multicollinearity would have serious implication for the overall model.

Whereas the literature suggests that in this case only one of these two variables should be present in the model in order to solve the issue, in this case eliminating one variable instead than another would mean restrict the research field. Another solution would possibly be to use others measures to operationalize these variables. But, also this solution would not fix the problem. Turning back to the explanation related to the choices that have been made for the selection of the variables, the only way to solve the multicollinearity could be to select GDP or GNP to measure the size of the market. Also under this condition, there is reason to suspect that another problem of multicollinearity would arise (for example with the variable open that is built on the ratio of imports and exports over GDP).

For this reason, the only possible solution is to estimate two different regressions. Thus, the first model will include size (and exclude wage). The second model instead will include wage (and exclude size) as follows:

$$FDI_{it} = \beta_0 + \beta_1 size_{it} + \beta_2 human\ capital_{it} + \beta_3 infrastructure_{it} + \beta_4 openness_{it} + \varepsilon_{it}$$

$$FDI_{it} = \beta_0 + \beta_1 human\ capital_{it} + \beta_2 infrastructure_{it} + \beta_3 openness_{it} + \beta_4 wage_{it} + \varepsilon_{it}$$

5.1.1 Benchmark specifications, “1996-2001” VS “2002-2007”

As already mentioned, particular attention has to be given to 2001, the China accession to the WTO. The formal opening of the country to global economy possibly has had an impact on the determinants of FDI. Thus, one regression for the period that precedes China’s accession to WTO (1996-2001), and one regression for the period the follows (2002-2007) will be implemented. By doing so it is easier to observe the effects and to draw accurate conclusions in the analysis.

6 Empirical Analysis

In order to test whether there is some evidence of the fact that globalization has had an impact on the five determinants previously described, size, openness, human capital, infrastructure and wage, a regression analysis for the period that goes from 1996 to 2007 has been estimated. The results for the full sample are reported in Table 5.

In order to estimate the effect of China's accession to WTO in 2001 (See Chapter 3.3.1), the five determinants have been compared creating two sub-periods, 1996-2001 and 2002-2007. The results for the regressions with the sub-periods are reported in Table 6.

Pooled OLS models have been applied for all the estimations.

6.1 Results

Table 5. Regression results all period (1996-2007)

	Model (I)	Model (II)
	(1)	(2)
SIZE	-0.24 (-1.47)	/
OPEN	0.15*** (4.19)	0.15*** (4.77)
HC	0.98*** (4.67)	0.82* (3.94)
INF	-1.47*** (-13.18)	-1.38*** (-13.28)
WAGE	/	0.42* (4.22)
cons	33.54***	25.85***

	(14.59)	(10.57)
R2	0.29	0.30
N	360	360

Note: *, **, and *** denote significance at the 5, 1, and 10 percent level, respectively

Table 6. Regression results “1996-2001” VS “2002-2007”

	Model (I)		Model (II)	
	Sub period (1996-2001)	Sub period (2002-2007)	Sub period (1996-2001)	Sub period (2002-2007)
	(1)	(2)	(3)	(4)
SIZE	-0.71*	-0.26	/	/
	(-2.92)	(-0.96)		
OPEN	0.12*	0.15**	0.16***	0.18**
	(2.43)	(2.78)	(4.77)	(3.29)
HC	0.50	0.90***	0.69	0.91***
	(1.22)	(0.13)	(1.51)	(0.94)
INF	-1.94***	-1.28***	-1.63***	-1.13***
	(-12.32)	(-9.40)	(-12.25)	(-9.16)
WAGE	/	/	0.38	0.70*
			(0.91)	(2.19)
cons	39.98***	32.05***	27.28***	21.82***
	(11.54)	(9.97)	(5.45)	(6.54)
R2	0.35	0.28	0.32	0.23
N	180	180	180	180

Note: *, **, and *** denote significance at the 5, 1, and 10 percent level, respectively.

Tables 5. and 6. show the results of the empirical analyses. Because of a problem of multicollinearity Table 5. column 1 shows the results when is taken in consideration only the variable SIZE, and WAGE is excluded, while on the other way round, column 2 includes WAGE as regressor, excluding SIZE. In the same way, in the Table 6. in the columns 1 and 2 the regressions include SIZE, excluding WAGE, and in the column 3 and 4 WAGE is included but SIZE is excluded.

In relation to Table 5. where the variables are averaged over the 12 years period (1996-2007) the results reported in column 1 indicate that three over four determinants, namely OPEN, HC and INF can explain the variation in FDI inflow. As a group, these factors account for about 29% of the FDI in China, as showed from the R2. In the column 2, when WAGE is introduced as regressor, instead of SIZE, all the variables are statistically significant. The R2 increases slightly to 30%.

Taken together the results show that that the determinants that significantly effect the FDI flows for the period that goes from 1996 to 2007 are OPEN, HC, INF and WAGE. The variable SIZE is not statistically significant, though it enters negatively in the regression. OPEN is positive related to FDI flows in both models. A 1% increase in OPEN leads to a 0.15% increase in FDI. HC is positive and significant, in both models. This means that a 1% increase in HC leads to a 0.98%, for the first model, and 0.82%, for the second model, increase of FDI. The results for INF are surprising. In both models a 1% increase in INF leads respectively to a 1.44% and 1.38% decrease in FDI. Finally the results of WAGE show the variable to be positively associated to FDI flows in the way that a 1% rise of WAGE increases the FDI flows by 0.42%.

Table 6. reports the results for the regressions where the variables are averaged over the two sub-periods: 1996-2001 and 2002-2007, with 2001 assumed to be a structural break. The variable SIZE in the models with the sub-periods shows a negative coefficient, but differently from the model the covers the overall period, in the first sub-period (1996-2001) it becomes statistically significant, at 5% level. Thus the results show that in the years that go from 1996 to 2001 a 1% increase in SIZE, leads to a 0.71% decrease in FDI flows. The variable OPEN seems to be consistent with the previous specification. The coefficients are significant, and it is possible to note a slight increase of the size of the coefficient between the two sub-periods respectively from 0.12% to 0.15% and from 0.16% to 0.18%. Also HC shows to confirm the relationship with FDI of the regression for the all period. But, whether the results are not

statistically significant in the first sub-periods in both models, in the second sub-periods are positive and statistically significant. The relationship with FDI for the years that go from 2002-2007 can be interpreted in the way that a 1% increase in HC lead to an increase of about 0.90% of FDI. INF enters again in a negative relationship with FDI in both two models and in both sub-periods. However it can be argued that the importance of this proxy increases over time, as the size of the negative coefficient decrease between the two periods. Finally the results of WAGE show that the variable, though positive related with FDI, for the first sub-period is not statistically significant, while during 2002-2007 a 1% increase in WAGE leads to a 0.70% increase in FDI.

6.2 Discussion

The results seem to confirm the fact that a reconfiguration of FDI determinants is evident in China in the period that goes from 1996 to 2007. All the determinants, except from infrastructure, show the correct signs and confirm the *a priori* expectations. In first instance, these findings seem to support the fact that the globalization of the world economy has witnessed a change from market-seeking to more efficient-seeking FDI. As already mentioned, foreign investors are more interested in the possibility of having access to other markets rather than the size of the domestic market. The results support that openness is a significant determinant of FDI, while size of the market does not appear to significantly affect MNEs location choice during the globalization process consistently with previous findings in China and other DCs.

In fact, in relation to the Chinese case it can be argued that the export-oriented FDI, represented a strong motivation in the years that go from 1996 to 2007. The country witnessed during the 1990s a rising number of FDI from Western companies, motivated by the possibility to exploit the Chinese huge domestic market. In spite of this, during this period the greatest part of foreign investors came from Asian countries. One example is Hong-Kong that during this period represented one of the main investors in China and whose FDI were export-oriented and motivated by China's incentive policies toward this type of FDI (Zhang, 1999). Hence, China's increasing opening up represented a large input to spur export-oriented FDI. But, the results of openness can also be interpreted from another point of view. As mentioned before,

it is in the 1990s the most of the countries liberalized their market in order to be enhanced by the positive spillovers of FDI. Thus, the results for the variable openness are extremely significant taking in consideration the boom of the international trade between the 1990s and the 2000s as a result of the globalization process (Surugiu and Surugiu, 2015).

As expected, in a presence of more efficient FDI and a shift from manufacturing towards more service-oriented sectors, the human capital positively affect FDI flows as a value-added factor when choosing where to invest. As a result of the adoption by MNEs of complex global integration strategies, a significant factor in influencing locational decisions has been the presence of sophisticated, created assets in host countries. It has been thus crucial—especially in a context of increasing competition for FDI—that developing countries formulated policies that improved local skills and built up their human resource capabilities (World Bank, 2000). Indeed, even though it can be argued that secondary school enrolment ratio is below the standard level of more developed regions, in the case of China is anyway a significant result being this region still an emerging country (Haizheng et al., 2010).

The results of human capital are also corroborated by the fact that wage represents an important factor in attracting foreign investors and thus supporting the fact that wage can be seen as a guarantee of the quality of labour. As literature suggest, the quality control on these export products was essential due to the fact that in the overall period the Chinese FDI were export oriented (Sun, Tong and Yu, 2002). In fact, it is possible to assume that investors were willing to pay higher wages as a guarantee of a better quality of the products. Additionally, as mentioned in the chapter related to the evolution path of China, it is also possible to estimate an overall increase of wages also in the manufacturing sectors in a presence of a shift towards high-tech activities in the last decade.

In relation to the hypothesis that 2001, the year of China's accession to the WTO, can be seen as a structural break in the history of China as a recipient of FDI and as a consequence in the reasons that attracted MNEs into the region, the results in models (I) and (II) with sub-periods, show interesting results. The most notable results are in relation to the determinants openness, human capital and wage.

First of all it is possible to notice a slight increase of the coefficient of openness between the two periods. This actually gives an idea that this variable has assumed an increasing significance over time. This small increase assumes a particular importance if we consider the

fact that the accession to the WTO of China after 2001 has marked China's formal integration into the world economy. Thus, the results confirm the fact that, as described by the literature, 2001 can be seen as a significant point, even though it is possible to presume that a period of six years after China's joining WTO is too short to see a drastic change in the importance of this variable.

More interesting are the results for human capital and wage. For both variables, while they are not significant for the period that goes from 1996-2001, the results show a positive and significant relation with FDI flows after 2001. This supports the fact that globalization has led eventually to a reconfiguration of the ways MNEs perceived their "advantages", but also that 2001 represents a critical point. Along with the previous findings, the results for sub-periods may indicate that taken together these variables can represent the quality of the labour. For many foreign companies aiming at exporting, China's unrivalled skill in major manufacturing fields after 2000 became the country's main attraction (Ross, 2014). Thus, the presence of a more qualified human capital can be argued to represent a specific asset that determines the attractiveness of a country especially in the era of the rising competition.

Finally in relation to the variable infrastructure, the findings show that an increase of the level of infrastructures is negatively related to the FDI in both sub-periods. Hence, the results confirm the findings of the regression for the overall period, but they are in contrast with the literature review and the other studies related to DCs. One possible explanation is that assuming a shift of the FDI from manufacturing sector toward the service sectors, other proxies as the number of the telephone lines or the quality of the network would have showed more significant results. It is also possible to assume that while the level of infrastructure have witnessed an overall improvement especially in the coastal regions, the inland regions in the 2000s were still underdeveloped.

7 Conclusion

The objective of this analysis was to determine whether the globalization has led to any changes in the determinants of FDI, using China as a case of study. The recent theory and several recent empirical studies both in China and in DCs suggest that the globalization process, among other changes, has had an impact on the factors attracting MNEs investment decisions. To this end, five determinants from Dunning's OLI paradigm, size, openness, human capital, infrastructure and wages have been re-examined and tested using a dataset collected from China Statistical Yearbook over the period 1996 to 2007. Furthermore, according to the fact that even though China opened to foreign investors in the late 1980s, it is the accession to the WTO that formally made China part of the global market two different sub-samples (1996-2001 and 2002-2007) have been tested to see if the relationship between FDI and the factors behaves differently.

The results seem to support the fact that in China the globalization has led to a reconfiguration of the traditional ways MNEs pursued their advantages. Considering the recent theories related to FDI induced changes, all the variables, except from infrastructure, show to be consistent with the theory related to globalization-induced changes over the period that goes from 1996 to 2007. Differently from the past the determinant market size is not significant related to FDI while, openness, human capital, and wages are positively related to FDI. In addition, the regression with sub-samples confirms that 2001 is a significant year in the history of China as a recipient of FDI. Notably, it is possible to see after 2001 the increase in relevance of the variables openness, human capital and wage which suggest the fact that China after 2001 became more integrated in the international economy and started to move from traditional low-tech activity to a high-tech manufacturing environment.

This study contributes to the literature and the empirical studies related to FDI determinants by offering an updated empirical analysis of the way "traditional" and "new" factors have attracted MNEs during the globalization in China. Nevertheless, as already mentioned, the related findings are not only useful to explain the China case, because in the evolution of the determinants that shaped the attractiveness of the country, China has reflected the pattern of

the other DCs. In the future studies can be interesting to analyse the determinants of FDI in disaggregate terms because the determinants of FDI are likely to differ between various types. In the same way, another approach could be to consider the significant regional heterogeneity in China in location determinants of FDI because some differences can also be explained by the different sectoral distribution of FDI in coastal and inland regions.

References

- Amaro, A. and Miles, W. (2006). Racing to the Bottom for FDI? The Changing Role of Labor Costs and Infrastructure. *The Journal of Developing Areas*, 40(1), pp.1-14.
- Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different?. *World Development*, 30 (1), pp. 107-119.
- Asiedu, E. (2006). Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability. *The World Economy*, 29(1), pp.63-77.
- Bahatia, K. (2013). From Barriers to Facilitation to Incentives Different Distortions of FDI. In World Economic Forum, *Foreign Direct Investment as a Key Driver for Trade, Growth and Prosperity: The Case for a Multilateral Agreement on Investment*, (pp. 19-22) [online] Available at: http://www3.weforum.org/docs/GAC13/WEF_GAC_GlobalTradeFDI_FDIKeyDriver_Report_2013.pdf [Accessed 25 May 2017].
- Bala, R. (2010), A causality analysis of the FDI-wages-productivity nexus in China. *Journal of Chinese Economic and Foreign Trade Studies*, 3(1), pp. 5-23.
- Baltagi, B., Egger, P. and Pfaffermayr, M. (2007). Estimating models of complex FDI: Are there third-country effects?. *Journal of Econometrics*, 140(1), pp. 260-281.
- Belkhdja, O., Mohiuddin, M. and Karuranga, E. (2016). The determinants of FDI location choice in China: a discrete-choice analysis, *Applied Economics*, 49(13), pp. 1241-1254.
- Bhattasali, D., Li, S. and Martin, W.(2004). *China and the WTO: Accession, Policy Reform, and Poverty Reduction Strategies*. Washington, DC: World and Oxford University Press.
- Billington, N. (1999). The Location of Foreign Direct Investment: An Empirical Analysis. *Applied Economics*, 31(1), pp. 65-76.
- Biswas, R. (2002). Determinants of foreign direct investment. *Review of Development Economics*, 6(2), pp. 492-504.
- Broadman, H. and Sun, J. (1997). The Distribution of Foreign Direct Investment in China. *The World Economy*, 20 (3), pp. 339-361.
- Buckley, P.J. and M. Casson (1976). *The Future of the Multinational Enterprises*. Macmillan: London.
- Cantwell, J. and Narula, R. (2001). The Eclectic Paradigm in the Global Economy. *International Journal of the Economics of Business*, 8(2), pp.155-172.
- Caves, R.E. (1971). International corporations: The industrial economics of foreign investment. *Economica*, 38 (149), pp. 1-27.
- Chakrabarti, A. (2001). The determinants of foreign direct investments: Sensitivity analyses of cross-country regressions. *Kyklos*, 54(1), pp. 89-114.
- Chen, C. and. Yeh, C. (2012). Re-Examining Location Antecedents and Pace of Foreign Direct Investment: Evidence from Taiwanese Investments in China. *Journal of Business Research*, 65 (8), pp. 1171–1178.

- Cheng, K. and Kwan, K. (2000). What are the determinants of the location of foreign direct investment? The Chinese experience. *Journal of International Economics*, 51, pp. 379-400.
- Cheong, T. and Wu, Y. (2003). Globalization and Regional Inequality in China. *UWA Economics Discussion Papers*, pp.1-34.
- Cho, J. (2015). Foreign Direct Investment: Determinants, Trends in Flows, and Promotional Policies. *Investment Promotion and Enterprise Development Bulletin for Asia and the Pacific*, 4, pp. 99-112.
- Chow, G. C. (2004). Economic Reform and Growth in China. *Annals of Economic and Finance*, 5, pp. 127-152.
- Cleeve, E. (2008). How effective are fiscal incentives to attract FDI to Sub-Saharan Africa?. *The Journal of Developing Areas*, 42 (1), pp. 135-153.
- Coleman, A., Tettey, F., K. (2008). Effect of exchange-rate volatility on foreign direct investment in Sub-Saharan Africa: The case of Ghana. *Journal of Risk Finance*, 9(1), pp. 52-70.
- Coughlin, C. and Segev, E. (2000). Foreign Direct Investment in China: A Spatial Econometric Study. *The World Economy*, 23(1), pp.1-23.
- Cui, L., Meyer, K.E. and Hu, H.W. (2014). What drives firms' intent to seek strategic assets by foreign direct investment? A study of emerging economy firms. *J. World Bus*, 49, pp. 488–501.
- Culem, C. G. (1988), The Locational Determinants of Direct Investment among Industrialized Countries. *European Economic Review*, 32, pp. 885-904.
- Demirhan, E. and Masca, M. (2008). Determinants of foreign direct investment flows to developing countries: a cross-sectional analysis. *Prague Economic Papers*, 17(4), pp.356-369.
- Deng, P. (2009). Why do Chinese firms tend to acquire strategic assets in international expansion?. *J. World Bus.*, 44, pp. 74-84.
- Devinney, T., Midgley, D. and Venaik, S. (2002). Managerial Beliefs, Market Contestability and the Dominant Strategic Orientation in the Eclectic Paradigm. *Insead Working Paper*, pp. 1-35.
- Donciu, E. C. (2013). Globalization and Foreign Direct Investments. *CES Working Papers*, 5 (2), pp. 177-186.
- Dubovecky, A and Garoseanu, A.R. (2015). Overcoming the Negative Location Bias of Inward Foreign Direct Investment in S-E Europe. Unpublished Seminar Paper. Erasmus University. Rotterdam, NL.
- Dorożyński, T. and Anetta, K. (2017). *Outward foreign direct investment (FDI) in emerging market economies*. 1st ed. Poland: IGI Global.
- Dunning, J. H. (1977). Trade, location of economic activity and the MNE: A search for an eclectic approach. In B. Ohlin, P. O. Hesselborn, & P. M. Wijkman, *The international allocation of economic activity* (pp. 395-418). London: Macmillan.
- Dunning, J. H. (1993). *Multinational enterprises and the global economy*. Wokingham, Berkshire: Addison Wesley.
- Dunning, J. H. (1998). Location and the multinational enterprise: a neglected factor. *Journal of International Business Studies*, 29 (1), pp. 45-66.

Dunning, J. H. (2002). Determinants of Foreign Direct Investment: Globalization Induced Changes and the Role of FDI Policies. Paper presented at the Annual Bank Conference on Development Economics in Europe, Oslo, Mimeo.

Dutta N. and Roy S. (2009). What attracts foreign direct investment? A closer look. *Economic Affairs*, 29(2), pp. 81-86.

Elkins, Z., Guzman A., and Beth A. S. (2006). Competing for capital: The diffusion of bilateral investment treaties, 1960-2000. *International Organization*, 60(4), pp. 811-846.

Faeth, I. (2009). Determinants of Foreign Direct Investments – A tale of nine theoretical model. *Journal of Economic Surveys*, 23, pp. 165-196.

Forte, R. and Moura, R. (2013). THE EFFECTS OF FOREIGN DIRECT INVESTMENT ON THE HOST COUNTRY'S ECONOMIC GROWTH: THEORY AND EMPIRICAL EVIDENCE. *The Singapore Economic Review*, 58(03), pp. 1-39

Fung, K. C., Iizaka, H., Lee, J. and Parker, S., (2000). Determinants of U.S. and Japanese foreign investment in China. *Asian Development Bank Institute*, pp.1-38.

Gastanaga, V. M., Nugent, J. and Pashamova B. (1998). Host Country Reforms and FDI Inflows: How Much Difference do they Make?. *World Development*, 26 (7), pp. 1299–1314.

Ge, S. and Yang, D. (2014). Changes in China's wage structure. *Journal of the European Economic Association*, 12(2), pp. 300-336.

Graham, M. E. and Wada, E. (2001). Foreign Direct Investment in China: Effects on Growth and Economic Performance. In P. Drysdale, *Achieving High Growth: Experience of Transitional Economies in East Asia*. Oxford: Oxford University Press.

Guruswamy, M. and Singh, Z. (2010). *Chasing the dragon*. Delhi: Longman.

Haizheng, L., Yunling, L., Fraumeni, B., Liu, Z. and Wang, X. (2010). Human Capital in China. *Paper Prepared for the 31st General Conference of The International Association for Research in Income and Wealth* [online] Available at: http://www.development.wne.uw.edu.pl/uploads/Courses/DW_HC_in_China.pdf [Accessed 25 May 2017].

Harrison (1996). Openness and Growth: A time-series, Cross-country Analysis for Developing Countries. *Journal of Development Economics*, 48, pp. 419-447.

He, Q. (2011). Dances with Chinese data: are the reform period Chinese provincial panel data reliable?. *China Economics and Management Academy*, 39, pp.1-29

Ho, C.S.F., Ahmad, N. and Mohd D. (2013). Economic freedom, macroeconomic fundamentals and foreign direct investment in fast emerging BRICS and Malaysia. *International Journal of Banking and Finance*. 10 (1), pp. 57-73.

Holz, C. A. (2003). Fast, Clear and Accurate: How Reliable Are Chinese Output and Economic Growth Statistics?. *The China Quarterly*, 173, pp. 122-163.

Hymer, S.H. (1976). *The International Operation of National Firms: A Study of Direct Foreign Investment*. MIT Press, Cambridge, MA, United States.

- Ianchovichina, E. and Martin, W. (2001). Trade Liberalization in China's Accession to WTO. *Journal of Economic Integration*, 16(4), pp.421-446.
- Jaspersen, F. Z., Aylward, A. H. and Knox, A. D. (2000). The effects of risk on private investment: Africa compared with other developing areas. In P. Collier, & C. Pattillo /Eds., *Investment and risk in Africa* (pp. 71-95). New York: St Martin's Press.
- Kamath, S. (1990). Foreign direct investment in a centrally planned developing economy: the Chinese case. *Economic Development and Cultural Change* 39, pp. 107-130.
- Kearney (2017). *A.T. Kearney FDI Confidence Index*. [online] Available at: <https://www.atkearney.com/documents/10192/12116059/2017+FDI+Confidence+Index+-+Glass+Half+Full.pdf/5dced533-c150-4984-acc9-da561b4d96b4> [Accessed 20 Apr. 2017].
- Kindleberger, C.P. (1969). *American Business Abroad*. Yale University Press: United States.
- Koch, I. N. (2013). The reliability of China's economic data: An analysis of national output. *U.S.-China Economic and Security Review Commission (USCC)*, pp. 2-35.
- Kueh, Y.Y (1992). Foreign direct investment and economic change in China. *The China Quarterly*, 131, pp. 637-690.
- Lin, J., Can, F. and Li, Z. (1996). The lessons of China's transition towards a market economy. *Cato Journal*, 16(2), pp. 201-231.
- Liu, K., Daly, K. and Varua, M. E. (2012). Regional Determinants of Foreign Direct Investment in Manufacturing Industry. *International Journal of Economics and Finance*, 4 (12), pp. 178-192.
- Mattoo, A. (2001). *China's Accession to the WTO: The Services Dimension*, paper presented at the Workshop on WTO Accession, Policy Reform, and Poverty Reduction, The World Bank, Beijing, China, October. [online] Available at: http://siteresources.worldbank.org/INTRANETTRADE/mattoo_services.pdf [Accessed 25 May 2017].
- Mayer K. (2015). What is "strategic asset seeking FDI?". *Multinational Business Review*, 23(1), pp. 57-66.
- Markusen, J. R. (1995). The Boundaries of Multinational Enterprises and the Theory of International Trade. *Journal of Economic Perspectives*, 9 (2), pp. 169-189.
- Mhlanga, N., Blalock, G. and Christy, R. (2010). Understanding foreign direct investment in the southern African development community: an analysis based on project-level data. *Agricultural Economics*, 41 (3-4), pp. 337-347.
- Moon, C. (2015). Who Loves Foreign Direct Investment? Labor, Capital, Government Partisanship, and Foreign Direct Investment. *International Studies Review*, 17(4), pp.702-704.
- Muhammad, T. and Ahmad, E. (2008). Human Capital Development and FDI in Developing Countries. *Journal of Economic Cooperation*, 29(3), pp.79-104.
- Na, L. and Lightfoot L. N., (2006). Determinants of foreign direct investment at the regional level in China, *Journal of Technology Management in China*, 1 (3), pp. 262-278.
- Nee, V. and Opper, S. (2012). *Capitalism from below*. 1st ed. Cambridge, Mass.: Harvard University Press.

- Noorbakhsh, F., Paloni, A. and Youssef, A. (2001). Human Capital and FDI Inflows to Developing Countries: New Empirical Evidence. *World Development*, 29(9), pp.1593-1610.
- Nunnenkamp, P. (2002). Determinants of FDI in developing countries: has globalization changed the rules of the game?. *Kiel Working Paper*, 1122, pp. 1-41.
- Nunnenkamp, P. and Spatz, J. (2004). Foreign Direct Investment and Economic Growth in Developing Countries: How Relevant Are Host-Country and Industry Characteristics?. *SSRN Electronic Journal*, 13(3), pp.53-86.
- OECD (2016). *Trends in foreign direct investment and their implication for development*. [online] Available at: <http://www.oecd-ilibrary.org/docserver/download/4316031ec008.pdf?expires=1495471701&id=id&accname=guest&checksum=251230C65F731E806B6456C50D5E6059> [Accessed 22 May 2017].
- ODI (1997), *Foreign Direct Investment Flows to Low-Income Countries: A Review of the Evidence*. . [online] Available at: http://www.odi.org.uk/publications/briefing/3_97.html [Accessed 22 May 2017].
- Oman, C. P. (1999). *Policy Competition for Foreign Direct Investment. A Study of Competition among Governments to Attract FDI*. [online] Available at: <http://www.oecd.org/investment/mne/2089936.pdf> [Accessed 25 May 2017].
- Pavnick, N. (2011). Globalization and Developing countries liberalization. *Journal of Management and Business*, 7, pp. 340-360.
- Perkins, D. (1988). Reforming China's economic system. *Journal of Economic Literature*, 26 (2), pp. 601-645.
- Perkins, D., Radelet, S., Lindauer, D. and Block, S. (2013). *Economics of Development*. 7th ed. New York: W. W. Norton & Company.
- Pistoresi, B. (2000). Investimenti diretti esteri e fattori di localizzazione: L'America Latina e il Sud Est asiatico, *Rivista di Politica Economica*. 90, pp. 27-44.
- Reisen H. and M. Soto (2001). Which Types of Capital Inflows Foster Developing-Country Growth?, *International Finance*, 4(1), pp. 1-14.
- Ren J. (2012). Determinants and impact of foreign direct investment in China: a national and regional analysis. Doctoral Thesis. [online] Available at: <https://dspace.lboro.ac.uk/dspace-jspui/bitstream/2134/12675/2/Thesis-2013-Ren.pdf> [Accessed 25 May 2017].
- Rodrik, D. (1998). Globalisation, Social Conflict and Economic Growth. *The World Economy*, 21(2), pp.143-158.
- Ross, J. (2014). *China's changing pattern of FDI - China.org.cn*. [online] China.org.cn. Available at: http://www.china.org.cn/opinion/2014-10/16/content_33783694_3.htm [Accessed 29 May 2017].
- Salike, N. (2015). Role of human capital on regional distribution of FDI in China: New Evidence. *IBSS Working Paper*, 6, pp. 3-47.
- Shah, Z. and Ahmed, M. (2003). The Determinants of Foreign Direct Investment in Pakistan: an Empirical Investigation. *The Pakistan Development Review*, 42, pp. 697-714.

- Singh, D., McDavid, H., Birch, A., & Wright, A. (2008). THE DETERMINANTS OF FDI IN SMALL DEVELOPING NATION STATES: AN EXPLORATORY STUDY. *Social and Economic Studies*, 57(3/4), pp. 79-104.
- Sun, Q., Tong, W. and Yu, Q. (2002). Determinants of foreign direct investment across China. *Journal of International Money and Finance*, 21(1), pp.79-113.
- Surugiu, M. R. and Surugiu, C. (2015). International Trade, Globalization and Economic Interdependence between European Countries: Implications for Businesses and Marketing Framework. *Procedia Economics and Finance Emerging Markets Queries in Finance and Business*, 32, pp.131-138.
- Tan, R. (1999), Foreign Direct Investment Flows To and From China. *PASCN Discussion Paper*, pp. 99-21.
- Teixeira, A. and Heyuan, W. (2012). Is human capital relevant in attracting innovative foreign direct investment to China?. *Asian Journal of Technology Innovation*, 20(1), pp.83-96.
- The Economist. (2001). *The cutting edge*. [online] Available at: <http://www.economist.com/node/512154> [Accessed 20 May 2017].
- Tsai, P. (1994). Determinants of Foreign Direct Investment and its Impact on Economic Growth. *Journal of Economic Development*, 19(1), pp. 137-163.
- UNCTAD (1994). *World Investment Report 1994*. United Nations, New York.
- UNCTAD (1998). *World Investment Report 1998*. United Nations, New York.
- UNCTAD (2006). *World Investment Report 2006*. United Nations, New York.
- UNCTAD (2015). *Global Investments Trends Monitor*. United Nations, New York.
- UNCTAD (2016). *Global Investments Trends Monitor*. United Nations, New York.
- Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80 (2), pp. 190-207.
- Vijayakumar, N. (2010). Determinants of FDI in BRICS Countries: A panel analysis. *Int. Journal of Business Science and Applied Management*, 5 (3), pp. 1-13.
- Vogiatzoglou, K. (2007). Vertical Specialization and New Determinants of FDI: Evidence from South and East Asia. *Global Economic Review*, 36(3), pp. 245-266.
- Wadham, J. (2001) FDI in the new era. *Journal of Academic Studies*, 7(4), pp.18-27.
- Walmsley, T., Hertel, T. and Ianchovichina, E. (2000). ASSESSING THE IMPACT OF CHINA'S WTO ACCESSION ON INVESTMENT. *Pacific Economic Review*, 11(3), pp.315-339.
- Wei, S-J. (1995). Financial Deregulation and Integration in East Asia in Foreign direct investment. In *China: Sources and consequences* (pp. 77-105) Takatoshi Ito and Anne O. Krueger: University of Chicago Press.
- Wei Y. And Balasubramanyam N. (2004.) *Foreign Direct Investment: Six Country Case of Studies*. 1st ed. Northampton, Mass.: Edward Elgar Publishing.

Welde, D. W. (2006). Foreign Direct Investment and Development: An historical perspective. Background paper for the UN 2006 World Economic and Social Survey. [online] Available at: <http://www.odi.org.uk/resources/docs/850.pdf>. [Accessed 25 May 2017].

World Bank. (1993). *The East Asian Miracle*. Washington, D.C.: World Bank.

World Bank. (1997). *China Engaged: Integration with the World Economy*. Washington D.C.: World Bank.

World Bank. (2000). *Entering the 21st century: World development report 1999/2000*. New York: Oxford University Press

Wu, X., and Strange, R. (2000). The Location of Foreign Insurance Companies in China. *International Business Review*, 9 (3), pp. 383-398.

Yan, I., Chong T. T., and Kwok (2008). Openness and productivity in China, unpublished, CERDI, France, [online] Available at: <http://cerdi.org/uploads/sfCmsContent/html/203/Chong.pdf> [Accessed 25 May 2017].

Yang, J., Yun, Y., Nicolaas, G. and Moonjoong, T. (2000) The Determinants of Foreign Direct Investment in Australia. *The Economic Record*, 76(232), pp. 45-54.

Yoo, D. and Reimann, F. (2017). Internationalization of Developing Country Firms into Developed Countries: The Role of Host Country Knowledge-Based Assets and IPR Protection in FDI Location Choice. *Journal of International Management*, pp.1-30.

Young, A. (2003). Gold into Base Metals: Productivity Growth in the People's Republic of China during the Reform Period. *Journal of Political Economy*, 111, pp. 1220-61.

Yueh, L. (2009). Multinationals and Economic Growth in East Asia: Foreign Direct Investment, Corporate Strategies and National Economic Development. Edited by SHUJIRO URATA, CHIA SIOW YUE and FUKUNARI KIMURA. *Economica*, 76(301), pp.213-214.

Zang, K. (1999). How does FDI interact with economic growth in a large developing country? The case of China. *Economic Systems*, 23(4), pp.291-303.

Zhao, S. X., Chan, R. C. K. and Chan, N. Y. M. (2012). Spatial Polarization and Dynamic Pathways of Foreign Direct Investment in China 1990–2009. *Geoforum* 43 (4), pp. 836–850.

Appendix A Table for section 4.3

Table 1. Summary of Variables

Variables	Description	Source	Theoretical Justification	Types of Variables
FDI	Total Amount of FDI Actually Utilized	China Statistical Yearbook-Domestic Trade, Economic Trade and Economic Cooperation 1996-2008		Dependent
SIZE	GDP per capita	China Statistical Yearbook-National Accounts 1996-2008	Market seeking	Independent
OPEN	Ratio of sum of exports and /imports of goods and services to the province GDP	China Statistical Yearbook Foreign Economy and Trade -National Accounts 1996-2008	Efficiency Seeking	Independent
HC	Ratio of people over the population who has accessed to the second level instruction	China Statistical Yearbook-Education and Culture 1996-2008	Efficiency Seeking	Independent
INF	Infrastructure density (km of railways and highways per square kilometre)	China Statistical Yearbook-Transport Post and Telecommunication Services 1996-2008	Market seeking	Independent
WAGE	Average annual wage of staff and workers in urban areas in each region	China Statistical Yearbook-Peoples livelihood 1996-2008	Resource seeking	Independent