

ABSTRAKTI

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Kiina-ilmiöllä viitataan länsimaisten yritysten massiivisiin tuotannon ulkoistamisiin Kiinaan. Suorien ulkomaan investointien osakehintavaikutusta tutkivien tapahtumatutkimusten innoittamana, tämä pro gradu –tutkielma on kiinnostunut osakemarkkinoiden reaktiosta listattujen suomalaisyritysten julkistuksiin koskien Kiinan kansantasavaltaan kohdistuneita suoria sijoituksia. Tapahtumatutkimusmenetelmää sovelletaan 135:een vuosina 1997 – 2014 tehtyyn julkistukseen koskien tytä- ja yhteisyrityksiä sekä yritysostoja. Aineiston tapahtumat tarkastetaan samanaikaisten vääristävien tapahtumien sekä outlier-havaintojen varalta. Keskimäärin, investointijulkistuksesta aiheutuu tilastollisesti merkitsevä positiivinen ylituotto. Tarkemmin, positiiviset ylituotot koskevat ennen 2008 julkistettuja investointiprojekteja, ja silloinkin vain investoinnin ollessa uusi, eikä aikaisemmin perustetun projektin edistämiseksi tehty jatko-investointi. Markkinareaktiot eivät erottele investointeja niiden omistusosuuden tai tehtaan uutuuden perusteella.

ABSTRACT

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In Finnish discourse, "The China Effect" refers to the surge of offshoring activities by Western companies to China during the past couple of decades. Inspired by event studies concerning announcements of foreign direct investment, this thesis investigates the market's reaction to Finnish companies' announcement of FDI targeting the People's Republic of China. Standard event study methodology is applied to 135 announcements related to subsidiaries, joint ventures and acquisitions between 1997 and 2014. The data is checked for contamination by unrelated coinciding events and outliers. A positive average abnormal return is found to take place on the date of the announcement. Additionally, the abnormal returns are found to exist only for projects announced before 2008, and only when the investment project is new, as opposed to investments made to extend previously established projects. Ownership arrangement and the novelty of facilities do not influence the market's reaction towards the investment announcement.

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In Lappeenranta, Friday 13th, March 2015

Otto Ahonen

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1 INTRODUCTION

For the most part, research literature associates foreign direct investment (FDI) with significant positive shareholder wealth gains; event studies have found that announcements of foreign acquisitions and establishment of joint ventures with foreign partners are usually rewarded by positive abnormal returns in the domestic equity market (see for example Doukas & Travlos, 1988; Morck & Yeung, 1992). More recent studies have examined the dependence of the effect according to the FDI destination. In the case of China, one of the most important FDI destinations globally, the results are unclear. While early joint ventures by American companies have been found to create shareholder wealth, more recent studies report significantly negative abnormal performance for French and U.K. FDI in China.

China became a very significant destination for Finnish foreign direct investment during the 1990's. The term *Kiina-ilmio* (China Effect) emerged to refer to the relocation of manufacturing operations from Finland (and other developed countries) to China because of an advantageously low level of labour costs. The recent surge in Chinese demand for clean technologies and services hold great promise for Finnish investment and exports to China in the future. The research studying the wealth effects of Finland-outward FDI is limited to two papers, namely Kallunki, et al. (2001) and Larimo & Pynnönen (2008). Their earlier data is from a time of higher market segmentation and thus a different FDI environment. The studies provide some evidence of significant positive wealth gains exists, particularly in the case of high-risk target countries (Larimo & Pynnönen, 2008).

The existing research attempts to explain the market reaction to FDI by the firm's target country experience and cultural distance. However, because of the sheer geographical size and heterogeneity within the Chinese economy, comparing it to other target countries using coarse generalizations is problematic and overly simplifying. The uneven regional concentration of investment has resulted in wide differences in the economic development of Chinese cities and provinces. Analysing the effect over time and in respect to the target region is therefore necessary. This study contributes to the literature by examining the market's reaction to announcements of Finnish investments targeting China specifically, seemingly the first attempt to do so. It seeks answers to the following questions:

- 1) Do companies investing in China gain additional short-term returns?
- 2) Has the effect changed over time or is it dependent on investment characteristics?

Besides offering insight about the efficiency and mechanics of the Finnish stock exchange to investors, the results are of interest to managers considering operations in China. What are the expected short-term implications and can they be optimized?

To answer the above questions, a standard event study methodology is applied to announcements of Sino-Finnish joint ventures, subsidiaries and acquisitions during 1997 and 2014. The difference between the expected and observed returns tells about the effect that the announcement had on the stock price of the Finnish company. By definition, the scope of an event study is limited to publicly listed companies and to the time period immediately surrounding the event.

The study is organized into six chapters. In the second chapter, FDI theories, a description of China as an FDI destination and analyses the branches of research literature most relevant to this study are presented. In the third chapter, the hypotheses are developed further. After a detailed presentation of the data and applied methodology, the results are presented in chapter five. Finally in chapter six, the study is summarized along with the conclusions drawn from the empirical observations.

2 BACKGROUND, THEORY AND LITERATURE

This chapter starts with defining the concept and different forms of FDI. A brief overview of China as a FDI destination and Finnish FDI in China is given. Before going into an in-depth analysis of relevant previous research, the overall implications of FDI towards shareholder wealth are considered.

2.1 DEFINITION AND FORMS OF FDI

The OECD defines FDI as “*a category of cross-border investment made by a resident entity in one economy with the objective of establishing a lasting interest in an enterprise that is resident in an economy other than that of the direct investor*”. (OECD, 2008)

In the context of multinational enterprises, FDI is a strategic move where the investing company acquires control over an entity that is located in another country than the place of its origin. Different forms of FDI comprise of full or partial *acquisitions* of an existing company, an alliance in the form of a *joint venture* (JV), or establishing a new wholly owned “*greenfield*” *subsidiary*. Gaining at least some managerial control in the target entity is a defining characteristic of FDI. In the case of partial acquisitions and joint ventures, an ownership of at least 10 percent of voting power is considered to qualify as FDI (see for example OECD; 2008).

The concepts of *stock* and *flow* are used to measure a country’s inward or outward FDI. Stock refers to the aggregate positions of investment that a country has absorbed or made abroad, and is the accumulation of flows, often measured annually or quarterly. Multinational companies (MNC’s) commonly engage foreign business opportunities using one of the three entry modes: acquiring a foreign company, establishing a wholly owned subsidiary, or forming an international joint venture.

2.1.1 International acquisitions

Firms frequently gain access to new markets by acquiring an existing company across country borders. In a total acquisition, the foreign company buys all of the equity, integrating all of the tangible and intangible resources of the local company. Alternatively, the MNC

may choose to only acquire a partial stake of the equity and continue operating jointly with the target or another foreign investor. As an investment, the profitability of a foreign acquisition is foremost reliant on the paid price, which in turn is affected by the number of interested bidders (López-Duarte & García-Canal, 2007).

2.1.2 Joint ventures

Liu et al. define a joint venture as “*a legally and economically distinct organizational entity formed by two or more parent organizations who collectively invest financial as well as other resources to pursue a particular objective*”. A joint venture is perceived international, when its headquarter is domiciled in a different country than at least one of its parents. (Liu, et al., 2014)

The joint venture form has its benefits and trade-offs. Most commonly, they are formed to leverage economies of scale, to obtain know-how related to the host country market or to share risk. For an individual company, a joint venture requires less capital than acting alone. It should also provide a foreign investor the quickest access to the new market. Conversely, joint venture entails the risks of possible managerial conflicts and limited control. The weaker incentives can cause the individual partners to be less committed to the JV's performance. (Larimo, 1999)

2.1.3 Wholly owned subsidiaries

Companies that have successfully established themselves into several foreign markets have accumulated knowledge on how to execute a successful market entry. An MNC with lots of international experience does not benefit from the involvement of a local partner as much as a company that is going abroad for the first time. Most probably it will want to retain all decision making power and set up a wholly owned greenfield subsidiary. (Larimo & Arslan, 2013)

2.2 MOTIVES FOR FDI

Increasing revenue and savings in production costs offer incentives for corporate internationalization of all forms. Joint ventures possess an additional dimension of strategic motivation, often in combination with the mentioned benefits.

2.2.1 Revenue-related motives

The most obvious motive for a domestic company to internationalize is to attract new sources of demand and increase total sales. This type of FDI is also referred to as *market-seeking*. When the domestic market for a company's product becomes saturated with competition, incentives arise to penetrate other markets. Developing countries showing high economic growth and rising income levels become particularly attractive. Possessing advanced technologies or skills enable first-mover firms to exploit monopolistic advantages internationally. (Madura, 2007)

A domestic company is solely dependent on the demand in a single economy for the accumulation of its revenue. Because of market imperfections, economies of countries do not move in perfect unison. MNC's achieve less volatile cash flows through diversification of attracting sales from several countries. (Madura, 2007)

2.2.2 Cost-saving motives

Linked to the notion of increased revenues, a large MNC can achieve lower costs per unit produced than a domestic company. Partnering in a JV can also justify larger production quantities, further decreasing the unit price. This type of cost saving does not necessitate offshoring of production. However, *resource-seeking* FDI aims to utilize the cheapest factors of production. Production is relocated to countries with low labour costs and/or access to scarce raw materials. Most often this means targeting developing economies with excessive offering in labour force and it's particularly common in the production of labour-intensive goods. In a joint venture, the fixed costs of starting up new operations can also be shared. (Vihakara, 2006) Fluctuations in foreign exchange rates can also influence the choice of the targeted country and the investment timing. (Madura, 2007).

2.2.3 Strategic motives

Apart from the objectives directly affecting the bottom line, companies engage in international partnerships for certain strategic motives. JV partners with complementary offerings can create new products with added value. Companies with similar offerings can benefit from pooling their market powers if it discourages a third competitor from entering the market. Synergies can also be gained in the exchange of knowledge and key technologies. (Vihakara, 2006)

International business requires a specific information set that is separate from that required of purely domestic business (Kogut, 1983). Uninformed decision-making can cause suboptimal performance of a foreign company acting alone. Closer relations with the local government can also set the foreigner at a disadvantage in relation to local players. Because *local knowledge* is difficult to replicate, the easiest way for an inexperienced foreigner to gain it is by partnering with a local company. (Larimo & Arslan, 2013)

At the moment of first entering a new market, there is no way for the investing company to foresee future developments of the economy and industry. Partnering with a local company is an inexpensive way for a foreigner to gain knowledge and build its network in the foreign market. This knowledge can then be leveraged to take on other investment projects as profitable opportunities arise. The ability not to commit capital and time to a project until absolutely necessary make these *real options* a very valuable strategic component of FDI. (Chen, Hu & Shieh, 1991)

The MNC also possesses the ability to arbitrage institutional restrictions. To minimize taxes, the firm can use discretion in where it declares its profits. By internalizing the markets, an MNC can circumvent regulations restricting the mobility of factors of production. (Kogut, 1983)

A number of FDI announcements collected for the purposes of this study mention geographical proximity as an investment motive: Companies find it important to be present in the vicinity of their end-customers in order to better conduct their services.

2.3 FOREIGN DIRECT INVESTMENT TO CHINA

Ever since the emergence of China as one of the most important FDI destinations during the 1990's, its overall stock of investment positions has risen rather steadily. In this chapter, general comments on the development, and structure of China-inward FDI are presented before elaborating on Finnish FDI in China.

The economic reforms launched in the late 1970's opened the door initially for foreign investment to China. Favourable policies and the establishment of free trade zones have increased China's attractiveness for foreign investors over time. China's accession to the World Trade Organization in December 2001 guaranteed improvements in principle of accounting and international property rights. In 2014, China overtook the United States as the top receiver of FDI in the world, attracting an inward flow of 127.6 billion USD (The Wall Street Journal, January 30th 2015). In 2013, the share of inward China FDI allocated to the service industry was reported to exceed fifty percent for the first time (华尔街见闻, trans. "Wall Street Knowledge", 2014). The gap between China-inward and outward FDI is narrowing, as it is becoming increasingly easier for Chinese investors to invest abroad. In 2014, China-outward FDI totalled 103 billion USD (growing 11 percent year-on-year), remaining a FDI net importer (Bank of Finland, 2015). The annual stock and flow of global FDI flows into China between 1994 and 2013 is presented in Figure 1.

All foreign investment to China is governed by three separate legislations: the Sino-Foreign Joint Venture Law, the Sino-Foreign Cooperative Joint Venture Law and the Foreign Enterprise Law. The laws were passed between 1979 and 1988 but amended by 2001 to adhere to WTO's requirements. The first two designate the vehicles for Sino-Foreign partnerships, namely the Equity JV and the Cooperative JV. The principal difference between the two forms of joint ventures concerns the equity ownership and the right to profits. Under an equity joint venture, profits (or losses) are distributed strictly in the proportion of the agreed equity shares. In a cooperative JV; the parties can agree freely on the distribution of profits and risks. Typically for a cooperative joint venture, the Chinese partner provides the facilities and labour, while the foreign investor provides capital or a key technology. The Foreign Enterprise Law allows the establishment of a wholly-foreign-owned enterprise (WFOE). (Gibson Dunn, 2015)

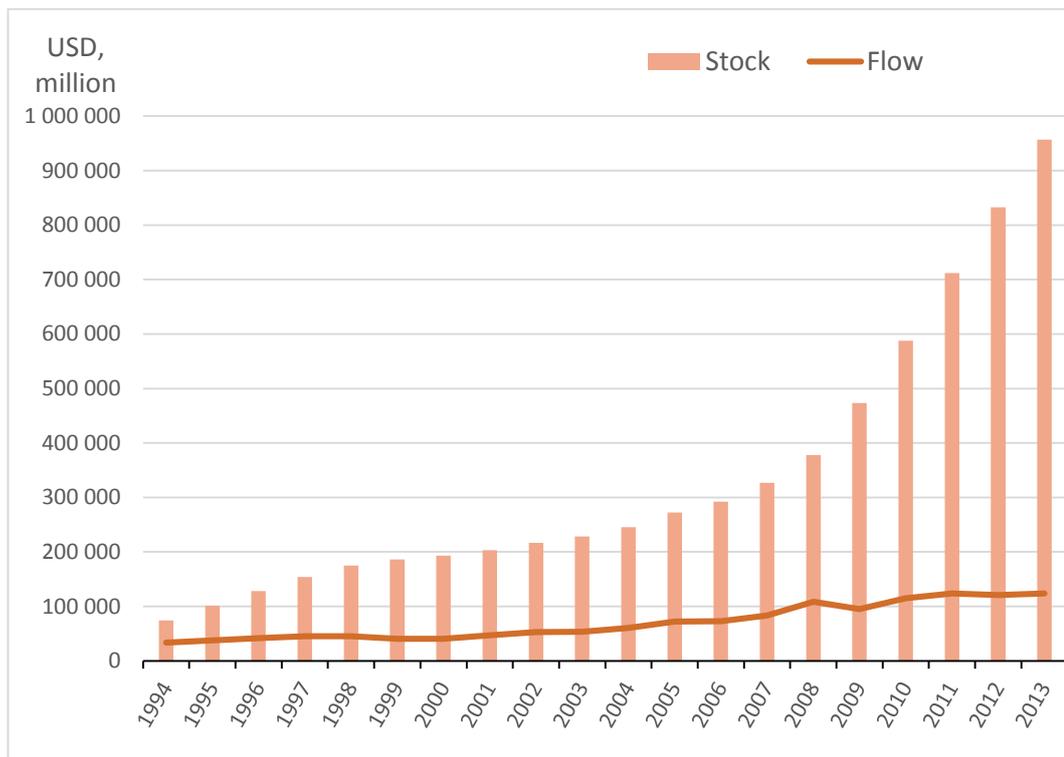


Figure 1 – China-inward FDI between 1994 and 2013. (UNCTAD, 2014)

Despite the gradual development of China, some characteristics of a planned economy can still be observed. The Chinese government lists industry sectors to those where foreign investment is *encouraged*, *restricted* and *prohibited*. Investments into a variety of manufacture and services are encouraged by preferential tax treatment. In some industries, foreign participation may only be allowed when partnering in a joint venture with a Chinese company, or otherwise limited. Certain industries (such as gambling and arms manufacture) are prohibited from foreigners completely. Revisions to the regulation are made regularly to guide investment into sectors of strategic importance. In 2011, emphasis was moved from manufacturing towards the service sector, e.g. making venture capital and intellectual property right services encouraged (Cadwalader, Wickersham & Taft LLP, 2012). Another revision is underway and it is expected to lift the Chinese-ownership requirement in a number of industries (Deacons, 2014).

Constant deregulations and increasing competition are proof that China is moving to the more mature stages of its economic development. Combined increases in wages, social security payments, rent and freight costs are inflating companies' overheads, essentially nullifying the cost-related benefits of China operations. Seppälä (2013) studied the China-offshoring activities of Nokia and China-intensive industry suppliers (including Efore, Scanfil,

Elcoteq), and found that for them the average cost of an employee reversed from decreasing to increasing sometime after 2007. The study concludes that China is no longer an attractive destination in terms of lower cost of labour (Seppälä, 2013).

2.3.1 Finnish FDI in China

Although large Finnish companies started establishing themselves in China already during the 1980's, it was the surge of offshoring in the late nineties that coined the term *Kiina-ilmio* (freely translated as the China Effect). Often heard in public discourse, the term refers to the massive relocations of manufacturing processes to developing economies (including PRC), due to lower costs of production. The resulting shift in demand of labour and subsequent layoffs in Finland stirred heated discourse about the ethics of the strategy and attached a negative connotation to the word. More recently, the emerging potential of the Chinese domestic market has attracted investment from the Finnish retail industry.

The rapid growth in the cumulative value of Finland to China FDI (along with the annual flow) between 1997 and 2013 is illustrated in Figure 2¹. In 1994, Finnish investments in China totalled only two million euros. They exceeded one billion euros in 2004 and four billion euros in 2010. During 2011 – 2013, a total negative flow of 2.2 billion euros were recorded by the Bank of Finland. It should be noted that the negative flow does not necessarily mean divestments in China. Profit repatriations and lending within the corporate group are in part probable causes for the negative flows reported (Kosonen, et al., 2013).

¹ This data does not include investments by Finnish companies carried out through third countries (such as Hong Kong). In 2013, CEMAT estimated the total cumulative value of all FDI in China by Finnish companies to exceed 10 billion EUR (Kosonen, et al., 2013).

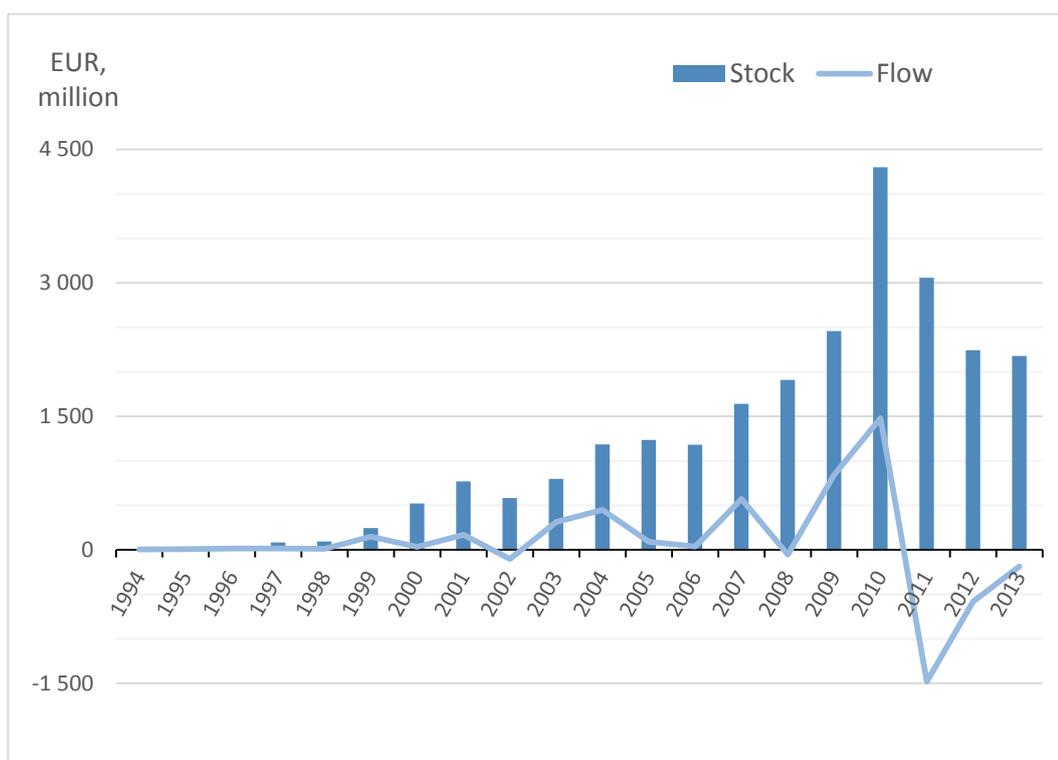


Figure 2 – Finnish FDI in China 1994 – 2013 (Bank of Finland)

As of 2013, approximately 300 Finnish companies had established themselves in China. Out of those, approximately one half are involved in some form of manufacturing in China, sales and other representation accounting for the other half (Kosonen, et al., 2013). Similarly to all foreign investment to China, Finnish investments used to predominantly target the areas around Beijing, Shanghai, and the Pearl River estuary. Machinery, electronics, information technology, forestry and the chemical industry have traditionally attracted the most foreign direct investments from Finland to China. (Kettunen, et al., 2008)

As of late, the rising production costs in the coastal areas have made fast-growing inland cities such as Chengdu and Chongqing more attractive for new investment projects. Finnish MNC's with the earliest investments to China are expected to relocate manufacturing processes further inland, or to other developing countries such as India and Vietnam (Kettunen, et al., 2008).

Some Finnish SMEs have even announced the relocation of manufacturing back to Finland. For example Biolan decided to move some of its production from China back to Finland in September 2014 (Ranta, 2014). Out of publicly listed companies, Cencorp closed down its unprofitable plant in Guangzhou, but continues operations in Beijing (Mustonen, 2012).

Faster working capital turnover, increased quality, responsiveness of production, faster and more reliable supply are often cited benefits of moving production back from China (Kosonen, et al., 2013). Advancements in robotics have made domestic production an increasingly viable option particularly in automation-intensive industries (Ranta, 2011).

Although some manufacturing divestments have been undertaken by Finnish companies in the more traditional industries, overall the net manufacturing is still increasing in China. Government incentives towards sustainability has made way for Finnish innovations in cleantech. Finnish offering in the industries of healthcare, telecommunications and gaming also possess great potential.

2.4 FDI AND SHAREHOLDER WEALTH

This subchapter introduces findings of previous literature most interesting to the objectives of this research. First the shareholder wealth effect of FDI is introduced and considered from different perspectives. Afterwards, event studies concerning Finland-outward and China-inward FDI are reviewed specifically.

2.4.1 Introduction to wealth gains from FDI

As explained previously, all efforts of corporate internationalization are ultimately aimed at increasing the profitability of the company, either by increasing revenues or cutting costs. In an efficient capital market, the consequent changes in the future cash flows of a company announcing FDI are reflected in its stock price at the time of announcement. Added revenues from newly accessed markets, cost-savings stemming from market imperfections, the inherent real options and international diversification are all shareholder wealth increasing consequences of FDI.

In financial research this mechanism is most often quantified by applying event study methodology. An event study is interested in the sign, scale and statistical significance of abnormal returns (AR) in a company's stock price in the occurrence of a particular event. The days surrounding the event is called the announcement period. Cumulative abnormal return (CAR) observes the stock's performance during the announcement period. In the context of corporate internationalization, if significantly positive abnormal performance is found, investors perceive the announced FDI as enhancing the future cash flows. If the investors perceive a negative net present value for the investment, one should observe negative abnormal performance. A detailed description of the methodology applied in this study is presented later.

In research literature, the analysis is often extended by analysing the cross-sectional differences in wealth gains. Is the market's reaction to FDI dependent on the characteristics of the investing firm, investment destination or entry mode? In order to find out, the market reaction can be further scrutinized. Standard statistical tests can judge the mathematical (in)equality of returns between sub-samples of FDI. Using the returns as the dependent variable in regression analyses can shed light on the influence and dynamics of multiple control variables.

2.4.2 General findings

In one of the most cited papers on the topic, Doukas and Travlos (1988) assigned 301 announcements of cross-border acquisitions by U.S. bidders into groups based on the firm's international experience at the time of announcement. The abnormal performance was anticipated to differ among firms that have previous establishment in the target country and those that are entering a country for the first time. A third group consists of purely domestic firms with no previous history in FDI. They do not find significant positive wealth gains for the overall sample. However, for the subsample of 99 cases where the acquirer does not have previous operation in the target country, a positive abnormal return of 0.31 percent significant at the 0.05 level is found. The finding supports the theories of positive-multinational-network and investors' diversification benefits. (Doukas & Travlos, 1988)

2.4.3 Emerging market direct investment

Doukas and Travlos argued, that because the benefits of FDI stem from market imperfections, the smaller the degree of integration between the origin and target markets, the greater the benefits of international expansion. Accordingly, they find the market reaction to be much more positive for acquisitions targeting less developed countries. (Doukas & Travlos, 1988)

In a more recent paper, Barbopoulos et al. (2014) provide insight on the shareholder wealth gains of emerging market FDI specifically. In order for an EM expansion to be profitable, the benefits of access to low cost inputs must be greater than importing the inputs without a FDI position. The immobility of certain resources and the ability to avoid trade barriers encourages establishment to the target market. Other advantages of EM FDI include domestic market potential and tax arbitrage. FDI to EMs is complicated by political instability, foreign exchange risk, and inferior infrastructure, requiring additional consideration. (Barbopoulos, et al., 2014)

Barbopoulos et al. investigate abnormal returns for 306 UK firms announcing EM FDI of various entry modes. The sample includes 49 investments to China, comprising 16 percent of the overall sample. The study is particularly interested in the impact of host country risk and level of corruption on announcement period returns. The aforementioned variables are captured from indices published by The World Bank Group and allowed to vary over time.

Intuitively one would assume higher country risk and corruption to result in a less favourable market reaction and thus lower abnormal returns. (Barbopoulos, et al., 2014)

For the main results, the study chooses to report two-day CARs spanning the day preceding the announcement and the date of the announcement. For all emerging markets, an average CAR of 1.57 percent is reported significant at the 0.01 level. Interestingly, the study reports a significantly negative market reaction to China FDI specifically, diluting the wealth gains observed for the full sample. The magnitude of the average value discount from China FDI is not reported. (Barbopoulos, et al., 2014)

Surprisingly, investments into EMs with low political risk and low level of corruption on average experience less significant and smaller value gains. The study also confirms higher wealth gains associated with resource rather than market-seeking investment and investment in tangible assets. (Barbopoulos, et al., 2014)

2.4.4 Entry-mode implications

López et al. (2007) examine the interaction between the chosen mode of FDI and its wealth gains. They distinguish four types of entry modes: wholly-owned subsidiaries, joint ventures, total and partial acquisitions. The exceptionally transparent and conservative control for outliers and contaminating events merit the results of the study. The final sample consists of 234 FDI events by companies listed on the Madrid Stock Exchange. (López-Duarte & García-Canal, 2007)

Their results indicate that the market reaction differs depending on entry mode. Most notably, FDI entailing full ownership of the host firm (WOS's and total acquisitions) earns higher wealth gains than those of partial ownership (JV's and partial acquisitions). On the event day, the first portfolio gains on average 0.79 percent (significant at the 0.01 level) while the latter only 0,16 percent (significant at the 0.10 level). The paper sets forth some disadvantages concerning partial ownership to explain the difference. Partial ownership involves opportunity costs from profits shared with the other partners. A firm entering a joint venture risks the dissemination of its core competences. (López-Duarte & García-Canal, 2007)

Furthermore, higher wealth gains are observed for greenfield FDI (new WOS's and JV's) as opposed to acquisitions (total or partial) of existing entities. Often in the case of acquisitions, the acquirer needs to pay a price higher than the market value of the acquired resources. The price premium paid harms the net profitability of the investment discounting the abnormal returns. The result is driven by non-positive returns observed for partial acquisitions specifically. (López-Duarte & García-Canal, 2007)

2.4.5 Novelty of investment project

López-Duarte et al. (2007) also make a distinction in the type of FDI projects in terms of their novelty. The FDIs are classified into *new FDIs* that conceive a particular internationalization project, and *accumulations* that further the amount of resources committed to a project carried out previously. In their sample, the 43 accumulation FDIs predominantly originate from the incremental acquisitions of small equity stakes in the host firm. The study reports highly significant positive wealth gains only for new FDIs, exclusively: the wealth gains for accumulations, although on average slightly positive, are not statistically significant. The difference can be explained by market anticipation. Re-investments into old projects are more often being expected and therefore to some extent already taken into account in the investing company's valuation. New internationalization projects are (in theory) unforeseeable to the market and therefore tend to have a stronger impact on the stock price. Secondly, the sheer financial volume of a typical new FDI in relation to a re-investment often makes it more influential. (López-Duarte & García-Canal, 2007)

2.4.6 Economic cycle

After rising steadily for four straight years, a record amount of USD two trillion in FDI flows were recorded globally in 2007. During the two following years, the financial crisis caused global FDI flows to recede by 16 and 40 percent respectively, before stagnating at USD one trillion in 2010. According to Poulsen and Hufbauer (2011), the main reasons for the reduction in FDI were liquidity constraints resulting from tightened credit lines and deterioration of corporate balance sheets. Managers today are more likely to be more risk averse when choosing investment projects than before the crisis. (Poulsen & Hufbauer, 2011)

Announcing internationalization can also signal distress in the company's performance in the domestic markets. If the investors perceive that the company is incapable of extracting the same benefits from its domestic operations, and therefore has no option but to pursue them abroad, the market reaction is negative (Doukas & Travlos, 1988).

In order to better understand the reaction of the Finnish capital market, similar research methods have been applied to data from the Helsinki Stock Exchange. Additionally, the growing importance of China as a global economic power has spawned a body of research that studies the wealth gains of FDI targeting China specifically. A comprehensive meta-analysis on these two areas of research is presented next.

2.5 FINLAND-OUTWARD FDI EVENT STUDIES

Owing to the trend of offshored manufacturing, Finnish outward FDI increased rapidly starting from the late 1980s, alongside other Nordic countries (Kallunki, et al., 2001). A decade later a dataset had emerged that allowed researchers to investigate the Finnish stock market reactions to FDI announcements of domestic companies. This chapter summarizes the contributions of two such studies, namely Kallunki, et al., 2001 and Larimo et al., 2008. The latter study extends upon the first employing a larger sample and alternative methodology.

Both studies justify the choice of a short 11-day event window with its lesser proneness to event contamination. Market model parameters are derived from an estimation period of 250 days. Additionally, the larger sample of Larimo et al. allows the disqualification of those events with earnings announcements within one day around the event.

Kallunki et al. employ a final sample of 79 events of manufacturing related FDIs by 19 companies between 1985 and 1996. For this overall sample, significant positive AARs are reported for the first and fourth day after the announcement, 0.4 percent on both days. Although no other significant AARs are found, a positive cumulative average abnormal return (CAAR) during $[-1 \dots 5]$ of 1.4 percent is found, significant at the 0.05 level. This seems to support the Finnish stock market reacting positively to companies' FDI announcements. (Kallunki, et al., 2001)

Larimo et al. extend on the previous study with a larger final sample: 297 foreign acquisitions made by 48 companies between 1989 and 2006. The AAR on event day is 0.57 percent (probability value 0.023). Other significant AARs are reported for days -1, 1, and 4 relative to event day, 0.23, 0.26 and 0.23 percent respectively, all significant at the 0.10 level. A highly significant 3-day CAAR of 1.06 percent provides even stronger support for the value creation of Finland-outward FDI. Additionally, the market's reaction to the announcement seems quicker, which can be seen as indication of increased efficiency in the Finnish stock market. (Larimo & Pynnönen, 2008)

2.5.1 Determinants of wealth gains for Finnish companies

In their data, Kallunki et al. also record the following six company or investment-specific variables: *firm's international experience* (as proxied by its foreign-to-total sales), *target country experience* (dummy), *relatedness of investment* (whether the company has experience in the product whose manufacturing is being offshored), *size of investment*, *ownership arrangement* and *cultural distance*. The last variable captures the differences in organizational cultures that originate from idiosyncrasies in national cultures. The integration of two organizations with high cultural distance is more problematic and is expected to create less value (Kallunki, et al., 2001). The influence of said variables on cumulative abnormal returns is tested in supplementary tests.

In both studies, the ownership arrangement is captured by a dummy variable. Joint ventures (including partial acquisitions) receive the value zero, while investments in wholly-owned entities (including full acquisitions) receive the value one. Unlike in joint ventures, the investing company has full decision-making power and access to profits of a wholly owned subsidiary. Furthermore, higher instability caused by potential managerial disputes between owners leads to a reduced success rate associated with joint ventures. Alternatively, joint ventures provide internationalization opportunities at a lower cost, particularly in the case of segmented markets with limited foreign access due to regulatory constraints (Kallunki, et al., 2001). Following the real options theory, it might be beneficial for a company to first "test the waters" with a small initial capital commitment, and take on follow-up investments if opportunities were to emerge in favourable market conditions.

Kallunki et al. found none of the explanatory variables to have a significant effect on CAR in a regression model. Larimo et al. test the equality of CAARs (during days -1, 0 and 1) for

portfolios of firms allocated according to the investigated variables. They test for the impact of all the same variables, except for substituting relatedness of investment with R&D intensity of investing firm. Additionally, they also compare returns with respect to level of development in target country and country risk.

The review of the impact of cultural distance provides interesting results. Firstly, no difference in CAAR exists when dividing the sample into two portfolios according to mean cultural distance. However, when the sample is divided into three portfolios of low, medium, and high cultural distance, only the first two portfolios demonstrate significant positive 3-day CAARs (0.83 and 1.06 percent). The 20 investments made to countries that have high cultural distance with Finland yielded on average only 0.43 percent during the three-day window (statistically insignificant). (Larimo & Pynnönen, 2008)

As for country risk, although the value gains were higher for countries with medium and high country risk classifications, they were found statistically insignificant, while the significance was strong in the low country risk –portfolio. On the other hand, when analysing CAARs separately for investments into developed and developing economies, some evidence of value creation exists for both. For 80 direct investments targeting developing economies, a 3-day CAAR of 1.22 percent is reported. For the developed economies -sample, the reaction is milder (0.86 percent CAAR in the same window), but it is more consistent (stronger statistical significance). Overall, it seems that for Finnish companies, wealth gains, although on average positive, is far less consistent when investing into developing economies associated with high country risk or with high cultural distance. The results may be affected by small sample sizes in the portfolios for high cultural distance (20 observations) and high country risk (20 observations). (Larimo & Pynnönen, 2008)

Dividing the investments into portfolios of partial and full acquisitions, some support for the hypothesis of higher wealth gains in the latter group can be found. In the three-day window, companies announcing a joint venture (or partial acquisition) gained on average 0.60 percent (statistically insignificant), while companies announcing a full acquisition gained nearly twice as much, 1.11 percent (strongly significant). However, the spread between the portfolios is not enough to result in a statistically significant difference of means. Thus, the results on the impact of ownership arrangement in Finnish FDI remain inconclusive. (Larimo & Pynnönen, 2008)

As for the explanatory powers of the other factors reviewed, Larimo et al. make the following conclusions: Firstly, wealth gains are larger for companies that have no previous direct investments in the target country, and particularly when the company has no history in direct investing abroad. Secondly, significant wealth gains exist only for companies with low and medium R&D intensity classification. Thirdly, the size of the investment (measured as the ratio of sales of acquired company to sales of acquiring company) is positively related to the gains in acquirer value. (Larimo & Pynnönen, 2008)

2.6 CHINA-INWARD FDI EVENT STUDIES

In this chapter, a comprehensive analysis of the previous event studies regarding China-inward FDI is presented. The four earliest studies use data on Sino-U.S. joint ventures (Gupta et al., 1991; Chen et al., 1991; Cheng et al., 1998), and the latter four on Sino-European joint ventures (Hubler & Meschi, 2001; Meschi & Cheng, 2002; Meschi & Hubler, 2003; Meschi, 2004). The event data used in the Sino-U.S. studies revolve around the decade of 1980s. Sino-European FDI has been investigated for the period of the late 1990s and the turn of the millennia. All studies follow the standard event study methodology, but use different durations for market model estimation and the event window.

The studies report differing findings about the sign, magnitude and significance of ARs resulting from the announcement of China FDI, and the factors affecting thereof. Oftentimes the testing for significant (cumulative) abnormal returns is conducted for the whole sample first and then for subsamples of firms with different firm/event characteristics. In some cases the analysis is extended with a cross-sectional regression analysis to review the firm-specific variables on the size of C(ARs).

The Chinese government's relative leniency towards early foreign investment carried out through JV's instead of wholly foreign-owned entities leads the research to focus on JV form of entry. Event study literature analysing other types of direct investment in China was not encountered.

2.6.1 Wealth gains in Sino-U.S. FDI

US companies were the quickest to exploit the Chinese FDI deregulations starting in 1979. The number of U.S. listed companies engaging in JV's with a Chinese partner reached the high hundreds by 1990, which allowed it to become the first type of partnership to be analysed regarding domestic market reaction to the announcement of Sino-Foreign FDI. The findings of studies analysing the market reaction to Sino-U.S. FDI are presented in table 1. Three out of the four Sino-U.S. studies (Gupta et al., 1991; Chen et al., 1991; Cheng et al., 1998) find significant positive abnormal returns on the announcement day of 0.45, 0.60 and 0.43 percent respectively.

Out of all the event studies regarding China-inward FDI, Chen et al. (1991) find the strongest instantaneous market reaction. For a sample of 51 JV announcements, the average abnormal return (AAR) on the announcement day is 0.60 percent (significant at the 0.05 level). They test the theory of value originating from real options of potential follow-up investments in the future. The larger the *size* of initial investment, the lower is the preserved value of the real options. After the initial test for all 51 events, they divide the sample to two portfolios relative to median investment size. The ventures with smaller initial investment are found to have higher announcement day ARs (0.91 percent). The large-investments-only portfolio does not demonstrate significant AARs or CAARs. In their regression analysis this translates to consistently significant and negative coefficients for investment size in all model specifications. (Chen, et al., 1991)

Similarly, Gupta et al. (1991) divide their sample according to entry mode to JV's and non-equity operations (the latter comprised of sales representation and licensing). They observe a small average size of initial investment in JV's. Because of its lower capital commitment, a JV can be discontinued or extended depending on future developments. The announcement day AAR is higher and more significant in the case of JV's, which further merits the real options theory. Additionally, the AAR is found to be higher for companies with lower domestic *market share*. This is interpreted as the market rewarding the firm's decision to pursue growth opportunities in other markets (Gupta, et al., 1991)

Table 1 – Summary of Sino-U.S. FDI event studies

Study	Published in	FDI Type studied	Timing of events	Sample size	Methodology ^(†)	Select significant abnormal returns reported (*, **, ***)	Control variables analysed ^(‡)
Gupta, McGowan, Misra & Missirian (1991)	The Financial Review, vol. 26, no. 3	Sino-U.S. JV's and non-equity FDI	1979 – 1987	86	Event Study (40:120)	for full sample: AAR (0) 0,45 %** CAAR [-5 ... 0] 0,49 %* for JV's only: AAR (0) 0,53 %** CAAR [-5 ... 0] 0,67 %* CAAR [-5 ... 5] 1,68 %**	<ul style="list-style-type: none"> • JV or non-equity (+/-) • R&D intensity (+) • capital intensity (-) • market share (-) • growth rate of sales • past stock performance • % of foreign sales
Chen, Hu & Shieh (1991)	Financial Management, vol. 20, no. 4	Sino-U.S. JV's	1979 – 1990	51	Event Study (21:90)	for non-contaminated sample: AAR (0) 0,60 %** CAAR [-1 ... 0] 1,03 %** *	<ul style="list-style-type: none"> • investment size (-) • prior China experience, n. of JV's • % of foreign sales • firm size
Hu, Chen & Shieh (1992)	Management International Review, vol. 32, no. 2	Sino-U.S. JV's	1983 – 1989	42	Event Study (11:120)	for firms with less foreign sales: CAAR [-5 ... 0] 2,22 %** CAAR [-1 ... 1] 0,93 %*	<p>(CAAR's significant only for firms with low international involvement, proxied by:)</p> <ul style="list-style-type: none"> • % of foreign sales (-) • n. of foreign subsidiaries (-)
Cheng, Fung & Lam (1998)	International Business Review, vol. 7, no. 2	Sino-U.S. JV's	1973 – 1993	103	Event Study (41:200)	AAR (0) 0,43 %** AAR (+2) 0,39 %** CAAR [-1 ... 1] 1,02 %** CAAR [-10 ... 10] 1,60 %**	<ul style="list-style-type: none"> • time trend • current ratio/total debt ratio/ROE • total assets turnover • industry: manufacturing/service • prior China experience, dummy • U.S. HQ location

*statistically significant at the 0.10 level

**statistically significant at the 0.05 level

***statistically significant at the 0.01 level

[†]For event studies, the applied durations for event window and estimation period are presented in the parentheses

[‡]In case of clear explanatory power, the variable is presented in bold. The sign of impact on abnormal returns is presented in the parentheses.

Gupta et al. (1991) also inspect the impact of the investing firm's *capital* and *technological intensity*, which prove occasionally significant, depending on the model specification. Because of having limited access to local capital, high-capital-intensity firms gain less value when forming Chinese JV's. Conversely, the higher the R&D-intensity of the firm, the higher the value gain. This is explained by the lower risk of dissemination of high technology associated with JV form of entry. (Gupta, et al., 1991)

Hu et al. (1992) further analyze the effect of the investor's *international involvement*, most often proxied by the percentage of foreign sales in company's total annual revenue. Following Doukas and Travlos (1988) they associate higher value created for those firms with less substantial prior investment in the reviewed country. The marginal gains from expansion to China should be larger for companies that are in the early stage of their internationalization, as opposed to established MNC's with vast international experience. CAARs are found to be higher for companies with less foreign subsidiaries and foreign sales. For companies with high prior international involvement, no significant market reaction is observed. For all samples studied, AARs on individual days within the event window were by and large not found to be significant². (Hu, et al., 1992)

Hu's conclusions contradict those of preceding studies. Both Gupta (1991) and Chen et al (1991) had previously found the percentage of foreign-to-total sales to be insignificant. The latter study also concluded that prior presence in the Far East also does not help explain the gained value in a regression analysis.

The latest study concerning Sino-U.S. JV's was conducted by Cheng et al. (1998), who reconfirmed earlier findings of value creation employing a sample unmatched in both size and range (103 events between 1973 and 1993). During the 21-day period surrounding the announcement, a value gain of on average 1,60 percent is observed (significant at the 0.05 level). Motivated by improvements in the Chinese economic environment, more recent FDIs are expected to receive higher gains. However, the time trend (along with other firm-specific variables) is found not to affect the size of the wealth gains. (Cheng, et al., 1998)

² A mildly significant AR on day +4 of -0,67 percent is found for the portfolio of firms with a large number of foreign subsidiaries.

Although inconclusive on some of the influencing factors the referred studies do agree that U.S. companies investing into China seem to consistently create wealth for their shareholders.

2.6.2 Wealth gains in Sino-European FDI

The findings of studies analysing the market reaction to Sino-European FDI is presented in table 2. Three out of the four event studies concerning Sino-European JV's limit their data to Sino-French JV's exclusively (Hubler & Meschi, 2001; Meschi & Hubler, 2003; Meschi, 2004). They find the French stock markets reacting negatively to announcements of French companies establishing JV's with Chinese partners, contradictory to the findings on Sino-U.S. partnerships. However, when the population is expanded to include investments by companies from other European countries, the positive announcement abnormal returns re-emerge (Meschi & Cheng, 2002).

Hubler & Meschi (2001) study a sample of only 34 Sino-French JV's between 1994 and 1998. A mildly significant negative AAR of -0,41 percent is found for the third day before the event. Cumulative abnormal returns of -1,00 and -1,60 percent are found for the periods of 11 and 21 days surrounding the announcement day, respectively. The study is later extended to include 11 new events occurring between 1998 and 2000 (Meschi & Hubler, 2003), along with some controlling variables. The extended sample yields similar results, but the AAR on d_{-3} becomes stronger (-0,80 percent significant at 0.005). This leads to extremely significant negative CAARs from d_{-3} onwards (-1,04 percent for 3 days before/after event, significant at 0.005). Leakage is claimed to be the reason for the negative market reaction before announcement. After adding 18 more events from 2000 – 2002, Meschi (2004) reconfirms the findings. Again the negative reaction on d_{-3} (-0,69 percent) is driving the negative 7-day CAAR (-0,39 percent). No significant AARs or CAARs for other days/periods were found. (Hubler & Meschi, 2001)

Table 2 – Summary of Sino-European FDI event studies

Study	Published in	FDI Type studied	Timing of events	Sample size	Methodology ^(†)	Select significant abnormal returns reported (*, **, ***)			Control variables analysed ^(‡)
Hubler & Meschi (2001)	Asia Pacific Business Review, vol. 7, no. 3,	Sino-French JV's	1994 – 1998	34	Event Study (21:?)	CAAR	[-10 ... 4]	-1,60 %**	<i>No control variables analysed</i>
						CAAR	[-5 ... 5]	-1,00 %*	
Meschi & Cheng (2002)	Journal of World Business, vol. 37, no. 2	Sino-European JV's	1998 – 2001	68	Event Study (21:150)	CAAR	[-10 ... 10]	1,95 %**	<ul style="list-style-type: none"> • foreign ownership percentage (+) • investment size (-) • coastal/inland location • industry: manufacturing/service • prior China experience, n. of JV's
Meschi & Hubler (2003)	Asia Pacific Journal of Management, vol. 20, no. 1	Sino-French JV's	1994 – 2000	47	Event Study (21:150)	AAR	(-3)	-0,80 %***	<ul style="list-style-type: none"> • time trend (+) • % of foreign / Asian sales (+/-) • % of European sales • industry: manufacturing/service • coastal/inland location • foreign ownership percentage • prior China experience, n. of JV's
						CAAR	[-3 ... 3]	-1,04 %***	
Meschi (2004)	International Business Review, vol. 13, no. 5	Sino-French JV's	1994 – 2002	67	Event Study (21:200)	AAR	(-3)	-0,69 %**	<ul style="list-style-type: none"> • % of foreign sales (+) • prior China experience, n. of JV's (+) • industry: manufacturing/service • foreign ownership percentage • coastal/inland location • % of Asian sales
						CAAR	[-3 ... 3]	-1,95 %*	

*statistically significant at the 0.10 level

**statistically significant at the 0.05 level

***statistically significant at the 0.01 level

[†]For event studies, the applied durations for event window and estimation period are presented in the parentheses

[‡]In case of clear explanatory power, the variable is presented in bold. The sign of impact on abnormal returns is presented in the parentheses.

Meschi and Hubler (2003) also investigate the differences in CAARs annually. 34 (12) events occurred between 1994 – 1997 (1998 – 2000). When broken down by year of occurrence, the CAARs change sign between the periods; while before 1998 the market reactions are consistently negative, JV's formed from 1998 onwards create substantial value for French shareholders. The authors argue that the scepticism of French investors in the earlier years subsided as the Chinese economy developed and conditions for FDI became more favourable. The impact of the *time trend* on (C)AAR magnitude had been previously studied by Cheng et al. (1998) for U.S. companies, where it showed no significance. Here the perceived effect of time trend may be influenced by the small sample size. (Meschi & Hubler, 2003)

The three Sino–French articles do not indicate any control for outliers or contaminating events. The existence of observation(s) with an extremely negative stock return three days before the event and subsequent influence on conclusions remain unknown. Little insight is put forward for the conclusion of opposite market reaction in comparison to the evidence for Sino-U.S partnerships. The contradiction is explained by the relative popularity of China as a target market for U.S. FDI, as well as shorter cultural distance associated with geographic proximity.

Apart from the effect of the general degree of internationalization, *prior China experience* has been speculated to affect the wealth gains. Experience of doing business in the idiosyncratic Chinese market gained from earlier projects should guarantee superior performance of the firm's subsequent ventures. However, complying with findings of Cheng et al. (1998), Meschi & Cheng (2002) and Meschi & Hubler (2003) do not find evidence for prior China experience affecting the magnitude of the wealth gains for Sino-European JV's. For Sino-French JV's, Meschi (2004) finds the number of prior China partnerships formed to affect the 3-day cumulative abnormal return positively. When extending the CAAR period to 7 and 11 days, the effect disappears, but instead the variable of foreign-to-total sales becomes significant (positive relation). Meschi & Hubler (2003) also report higher foreign-to-total sales to impact the CAARs positively. Unlike in the U.S., the French stock market seems to favor JV's by companies with low international involvement.

Meschi & Cheng (2002), Meschi & Hubler (2003) and Meschi (2004) introduce two new control variables; the *joint venture ownership percentages* and the JV location. They first theorize that in order to successfully transfer their technological and managerial expertise,

the foreign partner should assume autonomic control of the project. The hypothesis receives some support in the mean-difference tests for Sino-European JV's: On average, the market reacts positively (negatively) to FDI announcements with European majority (minority) ownership (Meschi & Cheng, 2002). However, when applied in a regression analysis, the same does not hold true for Sino-French partnerships (Meschi & Hubler, 2003; Meschi, 2004).

The second theory concerns the target location of the investment in China. Because of logistical advantages, the cities along China's coast were the first to attract foreign investment, which lead to their superior development in comparison to the inland provinces. Along with technological advancement, the surge of FDI to the coastal regions has resulted in higher labour costs in those areas. Consequently, late-movers receive less benefits from expanding into coastal as opposed to inland China. Apart from Meschi & Cheng (2002) reporting a significantly higher AAR one day after the announcement for the inland-subsample, this theory does not receive substantial support from the studies.

In addition to those already mentioned in this chapter, the literature has tested and rejected the significance of various company and investment-specific variables. For Sino-U.S. data, Chen et al. (1991) found *firm size* to be insignificant in explaining abnormal return magnitude. Gupta et al. (1991) included the *growth rate of company sales* and *past stock price performance* in their regression model specification to find no added explanatory power. Cheng et al. (1998) conclude the same for *location of investing company's headquarter* and various accounting ratios. They also found the abnormal returns not to depend on a dichotomous industry classification (manufacturing/service), later found to hold true for European FDI as well by Meschi & Cheng (2002) and Meschi (2004).

To summarize, significant wealth gains have been found to exist for European (including French) companies forming joint ventures with a Chinese partner beginning in 1998. So far it appears that the investor's industry sector and targeted location in China do not affect the size of the wealth gains. Although some explanatory power has been associated with investment size and firm's previous involvement in Asia, no firm-specific variables have been consistently proven to be influential.

3 DEVELOPMENT OF HYPOTHESES

This study investigates the shareholder wealth effects in the context of Finnish companies direct investing into People' Republic of China. Using standard event study methodology, the sign, magnitude and significance of abnormal returns in the announcement period are evaluated and discussed in relation to theory. According to theoretical literature, FDI has implicit shareholder wealth increasing implications. Additionally, empirical findings of literature concerning Finnish FDI, Sino-U.S. FDI, and FDI value creation in general, all report wealth gains as a result of FDI activities. Hence, there is reason to expect the following:

Hypothesis 1: *Finnish companies direct investing into China experience significant positive short-term abnormal returns.*

However, studies also exist that report an on-average significant negative market reaction to FDI targeting China (Hubler & Meschi, 2000; Meschi & Hubler, 2003; Meschi, 2004 and Barbopoulos et al., 2014). In anticipation of non-positive returns for the overall sample of this study, hypothesis 2A–E are prepared next. Even if no significant positive reaction exists for the overall sample, differences between subsamples are expected based on the following argumentation.

3.1 Economic cycle

The financial crisis that started in 2008 marked a structural change in the global equity markets. The euphoric market sentiment took a hard hit. Global FDI flows shrunk and Finnish investment to China ceased for over a year. During a positive cycle, markets are in a state of euphoria and react to news more positively. During recession marked by liquidity constraints and shortage of profitable investment opportunities, investors perceive the announcements less optimistically.

Additionally, the Chinese economy is becoming increasingly integrated with the global markets over time. Relaxing of FDI regulation attracts more and more foreign players to the markets. Coincidentally, technological advancements and heightening level of education have enabled major leaps in the quality of domestic offering. The consequent increase in competition and increasing overhead are driving down the profit margins of China operations. FDI in China is no longer justifiable with the low-cost argument. Motivated by the disappearance of diversification benefits of China FDI over time, the wealth gains are expected to become narrower over time. Based on these arguments, the following hypothesis is set forward:

Hypothesis 2A: *The abnormal performance is significantly positive for investments carried out until (and including) 2008.*

3.2 Project novelty

Most foreign investments are typically carried out in tentative increments in order to minimize risks, especially when targeting less developed markets. After the initial start-up of a particular project, secondary investments are carried out to increase its capacity, once proven profitable. The establishment or acquisition of entirely new projects contain more strategic gravity and should therefore have a bigger effect on valuation than extensions of old projects. Accordingly, the following hypothesis has been found to apply for Spanish companies (López-Duarte & García-Canal, 2007):

Hypothesis 2B: *The abnormal performance is significantly positive for investments, which constitute a novel investment project.*

3.3 Ownership arrangement

Ownership arrangement (wholly owned vs. joint venture), and the distribution of equity is often anticipated to affect FDI wealth gains. For example, Lopéz-Duarte et al. (2007) found the market to react more positively to wholly-owned investment projects. Meschi & Cheng (2002) observed higher wealth gains in JV's with majority European ownership and concluded that the realization of the economic benefits of FDI necessitates the managerial sovereignty of the foreign investor. Sharing of control can introduce problems in

management, particularly in the presence of wide cultural differences between the partners. On the other hand, the local partner can exploit its existing networks and provide valuable information about the target market. Based on whether the investment involves a non-Finnish partner, this study allocates all investments into joint ventures and to those wholly Finnish-owned, in order to test the following hypothesis:

Hypothesis 2C: *The abnormal performance is significantly positive for investments, when ownership in the target entity is complete.*

3.4 Novelty of facilities

When planning internationalization of manufacture, the foreign investor has two options: to either set up a new plant (greenfield), or acquire previously established facilities (brownfield). If the project entails transfer of high technology, greenfield mode might be more feasible. Profitability of brownfield investment depends on the premium paid to acquire the resources. Out of the two options, setting up new facilities can require a longer application process, particularly under the protectionist Chinese legislation. Therefore, the investment projects that manage to obtain necessary approval for greenfield operations, should be rewarded by the market in the form of higher abnormal returns:

Hypothesis 2D: *The abnormal performance is significantly positive for greenfield investment.*

The initial waves of China FDI predominantly targeted the large metropolitan regions along the eastern and southern coasts of China. The ease of nautical access and the establishment of free trade zones made them the most attractive destinations for investment. The contribution of FDI to the development of the infrastructure in these areas became self-reinforcing. The massive urbanization has led to a surge in the labour costs in the large metropolises. Consequently, investment in less developed inland areas requires less capital. It is because of these reasons that Meschi & Cheng (2002), Meschi & Hubler (2003) and Meschi (2004) argue that JV investments targeting inland cities should offer additional value over coastal cities. It may be the case that the decreasing benefits of investing into the coastal metropolises no longer cause positive excess returns, depending on the nature of the investment (resource or market seeking). The studies have tested the location-variable

and found it mostly insignificant in the explanation of CAARs. However, continued uneven growth has further increased the regional polarity, justifying the following hypothesis:

Hypothesis 2E: *The abnormal performance is significantly positive for investment targeting less developed Chinese regions.*

4 DATA & METHODOLOGY

Before the empirical testing of the hypotheses, the data collection process and event study methodology are explained in detail next.

4.1 Initial sample selection and subsampling

This thesis investigates the wealth gains of Finnish companies' announcing foreign direct investment to China. For the purpose of data collection this means that any announcement directly related to capital investment with the intention of establishing or expanding business operations within the People's Republic of China constitutes an event. The forms of investment entail full and partial acquisitions, establishment of wholly owned subsidiaries and setting up joint ventures. Investments targeting entities that are domiciled in Hong Kong, but essentially operate in the PRC, are included.

Secondary announcements (e.g. announcing completion of a previously announced project, inauguration of facilities, withdrawal or revision of a project etc.) do not constitute an event. Announcements related to licensing or other forms of partnership with no apparent capital investment by the Finnish company are also not included.

Stock exchange releases released during 1997 and 2014 containing information on the specified event were collected from the database of the largest Finnish financial newspaper (Kauppalehti) and company websites. Extracts of example announcements are attached in appendix 1. For all the relevant companies, total return indices were downloaded from Datastream.

For an event study using daily frequency, the precise identification of the event date is crucial. The announcement's date of publication is recorded, as well as the exact time, when available. This date is noted as the event study event date. No announcements were identified to have been released after trading hours. If the specific time of release was not provided by the source, the announcement is assumed to have been released during trading hours that day.

Apart from gathering the event dates, for the purpose of evaluating factors affecting the wealth gains, the events are categorized by a number of criteria:

- 1) *Investment project novelty* – the events are classified into *novel* and *extension* investments. Establishment of a new subsidiary, entering a JV, or acquiring a stake in a company with no previous ownership are considered novel projects. Extension investments are made for the purpose of modernization of facilities or increasing the capacity of previously established projects. Renovations and additions of a manufacturing line are typical cases of an extension investment.
- 2) *Greenfield vs. brownfield investments* – the events are classified into *greenfield* and *brownfield* investments based on the underlying resources. If an investment leads to the conception of a new business entity operating in to-be-built facilities, it is considered greenfield. Acquisitions or joint ventures taking over previously established resources are considered brownfield investment. Seven (four non-contaminated) announcements indicate both forms of investment and therefore remain unclassified.
- 3) *Ownership structure of target entity* - If the target entity of the investment is (or, as a result of the investment, becomes³) wholly-owned by the Finnish company, the investment is classified as wholly-owned, and joint venture otherwise. If the announcement mentions no involvement of a partner, the investment is assumed to belong entirely to the announcing company.
- 4) *Investment target city tier* – Cities in China are ranked into numbered tiers based on their level of development. For example Beijing, Shanghai and Shenzhen belong to first-tier cities. When available, the target city of the investment is noted from the announcement and matched with its tier. Three announcements in the non-

³ Eleven events (seven of which non-contaminated) are caused by the Finnish partner increasing its equity stake in a JV. In case of a complete buy-out, the investment earns the wholly owned -classification.

contaminated sample do not mention the specific geographical target of the investment within China.

135 announcements of China FDI by 32 companies compose the initial sample. The annual distribution of announced investments in the final sample is presented in Figure 3. A record number of twenty-two FDIs were announced in 2005. The global financial crisis practically froze all new investment by publicly listed companies to China for 2009 before recovering in the latter half of 2010. One JV by Nokia announced in December marks the only announcement in 2009. Sixty-three of the investments were wholly owned projects of the Finnish company and 72 involved a foreign partner. No trend in the preferred ownership structure can be observed in the sample over time.

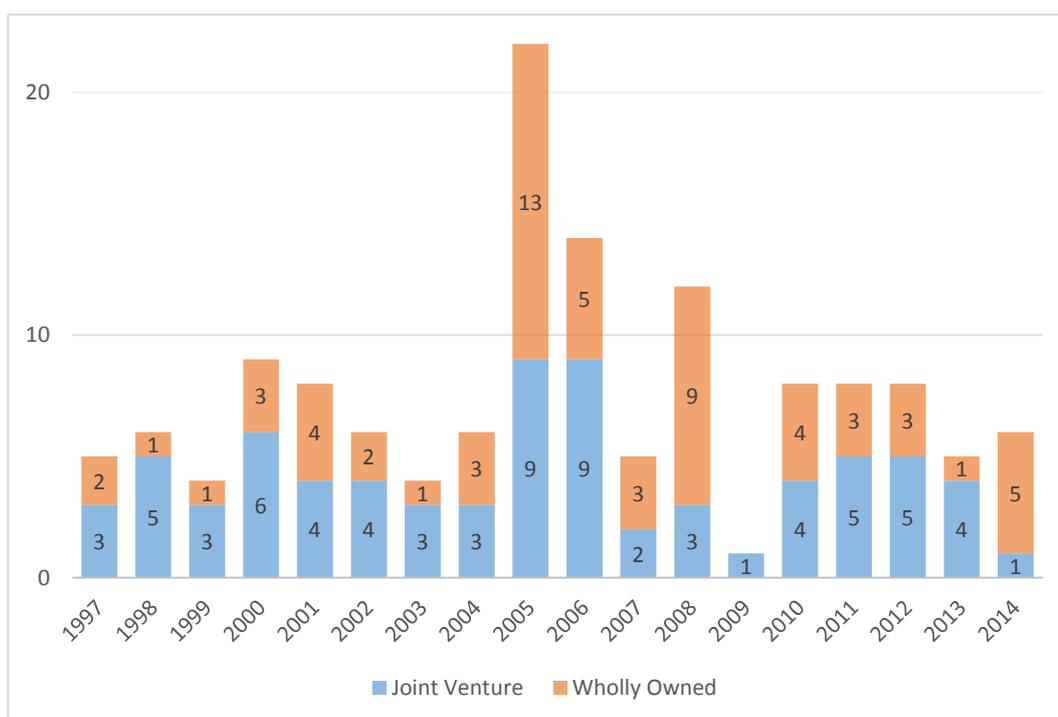


Figure 3 – Number of investment announcements per year

In order to satisfy the requirements of the event study methodology, 260 trading days must be observable for the investing company's stock before the announcement. Ahlstrom's investment from October 2006 is excluded from further analysis because of the event occurring within 260 from the stock's listing, i.e. before the fulfilment of a sufficient estimation period time series.

4.2 Event study methodology

According to McWilliams & Siegel (1997), the purpose of an event study is to measure the effect of an unanticipated event on stock prices. Most commonly, this entails the calculation of abnormal returns for each stock undergoing the event. The abnormal returns are perceived as the deviation from the returns that the stock would have otherwise experienced if the event had not occurred, i.e. the expected excess returns. From the scale, direction and statistical significance of this deviation the researcher is able to draw conclusions about the wealth gains caused by the event directly. The expected excess returns for each stock are functions of stock-specific market parameters derived from its estimation period observed returns and the event window market returns. In this study, the chosen duration for the estimation period is 250 days, or the approximate number of trading days in a year. The complete event window is 21 days in length; the ten days preceding (following) the announcement are referred to as the pre-event (post-event) window. The critical time periods of the event study are illustrated in Figure 4.

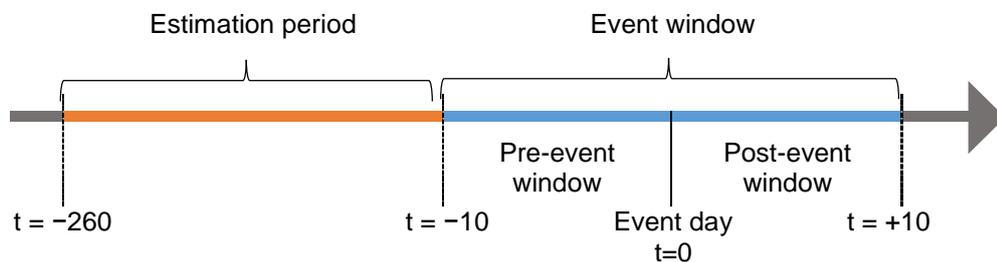


Figure 4 - Event study timeline

The expected excess returns are derived from the market model:

$$E(R_{i,t}) = \alpha_i + \beta_i R_{mt} \quad (1)$$

Abnormal returns are calculated for the twenty-one day event window for all stocks:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (2)$$

In equations (1) and (2), $AR_{i,t}$, $R_{i,t}$ and $E(R_{i,t})$ are the *abnormal return*, *observed excess return* and *expected excess return* of stock i on day t respectively. The observed excess returns $R_{i,t}$ are calculated as the natural logarithm of the ratio of the stock prices^{4a} at times t and $t - 1$ less the corresponding overnight risk-free rate (3-month Euribor). The market

model allows the estimation of event window expected returns of stock i in relation to the overall market performance. The parameters α_i and β_i are obtained for each stock by regressing the observed estimation period returns of stock i on the coinciding market returns. Similarly as for individual stocks, the market excess return R_{mt} is calculated as the natural logarithm of the ratio of the all-share Helsinki Stock Exchange index value^{4b} at times t and $t - 1$ less the risk-free rate.

To examine the abnormal performance of a single stock i from (and including) day t through day T , its abnormal returns are aggregated simply as:

$$CAR_i = \sum_{t=t}^T AR_{i,t} \quad (3)$$

Average abnormal returns are calculated separately for all 21 days in the event period as the arithmetic means of abnormal returns in the corresponding sample. It signifies the average abnormal performance on day t for a sample of N firms:

$$AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{i,t} \quad (4)$$

Finally, the average abnormal returns are also compounded to form cumulative average abnormal returns. It signifies the average abnormal performance over a period of multiple days:

$$CAAR = \frac{1}{N} \sum_{i=1}^N CAR_i \quad (5)$$

After the calculation and aggregation of average abnormal returns, their statistical significance is determined by hypothesis testing. The null hypothesis assumes that the (cumulative) average abnormal returns do not deviate from zero, in other words that the event does not induce abnormal performance (positive or negative) of the stock. If a

⁴For all stock market data (time series of stocks and the market index), total return indices are used as devised by Datastream in order to control for dividends.

statistical test justifies the rejection of the null hypothesis, it is concluded that the event does have a significant influence on stock performance:

$$H_0: (C)AAR = 0$$

$$H_1: (C)AAR \neq 0$$

In this study, the statistical significance is determined by a simple t-test. For single-day average abnormal returns the test statistic is calculated as:

$$t_{AAR_t} = \sqrt{N} \frac{AAR_t}{\sqrt{\sigma^2(AAR_t)}} \sim t(N) \quad (6)$$

In the denominator $\sigma^2(AAR_t)$ is the cross-sectional variance of abnormal returns on day t during event window:

$$\sigma^2(AAR_t) = \frac{1}{N-1} \sum_{i=1}^N (AR_{i,t} - AAR_t)^2 \quad (7)$$

For cumulative average abnormal returns the test statistic is calculated as:

$$t_{CAAR} = \sqrt{N} \frac{CAAR}{\sqrt{\sigma^2(CAAR)}} \sim t(N) \quad (8)$$

Similarly as in equation (7), $\sigma^2(CAAR)$ is the cross-sectional variance of the cumulative abnormal returns across the sample during event window:

$$\sigma^2(CAAR) = \frac{1}{N-1} \sum_{i=1}^N (CAR_i - CAAR)^2 \quad (9)$$

Based on various criteria, differences in abnormal returns of multiple subsamples are analysed. In order to determine its statistical significance, the difference in abnormal returns between two samples (named A and B) is also scrutinized with a t-test:

$$\Delta AAR_t = \frac{AAR_{t,A} - AAR_{t,B}}{\sqrt{\sigma^2(AAR_{t,A}) + \sigma^2(AAR_{t,B})}} \sim t(N) \quad (10)$$

In the denominator is the standard deviation, calculated as the square root of the summed variances of both samples. The individual sample variances are calculated as in equation (7). The same test is applied for differences in cumulative abnormal performance as follows:

$$\Delta CAAR = \frac{CAAR_A - CAAR_B}{\sqrt{\sigma^2(CAAR_A) + \sigma^2(CAAR_B)}} \sim t(N) \quad (11)$$

Similarly in the denominator is the square root of the summed variances of both samples. The individual sample variances are calculated as in equation (9).

4.3 PROBLEMS AND ASSUMPTIONS

McWilliams & Siegel (1997) name small sample sizes, sensitivity to outliers and contamination by confounding effects as the most serious (and often overlooked) problems related to the event study methodology. In addition, the implications of the inherent assumption of market efficiency needs to be carefully considered.

4.3.1 Assumption of market efficiency

The event study methodology assumes that as the result of an announcement, all investors simultaneously learn unanticipated information that none of them previously possessed, which is then reflected on the company's stock price. Only under this assumption is it safe to assume the abnormal returns to be caused by the new information (McWilliams & Siegel, 1997). In order to capture the impact of the managerial decision to invest into China, this study only includes events where the investment is announced publicly for the first time.

The managerial decision to establish operations abroad, like any investment decision, takes careful consideration and lengthy preparations, which makes it somewhat prone to leaking before the official announcement. In order to capture any pre-announcement leakage (while limiting the exposure to contamination by confounding events), a 21-day event window was chosen for this study. The same length was found to be typical in previous studies of similarity. Cumulative abnormal returns over shorter periods of 11, 10, 5 and 3 days are also analysed.

4.3.2 Contamination by confounding effects

In order to reliably test the hypothesis that China FDI affects valuation, we have to be sure that no unrelated company-specific events are influencing the abnormal returns. If the company in question coincidentally announces other financially relevant information, the individual sources of abnormal returns cannot be distinguished. In order to preserve the robustness of the abnormal returns during the event and in the post-event window, FDI events with contamination between the first day before and 10 days after the FDI event date are disqualified. For example earnings releases, profit warnings, unrelated investments (foreign or domestic), divestments, co-determination negotiations are considered contaminating, due to being highly influential to valuation. After screening the 134 qualifying events, 47 are found to be contaminated by unrelated news announced within the specified range. Unless otherwise mentioned, all results reported are based on the contamination-controlled sample.

4.3.4 Small sample size and outliers

Like in the use of many statistical methods, individual observations receiving unusually low or high values can bias the generalized results and conclusions of an event study. In this study, events that experience abnormal returns outside of a range calculated as the average abnormal return plus or minus three times the its standard deviation, are considered outliers. This test is run for abnormal returns on the event day and the cumulative abnormal returns during the complete 21-day event window. Two events are disqualified based on the first test and another two based on the latter. In all four cases the abnormal performance exceeded the upper limit of the outlier range. Unless otherwise mentioned, all results reported exclude those events.

After the elimination of contaminated events and outliers, the final sample consists of 83 events by 26 companies. The breakdown of events by year and investment attributes is presented in Table 3. In the final sample, the distributions are in favour of novel investments (over extensions), greenfield investments (over brownfield), joint ventures (over wholly-owned), and higher-tier target cities (over 1st tier-cities only).

Table 3 – Finnish announcements of FDI in China between 1997 and 2014

	N		
Initial sample of announcements	135		100,0 %
stocks with incomplete est. period	(1)		0,7 %
contaminated events	(47)		34,8 %
outliers	(4)		3,0 %
Final sample	83		61,5 %

	1997–2008	2009–2014	Total
Total events per period	59	24	83
Investment project novelty			
Novel investments	46	15	61
Extension investments	13	9	22
Greenfield vs. Brownfield			
Greenfield investments	37	16	53
Brownfield investments	21	5	26
(ambiguous)	1	3	4
Ownership structure			
Wholly owned	28	10	38
Joint venture	31	14	45
City Tier			
1st tier city	23	4	27
2nd tier or higher	33	20	53
(unknown)	3		3

Adhering to the Finnish Financial Supervisory Authority, publicly listed companies must follow to the disclosure obligation rules of that dictate when certain information should be made public. Unlike in the case of earnings or profit warnings, disclosure of FDI plans is to some extent subject to judgement of the board of directors. This leads to some diversity in

the behaviour of firms regarding the announcement of investments. This study only observes those cases of FDI that have been publicly disclosed via a stock exchange release. The results may be subject to the influence of the varying tendencies to make FDI announcements and their timing.

5 EMPIRICAL RESULTS

In this chapter, the average values and statistical significance of abnormal returns are reported for the event day, marked $AAR(0)$, and cumulatively for select intervals within the event window. Additionally for the overall sample, parameters of single day abnormal returns are presented for the whole event period. In all of the tables $***$, $**$ and $*$ signify statistical significance levels of 0.01, 0.05 and 0.10 respectively. The average abnormal stock performance in the event window is also plotted for each portfolio.

5.1 All-inclusive sample abnormal returns

As the initial test, the average abnormal and cumulative abnormal performance of the sample including all China FDI was analysed. Table 4 consists of the results before and after the disqualification of outliers.

Based on the event day average abnormal return, the null hypothesis is rejected and H_1 is confirmed: Finnish companies announcing China FDI experience a significant positive abnormal return on the event day. For the initial sample, the wealth gain is 0.94 percent and highly significant. After excluding outliers from the sample, the average reaction is diluted to 0.47 percent, but remains significant at the 0.05 level. Illogical abnormal returns of moderate statistical significance and varying sign are found for two days before the announcement, as well as the fourth, fifth, sixth and tenth day after the announcement, depending on the sample.

Table 4 – Abnormal returns of all-inclusive sample

Day	Initial sample			Final sample (excludes outliers)		
	N = 87			N = 83		
	AAR	t-stat	(p-value)	AAR	t-stat	(p-value)
-10	-0,20 %	-0,884	(0,379)	-0,22 %	-1,004	(0,318)
-9	0,08 %	0,489	(0,626)	0,04 %	0,213	(0,832)
-8	0,11 %	0,745	(0,458)	0,12 %	0,803	(0,424)
-7	0,18 %	0,925	(0,357)	0,30 %	1,591	(0,115)
-6	-0,45 %*	-1,779	(0,079)	-0,24 %	-1,088	(0,280)
-5	-0,13 %	-0,569	(0,571)	-0,19 %	-0,855	(0,395)
-4	-0,26 %	-1,435	(0,155)	-0,26 %	-1,381	(0,171)
-3	-0,03 %	-0,220	(0,827)	-0,04 %	-0,226	(0,822)
-2	0,17 %	0,700	(0,486)	0,11 %	0,434	(0,666)
-1	-0,14 %	-0,736	(0,464)	-0,06 %	-0,315	(0,754)
0	0,94 %***	2,713	(0,008)	0,47 %**	2,164	(0,033)
1	-0,17 %	-0,951	(0,344)	-0,08 %	-0,488	(0,627)
2	-0,01 %	-0,058	(0,954)	0,06 %	0,236	(0,814)
3	-0,01 %	-0,089	(0,929)	-0,03 %	-0,150	(0,881)
4	0,35 %	1,576	(0,119)	0,41 %*	1,805	(0,075)
5	0,37 %*	1,673	(0,098)	0,22 %	1,452	(0,150)
6	-0,36 %*	-1,959	(0,053)	-0,36 %*	-1,866	(0,066)
7	0,18 %	0,884	(0,379)	0,05 %	0,268	(0,789)
8	0,35 %	1,298	(0,198)	0,12 %	0,676	(0,501)
9	-0,04 %	-0,133	(0,894)	-0,21 %	-1,206	(0,231)
10	-0,32 %*	-1,945	(0,055)	-0,33 %**	-1,992	(0,050)

In order to observe any untimely abnormal performance as a result of information leakage or delay in the market's reaction, the cumulative abnormal returns are examined in Table 5. The pre-event CAARs are negative but non-significant, showing no evidence of leakage or the management timing the market. When the days immediately before and after the announcement are included, the gains are smaller and their significances are reduced. Outside the reporting of table 5, a mentionable CAAR is found for the interval [0...5] of 1.46 percent (p-value 0.024), and 1.05 percent (p-value 0,089) when outliers are excluded. Overall the market reaction on the event day is swift and leaves no consistent trend in the post-event window. Figure 5 portrays the average abnormal performance of the initial and outlier-excluding samples.

Table 5 – Abnormal performance of all-inclusive sample

Window	Initial sample			Final sample (excludes outliers)		
	CAAR	t-stat	(p-value)	CAAR	t-stat	(p-value)
	N = 87			N = 83		
[-10 ... -1]	-0,67 %	-1,161	(0,249)	-0,44 %	-0,754	(0,453)
[-5 ... -1]	-0,40 %	-0,834	(0,406)	-0,54 %	-1,127	(0,263)
[-1 ... 1]	0,62 %*	1,708	(0,091)	0,33 %	1,107	(0,272)
AAR(0)	0,94 %***	2,713	(0,008)	0,47 %**	2,164	(0,033)
[0 ... 1]	0,77 %**	2,137	(0,035)	0,38 %	1,328	(0,188)
[1 ... 5]	0,52 %	0,985	(0,327)	0,58 %	1,167	(0,246)
[1 ... 10]	0,34 %	0,431	(0,668)	-0,15 %	-0,259	(0,796)

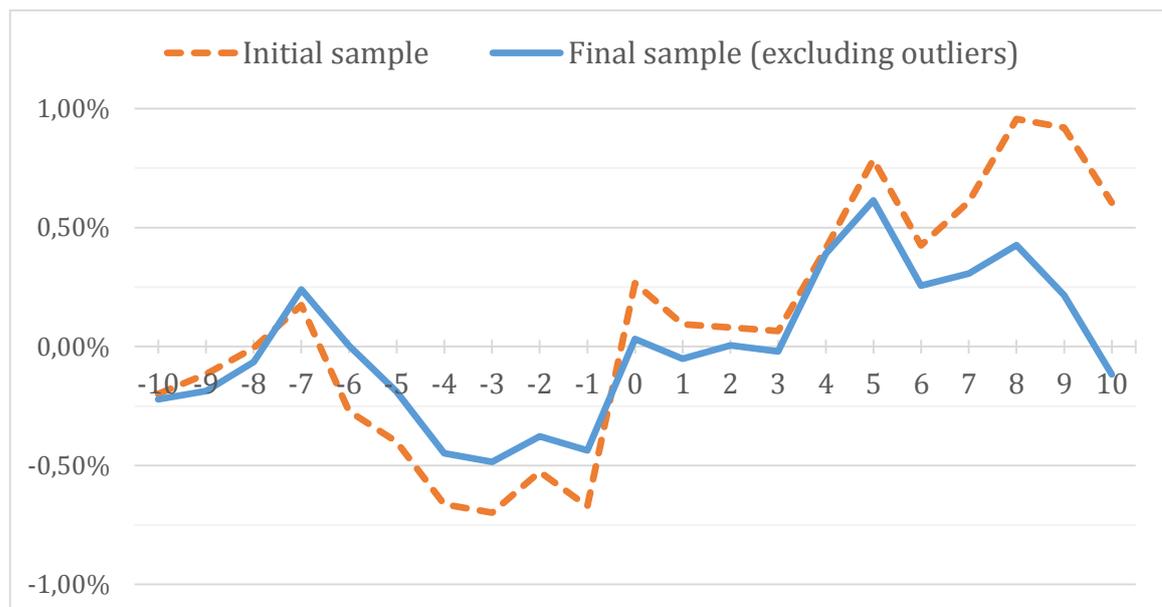


Figure 5 – Plotted cumulative abnormal performance (all-inclusive)

5.2 Robustness checks

In order to check that the results are not caused by the choice of the market-model methodology, the test was repeated with the parameters α and β set to zero and one, respectively, for all stocks. In other words, the alternative model expects all stocks to move in full compliance with the market. With this modification, the AAR(0) is 1.05 percent (p-value 0.003) and 0.64 percent (p-value 0.005) for the outlier-including and excluding sample, respectively. It is clear that the results do not rely on the market-model. Results for the alternative methodology applied to the all-FDI sample are presented in appendix 2–A.

In order to check that the market-model results are independent from the estimated parameters, the test was repeated with estimation period lengths of 125 and 375 days (corresponding to half- and one-and-a-half trading years, respectively). Again, the findings remain largely unchanged from that of the original method. Results for the alternative estimation period durations applied to the all-FDI sample are presented in appendix 2–B and 2–C.

5.3 Influence of investment attributes

Next, the investment events are subsampled according to the hypotheses presented earlier. This is done in order to gain insights on the abnormal returns dependency on investment-specific attributes. The cumulative abnormal returns and p-values of all sub-samplings are presented in tables 6–11. Additionally, $\Delta CAAR$ is calculated in the rightmost column as $CAAR_A - CAAR_B$ in order to evaluate the direction, size and statistical significance of the difference in returns between samples.

Hypothesis 2A anticipates a difference in wealth gains between the time periods before and after 2008. This is supported by the individual subsample abnormal returns on the event day (see table 6). The earlier sample (investments during 1997–2008) gains 0.70 percent (significant at the 0.05 level) while in the latter sample there is a mild non-significant negative reaction. For all windows of CAAR, the gains are higher in the pre-2008 sample. As observable from figure 6, the distinction is even clearer in the $[-3...3]$ CAAR window: the earlier sample gains 1.57 percent (p-value 0.018), while the later -2.37 percent (p-value 0.038). The difference is significant, 3.93 percent (p-value 0.014).

Table 6 – Abnormal performance based on economic cycle

Window	1997 – 2008		2009 – 2014		Difference	
	CAAR	(p-value)	CAAR	(p-value)	Δ CAAR	(p-value)
	N = 59		N = 24			
[-10 ... -1]	0,16 %	(0,804)	-1,89 %	(0,143)	2,05 %	(0,210)
[-5 ... -1]	0,09 %	(0,868)	-1,73 %	(0,106)	1,82 %	(0,177)
[-1 ... 1]	0,65 %*	(0,085)	-0,48 %	(0,235)	1,14 %	(0,121)
AAR(0)	0,70 %**	(0,014)	-0,10 %	(0,736)	0,80 %	(0,139)
[0 ... 1]	0,67 %*	(0,072)	-0,31 %	(0,471)	0,98 %	(0,182)
[1 ... 5]	1,00 %	(0,134)	-0,44 %	(0,457)	1,44 %	(0,236)
[1 ... 10]	0,00 %	(0,996)	-0,51 %	(0,413)	0,50 %	(0,714)

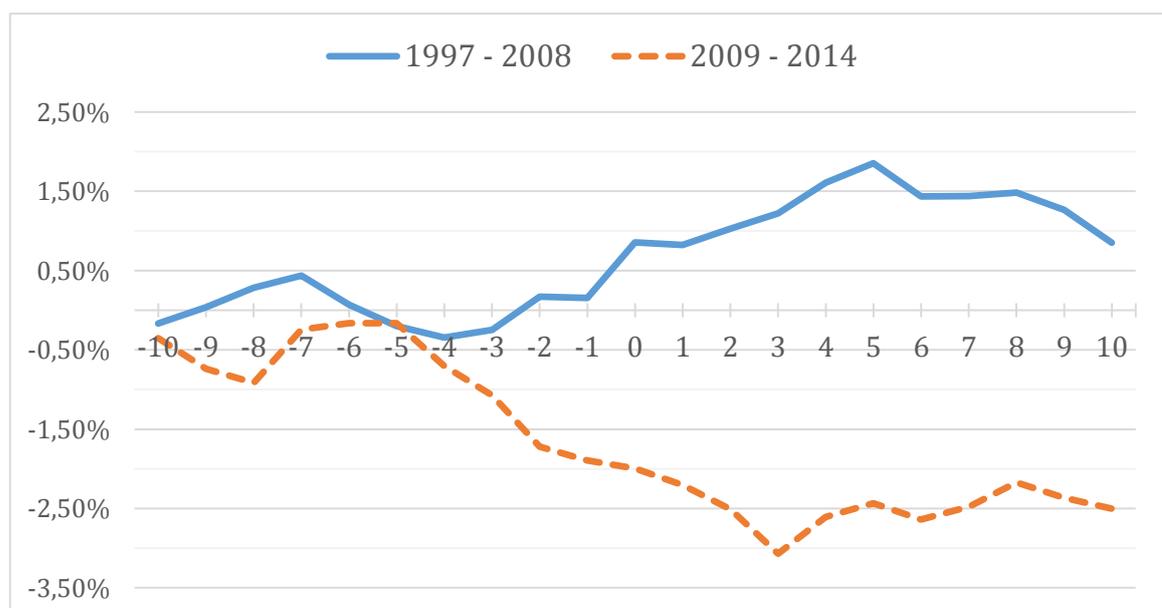


Figure 6 – Plotted cumulative abnormal performance (economic cycle)

Hypothesis 2B anticipates higher abnormal returns for the announcements of previously unknown investment projects than for investments used to extend ongoing projects. This hypothesis too receives support (see Table 7 and Figure 7). Firstly, the abnormal returns on the event day are positive and significant only for the novel-investment sample (0.69 percent, p-value 0.015). The differentials show it gaining consistently more than the extension-investment sample. The differences are statistically significant on the event day and for multiple CAAR windows (at its strongest 2.74 percent during [0...5]).

Table 7 – Abnormal performance based on project novelty

Window	Extension investments	Novel investment projects	Difference
	N = 22 CAAR (p-value)	N = 61 CAAR (p-value)	Δ CAAR (p-value)
[-10 ... -1]	-0,42 % (0,693)	-0,44 % (0,527)	0,03 % (0,977)
[-5 ... -1]	0,10 % (0,853)	-0,63 % (0,307)	0,74 % (0,295)
[-1 ... 1]	-0,18 % (0,669)	0,51 % (0,177)	-0,68 % (0,130)
AAR(0)	-0,13 % (0,632)	0,69 %** (0,015)	-0,82 %** (0,013)
[0 ... 1]	-0,27 % (0,520)	0,62 %* (0,091)	-0,89 %** (0,047)
[1 ... 5]	-0,83 % (0,227)	1,09 %* (0,085)	-1,92 %** (0,012)
[1 ... 10]	0,04 % (0,946)	-0,22 % (0,775)	0,26 % (0,759)

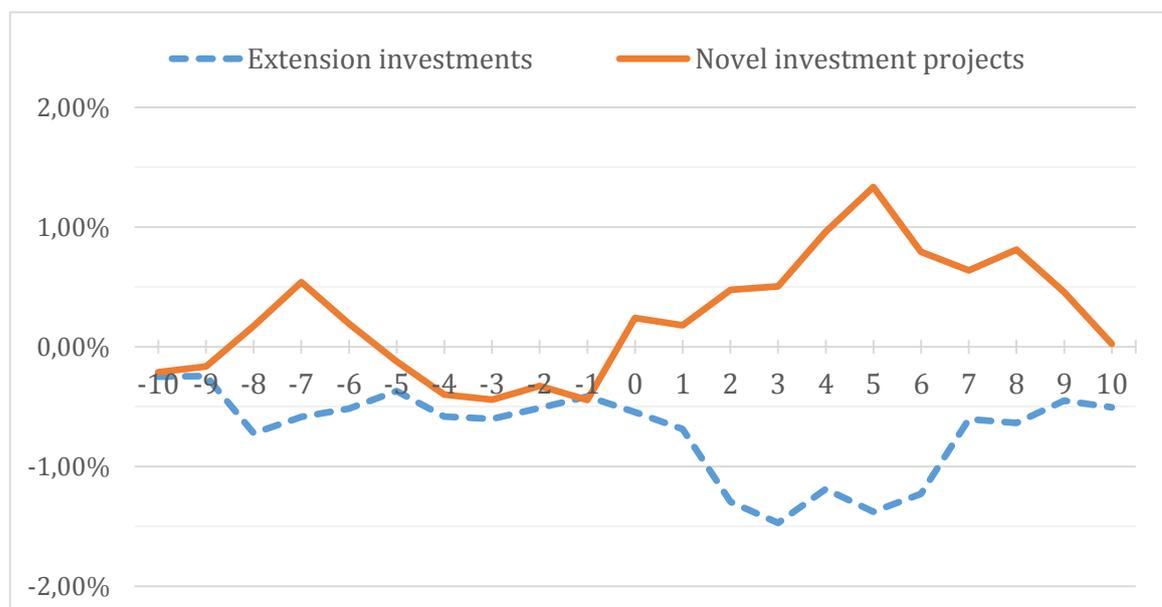


Figure 7 – Plotted cumulative abnormal performance (project novelty)

Based on the evidence received by hypotheses 2A and 2B, both the economic cycle and project novelty seem to affect the market reaction. To evaluate their combined effect, the event day abnormal return results for the novel and extension investment portfolios are presented separately for the two time periods in Table 8. Based on this subdivision, the market reacts significantly to novel investments carried out before 2008. The event day abnormal returns for all other combinations are not different from zero. Extension investments do not gain in either time period, and during the more recent period, even the novel investments experience no significant market returns.

Table 8 – Event day abnormal returns by time period and investment novelty

	1997–2008			2009–2014		
	AAR(0)	(p-value)	N	AAR(0)	(p-value)	N
Extension investments	-0,19 %	(0,484)	13	-0,04 %	(0,945)	9
Novel investments	0,95 %***	(0,007)	46	-0,14 %	(0,702)	15

Another supplementary test was conducted for a portfolio of investments known to mark the company's first-ever direct investment in China. This characteristic was apparent in eight announcements. The event day abnormal return is 2.37 percent (p-level 0.114). Significant CAARs are observed for windows [0...1], [0...3] and [0...5]. They are 3.31, 5.71 and 8.73 percent respectively, all mildly significant at 0.10 level. The abnormal performance is plotted in Figure 8. Although the small sample size hardly justifies generalization, the gain wealth for first-time China investors seems much wider and less instantaneous. In the initial sample, two more non-contaminated events denoted first-time China investments, but were identified as outliers. When they are reintroduced here, a significant CAAR is found for [0...9] at 11,99 percent (p-value 0,068). It is the single highest significant CAAR found in this study for all samples and durations.

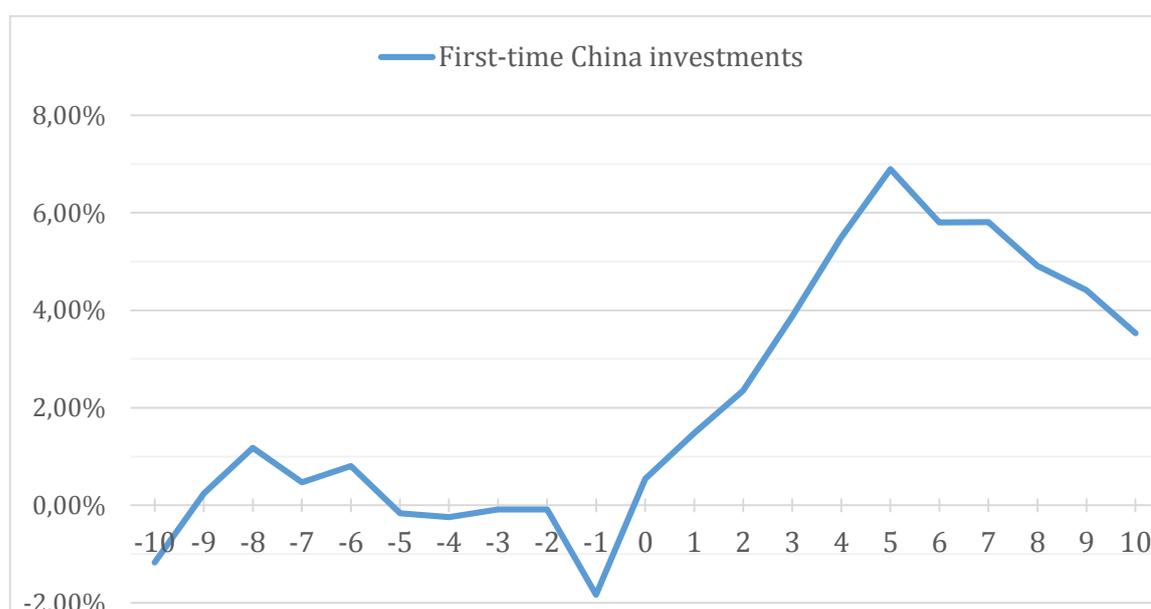


Figure 8 – Plotted cumulative abnormal performance (first-time China investments)

Hypothesis 2C, anticipating FDI carried out via wholly owned vehicles to experience higher wealth gains than joint ventures, is not supported by the analysis (see table 9). No significance is found for the event day abnormal returns or the selected CAAR windows or their differentials in either subsample. A mildly significant CAAR is found for joint ventures of 1.60 percent in window [0...5] (p-value 0.093). However, as evident from Figure 9, the effect does not last to the tenth day after the announcement.

Table 9 – Abnormal performance based on ownership arrangement

Window	Joint Venture investments	Wholly Owned investments	Difference	
	N = 47 CAAR (p-value)	N = 36 CAAR (p-value)	Δ CAAR	(p-value)
[-10 ... -1]	-0,62 % (0,413)	-0,20 % (0,829)	-0,42 %	(0,742)
[-5 ... -1]	-0,78 % (0,262)	0,01 % (0,993)	-0,79 %	(0,440)
[-1 ... 1]	0,26 % (0,526)	0,41 % (0,342)	-0,15 %	(0,812)
AAR(0)	0,46 % (0,152)	0,49 % (0,105)	-0,03 %	(0,945)
[0 ... 1]	0,36 % (0,401)	0,41 % (0,275)	-0,05 %	(0,933)
[1 ... 5]	1,15 % (0,131)	-0,15 % (0,802)	1,30 %	(0,222)
[1 ... 10]	0,16 % (0,847)	-0,55 % (0,505)	0,71 %	(0,571)

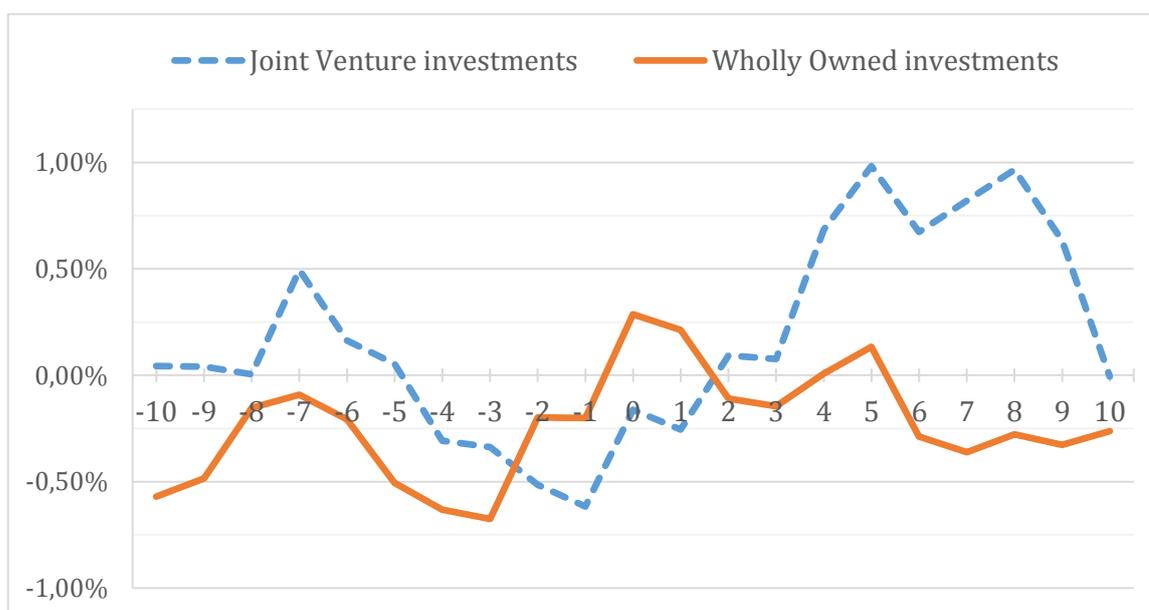


Figure 9 – Plotted cumulative abnormal performance (ownership arrangement)

Hypothesis 2D associates investment into new facilities (greenfield joint ventures and subsidiaries) with higher wealth gains than acquisitions of (or forming a JV that employs) previously built facilities. The hypothesis receives only little support (see table 10 and figure 10). On the event day, only the greenfield investment –subsample gains a significant abnormal return of 0.47 percent. The abnormal return for the brownfield investment is higher but less significant. Curiously, a significant positive AAR is found for brownfield investment two days before the announcement (0.71 percent, p-value 0.43). It is an indication of acquisitions being more prone to leakage, most probably because of the involvement of more stakeholders.

Table 10 – Abnormal performance based on novelty of facilities

Window	Greenfield investments	Brownfield investments	Difference
	N = 53	N = 26	
	CAAR (p-value)	CAAR (p-value)	Δ CAAR (p-value)
[-10 ... -1]	-0,46 % (0,561)	0,19 % (0,787)	-0,65 % (0,627)
[-5 ... -1]	-0,40 % (0,526)	-0,13 % (0,842)	-0,27 % (0,809)
[-1 ... 1]	0,20 % (0,547)	0,75 % (0,260)	-0,55 % (0,499)
AAR(0)	0,47 %* (0,099)	0,61 % (0,126)	-0,13 % (0,810)
[0 ... 1]	0,21 % (0,561)	0,68 % (0,238)	-0,46 % (0,549)
[1 ... 5]	0,87 % (0,237)	-0,01 % (0,987)	0,88 % (0,464)
[1 ... 10]	-0,47 % (0,562)	0,24 % (0,768)	-0,72 % (0,617)



Figure 10 – Plotted cumulative abnormal performance (novelty of facilities)

The final hypothesis 2E suggests that investment in less developed regions within China should experience higher gains than more developed regions. In this study, the distinction is based on whether the target city belongs to the highly developed first-tier cities (Beijing, Hangzhou, Guangzhou, Shanghai and Shenzhen) or not. In table 11, the signs of the differentials contradict the hypothesis in four of the CAAR windows (although insignificant). Furthermore, the subsample event day abnormal returns directly opposes the hypothesis: it is positive and significant for investment into first-tier cities only and insignificant otherwise. The deviation in reactions starting from the third day before the announcement is evident from figure 11.

Table 11 – Abnormal performance based on target-city tier

Window	FDI targeting 1st Tier Cities	FDI targeting 2+ Tier Cities	Difference	
	N = 52 CAAR (p-value)	N = 31 CAAR (p-value)	Δ CAAR	(p-value)
[-10 ... -1]	0,27 % (0,687)	-1,62 % (0,135)	1,89 %	(0,175)
[-5 ... -1]	0,01 % (0,989)	-1,19 % (0,202)	1,20 %	(0,301)
[-1 ... 1]	0,55 % (0,158)	-0,04 % (0,923)	0,59 %	(0,388)
AAR(0)	0,68 %** (0,014)	0,12 % (0,747)	0,56 %	(0,278)
[0 ... 1]	0,50 % (0,117)	0,20 % (0,733)	0,30 %	(0,679)
[1 ... 5]	0,36 % (0,405)	0,95 % (0,407)	-0,59 %	(0,643)
[1 ... 10]	-0,59 % (0,370)	0,58 % (0,601)	-1,17 %	(0,405)

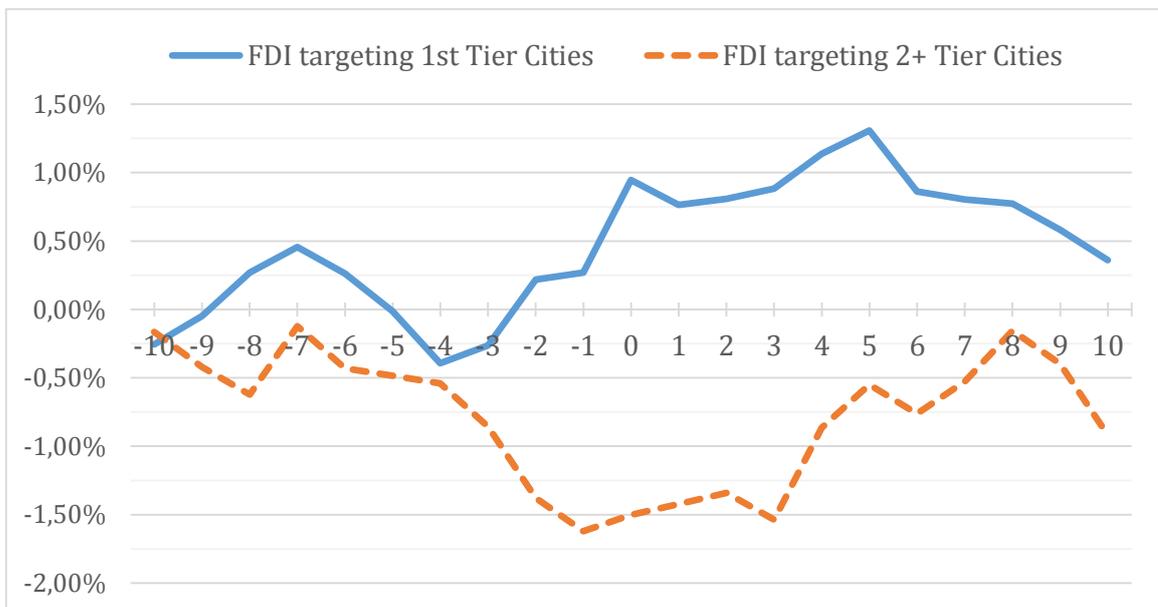


Figure 11 – Plotted cumulative abnormal performance (target-city tier)

6 CONCLUSIONS

Inspired by previous research related to shareholder wealth gains of foreign direct investment, this study set out to test the market reaction to Finnish companies direct investing in China between 1997 and 2014. Event study methodology was used to evaluate the deviation from expected returns in the announcing company's stock price. The results predominantly support the notion of FDI as a value creating activity. Looking at the event date, the announcement of FDI in China has a significant positive impact on the stock price of Finnish companies. On average, the reaction on the event day is 0.47 percent measured in abnormal return. The effect is amplified in the case of novel investment projects, company's first ever establishment to China and investment in Chinese first-tier cities. After 2008, China FDI announcements are perceived more negatively, to the extent of causing negative cumulative abnormal performance. During recession, the risk of suboptimal execution of international projects because of insufficient liquidity could play a role in the lower abnormal returns.

The findings of a positive event-day abnormal return aligns with Sino-U.S. joint venture announcements and general Finland-outward FDI. Most recently, Larimo et al. (2008) reports a slightly higher AAR of 0.57 percent on the event day. They also report a significant CAAR of 1.06 percent for [-1...1]. In this study, the inclusion of the days surrounding the event drives down the size and significance of the returns, regardless of the presence of outliers.

During the examined time period, the economic environment in China has changed, as have the underlying motivations of companies to invest there. More specifically, China has shifted from attracting resource-seeking to market-seeking FDI. It is also possible that the capital markets reward cost-cutting efforts with less hesitation than attempts to break into new markets.

The choice of entry mode between joint venture and wholly owned subsidiary does not affect the market reaction. It seems that the previously restricting Chinese legislation has relaxed to the extent that managers are able to choose the optimal entry mode for their company/industry/situation. Similarly, the market is indifferent towards the company's choice between the greenfield and brownfield entry options.

Earlier Sino-foreign studies have tested the explanation power of the investment location based on a division to inland and coastal regions. This study proposes the use of the target city's tier classification to control for regional differences.

The results of this study are insulated from the effects of contaminating events and outliers. Despite having to eliminate 35% of the found events because of contaminating events, the overall sample size is adequate when comparing to previous studies. Although complementary to the robustness of the results, excluding the outliers with extremely high announcement period returns causes the abnormal returns of the final sample to be downward biased.

The scope of the event study as such observes only the short-term horizon. Other methods are required to make conclusions about the long-term valuation effects. The methodology used here could also be extended with a regression analysis. Employing accounting data as independent variables in a regression analysis could shed light on the cross-sectional differences in market reactions. The current academic research gives next to no food for thought about the influence of macro-economic conditions on market reactions to investment announcements. This would be an interesting approach for future event studies.

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APPENDICES

Appendix 1a: Extract of an M&A announcement

Stock exchange release, Metso Oyj, February 13th, 2006

Published: 2006-02-13 10:30:02 CET



Metso Oyj - Company Announcement

Metso acquires paper machine manufacturer in China

Metso Corporation Stock Exchange Release February 13, 2006 at 11.30 a.m. 1(1)

Metso acquires paper machine manufacturer in China

Metso Paper has made an agreement to buy the entire share capital of Shanghai-Chenming Paper Machinery Co. Ltd, a Chinese manufacturer of paper machines. The company is currently owned by Shandong Chenming and Shanghai Heavy Machinery, and it is located in the Shanghai area in Jiading. The finalization of the transaction is subject to approval by the Chinese authorities. The transaction value will be published after the finalization.

The Shanghai-Chenming Paper Machinery's foundry and machine shop manufacture primarily narrow paper and board machines for the Chinese market as well as dry-end components. The company employs 630 people, and its net sales in 2004 amounted to about EUR 13 million.

"When finalized, the acquisition will enable us to better serve not only our Chinese customers but also the pulp and paper industry in Asia. The Shanghai area is also excellent in terms of developing the purchasing function," notes Risto Hautamäki, President, Metso Paper.

China's paper industry is growing strongly. Since the year 2000, about half the orders for new, big paper manufacturing lines have come from China. Metso Paper is a leading supplier of paper machinery in China, and its strategic objective is to strengthen its presence in customer service, servicing, manufacturing, and sourcing.

The company's current main owner, Shandong Chenming, is one of the biggest paper manufacturers in China and a Metso Paper customer. Metso Paper has delivered several paper machines to Shandong Chenming's mills in Shouguang and Wuhan. The most recent order was for the world's biggest deinking and paper manufacturing lines, which will start up at the end of 2006.

Metso is a global engineering and technology corporation with 2005 net sales of approximately EUR 4.2 billion. Its 22,000 employees in more than 50 countries serve customers in the pulp and paper industry, rock and minerals processing, the

Appendix 1b: Extract of a joint venture announcement

Company announcement, Biohit Oyj, July 25th, 2013

Published: 2013-06-25 10:00:00 CEST



Biohit Oyj
Company Announcement

Biohit to establish Joint Venture in China - Biohit Biotech (Hefei) Co., Ltd.

Biohit Oyj June 25, 2013 at 11 A.M. local time (EET)

Finnish healthcare company Biohit Oyj has agreed to set up a Joint Venture company in China. The Chinese partner to the Joint Venture is Anhui Wisdom-Win Investment Co., Ltd. Official name of the Joint Venture is Biohit Biotech (Hefei) Co., Ltd., located in the city of Hefei in Anhui province, China. The objective of the partners in forming Biohit Biotech (Hefei) Co., Ltd is to manufacture and sell high quality GastroPanel kits to the Chinese market area. GastroPanel is a non-invasive blood test that reliably identifies both healthy and unhealthy stomachs as well as helps to prioritize patients for further examinations.

Mr. Liu Feng, the owner of Anhui Wisdom-Win Investment Co., Ltd. who is also General Manager of Hefei Medicine Co. Ltd. China, invests 20 million RMB (2.5 MEUR) in Biohit Biotech (Hefei) Co., Ltd. Immaterial investments made by Biohit is worth of 13 MRMB and includes know-how expertise as well as production technologies and related patents to Joint Venture.

Anhui Wisdom-Win Investment Co., Ltd. will own 60 % of Biohit Biotech (Hefei) Co., Ltd. Biohit will own 40 % of Biohit Biotech (Hefei) Co., Ltd. Mr. Liu Zhen has been appointed CEO of Biohit Biotech (Hefei) Co., Ltd.

The regulatory approvals are pending and are expected to be finalized during 2014. Biohit Biotech (Hefei) Co., Ltd shall aspire to meet recognized international quality standards by the end of 2014. During the approval process, ramp-up costs will be covered from 20 MRMB investment.

The joint venture is consolidated to the Biohit Group using the equity method. Biohit's 40% share of the joint venture shareholders' equity and profit or loss is respectively recognized in the consolidated balance sheet and income.

Foundation of the Joint Venture will create a deferred income worth around one million euros, thus the recognition of revenue is postponed until the new company has been authorized so start operations in the Chinese market. The deferred income is recognized to cover the license application process and the start-up phase. This method is based to conservatism principle, because the company does not yet have an official license.

CEO Semi Korpela, Biohit Oyj: "We are pleased to announce this Joint Venture agreement. Our local partners will provide excellent conditions for Biohit Biotech (Hefei) Co., Ltd."

Appendix 1c: Extract of a wholly owned subsidiary announcement,
Stock Exchange Release, Wärtsilä Oyj, January 17th, 2005

Published: 2005-01-17 10:00:03 CET



Wärtsilä Oyj Abp - Company Announcement

WÄRTSILÄ ESTABLISHING THRUSTER PRODUCTION PLANT IN CHINA

Wärtsilä Corporation STOCK EXCHANGE RELEASE 17 January, 2005 at 11 am

WÄRTSILÄ ESTABLISHING THRUSTER PRODUCTION PLANT IN CHINA

Wärtsilä is developing the Propulsion business and is setting up a wholly owned, state-of-the-art factory for Transverse Thrusters in Wuxi, PR China. Production will start in mid 2005. Wuxi is located approximately 100 km west of Shanghai. The name of the company is Wärtsilä Propulsion (Wuxi) Co. Ltd.

The company will produce LIPS brand Transverse Thrusters and will serve the global shipbuilding market. Transverse Thrusters, also known as bow thrusters or tunnel thruster, are used in all kind of vessels. Nearly every vessel has a one or more Transverse Thruster. The thruster is used as a manoeuvring aid or for dynamic positioning purposes. Wärtsilä will also complete its portfolio by adding new sizes of Transverse Thrusters giving better market coverage.

"This venture brings Wärtsilä even closer to Asian customers, which will help us to serve them better. As the focus of the world's shipbuilding industry shifts heavily to Asia, Wärtsilä has the opportunity to increase its market share in Transverse Thrusters", says Mikael Mäkinen, Group Vice President, Ship Power.

Value of the factory investment is EUR 6.6. million. The factory will employ some 120 employees by step by step approach according to volume development.

Further information: Mikael Mäkinen, Executive Vice President, Group Vice President, Ship Power, Wärtsilä Corporation, Tel: +358-10-709 0000.

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Appendix 2a: Robustness check 1 – results using market parameters $\alpha = 0$ and $\beta = 1$

Day	Initial sample			Final sample (excludes outliers)		
	N = 87			N = 84		
	AAR	t-stat	(p-value)	AAR	t-stat	(p-value)
-10	-0,25 %	-1,069	(0,288)	-0,25 %	-1,090	(0,279)
-9	0,14 %	0,872	(0,386)	0,10 %	0,617	(0,539)
-8	0,02 %	0,115	(0,909)	0,03 %	0,160	(0,873)
-7	0,14 %	0,622	(0,536)	0,25 %	1,075	(0,286)
-6	-0,52 %*	-1,984	(0,050)	-0,36 %	-1,503	(0,137)
-5	-0,18 %	-0,717	(0,475)	-0,28 %	-1,128	(0,263)
-4	-0,22 %	-1,016	(0,312)	-0,20 %	-0,943	(0,349)
-3	-0,06 %	-0,342	(0,733)	-0,12 %	-0,621	(0,536)
-2	0,36 %	1,335	(0,185)	0,27 %	1,022	(0,310)
-1	-0,33 %	-1,420	(0,159)	-0,33 %	-1,387	(0,169)
0	1,05 %***	3,051	(0,003)	0,64 %***	2,914	(0,005)
1	-0,17 %	-0,738	(0,462)	-0,03 %	-0,152	(0,880)
2	-0,08 %	-0,299	(0,766)	-0,01 %	-0,050	(0,960)
3	-0,17 %	-0,852	(0,397)	-0,20 %	-1,012	(0,314)
4	0,48 %*	1,987	(0,050)	0,55 %**	2,225	(0,029)
5	0,32 %	1,272	(0,207)	0,12 %	0,675	(0,501)
6	-0,48 %**	-2,150	(0,034)	-0,51 %**	-2,198	(0,031)
7	-0,06 %	-0,256	(0,799)	-0,14 %	-0,650	(0,518)
8	0,34 %	1,167	(0,246)	0,31 %	1,022	(0,310)
9	0,07 %	0,236	(0,814)	0,07 %	0,226	(0,821)
10	-0,40 %*	-1,899	(0,061)	-0,41 %*	-1,904	(0,060)

Window	(Initial sample)			(Final sample)		
	CAAR	t-stat	(p-value)	CAAR	t-stat	(p-value)
[-10 ... -1]	-0,90 %	-1,362	(0,177)	-0,89 %	-1,317	(0,191)
[-5 ... -1]	-0,43 %	-0,781	(0,437)	-0,88 %	-1,579	(0,118)
[-1 ... 1]	0,56 %	1,413	(0,161)	0,28 %	0,912	(0,364)
AAR(0)	1,05 %***	3,051	(0,003)	0,64 %***	2,914	(0,005)
[0 ... 1]	0,89 %**	2,303	(0,024)	0,61 %*	1,914	(0,059)
[1 ... 5]	0,39 %	0,797	(0,428)	0,42 %	0,861	(0,392)
[1 ... 10]	-0,13 %	-0,178	(0,859)	-0,26 %	-0,374	(0,709)

Appendix 2b: Robustness check 2 – results using a 125-day estimation period

Day	Initial sample			Final sample (excludes outliers)		
	N = 87			N = 83		
	AAR	t-stat	(p-value)	AAR	t-stat	(p-value)
-10	-0,21 %	-0,951	(0,344)	-0,23 %	-1,071	(0,287)
-9	0,14 %	0,795	(0,429)	0,10 %	0,567	(0,572)
-8	0,09 %	0,617	(0,539)	0,11 %	0,718	(0,475)
-7	0,21 %	1,101	(0,274)	0,35 %*	1,822	(0,072)
-6	-0,44 %*	-1,709	(0,091)	-0,22 %	-0,976	(0,332)
-5	-0,10 %	-0,447	(0,656)	-0,15 %	-0,647	(0,520)
-4	-0,24 %	-1,265	(0,209)	-0,23 %	-1,192	(0,237)
-3	-0,02 %	-0,152	(0,879)	-0,02 %	-0,125	(0,901)
-2	0,17 %	0,684	(0,496)	0,09 %	0,379	(0,706)
-1	-0,10 %	-0,479	(0,633)	-0,03 %	-0,178	(0,859)
0	0,92 %***	2,712	(0,008)	0,47 %**	2,150	(0,034)
1	-0,22 %	-1,143	(0,256)	-0,11 %	-0,648	(0,518)
2	0,01 %	0,037	(0,971)	0,09 %	0,366	(0,715)
3	-0,03 %	-0,198	(0,843)	-0,04 %	-0,252	(0,802)
4	0,33 %	1,517	(0,133)	0,41 %*	1,812	(0,074)
5	0,37 %	1,641	(0,104)	0,24 %	1,520	(0,132)
6	-0,35 %*	-1,925	(0,058)	-0,35 %*	-1,814	(0,073)
7	0,15 %	0,707	(0,481)	0,03 %	0,165	(0,870)
8	0,36 %	1,309	(0,194)	0,12 %	0,688	(0,493)
9	-0,03 %	-0,129	(0,898)	-0,19 %	-1,121	(0,266)
10	-0,31 %*	-1,860	(0,066)	-0,30 %*	-1,784	(0,078)

Window	(Initial sample)			(Final sample)		
	CAAR	t-stat	(p-value)	CAAR	t-stat	(p-value)
[-10 ... -1]	-0,50 %	-0,854	(0,395)	-0,24 %	-0,401	(0,689)
[-5 ... -1]	-0,29 %	-0,607	(0,545)	-0,29 %	-0,607	(0,545)
[-1 ... 1]	0,60 %	1,654	(0,102)	0,32 %	1,079	(0,284)
AAR(0)	0,92 %***	2,712	(0,008)	0,47 %**	2,150	(0,034)
[0 ... 1]	0,70 %**	2,028	(0,046)	0,36 %	1,220	(0,226)
[1 ... 5]	0,46 %	0,841	(0,403)	0,58 %	1,126	(0,263)
[1 ... 10]	0,27 %	0,336	(0,737)	-0,11 %	-0,183	(0,855)

Appendix 2c: Robustness check 3 – results using a 375-day estimation period

Day	Initial sample			Final sample (excludes outliers)		
	N = 87			N = 84		
	AAR	t-stat	(p-value)	AAR	t-stat	(p-value)
-10	-0,18 %	-0,806	(0,422)	-0,21 %	-0,917	(0,362)
-9	0,07 %	0,379	(0,706)	0,01 %	0,053	(0,958)
-8	0,12 %	0,793	(0,430)	0,13 %	0,826	(0,411)
-7	0,15 %	0,753	(0,453)	0,26 %	1,369	(0,175)
-6	-0,46 %*	-1,828	(0,071)	-0,26 %	-1,171	(0,245)
-5	-0,14 %	-0,593	(0,555)	-0,21 %	-0,930	(0,355)
-4	-0,27 %	-1,472	(0,145)	-0,27 %	-1,445	(0,152)
-3	-0,04 %	-0,251	(0,803)	-0,04 %	-0,276	(0,783)
-2	0,18 %	0,728	(0,469)	0,11 %	0,462	(0,645)
-1	-0,15 %	-0,779	(0,438)	-0,06 %	-0,296	(0,768)
0	0,95 %***	2,707	(0,008)	0,47 %**	2,162	(0,033)
1	-0,14 %	-0,748	(0,456)	-0,06 %	-0,335	(0,739)
2	0,00 %	0,000	(1,000)	0,07 %	0,269	(0,788)
3	-0,02 %	-0,132	(0,895)	-0,04 %	-0,214	(0,831)
4	0,33 %	1,535	(0,128)	0,39 %*	1,730	(0,087)
5	0,36 %	1,640	(0,105)	0,20 %	1,323	(0,189)
6	-0,37 %**	-1,991	(0,050)	-0,38 %*	-1,907	(0,060)
7	0,16 %	0,734	(0,465)	0,02 %	0,103	(0,918)
8	0,33 %	1,233	(0,221)	0,10 %	0,579	(0,564)
9	-0,02 %	-0,068	(0,946)	-0,20 %	-1,163	(0,248)
10	-0,32 %*	-1,963	(0,053)	-0,35 %**	-2,099	(0,039)

Window	(Initial sample)			(Final sample)		
	CAAR	t-stat	(p-value)	CAAR	t-stat	(p-value)
[-10 ... -1]	-0,73 %	-1,248	(0,215)	-0,53 %	-0,908	(0,367)
[-5 ... -1]	-0,42 %	-0,865	(0,389)	-0,58 %	-1,206	(0,231)
[-1 ... 1]	0,66 %*	1,797	(0,076)	0,35 %	1,195	(0,235)
AAR(0)	0,95 %***	2,707	(0,008)	0,47 %**	2,162	(0,033)
[0 ... 1]	0,81 %**	2,209	(0,030)	0,41 %	1,410	(0,162)
[1 ... 5]	0,54 %	1,031	(0,305)	0,57 %	1,120	(0,266)
[1 ... 10]	0,32 %	0,402	(0,689)	-0,24 %	-0,410	(0,683)