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INVESTMENT BEHAVIOR BY FOREIGN FIRMS IN TRANSITION ECONOMIES THE CASE OF VIETNAM

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Contents

Abbreviations

ASEAN	Association of Southeast Asian Nations
BTA	Bilateral Trade Agreement
CIEM	Central Institute for Economic Management
CEE	Central and Eastern European Countries
EPZ	Export Processing Zone
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GSO	General Statistics Office
IZ	Industrial Zone
LURC	Land Use Rights Certificate
MNC	Multinational Corporation
MPI	Ministry of Planning and Investment
PCI	Provincial Competitiveness Index
SBV	State Bank of Vietnam
SOE	State-Owned Enterprise
UNCTAD	United Nations Conference on Trade and Development
US	United States
VCCI	Vietnam Chamber of Commerce and Industry
VNCI	Vietnam Competitiveness Initiative
WTO	World Trade Organization

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Writing a Ph.D. thesis is like embarking on a long journey. At the beginning, we are eager of exploring a new territory. However, to get the target, we need to get the right tools at the right place and understand the country of data. Along this journey, we sometimes feel exhausted and wonder why we come here. Looking back this journey, I would like to thank many people who make my interest continued and difficulties reduced by half.

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Introduction

According to the World Bank Report 2002, transition economies are formerly socialist countries in the East Asia, the Central and Eastern Europe and the newly independent states of the former Soviet Union. After the fall of the Iron Curtain in 1989, most countries of the former Soviet bloc moved successfully from centrally planned economies and one-party governments towards market economies with multiparty parliamentary democracy. In the East Asia, Vietnam and China are although still led by the communist parties, their economies are gradually growing out of central planning through gradualist policies (Peng, 2003). In the transition process, these countries have opened to Western business after more than fifty years following a policy of economic autarky. With a short time, the policy environments changed radically, creating new conditions for international investment. Many multinational enterprises have been attracted by new markets, cheap labor forces and supporting policies toward foreign direct investment (FDI) in transition economies (Lankes and Venables, 1996; Meyer, 1998; Cheng and Kwan, 2000; Bevan and Estrin, 2000).

Among the various forms of international business, FDI is considered the most effective way by which transition economies become integrated to the global economy. FDI involves the transfers of multiple resources to a host country, especially transfers of capital, knowledge, management skills, marketing know-how and the latest production technology. FDI is hoped to provide urgently needed capital for countries with limited access to international capital markets and to generate cash revenues through privatization for empty budgets. Further, the entries of foreign firms are expected to foster changes in the economic system, create competition and promote the development of private sector. Foreign investors also facilitate exports to Western markets through their knowledge and experience of the relevant markets as well as access to distribution networks (Girma *et al.*, 2005; Meyer, 1998; Nguyen and Xing, 2006). FDI therefore interacts with many aspects of the transition process through its direct impact on macroeconomics such as the balance of payments and employment, through the

transfer of knowledge and through the role of investors as new owners of formerly state-owned enterprises (Meyer, 1998). The transition vice versa influences FDI inflows. For instance, FDI is gravitated to countries with furthest progress in economic and institutional reforms to minimize transaction costs of doing business (Baniak *et al.*, 2002; Meyer, 2001).

In order to understand the interaction between foreign investors and the local economy, we have chosen Vietnam as a case study. As other transition economies, from the late 1970s until 1990, Vietnam was integrated in the trading system of the Soviet Union and its allies with few other linkages. In the 1980s, Vietnam experienced severe shortages of food and basic consumer goods, a high budget deficit, three-digit inflation, chronic trade imbalances and deteriorating living standards. The economic stagnation forced the Vietnamese government to initiate an overall economic reform from a planned economy to a market economy in 1986. The main task of the reform program is to encourage development of private sector and to reduce the dependence of the overall economy on inefficient state-owned enterprises. In this process, foreign direct investment has played an important role in creating an "imported" private sector and strengthening the competitiveness of the economy.

The first Law on Foreign Investment issued in 1987 by the Vietnamese government is considered as one of the first concrete steps towards economic renovation and FDI encouragement. This law was amended several times in 1992, 1996, 2000, and most recently replaced by a new law on investment integrating both domestic and foreign investment (Unified Investment Law 2006). These changes and amendments aimed to remove obstacles against the operation of foreign investors and to improve the investment climate in Vietnam, creating a level playing field for both domestic and foreign firms. Usually, these changes are to provide more tax incentives, to simplify investment licensing procedures, and to promote transfer of technology.

Besides favorable and open policies toward foreign investments, Vietnam also attracts foreign investors with a new market and low costs of production factors. Before the economic renovation, the consumers in Vietnam had almost no access to many consumer goods. After the opening of the economy, Vietnam with nearly 80 millions people has become a large market for consumer goods manufacturers. Moreover, factor-cost advantages arising from relatively low costs of raw materials and low labor costs create the attractiveness of Vietnam compared with neighboring countries especially in textile, garment, and sea food manufacturing industries (Mirza and Giroud, 2004).

However, foreign firms in Vietnam still have to pay high transaction costs associated with searching, negotiating and contracting with domestic partners arising from an incomplete, inconsistent and continuously changing institutional framework. Many managers in Vietnam complained about the lack of market information on suppliers, buyers, price trends and changes in policies and regulations, and they have to use personal relationships with local authorities to get important information (The Provincial Competitiveness Index Report 2006).

Moreover, according to the decentralization policy in the FDI law amendment in 1996, each province has more power and autonomy in dealing with foreign investments such as in granting investment licenses, leasing land, recruiting labor and providing export and import licenses. This policy, on the one hand, allows provincial authorities to develop innovative ways to attract more foreign investors, but on the other hand, it leads to variations in the implementation of the central laws and regulations among provinces. Foreign investors may experience a lot of red tapes such as corruption or delays in administrative progress if local authorities possess conservative inherited norms and cognitions. In this context, foreign investors have to consider many factors when investing in Vietnam such as modes of entry and location choices for their operations so that they can make use of advantages and minimize disadvantages.

This thesis focuses on determinants of location choices by foreign firms in Vietnam at the provincial level of which institutions and agglomeration economies are key factors. We also analyze the effect of entry mode choices and location choices on the survival probability of foreign entrants. The main data sources used for empirical research are the yearly surveys of the enterprises operating in Vietnam conducted by the General Statistics Office of Vietnam since 2000. These are comprehensive surveys covering all state enterprises, non-state enterprises that have equal or greater than 10 employees, 20% of sampled non-state enterprises with fewer than 10 employees, and all foreign enterprises across 64 provinces and cities in Vietnam. These datasets provide a useful source to analyze the behavior by foreign firms at the firm level. The description of the dataset, the surveys' questionnaire and selected variables definitions are presented in Chapter 1 and Appendix A.

The structure of this dissertation is as follows. The *first* chapter presents a literature review on FDI with the aim to explore the motivations driving a firm to expand investments abroad, the reasons why FDI is preferred to other investment forms, and the main factors affecting location choices of foreign investors. Since our thesis focuses on location decisions of foreign firms in Vietnam, we spend more room on the discussion of the location theories such as the theory of

comparative advantages, localization theory, institutional based view and information cost approach. Subsequently, we present a theoretical review on FDI determinants in transition economies and in Vietnam. We state that market size, labor costs and the riskiness of investment environments are key factors affecting FDI inflows to these countries. The final section provides the description of data source that is used for the empirical studies in Vietnam.

The *second* chapter studies the effect of institutional practices by local authorities on the entry rates of foreign firms in Vietnam over the period 2000-2005. The Vietnamese provincial competitiveness index in 2006 (PCI 2006) and its two sub-indices reflecting attitudes of local government toward state-owned enterprises and the capability of private enterprises to access to necessary information for their business are used as proxies for institutional implementations by provincial authorities. The empirical findings show that provinces with better institutional performance attract more foreign firms. The results support our argument that just as institutions at the national level affecting the overall volume of FDI inflows, informal institutions at the sub-national level influence FDI spatial distributions among provinces within the country. Formal legal changes initiated at the centre have varied impacts across provinces because the implementation of laws and regulations at local level depends on the informal institutions determined by attitudes (norms and cognitions) of local authorities.

The *third* chapter examines the effects of agglomeration economies on the location choices by foreign firms in Vietnam. By using a large dataset that provides detailed information about individual firms, we examine the location choices by 568 newly created foreign firms in 2005 in about 150 different 4-digit industries. The estimates of the negative binomial regression model and the conditional logit model strongly support our hypotheses that agglomeration benefits motivate foreign firms in the same industries and from the same countries of origin to locate near each other. Moreover, the empirical results show that provinces in Vietnam compete with each other to attract FDI, and the locations of Vietnamese firms have no effects on the location decisions by foreign firms in the same industry.

The *last* chapter investigates the survival probability of foreign entrants in Vietnam by looking at the life span of 187 foreign firms created in 2000 over the period 2000-2005. By applying the Cox proportional hazard model, we find that foreign firms with larger start-up size and growing current size are more likely to stay longer in the market. We also reveal that foreign firms entering the market with wholly-owned subsidiaries rather than making joint ventures with local partners can live longer. In addition, locating in industrial zones or export

processing zones increases the survival probability of foreign firms due to tax priority and other incentives. However, by contrast to our prediction, agglomeration economies have no significant effect on firm survival. As expected, cultural distance is found to have a strong impact on the survival of foreign firms. Proximities in culture make it easier for foreign firms in cooperating with local partners, therefore increasing their success in foreign markets.

Chapter 1

Literature Review on Foreign Direct Investment and Description of the Dataset

1. Introduction

Transition economies are formerly socialist countries in East Asia, Central and Eastern Europe and the newly independent states of the former Soviet Union (The World Bank Report 2002). The economic stagnation during 1980s forced these countries to implement economic reforms by restructuring the economies from planned to increasingly market-driven economies. The main task is to transfer enterprises from the state ownership to private ownership in order to increase efficiency of production and reduce the dependence of the overall economy on inefficient state-owned enterprises. In this process, foreign direct investment (FDI) has played an important role in creating an "imported" private sector and strengthening the competitiveness of the economies.

Empirical studies on FDI in transition economies show that foreign investors are mainly attracted to these countries by new markets, low labor costs and favorable policies toward FDI (Meyer, 1998; Cheng and Kwan, 2000; Bevan and Estrin, 2002). FDI is considered one of the most effective ways by which transition economies become integrated to the global economy as FDI involves the transfers of multiple resources to a host economy, especially transfers of capital, knowledge, management skills, marketing know-how and the latest production technology. Further, the entries of foreign firms are expected to foster changes in the economic system, create competition and promote the development of private sector. Foreign investors also facilitate exports to Western markets through their knowledge and experience of the relevant markets as well as access to distribution networks (Girma *et al.*, 2005; Meyer, 1998; Nguyen and Xing, 2006).

Besides advantages that foreign firms benefit when investing in transition economies, they, however, have to face many difficulties coming from low-skilled labor forces, backward infrastructure conditions, and especially the weakness of incomplete and unstable institutional frameworks such as underdeveloped political and constitutional court systems, corruption and bureaucratic inefficiency (Bevan *et al.*, 2004; Meyer, 2001). In addition, domestic agents in transition economies lack the knowledge and experience to use market mechanism and to correctly identify potential partners and competitors. These disadvantages increase production costs as well as transaction costs associated with searching, negotiating and monitoring local partners. Foreign investors, therefore, have to think strategically about how to limit disadvantages to obtain the highest benefits when entering transition markets.

In order to understand the interaction between foreign firms and the local economy, it is first of all necessary to understand the foreign investors, such as what motivates them to invest abroad, why they prefer FDI over other investment forms such as exporting or licensing, and which factors influence their location decisions. By reviewing literatures on FDI, this chapter provides an understanding of the firm's strategies and builds up the theoretical backgrounds for empirical studies in the next chapters.

The structure of this chapter is as follows. Section 2 presents general literatures on FDI with the focus on three issues: the sources of ownership advantages, the reasons for internalization, and the location of FDI. Since our thesis concentrates on location choices by foreign firms, this section will spend more room on discussions of location theories. Section 3 provides an overview of FDI in transition economies through which we can have a comparison of the foreign firm's strategies in foreign countries in general and in transition economies in particular. In section 4, we move to summarizing literatures on FDI determinants in Vietnam at the national and regional levels. Section 5 introduces general descriptions of the dataset that is used for our empirical work. The final section is devoted to some conclusions.

2. Determinants of FDI: a review of the literature

Globalization in business creates opportunities for investors to expand their activities and exploit their capabilities abroad to reap greater benefits. FDI is one of the ways a firm uses to enter foreign markets. With its enormous potential to create jobs, raise productivity, enhance exports and transfer technology, FDI is a vital factor in long-term economic growth, especially for developing countries. In

this section, we first provide some main concepts of FDI and then move to reviewing literatures on FDI.

FDI is defined as an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) to an enterprise resident in another country (FDI enterprise). FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy (UNCTAD)[1].

FDI involves the transfer of a package of assets which include financial capital, technology, management skills and organizational principles of the firm from one country to another. There is an important distinction between FDI and foreign portfolio investment. Foreign portfolio investment is an investment by firms or individuals in financial instruments issued by a foreign government or a foreign company (e.g. government bonds, foreign stocks…). Investors can get benefits but do not have any right to control the decision taking process (Dunning, 1993).

There are two kinds of FDI: horizontal and vertical FDI. Horizontal FDI, where multi-plant firms duplicate roughly the same activities in multiple countries, has been distinguished from vertical FDI, where firms locate different stages of production in different countries. FDI can take in forms of greenfield investments by establishing a subsidiary from the beginning or cross-border mergers and/or acquisitions of existing firms in host countries. As FDI is mostly implemented by multinational corporations (MNCs) and the theory of MNCs is embedded with FDI, it is important to understand some main concepts of MNCs.

According to Dunning (1993), a multinational or a transnational enterprise is an enterprise that engages in foreign direct investment and owns or controls value-adding activities in more than one country. Making the definition more detailed, Barlett and Ghoshal (1995) state that an MNC first must have substantial direct investment in foreign countries, not just an export business. Moreover, an MNC has to be engaged in the active management of these subsidiaries rather than simply holds them in a passive financial portfolio. So by this definition, all companies that source their raw materials abroad, license their technologies offshore, export their products into foreign markets, or even hold minority equity positions in oversea ventures without any management involvement can be regarded as international corporations, but they are not real MNCs if they do not have substantial direct investment in foreign countries, actively manage those

[1] UNCTAD: UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
http://www.unctad.org/Templates/Page.asp?intItemID=3146&lang=1

operations, and regard those operation as integral parts of the company both strategically and organizationally.

The question here is that why and when FDI happens. In other words, which are the motivations of a firm to invest abroad, why the firm prefers FDI over other investment forms such as domestic investment, exporting, and licensing, and which factors influence the firm's location decisions? By reviewing literatures on FDI, the following paragraphs intend to provide answers to these questions.

Early research analyzed FDI as a financial flow between countries (Aliber, 1970; Logue and Willet, 1977; Batra and Hadar, 1979). Different rates of return to capital induce movements of capital flows corresponding to differences in the marginal productivity of capital. The basic premise is that firms invest in countries with a relatively low capital endowment and high capital costs. FDI serves as international capital arbitrage. In this case, foreign firms earn a currency premium by utilizing the interest differential between hard currency and weak currency countries. Later on, as researchers recognize the special characteristics of direct, rather than portfolio, investment, they focus on three issues: (1) the sources of firm-specific advantages and knowledge capital (Hymer, 1976; Wernerfelt, 1984; Markusen, 1995), (2) the reasons for internalization (Dunning, 1993; Buckley and Casson, 1976), and (3) the location of FDI (Dunning, 1993; Krugman, 1991). Since our thesis focuses on location choices by foreign firms, more discussions will be dedicated to the third aspect – the location theory of FDI.

2.1. Firm-specific advantages and knowledge capital

Most scholars trace the first attempt to systematically explain the activities of firms outside their natural boundaries to Hymer's 1960 dissertation (published in Hymer, 1976). By observing a substantial growth in the activities of US firms abroad, he found that in order to compete with indigenous firms, foreign entrants must possess some specific advantages including intellectual property rights and intangible assets embodied in the human capital of the firm, such as management, engineering, marketing and financial capabilities. These specific advantages give a firm some degree of monopolist power to overcome its lack of knowledge about local environment innate in the local firms which foreign entrants can only acquire at a cost, and also serve to compensate for the foreigner's costs of operating abroad.

In terms of the resource-based view (Wernerfelt, 1984; Barney, 1991), competitive advantages of firms arise from "tacit knowledge" such as patents or other exclusive technical knowledge. Tacit knowledge, as clearly illustrated in the

work of Nelson and Winter (1982), is an embedded component of both individual skills and organization routines. Unlike machines or blueprints, they cannot be easily transferred to other firms. Indeed, they can exist and create value only in the firm in which they have evolved. This view gives rise to the concept of knowledge-based assets.

Markusen (1995) pointed out two reasons why the knowledge-based assets are more likely to give rise to FDI than physical assets. First, knowledge-based assets can be transferred easily back and forth across space at low cost. An engineer or a manager can visit many production sites at a relatively low cost. Second, knowledge often has a joint character, like a public good, in that it can be supplied to additional production facilities at very low cost. The joint-input characteristic of knowledge-based assets allows an MNC to gain economies of multiplant production because a single two-plant firm has cost efficiency over two independent single-plant firms. By contrast, physical capital usually cannot yield a flow of services in one location without reducing its productivity in others. Brainard (1993b) stated that scale economies based on physical intensity do not by themselves lead to foreign direct investment. This type of scale economy implies the cost efficiency of centralized production rather than geographically dispersed production. Indeed, the empirical evidence shows that the presence of MNEs is the greatest in sectors characterized by large investments in research and development, a large share of professional and technical workers, and the production of technically complex or differentiated goods (Cave, 1982; Buckley and Casson, 1976; Brainard, 1993a, b).

2.2. Internalization theory

Hymer (1976) argued that the existence of special advantages is only the necessary condition for foreign firms to invest successfully abroad, but not yet enough to explain the motivation for moving their production to another country. A foreign firm can exploit its advantages through producing at home and then exporting or through licensing or making joint venture with local partners. If a firm has a proprietary product or production process and if, due to tariffs and transport costs, it is advantageous to produce the product abroad rather than export it, it is still not obvious that the firm should set up a foreign subsidiary. The firm can license a foreign firm to produce the product or use production process, or it can combine with local partners to set up a joint venture. Reasons for wishing to set up a foreign subsidiary are referred to as internalization advantages.

Internalization means that a multinational firm, including its subsidiaries in foreign countries, should implement and control the whole production process of a

product from raw material inputs to sales stage rather than implement arm's-length agreements. This choice is driven by market failures affecting the contractual relationship with local firms, creating difficulties and uncertainty for MNEs to fully exploit their ownership advantages. In other words, FDI is to do with firms choosing to keep activities inside the firm, operating wholly-owned foreign subsidiaries (Barba Navaretti and Venables, 2004).

This theory is rooted on the transaction cost approach initiated by Coase (1937) and developed in the well-known work by Williamson (1975). Firms operating in an imperfect market have to face informational asymmetry between the nature and the value of products or transaction costs arising from enforcing contract with the partners and monitoring the quality of intermediate products. Internalization thus is likely to be an important strategy by which a market-making firm can guarantee the quality of the final products it offers to customers.

There are three sets of issues that may affect market transactions between MNEs and local producers in host economies. The first one is *hold-up problem* that arises in the presence of incomplete contracts when it is not possible to write contracts covering all possible contingencies affecting the relationship between the firm and an input supplier because of uncertainty. Thus, parties in these transactions might wish to renegotiate the terms of the contract ex-post, and if the investment is specific to the relationship, then the supplier's bargaining position will be weak. Fearing this, the supplier's initial investment is likely to be suboptimal. This inefficiency reduces the total return from outsourcing, making it more likely that investments will be undertaken by wholly owned subsidiaries.

The second one is the *dissipation of intangible assets*. Local partners may learn the firm's technology to their own advantage and become competitors in the future. Moreover, they could dissipate the MNE's reputation by producing low-quality products under high-quality brands. In both cases, the risk of dissipation is lower if the firm carries out the activities with its own subsidiaries. The third issue concerns the *principal-agency relationship* between MNEs and local firms. In this case, the relationship can be affected by problems of hidden action or hidden information about the local market. The local agents could have an interest in reporting that the market is worse than it actually is to justify their poor performance.

In terms of empirical works, most researchers use transaction cost theory to study entry mode choices by foreign firms, especially between wholly owned modes and joint ventures. For instance, Kogut and Zander (1993) find that the more tacit the technology is, the more firms prefer to set up wholly-owned subsidiaries rather than sharing the knowledge with other partners. In their views,

there is a distinguishable boundary in the knowledge between the partners in the joint venture. It is therefore difficult to have a common understanding between partners by which to transfer knowledge from ideas into productions and markets efficiently. Meyer (2001) studied foreign firms in transition economies and found that they prefer to set up wholly owned subsidiaries rather than joint ventures. In these countries, foreign firms lack information about local partners, and domestic firms lack knowledge of market mechanism and inexperience in doing business with foreign firms. Foreign investors, therefore, have to pay high transaction costs of searching, negotiating and monitoring if making joint ventures with local partners. Moreover, in transition economies, the diffusion of knowledge is of particular concern because the institutional framework does not provide for the efficient protection of intellectual property rights. Hence, technology-intensive firms would prefer to internalize their transactions in high-tech goods and services, including transfer of production know-how, assessment of market opportunities for innovation products, as well as the training of sales and service personnel (Oxley, 1999; Hennart 1991).

2.3. The location of FDI

In the previous parts, we have learned the reasons why a firm engages in FDI. However, once the firm decides to extend its activities abroad through FDI, it will face a two-tier choice of the optimal location for its operation: (1) select the country it wants to invest; and (2) pick the best region within that country to locate its plant. This part presents the factors that influence location decisions of the firm with a focus on the literatures relevant to our empirical studies, such as *theory of comparative advantages*, *localization theory*, *institution-based view*, and *information cost approach*.

Theory of comparative advantages

The traditional basis for analysis of international economic activity is the neoclassical theory of international trade. This theory, known as the factor endowment theory of international trade, is developed by Heckscher and Ohlin from the Ricardo's theory of comparative advantages (Krugman and Obstfeld, 1997). It explains international trade in terms of comparative advantages of participating countries based on the assumption of perfect competition in which certain resources or factors are immobile, production functions and consumer preference are identical, and specialization is incomplete. The basic premise is that countries should specialize in producing and exporting products that utilize

their abundant and cheap factors of production and import products that utilize the countries' scarce factors. The trade theory suggests that location of international production is based on comparative advantages of factor costs. If firms use FDI to minimize costs, they will move to the location where production costs are lowest.

The concept of location advantages as reviewed by Cave (1982), Dunning (1993) and Brainard (1997) covers many aspects, including production costs and factor endowments, market size, and taxation policies to attract FDI. Researchers when discussing factors affecting location choices by foreign firms have considered FDI in two forms: horizontal FDI and vertical FDI. As mentioned before, horizontal FDI implies that the firm duplicates its entire activities by setting up a foreign plant in addition to a home plant. Vertical FDI means that the firm splits its activities by function. It might decide, for example, to put all of its production of a particular component part in a separate foreign plant. In horizontal FDI models, the question is how best to serve the host market whereas in vertical FDI models, the question is typically how best to serve the domestic and other markets.

Standard models of horizontal FDI revolve around the trade-off between plant-level fixed costs and trade costs (Markusen, 1984). When the potential host country is small and the potential savings in trade costs (with accrue per unit of exports to the host country) are insufficient to offset the fixed costs of setting up a production facility there, exports are chosen over FDI as the method for serving the market abroad. Bigger market size of the host country, smaller plant-level fixed costs, and larger trade costs are more conducive to horizontal FDI. Further, the proximity-concentration trade-off theory (Brainard, 1997) refers to the common tenet that FDI occurs when the benefits of producing in a foreign market, such as proximity to customers, low transport costs and trade barriers, outweigh the benefits of scale economies that could be reaped if production is concentrated in the home country.

Unlike horizontal FDI, standard models of vertical FDI involve deciding where to locate production to minimize factor costs. The trade-off is between the benefits of producing in countries with low factor costs and the trade costs to bring the goods back home. FDI occurs if the cost savings from producing abroad are greater than the trade costs incurred. Therefore, low-wage locations with good transport and trade links to other parts of the corporation will be the favored locations of foreign investors (Barba Navaretti and Venables, 2004).

In terms of empirical works, due to difficulties in splitting the data for differentiating horizontal and vertical FDI, most researchers accept that the data contain both sorts of investments and econometric regressions report some sort of

average effects (Barba Navaretti and Venables, 2004). The empirical evidence has confirmed important effects of location advantages on FDI inflows both into developed and developing countries. Regarding developed countries, Brainard (1993b, 1997) find that *market size* of a host country is a fundamental factor to attract investments of U.S. firms. Similarly, Woodward (1992) and Billington (1999) reveal that foreign firms in the United States prefer to locate in the states with strong market and high population density. Other factors such as *low labor costs* and *favorable policies* toward FDI are also significant determinants. Ireland, for example, becomes known as the Celtic Tiger not only because it offers the lowest tax rates in Europe but also it hosts a highly skilled, English-speaking and relative cheap labor force (Barba Navaretti and Venables, 2004).

In terms of developing countries, recently there are massive studies on the determinants of FDI in these countries when their share of worldwide FDI has been increasing, from 24.6% in the period 1988-1991 to 34% in the period 2002-2007 (The World Investment Report 2005 and 2008). Motives for investments in these economies are mainly determined by *large market size*, *low labor costs*, *high return in natural resources* and *favorable policies* towards FDI (The Report of Overseas Development Institute, 1997; Chen, 1997). For instance, at the national level, Jenkins and Thomas (2002) reveal that South Africa is more attractive toward foreign investors than other countries in the region due to its large market size. In addition, Mirza and Giroud (2004) find that compared with other ASEAN countries, Vietnam is chosen as a destination of FDI because of its large population, relatively cheap and qualified labor force, and political stability. Market-seeking and resource-seeking are also considered as the most important motives of foreign investors in the Central and Eastern European countries (Meyer, 1998; Pusterla and Resmini, 2007; Altomonte, 2000). At the regional level, Cheng and Kwan (2000), Wei *et al.* (1998), and Zhou *et al.* (2002) show that within China the regions with larger market size, better infrastructure conditions, lower wage rates and supporting policies especially on taxation and administrative procedures can attract more FDI. These findings are consistent with the results of Meyer and Nguyen (2005) and Nguyen Phuong Hoa (2002) on the FDI spatial distributions among provinces within Vietnam and Boudier-Bensebaa (2005) in Hungary.

In sum, there are many factors contributing to location advantages of a host country. Foreign investors both in developed and developing countries are mainly attracted by large markets, low labor costs and supporting policies toward FDI. This explains for the reason why FDI inflows to emerging economies have been increasing since 1990s when most of them started the open policy of the

economies. This policy created a great opportunity for foreign investors to exploit new markets as well as abundant and cheap labor forces. Moreover, priority policies, especially on administrative procedures and taxation, make it easier for foreign firms to set up plants and profitably operate.

Besides studying the effects of traditional location advantages such as market size or production factor costs on FDI location decisions, international business researchers have also focused on the effects of agglomeration economies popularized by Krugman (1991). The agglomeration or localization theory explains for the reason why firms in the same industries or from the same countries of origin have tendencies to cluster in a country or a region, and the reason why many emerging countries, such as China and Vietnam, are successful in attracting FDI by establishing industrial and export processing clusters. In the following part, we will discuss the motivations of firms to agglomerate and how agglomeration economies affect location choices by foreign firm.

Localization theory

Industry localization is defined as the geographic concentration of firms in the same industries (Head *et al.*, 1995). One of the mechanisms motivating this concentration is the existence of agglomeration economies, which are positive externalities that stem from the geographic clustering of industries. The issue on industry localization attracted the attention of economists in the late nineteenth century. The work of Marshall (1920) is considered as an early and influential economic analysis on this phenomenon. Marshall identifies three externalities that stem from industry localization: (i) localization enables firms to benefit from technological spillovers, (ii) localization provides a pooled market for workers with specialized skills that benefits both workers and firms, and (iii) localization creates a pool of specialized intermediate inputs for an industry in greater variety and at lower cost. These positive externalities have the potential to enhance the performance by firms that agglomerate.

According to Krugman (1991), the concept of technological spillovers is quite vague and general but it is the most frequently mentioned as a source of agglomeration effects. Useful information can flow between near firms, designers, engineers, and managers. For foreign companies, the spillovers of information can be the flows of experience-based knowledge about how to operate efficiently in the host countries (Head *et al.*, 1995). Many authors use such clusters as California's Silicon Valley and Boston's Route 128 to show that technological externalities are the most obvious reason for firms to agglomerate (Krugman, 1991; Saxenian, 1994). However, by contrast with the labor pooling or

intermediate goods supply that are in principle measurable, technological spillovers can be invisible and difficult to measure. It can therefore be difficult to state clearly that either technological spillovers or specialized labor play a more important role in creating high-technological clusters, for instance in Silicon Valley and the high-fashion cluster in Milan (Krugman, 1991).

As anticipated by Marshall (1920), localized industry allows a pooled market for workers with specialized skills to benefit both workers and firms. David and Rosenbloom (1990) argue that an increased number of firms reduce the possibility that a worker will be unemployed for a long time. Finally, this also benefits firms by increasing the supply of specialized employees and reducing the risk of high-wage requirements from labor. Popular examples of this phenomenon are microelectronic manufacture in Silicon Valley (Saxenian, 1994) and carpet manufacture in Dalton, Georgia (Krugman, 1991).

Krugman (1991) argues that the combination of scale economies and transportation costs will motivate the users and suppliers of intermediate inputs to cluster near each other. Such agglomerations reduce the total transportation costs and make large centers of production become more efficient and have more diverse suppliers than small ones. This will encourage firms in the same industries to concentrate in one location. Krugman points out that a historical accident makes a firm locate in a particular place, and then the cumulative location choices allow such an accident to influence the long-run geographical pattern of industry.

From these observations, it seems that firms benefit from geographical localization when agglomeration economies exist. So far, there have been two types of studies that support the existence of agglomeration benefits. The first consists of qualitative studies of agglomerations that identify the existence of industry clusters and document the existence of agglomeration externality mechanism (Krugman, 1991; Saxenian, 1994). The second is empirical studies, mostly on foreign firms in host countries, which try to find whether a foreign firm has benefits when locating near other domestic and foreign firms in the same industry or from the same country of origin. For instance, Crozet *et al.* (2004) study foreign firms in France and find that proximity allows foreign entrants to learn experience from others and to exploit earlier investors' understanding of new business environment. Head *et al.* (1995; 1999) studying Japanese firms in the United States show that foreign firms in the same industries prefer to cluster to obtain benefits from technology spillovers, specialized labor markets, and availability of input suppliers to the industry. Further, Mariotti and Piscitello (1995) when studying location decision by foreign firms in Italy stated that by locating close to large firms, especially the world's leading multinational

enterprises, new foreign firms can access sources of important and cost-free information about new business opportunities. Regarding developing countries, there are still few studies on the effects of agglomeration economies on location choices by foreign firms mostly due to the lack of data at firm level. We can count the works of Head and Ries (1996) and Cheng and Kwan (2000) on China using data at firm level and the works of Boudier-Bensabaa (2005) on Hungary and Meyer and Nguyen (2005) on Vietnam using data at provincial level. The empirical results of these studies are consistent with the findings in developed countries.

However, most papers studying agglomeration economies neglect firm heterogeneity and competition among firms. As a result, the localization literature mostly ignores firm capacities which determine whether firms can absorb desired knowledge and that firms are not only receivers but also sources of knowledge. Firms would therefore strategically choose locations to gain exposure to others' localized knowledge while reducing leakage of their own knowledge to competitors (Shaver and Flyer, 2000; Alcacer and Chung, 2007). The empirical study of Shaver and Flyer (2000) shows that under the existence of agglomeration economies, many foreign firms will perform better if they do not cluster. Large foreign firms with the greatest capacity in technologies, human capital, training programs, suppliers, and distributors will try to locate away from their competitors because the benefits they gain from locating close to their competitors will be less than what the competitors gain from them. By using new entrants into the United States, Alcacer and Chung (2007) find that foreign firms consider not only gains from inward knowledge spillovers but also the possible costs of outward spillovers. While less technologically advanced firms favor locations with high levels of industrial innovative activity, technologically advanced firms choose only locations with high levels of academic activity and avoid locations with industrial activity to distance themselves from competitors.

The problems firms will experience when participating in an industrial cluster can be the spillover of technology, employee defection to competitors, and the sharing of distributors and suppliers with neighboring firms. Yoffie (1993) shows that semiconductor managers decide to locate far from their competitors due to their concern that their technology might spill over to the near firms. Baum and Mezias (1992) indicate that locating closer to other hotels in Manhattan increases the survival chance of a hotel, but this benefit of agglomeration diminishes when hotel districts become crowded, pushing up prices and exacerbating competition.

So far, we have discussed the location decision of FDI as a function of the costs and quality of local factors of production such as labor force, market size and agglomeration economies. Another theoretical foundation to explain the FDI location, according to Meyer and Nguyen (2004), is the institutional perspective. Indeed, empirical research in emerging economies has found major institutional influences on the strategies of both domestic firms (Peng, 2000) and foreign direct investors (Meyer, 2001; Bevan *et al.*, 2004). In the following part, we will discuss how institutions at both national and sub-national levels affect location choices by foreign firms with the focus on transition economies.

Institution-based view

The World Investment Report 1998 stated that besides business facilitation and economic factors, institutional framework is a principal determinant of the FDI location. However, when studying the location decision of foreign investors, the researchers in international business have almost exclusively focused on the effects of agglomeration economies popularized by Krugman (1991) and traditional location advantages such as factor endowments and market attraction. Recently, the studies on emerging economies whose institutions differ significantly from those in developed countries have led to the emergence of an institution-based view of firm strategies (Peng, 2002; 2003; Peng *et al.*, 2008).

The institution-based view has explored how the institutional set-up influences economic activity and thus the strategies pursued by firms. North (1990) distinguishes formal institutions such as laws and regulations and informal institutions that are grounded in customs, traditions, and codes of conduct. Scott (1995) describes institutional frameworks as consisting of three pillars: regulatory, normative and cognitive institutions where the regulatory dimension roughly corresponds to formal institutions in North's terminology. Institutions and their enforcement mechanisms set the "rules of the game" which organizations must follow. The role of institutions in an economy is to reduce both transaction costs and information costs through reducing uncertainty and establishing a stable structure that facilitates interactions (Hoskisson *et al.*, 2000). The legal and governmental arrangements as well as informal institutions underpinning an economy influence corporate strategies (Oliver, 1997; Peng, 2000) and thus affect the operation and performance of business (Scott, 1995).

According to Mudambi and Navarra (2002), institutions are important as location advantages in international business because they represent the major immobile factors in a globalized market. Legal, political and administrative systems tend to be the internationally immobile framework whose costs determine

international attractiveness of a location. Institutions affect the capacity of firms to interact and therefore affect the relative transaction and coordination costs of production and innovation. For foreign investors, the restrictions and incentives created by institutions of host countries favor some deals and opportunities while disadvantage others. They force the investing firms to think strategically about how to avoid the limits imposed by domestic laws as well as how to reap the benefits that the law and particular circumstances are capable of providing (Spar, 2001). Empirical research finds that institutions influence international business strategies of firms, notably the choice of entry mode, the magnitude of investment, the probability of survival and the location decision (Meyer, 2001; Henisz, 2000; Bevan *et al.*, 2004; Meyer and Nguyen, 2005).

The effect of institutions on FDI location in transition economies attracts special attentions as the legal frameworks in these countries have been changed radically when the economies were restructured from planned to market economies during 1990s. Privatization and the open policies of these countries create a great opportunity for foreign firms to enter and exploit new markets. However, they also have to pay high transaction costs and information costs arising from incomplete and unstable institutional frameworks. Moreover, domestic economic agents in these economies lack knowledge and experience of how to use market mechanism and correctly identify potential partners and competitors. This increases the costs of searching, negotiating and contracting with local partners. Further, the rapidly changing institutions may generate inconsistency between the requirements of different institutions as well as uncertainty over future institutional changes (Meyer, 2001). As firms in reality are risk adverse, they prefer to locate in the place of which the gap between institutional framework at the macro level and that of their home countries as developed markets is small so that they may not have to change much their internal institutions reflecting their firm-specific norms, values and enforcement mechanism (Dunning and Lundan, 2008).

Similarly, Meyer (1998; 2001) found that investors prefer to invest in transition economies that have progressed furthest in institutional reforms because progress in reform brings the institutional framework closer to that of developed countries, therefore reducing *psychic distance* and thus facilitates international business. Low psychic distance reduces the need to invest in information, to train local staff and to adapt management processes to the local environment. Indeed, among the Central and Eastern European countries, the most successful countries in attracting foreign investments have been those more advanced in the transition process toward market economies, namely Czech Republic, Poland and Hungary

(Resmini, 2000; Bevan and Estrin, 2002; Holland and Pain, 1998). More particularly, researchers revealed that foreign investors gravitate towards countries or regions that have predictable future policy regime (Mudambi and Navarra, 2002), low corruption level (Lipsey, 1999), political stability and low perceived risk level (Lankes and Venables, 1996), progress in reforms of capital market, regulations on property rights, and labor market (Hoskisson *et al.*, 2000; Bevan *et al.*, 2004).

Besides studying the effect of institutions on FDI location at country level, researchers recently pay increasing attentions to institutions at local level when they knowledge that informal institutions such as the practices of law enforcement by local authorities may affect spatial distribution of FDI among regions within a country. In transition economies, reform initially concern primarily formal institutions at the central level, then this directly affects formal institutions at the sub-national level. However, the implementation of law and regulations issued by central governments enforcement at local level may vary due to variations of normative or cognitive aspects of local authorities. Especially in some transition economies such as China, Vietnam, and Russia which implement decentralization policy, local authorities can decide how to practise policies set at central level. Many local decision makers therefore influence the implementation of institutional change with their individually held norms and cognitions. If conservative inherited norms and lack of recognition of the purpose of regulatory changes dominate, then foreign investors may experience a lot of red tape at local level such as corruption or delays in administrative progress. On the other hand, friendly and supportive treatment by local authorities will reduce difficulties and transaction costs foreign firms have to bear when investing in transition economies, thereby encouraging their investment in the province. It is noted that in industrialized countries with a federal structure, such as Australia, Germany or the United States, the responsibilities of different levels of government are clearly delaminated by law. In contrast, formal institutions in transition economies are somewhat still vague such that the actual influence of provincial authorities is to a much higher degree based on informal institutions (Meyer and Nguyen, 2005).

Up to date, there have been few studies investigating the influences of institutions at local level on FDI location most probably due to the lack of data and difficulties in finding appropriate proxies for institutions. We can count the work of Meyer and Nguyen (2005) on Vietnam, Zhou *et al.* (2002) on China and Bruno *et al.* (2008) on Russia. Meyer and Nguyen (2005) show that foreign investors in Vietnam prefer to locate in regions that have more developed market-supporting institutions proxied by facilitation by local authorities towards foreign

firms to access scarce local resources. Zhou *et al.* (2002) stated that specific incentives policies issued by Chinese local government such as tax incentives and development of special economic zone positively influence the location choice by Japanese firms. Bruno *et al.* (2008) find that in Russia, regions with better institutional practice measured by the region's risk index attract more new firms.

In sum, we have argued that foreign investors are likely to locate in the place of which the institutional framework is close to that of their home countries, thereby reducing psychic distance and facilitating international business. Lower psychic distance makes it easier for firms to understand local business environments, therefore reducing the costs of getting information. Indeed, in order to operate efficiently, foreign firms need to have enough information about local markets and they prefer to locate in places where necessary information is transparent and available (The PCI Report, 2006). However, up to date there have been few studies judging information cost as a determinant factor of investment location decisions. In the following part, we will discuss how information cost affects FDI location choices, especially in transition economies.

Information cost approach

The location decision by a foreign firm is considerably affected by uncertainties arising from informational asymmetry and from the unpredictability of the host country's business environment (Mariotti and Piscitello, 1995; Figueiredo *et al.*, 2002; He, 2002). Unlike domestic investors, foreign firms lack information about the local product and factor market conditions as well as social and political situations of the host country. As a consequence, they always have to pay higher costs of obtaining information about such as local knowledge, local suppliers, market opportunities, and skilled labor (Arrow, 1972). Foreign firms therefore prefer to locate in places where necessary information for their business is transparent and easy to access.

He (2002) stated that foreign firms use both public information and privately-held information to make new investment decision. Public information, for instance, about market size, economic growth, infrastructure, and foreign investment policies is easier to access in large and urban places. By contrast, privately-held information about, for example, the strategies for selecting partners or the practical implementation of foreign investment policies is obtained through personal relationship or through a network of foreign investors clustering nearby. Hence, foreign investors incline to locate in urban or metropolitan locations where they can benefit information cost savings associated with proximity to a market, labor supply, good communications, and financial and commercial services.

Moreover, they also prefer to concentrate in industrial clusters because *physical proximity* to other firms allows them to learn experience of earlier investors in doing business in new environments, therefore reducing the need to invest in information.

The empirical evidence supports the argument that location choice of foreign firms is affected by information costs. Mariotti and Piscitello (1995) find that foreign firms in Italy prefer to locate in regions where they can easily obtain information such as metropolitan or boundary provinces. Moreover, they are also likely to locate close to large firms, especially the world's leading multinational enterprises, so that they can access important and cost-free information about new business market. He (2002) also finds that foreign firms in China favor places where they can minimize information costs such as coastal cities and urban areas because reliable public information usually appear and spread easily in these regions as well as to locate in industrial clusters so that they can get information through networks of vicinal firms. These empirical results are confirmed by the studies of Figueiredo *et al.* (2002) and Guimaraes *et al.* (2000) on foreign firms in Portugal.

Up to date, we have learned that foreign firms prefer to locate in places where they can minimize information costs arising from physical or cultural distance between the home countries of foreign investors and the host countries where they invest. Indeed, in the part of localization theory we have discussed that reducing information costs is an important factor motivating firms to agglomerate. However, an easy or difficult access to information is also regulated by the institutional framework underpinning the economy of the host country. According to Hoskisson *et al.* (2000), the role of institutions in an economy is to reduce both transaction costs and information costs through reducing uncertainty and establishing a stable structure that facilitates interactions. Hence, economic agents in transition economies characterized by inconsistent and unstable institutional frameworks have to pay higher transaction and information costs associated with searching, negotiating and contracting with domestic partners (Meyer, 2001). Indeed, during the early phase of transition, uncertainties in institutional frameworks and lack of information about local environment often force foreign firms to rely on relationships not only with managers of other firms but also with governmental officials or to create joint ventures and alliances with local partners (Peng and Health, 1996; Peng, 2003). As a consequence, foreign investors may have to pay higher costs of obtaining information about local business environment. Private enterprises in Vietnam thus evaluate transparency and easy access to information are one of the most crucial factors in distinguishing between

environments that are conductive, or not conductive to the private sector (The PCI 2006 Report).

Summarizing, we have identified the advantages and conditions under which direct investment will occur by introducing three explanations of FDI: the firm's ownership advantages; internalization advantages; and location advantages. However, Rugman (1981) and Buckley (1985) argued that internalization is really the only thing that matters to understand the multinational. By contrast, Dunning (1977, 1981) suggested that because of the inherent disadvantages and higher costs of foreign production, three conditions all need to be present for a firm to have a strong motive to undertake direct investment. This has become known as the OLI framework which is reviewed in the following section.

2.4. A synthesis: Dunning's OLI framework

Dunning (1977) integrated many theories of FDI into a general paradigm of international production and extended the framework repeatedly (1981; 1993). The basic premise is that FDI is undertaken if three sets of determining factors are met simultaneously: ownership specific advantages (O), location advantages (L) and the advantages from internalization (I). If not, exporting or licensing may be superior strategies. Based on the acronyms of the three components, this approach is commonly known as the "OLI framework".

The *first* factor is the firm's ownership advantages, which are specific assets to facilitate the firm obtaining a competitive advantage over local competitors. They include not only tangible assets such as capital and manpower but also intangible ones such as technology, tacit knowledge, brand name, reputation and management skills. The *second* factor is location advantages, meaning that the host country must possess advantages such as factor cost advantages, proximity to the market, and the appropriate legal, social and political frameworks. The *third* factor is the advantages from internalization of the whole firm's activities which arise from the presence of market failure. Internalization allows the firm to fully exploit owner-specific and location-specific assets.

This framework suggests that FDI will bring the best results if all the three determining components are combined. A firm will engage in FDI if three following conditions are satisfied: (i) firms have to possess ownership-specific advantages over other firms in serving particular markets; (ii) given the ownership advantages of firms, it must be more beneficial for them to exploit the advantages themselves rather than to sell or license them to foreign partners; (iii) given the two conditions are satisfied, firms must get more profit to combine these

advantages with some factors in the foreign countries. The key point is that any one of the ownership-location-internalization advantages may be necessary but not sufficient to explain the reasons why firms would be multinational engaging in FDI.

This framework is still the most common analytical tool for the determinants of FDI although it has some limitations (Meyer, 1998). It is mainly criticized about the ability to explain dynamic processes. Dynamic models focus on particular types or aspects of FDI and thus are less general than the OLI paradigm. The most familiar dynamic approaches are those of the internationalization process models based on the work of the Uppsala school in the 1970s, the economic geography (Krugman, 1991), and the modern international trade theory (Hortman and Markusen, 1992; Brainard, 1993a). Dunning (1983) also admitted the impossibility of predicting which of the OLI variables was likely to be the most significant in motivating or expanding FDI. Moreover, the OLI framework only considers the conditions necessary for direct investment. It has little to offer about the choice among alternatives, such as licensing versus joint venture versus exporting (Markusen, 1995).

In this section, by reviewing general literatures on FDI we have explored the motivations driving firms to expand investments abroad, the reasons why FDI is preferred to other investment forms, and the main factors affecting location choices of foreign investors. However, we have not yet intensely discussed the reasons why transition economies become attractive destinations for FDI. Since the aim of this thesis is to understand the behavior of foreign firms in transition economies, the next section will be dedicated to an overview of FDI in these countries.

3. Foreign direct investment in transition economies

According to the World Bank Report 2002, transition economies are formerly socialist countries in East Asia, Central and Eastern Europe and the newly independent states of the former Soviet Union[2]. After the fall of the Iron Curtain in 1989, most countries of the former Soviet bloc moved successfully from centrally planned economies and one-party governments towards market economies with multiparty parliamentary democracy. Vietnam and China are although still led by the communist parties, their economies are gradually growing

[2] There are 30 transition economies, including Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, China, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Poland, Romania, Russian Federation, Serbia/Montenegro, Slovakia, Slovenia, Tajikistan, Ukraine, Uzbekistan, Vietnam, Yugoslavia (Federal Republic of).
Source: http://www.ssrn.com/update/ern/tran_econs.html

out of central planning through gradualist policies (Peng, 2003). These transition economies have strengthened their market mechanism through liberalization, stabilization and privatization. Under the market mechanism, prices and trade have been liberalized, the double price system has been abolished, and import and export restrictions have been greatly reduced. For instance, China has moved from state monopoly on foreign trade to free trade, and from import-substitution to export-oriented policies (Lin *et al.*, 1996). However, most transition economies experienced periods of hyperinflation coming from price liberalization at the beginning of transition. Therefore, macroeconomic stabilization mainly through monetary policies has become a major concern in most transition economies (Meyer, 1998).

Recent research has focused more on microeconomic restructuring of which the main task is the transfer of enterprises from state ownership to private ownership. The motive is to increase efficiency of production and reduce the dependence of economies on inefficient state-owned enterprises (Balcerowicz *et al.*, 2002). Privatization in transition economies differs from Western experiences by the scope of the task, by the absence of efficient capital markets, and by the lack of private domestic savings. The main methods of privatization through sale and free distribution have offered great opportunities for foreign investors to acquire local firms (Bevan and Estrin, 2000; Meyer, 1998). In addition, the openness of the economy and incentive policies toward FDI have attracted foreign firms to transition economies. FDI indeed is considered as one of the most effective ways by which transition economies become integrated to the global economy as FDI provides not only capital but also technology and management know-how necessary for restructuring firms in the host economies (Kinoshita and Campos, 2002; Lankes and Venables, 1996).

The World Investment Report 2008 shows that FDI inflows to transition economies have been increasing since the economic reforms at the end of 1980s. In 2007, FDI flows in the Central and Eastern European countries (CEE) and the newly independent states of the former Soviet Union (CIS) accounted for 4.7% of the world FDI and 17% of developing countries compared with 1% and 3.8% respectively in 1997. However, the vast majority of investments have gone to the Czech Republic, Hungary and Poland, three of the largest transition economies and the earliest to begin liberalization. In the East Asia, China remains the biggest host country of FDI, accounting for more than 50% of FDI inflows to this region since 1995. In 2007, China accounted for 4.4% of FDI inflows of the world, nearly equaled to the share of the CEE and the CIS and 16.7% of FDI running to

developing countries. It also ranks first in the UNCTAD 2008-2010 survey of the most attractive locations for FDI.

Empirical research on FDI in transition economies has mainly focused on entry mode choices and determinants of location choices by foreign investors. In terms of entry mode choices, most studies discuss the choices between wholly owned subsidiaries and joint ventures. The literature suggests that joint ventures will be preferred when investors need access to information, particularly about local market conditions, while fully-owned subsidiaries will be the preferred control mode when control of production aspects, such as technology or production quality, is paramount (Kokko *et al.*, 2003; Meyer, 2001; Hennart 1991). Kokko *et al.* (2003) show that at the beginning of the transition process difficulties in access to information about investment environment in Vietnam encouraged foreign investors to make joint ventures with SOEs. The privileged positions and the large network of SOEs could help foreign firms a smooth entry and succeed in the market. However, at more advanced stages of economic transition, information is more open to foreign firms. They therefore prefer to set up wholly owned subsidiaries to avoid transaction costs arising from searching, negotiating and monitoring local partners in the case of joint ventures (Meyer, 2001). Moreover, due to the weakness of law enforcement on intellectual property rights, technology-intensive firms would prefer to internalize their transactions in high-tech goods and services (Hennart, 1991).

With respect to location choices, key factors such as *market size*, *low labor cost*, and the *riskiness of investment* both in terms of the economic and political environments are found to have strong effects on location decisions of foreign firms in transition economies. Lankes and Venables (1996) summarize seven surveys on foreign firms in the CEE and show that market seeking is a predominant motive of foreign investors in these transition economies. Meyer (1998) explain that before the economic reform, the consumers in these countries had almost no access to many consumer goods that were readily available to consumers at similar levels of per capita income in other parts of the world. This creates opportunities for foreign firms to explore these new markets while their home established markets are saturated. Market seeking indeed is one of the most important factors to explain the attractiveness of China toward foreign firms (Cheng and Kwan, 2000; Wei *et al.*, 1998).

Besides market size, low labor cost is considered as a key resource driving resource-seeking foreign investors to transition economies. Labor forces in most transition economies in the Central and Eastern Europe are regarded as having relatively a high level of skills and training and a strong scientific base in

comparison for example to regions with comparable income per capita levels in South East Asia or Latin America (The European Bank for Reconstruction and Development Report 1999). These countries therefore attract not only labor-intensive but also knowledge capital-intensive foreign enterprises. The empirical works of Cheng and Kwan (2000) on foreign firms in China, Nguyen Phi Lan (2006) in Vietnam, Meyer (1998) and Kinoshita and Campos (2002) in the CEE and the CIS confirmed the effect of low labor costs on investment decisions by foreign firms in transition economies.

Studies of FDI in transition economies have paid special attentions to indicators of economic and political risks (Lucas, 1993; Singh and Jun, 1996). This comprises three main elements: *macroeconomic stability*, e.g. growth, inflation, exchange risk; *institutional stability*, such as policies towards FDI, tax regimes, the transparency of legal regulations and the scale of corruption; and *political stability*, ranging from indicators of political freedom to measures of revolutions (Bevan and Estrin, 2000). During the transition stage, many aspects of the economic and political structures in these countries have been changed radically, creating risks and uncertainties for economic environments. As firms in reality are not neutral risk but instead they are risk adverse, foreign investors are therefore likely to invest in places where economic and political environments are stable and have progressed furthest in institutional reforms (Baniak *et al.*, 2002; Meyer, 2001). Progress in reform brings the institutional framework closer to that of developed countries, therefore reducing psychic distance and thus facilitates international business. Low psychic distance reduces the need to invest in information, to train local staff and to adapt management processes to the local environment. The empirical evidence in transition economies has revealed that foreign investors gravitate towards countries or regions that have low corruption level (Lipsey, 1999), political stability and low perceived risk level (Lankes and Venables, 1996; Bruno *et al.*, 2008), progress in reforms of capital market, regulations on property rights, and labor market (Hoskisson *et al.*, 2000; Bevan *et al.*, 2004; Meyer and Nguyen, 2005).

Up to date, there have been many empirical studies on FDI in transition economies. However, most of them concentrate on the Central and Eastern European countries and China. To fulfill this gap, in our opinion, Vietnam is a suitable choice to investigate the strategic behavior of foreign investors in transition economies. From the late 1970s until 1990, Vietnam was integrated in the trading system of the Soviet Union and its allies, with few other linkages. In the 1980s, Vietnam experienced severe shortages of food and basic consumer goods, a high budget deficit, three-digit inflation, chronic trade imbalances and

deteriorating living standards. The economic stagnation forced the Vietnamese government to initiate an overall economic reform from a planned economy to a market economy in 1986. Different from some countries (e.g. Poland and Russia) choosing to drop central planning through shock therapies, Vietnam just like China attempted to gradually grow out of central planning through gradualist policies (Peng, 2003).

In the scope of this thesis, we focus on determinants of location choices by foreign firms in Vietnam of which institutions and agglomeration economies are key factors. We also analyze the effects of location choices and entry mode choices on the survival probability of foreign firms in Vietnam. We suggest that when foreign firms invest in a transition economy whose characteristics, especially institutional frameworks, differ from their home countries, they need to implement strategic choices for their survival. Before moving to the empirical studies, in the following parts we present a literature review on FDI determinants in Vietnam and provide an overview description of the dataset used for empirical works.

4. The determinants of the FDI in Vietnam at the literature

The first Law on Foreign Direct Investment issued in 1987 to encourage investments of foreign firms in Vietnam was considered one of the first concrete steps toward the economic renovation of the government. Since then, FDI inflows into Vietnam have increased rapidly both in terms of the number of project and the amount of funds. By 1990, Vietnam licensed 211 projects with the registered capital of $1.57 billion, but by 2005, these numbers increased up to 7279 and 66.24, respectively (The General Statistics Office of Vietnam – GSO website). In 2007, FDI inflows to Vietnam achieved the highest record with $21.3 billion of registered capital after twenty years of issuing the Law on FDI, and it ranks sixth in the UNCTAD 2008-2010 Survey of the most attractive locations for FDI in the next three years (The World Investment Report 2008).

The FDI inflows have been considered as an important source of economic development of Vietnam during its transition from a planned to a market oriented economy (Le Dang Doanh, 2002; Kokko *et al.*, 2003). The FDI benefits the economy in terms of economic growth and domestic investment stimulation (Le Viet Anh, 2002; Nguyen Phuong Hoa, 2002; Nguyen Phi Lan, 2006), the development of the local industry stemmed by technological spillovers (Nguyen *et al.*, 2004; Le Thanh Thuy, 2005; Mizra and Giroud, 2003, 2004), export boosting (Schaumburg-Muller, 2003; Nguyen and Xing, 2006), and poverty reduction

(Nguyen Phuong Hoa, 2002). For instance, during the period 2001-2005, foreign companies constituted almost 15.5% of Vietnam's GDP, accounted for around 35% of total non-oil export revenues and created 11000 new jobs each year (The GSO, 2004, 2007).

According to Mirza and Giroud (2004), the achievement of Vietnam in attracting FDI is noticeable. Vietnam has become the third largest recipient of FDI inflows in the ASEAN, behind Singapore and Malaysia. Meyer (1998) stated that there are six aspects of the economic environments in the transition economies in which international business partners are particularly interested: the process of economic restructuring, large scale privatization, an evolving institutional framework, the reorientation of international trade, new markets, and low labor costs. In the centrally planned economy, the state owned all production facilities, and all economic activities in particular factor allocation were centrally coordinated through the central plan. The system implied not only a different mode of resource allocation but also many structural differences in the pattern of industry, the role of enterprises and the routines of individual behavior.

The economic stagnation during 1980s forced the Vietnamese government to implement an economic reform in 1986 by restructuring the economy from a planned to a market economy. The major, if not the main, task of microeconomic restructuring is the transfer of enterprises from the state ownership to private ownership and the encouragement for foreign investment by favorable policies; thereby the role of private sector is strengthened. Besides developing the regulation framework for FDI, Vietnam has signed bilateral investment treaties with over sixty countries and has become the member of many international organizations such as the WTO and the ASEAN. The economic integrations with the Asian region and the world have contributed to making the investment regime in Vietnam more in line with international standards and more favorable to foreign investors.

Besides the open policies for foreign investment, a new market in Vietnam is potentially attractive for many businesses. Before the economic renovation, the consumers in Vietnam had almost no access to many consumer goods that are available to consumers at similar levels of per capita income in other parts of the world. After the opening of economy, Vietnam with nearly 80 millions people has become a large market for consumer goods manufacturers. Moreover, Vietnam as a poor country with the desire to rapidly upgrade the economy is also an attractive market for many other businesses such as machinery supply or infrastructure construction. Moreover, factor-cost advantages arising from low costs of some raw materials and low labor costs create the attractiveness of Vietnam compared

with neighboring countries especially in textile, garment, and sea food manufacturing industries.

Although there are numerous reports on the FDI in Vietnam, the empirical research is still limited. This is partly because of data availability. Vietnam does not publish many data on the operations of foreign affiliates, and the statistical office did not undertake regular surveys of foreign investors until the late 1990s. Moreover, it is hard to find a systematic socio-economic statistics that are useful for studies on determinants of FDI. It is therefore impossible to conduct comprehensive analyses of foreign investment in a long-term perspective (Kokko *et al.*, 2003). However, since 2000 the GSO has implemented surveys on enterprises in all provinces of Vietnam. This dissertation uses the dataset from these surveys for empirical studies. We believe that these surveys will create good conditions for research on FDI in Vietnam.

With respect to the empirical works on location choices by foreign firms in Vietnam, there have been very few studies exploring the reasons why foreign firms choose Vietnam to invest or why a specific region within Vietnam is preferred by foreign investors over the others. Moreover, all these studies can use data only at provincial level with conventional variables reflecting location advantages suggested by Dunning and Narula (1996) such as labor cost, labor productivity, market size, market growth, infrastructure, government policies, political stability, and geographical proximity.

In terms of national determinants, we can count the works of Mirza and Giroud (2004), Hsieh (2005) and Nguyen Nhu Binh and Haughton (2002). The paper of Mirza and Giroud (2004) surveyed transnational corporations with operations in the ASEAN and found that Vietnam is chosen as a destination of FDI because of its political stability, large population, quality of labor force and diversified industrial base. The authors stated that around 45% of firms investing in Vietnam do so with the motivation of market seeking, only 14% can be regarded as efficiency seeking, and the other motives are mixed and can be either efficiency or market seeking, depending on contingencies.

Hsieh (2005) studied the determinants of FDI inflows into the Southeast Asia transition economies including Cambodia, Laos, Myanmar and Vietnam during the period 1990-2003 and found that the most important determinants are the lagged FDI inflows, GDP per capita, and the degree of openness. In addition, the Asian financial crisis is found to reduce FDI inwards to these countries. Nguyen Nhu Binh and Haughton (2002) estimated the effects of the Bilateral Trade Agreement between the United States and Vietnam, which came into effect in December 2001, on FDI in Vietnam and found that the Bilateral Trade

Agreement should lead to 30% more FDI into Vietnam in the first year, and in the longer term, the FDI will double. However, the inflow would only be maintained if Vietnam makes the changes required to join the WTO.

Once the firms have decided to invest in a particular country, they face the location choices for their operations inside the country. The location-specific characteristics and policies of local authorities can affect the decisions of firms. In the case of Vietnam, there have been some studies investigating the regional determinants of FDI including Meyer and Nguyen (2005), Nguyen Phuong Hoa (2002), Pham Hoang Mai (2002), Le Viet Anh (2004), Nguyen Ngoc Anh and Nguyen Thang (2007), and Nguyen Phi Lan (2006). The work of Meyer and Nguyen (2005) examined the distributions of both newly registered FDI in 2000 and the cumulative FDI up to 2000 by using logit model. The authors found that foreign investors are interested in the existence of industrial zones and the friendly policies of local authorities. Moreover, the provinces with larger population, better transport infrastructure, higher GDP growth and better educational system can attract more FDI. The location decisions by foreign firms are also driven by agglomeration effect that is proxied by the lagged FDI stock.

Nguyen Phuong Hoa (2002) estimated the regional determinants of FDI distributions across provinces in Vietnam during the period 1990-2000 and revealed that market size presented by provincial GDP, technical workers, GDP per capita and industrial zones are the most important determinants of distributions of both registered and implemented FDI. By using the linear regression, Pham Hoang Mai (2002) analyzed the factors that influence the pattern of regional location of FDI during 1988-1998 and found that foreign investors are attracted by infrastructure, the quality of labor force and the size of the local market. Government tax incentives, on the other hand, do not make any significant impact on attracting FDI flows to poor and remote provinces.

Similarly, the study of Nguyen Phi Lan (2006) used conventional variables with the data at provincial level to show that economic growth, market size, human capital, labor cost, infrastructure conditions, domestic investment and exchange rate affect the location decisions by foreign firms. By using the ordinary least square regressions, Le Viet Anh (2004) and Nguyen Ngoc Anh and Nguyen Thang (2007) have some changes when respectively including agglomeration effect measured by the cumulative FDI and institutional performance by local authorities proxied by the Vietnamese Provincial Competitiveness Index 2006 in the econometric models besides other conventional variables. They pointed out the importance of market, labor quality, infrastructure, and agglomeration effect in

attracting FDI. However, the institutional performance by provincial authorities seems not to be a significant factor.

In summary, most studies on the determinants of FDI in Vietnam at national or provincial level have exploited conventional variables. The consistent results of studies on the importance of market size, market growth, labor force, and infrastructure conditions to the FDI distributions imply the motivations of market seeking, efficiency seeking and factor endowment seeking by foreign firms when investing in Vietnam. However, the empirical studies on the FDI of Vietnam are still very few and only exploit the data at the provincial level by using the conventional econometric models. The future work should go further by looking at the behavior by each foreign firm, thereby reflecting more exactly the determinants of location choices by foreign firms in Vietnam.

5. Data source description and the FDI patterns in Vietnam

General description

This dissertation uses the data from the early surveys on the enterprises operating in all provinces of Vietnam conducted by the General Statistics Office of Vietnam since 2000. An enterprise in these surveys is defined as "an economic unit that independently keeps business account and acquires its own legal status. It may be set up and operate under the regulations of State Enterprise Law, Cooperative Law, Enterprise Law, Foreign Investment Law or the Agreements between the Government of Vietnam and the Governments of Foreign Countries" (The GSO, 2007). There are three types of enterprise in the surveys:

- The state enterprises at central level and at local level, including also enterprises which are under the control of the Communist Party and mass organizations of which the capital is provided by the government.
- The non-state enterprises: enterprises set up by Cooperative Law except cooperatives of agricultural, forestry, and fishing sectors; private enterprises; collective name enterprises; limited liability companies; joint-stock companies including also privatized state enterprises and companies which have the capital share of the Government less than 50%.
- The foreign enterprises: wholly-owned foreign enterprises and joint venture enterprises.

These enterprises belong to all industries excluding cooperatives of agricultural, forestry, fishing sectors and business households. Industrial

classification is based on main activity of the enterprise that contributes the largest share to total gross output of the enterprise. The number of enterprises in the surveys and their statistical indicators are counted only when they are still operating by the 31st of December every year, excluding enterprises that had received business licenses, tax codes but still do not operate; enterprises that were dissolved or jointed to other enterprises; enterprises that got operation licenses but do not locate in local area; economic units that do not independently keep business account such as branches, dependent economic units and other non economic bodies.

The contents of the surveys cover indicators to identify enterprises including their name, address, type, and economic activities of the enterprises and indicators to reflect production situations of the enterprises such as their employees, income of employees, asset and capital source, turnover, profit, contributions to the state budget, investment capital, taxes and other obligations to the government, job training, and evaluations on the investment environment. The GSO designed some questionnaires that are applied to different kinds of enterprises. For instance, the questionnaire 1A-ĐTDN is used for all state enterprises, non-state enterprises that have equal or greater than 10 employees, 20% of sampled non-state enterprises with fewer than 10 employees, and all foreign enterprises. The description of the questionnaire 1A-ĐTDN and selected variables definitions are shown in Appendix A. The investigators can either deliver the questionnaires to enterprises with necessary instructions and the time and address to receive their answers back or they have to directly interview the owners of the enterprises especially with the questionnaire on investment environment. The methodologies and contents of surveys are in general similar every year to assure comparability of information among years.

Table 1.1 presents some descriptive statistics of the dataset from the surveys conducted from 2000 to 2005[3]. The average increase of number of enterprises in the six years from 2000 to 2005 is around 28% per year. The contribution to GDP of enterprises has been increasing which accounted for 53% in 2005, increasing 10% compared with 1995. Most enterprises operate in commerce and manufacturing sectors and have tendencies to concentrate in the Red River Delta and the South East regions, where two biggest cities Hanoi and Ho Chi Minh City are respectively located. The majority of enterprises have small and medium size (from 5 to 300 employees). Every year, enterprise sector creates new jobs for around 500 thousand employees (The GSO, 2007).

[3] The data are calculated up to the 31st of December of each year.

Table 1.1: The principle indicators of enterprises

Principle Indicators	2000	2001	2002	2003	2004	2005
1. Total numbers of surveyed enterprises	**42288**	**51680**	**62908**	**72012**	**91755**	**113352**
By type of ownership (%)						
State enterprises	13.62	10.36	8.53	6.73	5.01	3.60
Non-state enterprises	82.78	85.75	87.80	89.60	91.55	93.13
Foreign enterprises	3.61	3.89	3.67	3.67	3.44	3.26
By kind of economic activity(%)						
Agriculture, Hunting and Forestry	2.19	1.69	1.55	1.30	1.11	0.94
Fishing	5.80	4.96	3.83	2.04	1.48	1.20
Mining and quarrying	1.01	1.23	1.40	1.43	1.30	1.13
Manufacturing	24.59	23.90	23.52	23.49	22.38	21.23
Electricity, gas and water supply	0.26	0.30	0.29	0.35	0.19	0.18
Construction	9.46	11.02	12.47	13.49	13.42	13.46
Wholesale and retail trade, repair vehicles	41.49	40.10	39.41	39.43	40.74	41.60
Hotels and restaurants	4.54	4.65	4.52	4.56	4.31	4.18
Transport, storage and communications	4.25	4.92	5.15	5.52	5.83	5.97
Financial intermediation	2.21	2.00	1.66	1.46	1.23	1.00
Science and technology activities	0.01	0.02	0.02	0.02	0.02	0.02
Real estate, renting and business activities	3.25	4.25	5.14	5.74	6.73	7.68
Education and training	0.18	0.17	0.20	0.26	0.32	0.35
Health and social work	0.06	0.09	0.13	0.12	0.15	0.18
Cultural and sport activities	0.28	0.28	0.29	0.31	0.29	0.35
Other community and social activities	0.41	0.43	0.43	0.46	0.50	0.52
By size of employee (%)						
Less than 5 persons	24.05	23.09	19.20	18.18	19.59	20.64
From 5 to 9	25.78	26.89	28.83	28.38	28.84	30.66
From 10 to 49	28.54	30.45	32.93	35.02	35.36	34.42
From 50 to 199	13.32	12.20	11.99	11.85	10.69	9.65
From 200 to 299	2.66	2.31	2.15	1.95	1.67	1.43
From 300 to 499	2.48	2.24	2.15	1.95	1.65	1.37
From 500 to 999	1.93	1.71	1.66	1.64	1.31	1.05
From 1000 to 4999	1.17	1.04	1.01	0.95	0.83	0.71
From 5000 and above	0.08	0.08	0.07	0.08	0.06	0.06
By regions (%)						
Red River Delta	21.01	22.60	25.43	27.02	27.44	26.92
Northeast	4.91	5.38	5.85	6.14	6.75	6.43
Northwest	0.90	0.95	0.96	1.10	1.14	1.18
North Central Coast	5.33	5.43	6.03	6.07	5.86	6.36
South Central Coast	7.81	7.50	7.27	7.09	6.82	6.90
Central Highlands	4.32	3.75	3.40	3.21	3.14	3.14
Southeast	32.02	33.92	33.39	33.77	34.73	36.34
Mekong River Delta	23.26	20.08	17.33	15.32	13.90	12.58
2. Average employees per one enterprise	**84**	**76**	**74**	**72**	**63**	**55**
State enterprises	363	395	421	467	490	499
Non-state enterprises	30	30	31	32	29	28
Foreign enterprises	267	243	299	326	331	330

3. Avg. capital per enterprise (bill. VND)	**26**	**24**	**23**	**23.9**	**23.6**	**23.7**
State enterprises	130	153	167	210.2	264.7	355
Non-state enterprises	3	4	4	5.2	5.9	6.7
Foreign enterprises	157	133	134	139.6	142.4	142.8
4. Profit rate (%) compared with capital	**3.7**	**3.8**	**4.3**	**4.5**	**4.9**	**4.4**
State enterprises	2.3	2.5	2.9	2.8	3.1	3.4
Non-state enterprises	1.8	2.3	2.3	2.1	1.6	1.4
Foreign enterprises	9	8.7	10	11.6	13	11.2
5. Profit rate (%) compared with turnover	**5.1**	**5**	**5.1**	**5.4**	**6**	**5.3**
State enterprises	4	4.2	4.2	4.2	5.3	5.7
Non-state enterprises	1	1.3	1.5	1.5	1.3	1.2
Foreign enterprises	13.3	13	13.6	14.6	15.4	11.8

Source: The GSO (2004, 2007), "The situation of enterprises", the Statistical Publishing House.

Due to the re-organization and privatization in the direction of multi-sector economic development by the government, there are some changes in the structure of enterprise sector. In 2005, the number of state enterprises accounted for 3.6% of the total number of enterprises, reducing 10% compared with 2005. However, their scale has been enlarged. For example, in 2000 the average number of employees per one enterprise is 363, but in 2005 is 499, or the average capital per one enterprise in 2000 is 130 billion VND, but in 2005 is 355 billion VND. Currently, state enterprises are mainly operating in the following sector: industry (30.6%); construction (17.3%); agriculture, forestry and fishing (14%); commerce (16.3%).

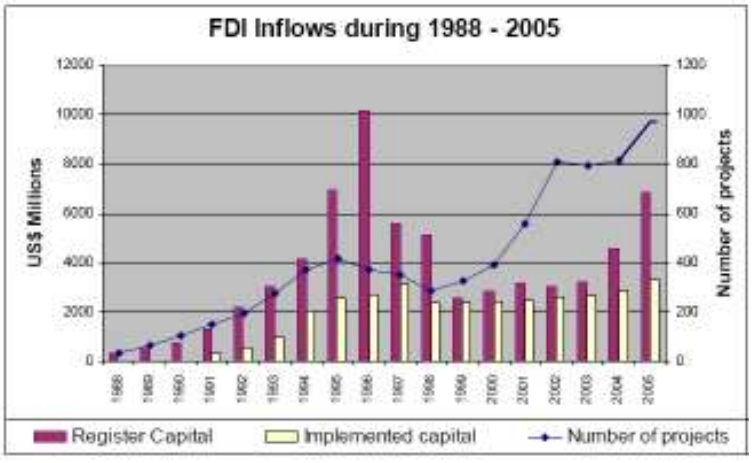
Opposite to state enterprises, the number of non-state enterprises has been rapidly growing, from 35004 enterprises (accounting for 82.78% of the total enterprises) in 2000 to 105569 (equivalent to 93.13% of the total enterprises) in 2005 (an increase of 14113 enterprises per year). However, most of them are micro and small enterprises. The average number of employees per one enterprise is only 30 and 32 in 2000 and 2005, respectively. The average capital per one enterprise is 3 billion VND in 2000 and 7 billion VND in 2005. These levels are really small compared with state enterprises. The number of foreign enterprises has also been increasing, from 1525 enterprises in 2000 to 3697 in 2005 (an increase of 362 enterprises per year) of which most of them are wholly-owned enterprises, accounting for 77.1% (The GSO, 2007). In terms of production efficiency that is based on the profit rate compared with production capital or turnover, foreign firms operate much more productively than state and non-state enterprises (more than double state enterprises and ten times more than non-state enterprises).

The FDI patterns in Vietnam

In 1987, Vietnam for the first time issued the Law on Foreign Direct Investment. Compared with other countries in the region, FDI in Vietnam has a short history of development. However, Vietnam has attracted a substantial amount of FDI and has been quite successful as compared with other countries in the region, ranking the third largest recipient in the ASEAN (Mirza and Giroud, 2004).

Figure 1.1 shows the overall trend of FDI inflows in Vietnam for the period 1988-2005. Together with the number of investment projects, the amount of registered capital for licensed projects increased rapidly in the first half of the 1990s, which is generally referred to as the "investment boom" period in Vietnam. However, the Asian financial crisis in 1997 strongly influenced the economies of countries in the region, leading a sharp decline of the FDI in Vietnam during the final years of 1990s. The FDI inflows started to pick up again as countries in the region recovered from the crisis and the United States-Vietnam Bilateral Trade Agreement was signed in 2001. Although not shown here in the Figure 1.1, the trend of FDI inflows has increased strongly after Vietnam became a formal member of the WTO in the beginning of 2007. As a result, after twenty years of issuing the first Law on Foreign Direct Investment, FDI flowing to Vietnam in 2007 achieved the highest record with $21.3 billion of registered capital, $8.03 billion of implemented capital and 1544 new investment projects (The Ministry of Planning and Investment of Vietnam – MPI website).

Figure 1.1: FDI inflows into Vietnam during 1988-2005



Source: The GSO website

Together with the increase in registered capital and investment projects, Table 1.1 shows that the number of foreign firms entering Vietnam's market also increases over time, from 1525 enterprises in 2000 to 3697 in 2005. However, foreign firms are unevenly distributed among the regions and provinces within Vietnam. Table 1.2 shows that most investors prefer to locate in the Red River Delta and the Southeast regions[4]. For instance, in 2005 these two regions accounted for 89% of total number of foreign firms, of which 20.2% in Hanoi and 68.8% in Ho Chi Minh City. By contrast, the Northwest and the North Central Coast attracted only 0.4% and 0.9% respectively of the total foreign firms.

Regarding industry distribution, the data from the surveys shows that most foreign firms invested in manufacturing sector, accounting for 71.8% of total number of foreign firms in 2005. Following are activities relating to business consultancy, communications and transport. The data also shows that most investors prefer the form of 100% foreign ownership. For example, in 2005 the 100% foreign-owned enterprises accounted for 77.1% of the total foreign enterprises in Vietnam.

Table 1.2: Regional distribution (%) of foreign enterprises in Vietnam

Regions	2000	2001	2002	2003	2004	2005
Red River Delta	22.7	20.5	20.7	20.5	20.7	20.2
Northeast	2.0	1.9	2.5	2.9	3.2	3.0
Northwest	0.3	0.2	0.2	0.3	0.3	0.4
North Central Coast	1.1	0.8	0.8	1.0	1.0	0.9
South Central Coast	3.7	3.4	3.4	3.4	3.0	2.7
Central Highlands	2.2	1.7	1.5	1.6	1.6	1.9
Southeast	64.5	68.5	68.1	67.6	67.7	68.8
Mekong River Delta	3.5	3.0	2.8	2.8	2.6	2.3

Source: The GSO, the Enterprise Surveys in Vietnam 2000-2005

In term of the investors' nationalities and their location patterns, the data in the surveys reveal that up to the end of 2005, there were seventy five countries and territories investing in Vietnam. Among them, the number of investors from Asian countries accounted for 78.7%, Europe 11.6%, and America and Caribbean 5% of the total foreign enterprises. The top five investors were Taiwan, South Korea, Japan, Singapore, and China. However, the geographical locations of investments were diversified. While most investors from Taiwan or the United

[4] The positions of the provinces and regions are presented in the map of Vietnam in Appendix C and Appendix 3.1.

States preferred to concentrate in some provinces of the Southeast region such as Ho Chi Minh City, Binh Duong and Da Nang provinces, Japanese or Chinese investors were likely to choose some provinces of the Red River Delta region such as the cities of Hanoi and Hai Phong for their firm location.

6. Conclusions

This chapter provides a theoretical review on FDI with the aim to explore the motivations driving a firm to expand investment abroad, the reasons why FDI is preferred to other investment forms, and the main factors affecting location decisions by foreign firms. Since our thesis focuses on location choices by foreign firms in Vietnam, we spend more room on the discussion of the location theories such as the theory of comparative advantages, localization theory, institutional based view and information cost approach.

The *theory of comparative advantages* suggests that if firms use FDI to minimize costs, they will move to locations where production costs are lowest. The *localization theory* states that benefits from agglomeration economies motivate foreign firms to cluster in the same place. However, clustering firms are not only receivers but also sources of spillover knowledge. They would therefore choose locations to gain exposure to others' localized knowledge while reducing leakage of their own knowledge to their competitors. The effect of agglomerations on the firm's location decision will be discussed in Chapter 3 of this thesis. The *institutional-based view* suggests that foreign firms gravitate toward countries and regions that have market-supporting institutions where they can reduce transaction costs associated with searching, negotiating, monitoring local partners. The effects of institutions on FDI location will be explored in Chapter 2. The *information cost approach* indicates that foreign investors prefer to locate in areas where they are able to minimize the expected information costs. The effects of information costs on FDI location choices will be discussed partly in Chapter 2.

Subsequently, we present a literature review on FDI determinants in transition economies and in Vietnam. We state that market size, labor costs and the riskiness of investment environments are key factors affecting FDI inflows into these countries. The final section provides the description of data source that is used for the empirical studies in Vietnam. The dataset show that since the economic reform in 1986, Vietnam's economy has experienced many changes. One of them is the decrease of the number of state enterprises and the increase of non-state and foreign enterprises. This reflects that the economy gradually reduces its dependence on inefficient state-owned enterprises and private sector has been

strengthened over time. Especially, FDI has important effects on the economy by encouraging domestic investment, creating employment opportunities, transferring technology, and boosting exports. However, the dataset also reveal uneven distributions of FDI across regions within the country, contributing to the unequal development among regions. This issue suggests that in the coming time, Vietnam should design policies on the one hand to promote FDI inflows into the country, and on the other hand to fulfill the gaps among regions in attracting FDI.

Chapter 2

Institutions and Entry Decisions by Foreign Firms in Vietnam

1. Introduction

The role of institutions in an economy is to reduce both transaction costs and information costs through reducing uncertainty and establishing a stable structure that facilitates interactions (Hoskisson *et al.*, 2000). In order to succeed in foreign markets, foreign investors have to adapt their strategies to *formal institutions*, such as laws and regulations, and *informal institutions*, such as practices of law enforcement by local authorities, of host countries, especially when entering transition economies characterized by incomplete, inconsistent and unstable institutional frameworks. For instance, foreign firms prefer to set up wholly-owned subsidiaries rather than joint ventures to reduce transaction costs of searching, negotiating and contracting with local partners (Meyer, 2001; Brouthers, 2002), or they are likely to locate in places that have developed market-supporting institutions (Bevan *et al.*, 2004; Hoskisson *et al.*, 2000; Meyer and Nguyen, 2005).

International business scholars have extensively studied how institutional variables influence the location of FDI in terms of host country selection (Bevan *et al.*, 2004; Hoskisson *et al.*; Lipsey, 1999; Mudambi and Navarra, 2002), but they have largely ignored institutional effects on *intra-country* location. This study contributes to fulfill this gap by showing that just as formal institutions at the national level affecting the overall volume of FDI inflows in a country, informal institutions at the sub-national level influence spatial distributions of FDI among regions within the country. We emphasize that inappropriate institutional practices by local authorities are a barrier to entries and development of foreign firms in the regions.

We have chosen Vietnam to study the impact of informal institutions on FDI inflows. This is a suitable choice because Vietnam has gone through a major economic transition process since 1986 while weakness in the formal and informal institutions remains obstacles to business. The communist party still remains in power and many aspects of the economy are subject to regulations or direct interference by the authorities of the local government or the ruling party. Moreover, the important amendment of the FDI law in 1996 decentralized some policy responsibilities to provinces, leading to variations in how local authorities implement central regulations and may develop different ways to deal with foreign firms.

The study applies the Tobit model to investigate the effect of institutional practice by local authorities on the entry rates of foreign firms in provinces of Vietnam over the period 2000-2005. The Vietnamese provincial competitiveness index in 2006 (PCI 2006) and its two sub-indices reflecting attitudes of local government toward state-owned enterprises (SOEs) and the capability of private enterprises to access to necessary information for their business are used as proxies for institutional practices. The empirical results reveal that provinces with better institutional practices attract more foreign firms. The efforts of local authorities in interpreting and implementing central regulations and policies are an important factor creating attractiveness toward domestic and foreign investors. Transparency and access to information are found to have a strong effect on the attractiveness of a province to foreign investors. By contrast to our prediction, the favorable treatments of local authorities toward SOEs do not inhibit the entry of foreign firms to the region.

The empirical results support our argument that institutional practices by local governments influence the FDI spatial distributions among regions within the country. Formal legal changes initiated at the centre have varied impacts across provinces because the implementation of laws and regulations at local level depends on the informal institutions determined by attitudes (norms and cognitions) of local authorities. This shows that decentralization policy may, on the one hand, generate opportunities for entrepreneurial local authorities to push forward economic reforms, but on the other hand, it can deter investments if local decision makers possess conservative inherited norms and lack recognitions of the purpose of regulation changes. However, in our opinion, this policy is successful in encouraging creativeness and competitiveness among provinces to attract foreign investments.

We organize this chapter as follows. Section 2 reveals an overview of institutional reforms and their effects on the foreign direct investment in Vietnam.

Section 3 presents the theoretical framework to develop hypotheses. Section 4 provides a detailed description of the Vietnam provincial competitiveness index as a proxy for institutional practice. Section 5 is devoted to the methodology and empirical results. The final section is conclusions.

2. An overview of institutional reforms and their effects on the FDI in Vietnam

In 1986, Vietnam embarked on a path of reform, known as "*Doi moi*", by restructuring the economy from a planned to a market economy. With the collapse of the communist regime, the transformation of the old economic structure had to take place through the entry of new and market-oriented firms particularly in the undeveloped sectors of the economy and the exit of inefficient and uncompetitive enterprises. Since the beginning of the 1990s, Vietnam has recognized the legal existence of the domestic private enterprises and has issued favorite policies to attract FDI. Despite this legal landmark, the policy environment, however, remained hostile to private businesses in the 1990s. Consequently, non-state firms had faced many constraints to their establishment and growth.

The Asian financial crisis in 1997 led to an economic stagnation and thus contributed to the second phase of Vietnam's economic reform. This reform stage targeted at the sustainable growth of the non-state sector and was supported by the issuance of the Enterprise Law in 1999. In this section, we present the institutional reforms in Vietnam and their impacts on the patterns of foreign direct investment. Following Balcerowicz *et al.* (2002), we focus on four aspects of institutional performance of which their weaknesses are main constraints for the entry and development of new firms in Vietnam: (i) regulatory reforms focusing on administrative procedures, fiscal and financial system; (ii) security of private property rights concentrating on land access and security of tenure and dispute resolution; (iii) provision of information; and (iv) competitive environment, particularly the role of existing state-owned enterprises.

2.1. Institutional reforms

(i) Regulatory reforms in administrative procedures, fiscal and financial system

Since the issuance of the Enterprise Law in 1999, a significant change in business costs has arisen in that many barriers preventing the establishment of firms have been reduced. As a result, the time it takes for business registration has been reduced from 90 to 7 days on average. The registration fee has also decreased nearly twenty times, from VND 10 million (around $570) to VND 500

thousand (around $29). The registration process is generally perceived without much difficulty (Tran *et al.*, 2008).

Recently, the government has implemented a series of actions to improve **administrative procedures**: Decision 181 on April 5, 2005 on one-stop shops in provinces to improve business registration; Decision 23 on January 26, 2005 to create an inter-disciplinary group to address difficulties and complaints from businesses regarding business procedures; Decision 22 on January 24, 2006 on assigning responsibility to address concerns and complaints from people, organizations and businesses; and other actions to improve the relationship between the state and citizens and businesses, and make administrative procedures public, transparent, and simplified.

The land law which was enacted in 1993 and amended in 2003 was a big advancement on reforming institutions related to land ownership and land use right of market actors. In 2007, one enterprise had to spend 90 days for getting Land Use Rights Certificate and negotiating with previous owners of the land compared with 231 days in 2006. While this improvement is substantial, 90 days are still a long time for a business to wait (The PCI 2007 Report).

As pointed out by Balcerowicz (2002), **tax system** is one of the main problems for firms in transition economies. In Vietnam, the complexity and non-transparency of tax regulations still remain as major obstacles for establishment and growth of private firms. Although since the day of reformation in 1986, Vietnam has implemented a significant reform in tax system including a gradual reduction of tax rates, more uniform tax ranges and improvement in the tax collection mechanism, firms often complain about the discretion and bureaucratic attitude of tax officers. The fact that firms have to pay unofficial fees is common because tax officers usually hide information, making the regulation environment unclear (Carlier and Tran, 2004a). According to the survey conducted by the Central Institute for Economic Management in Vietnam (CIEM) on 360 firms in 2007, a firm on average has to spend 2000 hours or 245 days per year, which is equivalent to hiring one employee to take charge of all tax procedures (Tran *et al.*, 2008). The recent reform in tax system is the issuance of the Tax Law in 2006 that allows firms to calculate and pay tax online. This will reduce the complexity and costs firms have to pay in terms of business taxation.

Regarding the **financial system**, during the beginning years of reform, the Vietnamese economy had to cope with hyper-inflation. The State Bank system had both currency printing and credit supply functions. Thus, the transformation from the one-tier to the two-tier banking system that separated the state management function of the State Bank from the business function of commercial

banks and other non-banking financial institutions was a crucial step to curb inflation as well as to create conditions for the implementation of a monetary policy corresponding with the market mechanism. Moreover, a stock market that was established in late 2000 has contributed to attract private saving for investment.

However, despite the efforts of the government in reforming the financial system, the Vietnamese financial market, overall, has not caught up with and satisfied socio-economic demands. The financial market, in general, and the monetary market and capital market in particular have remained at a low development level. The security market has been newly-established and weak. At present, many secondary markets in Vietnam have not been developed. The cooperation and interaction among markets in the system remained loose. The banking system has had many potential risks. The information transparency has not always been guaranteed. Moreover, the current legal system has not created the conditions for the necessary independence of the State Bank and loosened conditions for financial market penetration of investors, especially foreign investors. The legal system on credit has also showed quite clear discriminations among credit suppliers as well as among customers of credit organizations. Many private firms, especially the small and medium ones, complain that it is very difficult for them to access loans from banks, and most of loans run to state-owned enterprises. Consequently, most private firms have to use their own savings or the profit from the previous years for their firm's operation (Dinh Van An, 2006).

(ii) Security of private property rights

In 2000, the International Monetary Fund observed that Vietnam did not have secure private property rights. Six years later, the Heritage Foundation 2007 gave a score of just 10% to Vietnam in terms of security of its property rights whereas other measures of institutional performance were rated above 50% (Kane *et al.*, 2007). Main problems that are related to private property rights and often cited as impeding the private sector performance in Vietnam are land access and security of tenure and dispute resolution.

Land access and security of tenure

One issue that is often cited by private firms in Vietnam is unclearly defined land policies. Essentially, land property issue can be divided into two dimensions: access to land and the security of tenure (The PCI 2006 Report).

According to the Constitution of Vietnam, land belongs to the state. The Land Law 1993, however, recognizes the right to use land of individuals and firms through Land Use Rights Certificates (LURCs). These certificates legalize their owners' rights to the long-term use of the allocated land (for as little as 20 years, but up to 70 years) and to transfer, exchange, lease, inherit and mortgage the land use right. Particularly important is the ability to use formal LURCs as collateral in accessing bank loans. However, the Land Law 1993 does not define clearly the functions of related government bodies, leading to the weakness in providing LURCs. Consequently, many private firms have their own premises but cannot have an LURC, or they have informal land rights inherited from previous generations or purchased through informal exchange.

A consequence of the planned economy and the Vietnam's Constitution is that all utilized land is allocated to individuals and state-owned enterprises. The procedures to apply for land for business purposes are both complicated and costly. Firms have to pay transaction costs by visiting many government agencies as well as informal fees, then waiting for around 2-3 years for the final decision (Carlier and Tran, 2004b). Private firms that cannot have their own LURCs must either rent land from family, friends, or -in strikingly high numbers- rent land from state-owned enterprises or local agencies. Moreover, renting land from state-owned enterprises is a short-term lease with monthly or yearly payments rather than the quasi-property right offered by the LURC. This makes firms suffer from an additional set of costs over time, both in terms of regular rent and opportunities foregone due to an inability to access bank capital.

In order to increase the land supply for non-state enterprises, the government issued the Land Law Amendment in 1998 and the Domestic Investment Promotion Amendment in 1998 that encourage provinces with little available land to construct industrial zones and publish information about available land. However, constructing industrial zones takes time because it requires compensation for confiscated land and the publication of information on available land depends on local governments. Moreover, many private firms complain that many industrial zones are ill-suited to the needs of the private sector and instead were designed to accommodate foreign firms or state-owned enterprises. As a result, many provinces have a large number of industrial zones, but very few firms located within them.

Besides the capacity of land access, private firms are also concerned about the security of land tenure once they get LURCs. The more secure the tenure, the more firms will be emboldened to invest in the long term productivity of their land allocation. But if expropriation or fundamental changes in lease contracts are

possible, firms will take a more short-term outlook with their investment and business decisions. In special cases, firms are forced to surrender their property, they are concerned about if they can receive fair compensation for the value of that land. One of the break-through of the new Land Law in 2003 is that it tries to bring state compensation prices into closer accordance with market prices. However, there is inevitably a delay between the bureaucratic process of revaluing land and more rapid changes in the market value of land. Moreover, the implementation of this law depends on practices by local government authorities (Carlier and Tran, 2004b).

Dispute resolution

For many years, scholars and practitioners have stressed legal development and formal modes of dispute resolution as a weak link in Vietnam's economic transformation and development (The PCI 2007 Report). In fact, most Provincial People's Courts have very little independence in staffing, budgeting, or decision making from the Central People' Court. Strengthening legal institutions and local courts will become even more vital as Vietnam enters the WTO. Despite the reforms of the judiciary system in recent years, most individuals and private firms still choose informal mechanisms of dispute resolution. For example, of the 6500 firms in the survey for the provincial competitiveness index in 2006, only 0.8% saw courts as their top dispute resolution option. The reasons for not using courts when firms' disputes arise include the fear of the complication of lawsuits, the possibility of an unfair judge and negative reputation with business partners. As a result, firms rely mostly on business associations to solve their disputes.

(iii) Provision of information

Transparency is one of the most crucial factors highlighted by academics and development practitioners in distinguishing between environments that are conductive or not conductive to private sector. Vietnam has been characterized by a lack of transparency and a service sector to support business development. Managers often complain about the lack of market information about inputs, output, alternative suppliers, buyers, price and price trend. Moreover, information about changes in policies and regulations as well as basic business registration such as firm name, address, and other details were not available to public and responsible officials (Tran *et al.*, 2008). The capacity to access market information or new regulations and policies to some extent is based on the relationship with provincial officials (The PCI 2006 Report). Information

openness to firms, however, is implemented differently by provinces. For instance, Binh Duong province provides all firms with a compact disc that contains copies of all relevant national legal documents and provincial implementing documents from the previous years. The solution of Vinh Phuc province is less high-tech, but of a similar spirit. Firms in this province are provided with a binder containing paper copies of all relevant regulatory documents.

The lack of information about the market and changes in regulations constrains development of non-state firms. Acknowledging these difficulties, the government issued Decree No.90/2001/CP-ND to support development of small and medium enterprises and Decree No.94/2002/QD-TTG to reform the mechanism and policies to stimulate the development of the non-state sector. These decisions led to the formation of the Agency for Small and Medium Enterprises Development in October 2002. The key roles of this agency are to provide firms with information about markets, technology, management, and governmental regulations. However, information provision by this agency remains weak and depends on the attitudes of the local government official towards the non-state sector (Tran *et al.*, 2008).

In order to overcome the shortage of information and to promote cooperation, firms have established their own business associations. These associations provide information about policies and legal issues to their members. However, there are very few associations that are large and effective enough to give firms fully necessary information. Besides information provided by associations or local governments, firms can buy information from business development services, but normally the quality of information does not satisfy firms' requirements.

(iv) Competitive environment

In order to encourage development of private firms, the government has issued regulations aimed at creating a fair and balanced competition environment for all economic actors. However, many non-state firms complain that provinces have favorable treatments to the state-owned enterprises especially in access to bank credit and land, creating barriers to entry and develop of non-state firms. Some provinces have stated explicitly that their primary goal is to promote large state-owned champions as the primary engine of growth. Others may not have such an explicit bias, but instead have an institutional incentive to promote state-owned enterprises because of the high employment or revenue they generate for the province (The PCI 2006 Report).

Traditionally, SOEs played a leading role in Vietnam's economy and still contribute more than the domestic private sector to the GDP although their share has been gradually declining (Nguyen *et al.*, 2004). However, most of SOEs suffered from inefficiency, outdated technology, non-competitive products, poor management and an inability to respond to market demands. To realize the goals of the "*Doi moi*", the government policy aims to restructure SOEs by equitization, therefore reducing the dependence of the overall economy on SOEs and the dependence of SOEs on the government's support.

Despite the reforms in the SOE sector by the government, private firms often complain that provinces have bias attitudes to the state sector. One of the key sources of state sector bias is a collateral requirement on loans to the private sector, whereas no collateral is required to loan to the state sector. Bankers in state-owned commercial banks tend to believe that lending to the state sector is a safer bet. Over time, the banking environment has improved for private sector clients in many provinces. But in others, there continues to be a significant disparity (The PCI 2006 Report). Using the PCI 2005 data, Nguyen Van Thang (2005) shows that the density of SOEs in a province has a negative impact on the private sector's access to market and key resources such as land and bank loans and a negative influence on the private sector's growth in terms of the number of firms and employment. Moreover, his study found that private sector development tends to have a more positive contribution to a province's overall economic performance than the SOE sector, and those provinces hosting a higher density of SOEs tend to have a lower GDP growth rate.

2.2. The effects of institutional reforms on the FDI in Vietnam

In order to strengthen the role of private sector in the economy, besides the policies to encourage the development of domestic private firms, the government has issued favorable policies to attract FDI. The first Law on Foreign Investment in Vietnam that was passed by the National Assembly of Vietnam on 29 December 1987 is considered as one of concrete steps towards this goal. This law was amended several times in 1992, 1996, 2000, and most recently replaced by a Unified Investment Law 2006 that integrates both domestic and foreign investment. These changes and amendments aim to remove obstacles against the operation of foreign investors and to improve investment climate in Vietnam. Usually, these changes are to provide more tax incentives, to simplify investment licensing procedures, and to promote transfer of technology.

The FDI law amendment in 1992 granted foreign investors with more rights and incentives, allowing FDI in construction of infrastructure facilities, giving the

same tax treatment between wholly-owned foreign firms and joint ventures, and providing foreign firms with longer operation duration. This amendment has encouraged foreign firms to set up wholly-owned affiliates when entering Vietnamese market. For example, during 1991-1998, joint ventures had been the most common form of investment, but in 2000, the licensed capital for wholly-owned projects for the first time was larger than that of joint ventures (Kokko *et al.*, 2003). Moreover, under the 1987 FDI Law, a foreign enterprise could open Vietnamese and foreign currency bank accounts at the Bank for Foreign Trade of Vietnam, or at the branch of a foreign bank established in Vietnam. This would need approval from the State Bank of Vietnam (SBV). In the 1992 Law, these enterprises were able to open bank accounts at any banks operating in Vietnam, and could open loan capital accounts at overseas banks with approval from the SBV. From the year 2000, in special cases approved by the SBV, a foreign enterprise can mortgage assets attached to the land and use the value of the land-use rights for borrowing loans from credit institutions operating in Vietnam.

In 1996, the FDI law was modified to allow for new forms of investment including BOT (Build-Operate-Transfer), BTO (Build-Transfer-Operate) and BT (Build-Transfer) contracts. The modification also gave more rights and incentives to investors, such as the right to assign the contributed capital to other parties. Moreover, before 1996, pre-licensing evaluation procedures applied to all foreign investment projects. During the evaluation process, the Ministry of Planning and Investment of Vietnam could request any necessary documents apart from those stipulated by law. The time it took to acquire an investment was supposed to be three months from the date of receiving a completed application dossier. However, in reality this usually took much longer, possibly even years. The FDI law amendment in 1996 has reduced procedures for registration, and it has decentralized some policy responsibilities to provinces and has given them some autonomy in issuing investment licenses for foreign investment projects up to specified sizes.

In 2000, the FDI law was amended again to acknowledge the right of foreign investors to merge and to acquire companies or branches, and the right to transfer the form of investment. Most recently, the Unified Law of Investment was passed on 29 December 2005 to replace all previous laws and regulations on domestic and foreign investment. The new law which came into force on 1 July 2006 was prepared to meet requirements of the accession to the WTO. Under this new law, foreign and domestic enterprises are treated equally according to the rule of non-discrimination under the WTO. In addition, that Vietnam has signed bilateral investment treaties with over sixty countries contributes to make the

investment regime in Vietnam more in line with international standards and more favorable to foreign investors.

Besides amendments of the FDI law, the government has also passed several other laws in order to create a good business environment for foreign investment such as the Competitive Law and the Law on Bankruptcy both issued in 2004. Remarkable are the Land Law Amendment and the Domestic Investment Promotion Amendment issued in 1998 that encourage provinces with little available land to construct industrial zones and publish information about available land. By doing this, the government has increased land supply and foreign investors may have easier access to land, therefore making it unnecessary to seek joint ventures as a means to access land-use rights (Meyer and Nguyen, 2005).

To increase attractiveness of industrial zones, the government has issued some tax incentives applied for firms locating in these places. The standard profit tax rate is 28% and preferred rates range from 10% to 20% if the investment is located in priority areas or satisfies certain investment promotion criteria. In 1991, the government issued the first regulation on export processing zones (EPZ). An EPZ specializes in the production of export goods and in the provision of services for the production of export goods and export activities. Enterprises operating in EPZs enjoy a profit tax rate at 10% and 15% in respect of production and service enterprises. Industrial zones (IZ) have been established since 1994. An IZ is a concentrated zone specializing in the production of industrial goods and services for industrial goods production. Enterprises operating in IZs enjoy profit tax rates at 15%, 10%, and 20% respectively for production, exporting and service enterprises. A high-tech zone concentrates high-technology industrial enterprises and units providing hi-technology development services, including scientific technological research and development, training and other related services. Enterprises operating in high-tech zones have to pay 10% of profit tax rate after an eight-year tax holiday from the first year in which the enterprises are profitable.

As a result of amendments of the FDI law toward encouraging FDI and issuance of other supporting laws, FDI inflows to Vietnam have been increasing and have had important effects on the economic growth. In the first half of the 1990s, both the number of investment projects and the amount of registered capital for licensed projects increased rapidly. However, the Asian financial crisis in 1997 strongly influenced the economies of countries in the region, leading a sharp decline of the FDI in Vietnam during the final years of 1990s. The FDI inflows started to pick up again as many changes had been implemented due to

either subjective or objective factors such as countries in the region recovered from the crisis, the FDI Law had some important amendments, the United States-Vietnam Bilateral Trade Agreement was signed in 2001, and Vietnam became a formal member of the WTO in the beginning of 2007. Indeed, in 2007 after twenty years of issuing the first Law on Foreign Direct Investment, FDI in Vietnam achieved the highest record with $21.3 billion of registered capital, $8.03 billion of implemented capital and 1544 new investment projects (The Ministry of Planning and Investment of Vietnam – MPI website).

The increasing FDI inflows reveal their important contributions to economic transition, business liberalization and macro-economic growth of Vietnam over past decades. Moreover, FDI also creates positive spillovers that support the development of the local industry, boosts the exports and reduces the poverty (Nguyen Phuong Hoa, 2002; Nguyen Phi Lan, 2006; Le Thanh Thuy, 2005). For instance, during the period 2001-2005, foreign companies constituted almost 15.5% of Vietnam's GDP, accounted for around 35% of total non-oil export revenues and created 11000 new jobs each year. At present, FDI accounts for 100% in oil exploration and automobile production, 60% in steel, 28% in cement, and 33% in electronic production (The MPI website).

However, despite favorable policies of the government to foreign investment sector in recent years, foreign enterprises still complain about different treatment by local authorities in some respects such as giving more favorable conditions to domestic rather than foreign-owned firms, and to state-owned rather than private enterprises. An important amendment of the FDI law in 1996, the decentralization of administrative responsibilities to provinces has created opportunities for entrepreneurial-minded local authorities to push forward economic reform, and just foster the development of both local businesses and foreign investment. However, the decentralization of authority also implies that provincial authorities may vary in how they use their newly gained responsibilities to develop innovative ways of dealing with foreign investors (Nguyen *et al.*, 2004). Thus, the implementation of laws and decrees at local level may not meet the intentions of the legislators, and may be slow and inconsistent.

The differences in law practices by provinces cause challenges for foreign investors and contribute to unequal distributions of FDI among provinces within Vietnam. The data of the MPI show that during the period 1988-2007, more than 60% of projects and 52% of registered capital ran to the Southeast region of which most of them belong to Ho Chi Minh City and its two neighboring provinces, Dong Nai and Binh Duong, and nearly 25% of investment projects and registered capital flew to the Red River Delta of which Hanoi, the capital city, took the

largest proportion. By contrast, the Northwest and the North Central Coast attracted less than 1% of the FDI inflows. It seems that provinces pursuing FDI-friendly policies in the liberalization process such as Binh Duong or Dong Nai provinces may benefit from first-mover advantages in the long run and develop into a hub of economic activity. For instance, only Binh Duong province in 2005 accounted for 19.8% of the total foreign investment in Vietnam while hosting about 2% of the total Vietnamese firms (The General Statistics Office of Vietnam - GSO, 2007).

2.3. Reasons for differences in institutional practices in Vietnam

The previous part mentioned that provincial authorities in Vietnam vary in interpreting the central government's laws and regulations, and they may develop innovative ways to deal with foreign investors. In fact, it is difficult to understand what truly drives differences in economic governance among provinces. In this context, it is important to keep in mind that the political system and government structures are identical in all provinces in Vietnam, and there are no over-arching regional authorities on economic policy. In particular, differences are more pronounced between the North and the South of the country. In this study, we present three factors that may explain the variation in institutional practices by provinces: (i) Urban versus Rural, (ii) North versus South, and (iii) the complexity and ambiguity of the laws and regulations.

(i) Urban versus Rural

The differences between provinces and highly urbanized national-level cities are quite easy to understand. Cities tend to attract the best educated and talented citizenry from neighboring provinces, including officials in the provincial bureaucracy. Cities also have more active and influential business associations, leading to greater cross-fertilization of ideas between the public and private sector. The PCI 2007 shows that cities outperform provinces because they have advantages in labor policies and private sector development services due to possessing more resources to expand on business match-making, trade fairs, vocation schools, and labor exchanges.

However, firms in provinces may have better conditions in land access and security of tenure. Population density works against urban centers, making land become more expensive. In addition, population growth due to migration puts enormous pressure on pre-existing infrastructure. Cities are forced to repossess

land more often, for example, in order to expand roads and zone off areas for new residential development.

(ii) North versus South

Overall, southern provinces have better institutional performance than northern provinces according to the ranking of the PCI 2007. The differences between the North and the South may come from historical factors.

Vietnamese culture originated from the North and in the Red River Delta in particular. The Vietnamese culture was historically characterized by wet rice cultivation and village settlements. The village was an autonomous community which collected taxes from citizens and fulfilled its obligations to the state. Due to unclear demographic system and difficulties in communication and monitoring, chiefs of villages had incentives to keep a part of collected taxes and to create their own rules, leading to a high level of independence of local authorities and lack of transparency between local and central governments (Tran *et al.*, 2008).

The South was settled by people from the North and the Centre of Vietnam in the 17th century, concentrating around the Mekong River Delta. Difficulties in setting up a new life stimulated migrants to have open and cooperative attitude. This can help to explain the reasons why provincial leaders in the South have greater familiarity with the needs of the private sector that is presented by policies relating to trade, provision of regulatory information to firms, business partner matchmaking, provision of industrial zones and technological services aimed at promoting development of private sector (Tran *et al.*, 2008).

In addition, recent political and historical factors may have more effects on the variation in institutional practice between southern and northern provinces. Before 1975, under the control of the United States, the South followed a market-oriented economy. When the country was unified in 1975, the central planning economy was applied in the whole country. Because strict central planning was only implemented in the provinces south to the 17th parallel for 11 years (1975-1986), as opposed to 32 years (1954-1986) in the northern provinces, and because key components of a central planning economy such as the collectivization of land and agriculture were never fully implemented in the South, southern provinces had a enormous head-start at developing streamlined economic governance for a market economy at the on-set of the "*Doi moi*" era.

(iii) The complexity and ambiguity of the laws and regulations

In Vietnam, due to the complexity of the laws, large number of sub-laws such as decrees, decisions and regulations are issued to guide the implementation of laws. Moreover, the rapidly changing institutions may generate inconsistency between the requirements of different institutions as well as uncertainty over future institutional changes (Meyer, 2001). These problems create complexity and ambiguity of many laws and regulations issued at the central level that in turn make the implementation of laws depend much on the interpretation of local officials. In addition, Tenev *et al.*, (2003) indicate that even when regulations are clear, there are always opportunities for local authorities to apply their own interpretation to central policies.

3. Theoretical framework and hypothesis development

The World Investment Report 1998 stated that besides business facilitations and economic factors, institutional framework is a principal determinant of the FDI location. However, when studying the location decision of foreign investors, the researchers in international business have almost exclusively focused on the effects of agglomeration economies popularized by Krugman (1991) and traditional location advantages such as factor endowments and market attraction (Meyer and Nguyen, 2005). Recently, studies on emerging economies whose institutions differ significantly from those in developed countries have led to the emergence of an institution-based view of firm strategies (Peng, 2002; 2003; Peng *et al.*, 2008).

The institution-based view has explored how the institutional set-up influences economic activities and thus the strategies pursued by firms. North (1990) distinguishes formal institutions such as laws and regulations and informal institutions that are grounded in customs, traditions and codes of conduct. Scott (1995) describes institutional frameworks as consisting of three pillars: regulatory, normative and cognitive institutions where the regulatory dimension roughly corresponds to formal institutions in North's terminology. Institutions and their enforcement mechanisms set the "rules of the game" which organizations must follow. The role of institutions in an economy is to reduce both transaction costs and information costs through reducing uncertainty and establishing a stable structure that facilitates interactions (Hoskisson *et al.*, 2000). The legal and governmental arrangements as well as informal institutions underpinning an economy influence corporate strategies (Oliver, 1997; Peng, 2000) and thus influence the operation and performance of business (Scott, 1995).

According to Mudambi and Navarra (2002), institutions are important as location advantages in international business because they represent the major immobile factors in a globalized market. Legal, political and administrative systems tend to be the internationally immobile framework whose costs determine international attractiveness of a location. Institutions affect the capacity of firms to interact and therefore affect the relative transaction and coordination costs of production and innovation. For foreign investors, the restrictions and incentives created by institutions of host countries favor some deals and opportunities while disadvantage others. They force the investing firms to think strategically about how to avoid the limits imposed by domestic laws as well as how to reap the benefits that the law and particular circumstances are capable of providing (Spar, 2001). Empirical research finds that institutions influence international business strategies of firms, notably the choice of entry mode, the magnitude of investment, the probability of survival and the location decisions (Meyer, 2001; Henisz, 2000; Bevan *et al.*, 2004).

In this section, we present a theoretical framework showing how institutions affect FDI with a focus on informal institutions. We suggest that within one country, formal institutions, such as laws and regulations, and informal institutions, such as practices of law enforcement by local governments, are not homogeneous, especially in transition economies. Because in these countries the ambiguity of many laws and regulations issued at the central level and the decentralization policy of administrative responsibilities to provinces lead to variation in interpretation and implementation of governmental laws by local authorities (Meyer and Nguyen, 2005).

3.1. Institutions and business strategies in transition economies

Transition economies are formerly socialist countries in East Asia, Central and East Europe and the newly independent states of the former Soviet Union (World Bank, 2002). Historically, transition economies were planned economies and ruled by power relations and bureaucratic controls. The state curbed opportunism and allocated resources so there was little need for formal laws to define exchange relationships among economic actors. Property rights were held and protected by the state, and individual could use assets but did not own them. State-owned enterprises (SOEs) were closely tied to governments, receiving direct financial subsidiaries and indirect preferential treatment. The collapse of Communism in 1989 created transition economies committing to strengthening their market mechanism through liberalization, stabilization and privatization with the encouragement of domestic and foreign firms. Indeed, privatization and the

open policies create great opportunities for foreign firms to explore new markets of transition economies.

In the new context, the legal framework has been changed radically to create a new set of formal institutions. To attract foreign investors, besides the core framework for FDI consisting of such as rules and regulations governing entry and operations of foreign investors and standards of treatment of foreign affiliates, transition economies have issued complementing policies with many incentives and improvements such as on taxation, administrative procedures and business laws (The World Investment Report 1998). However, the weakness of institutional frameworks in most transition economies such as underdeveloped political and constitutional court systems, corruption and bureaucratic inefficiency increases search, negotiation and enforcement costs, especially for foreign investors who are not familiar with local business environments (Bevan *et al.*, 2004; Meyer, 2001). Moreover, rapidly changing institutions may generate inconsistency between the requirements of different institutions as well as uncertainty over future institutional changes. As firms in reality are risk adverse, they prefer to locate in the place of which the gap between institutional framework at the macro level and that of their home countries as developed markets is small so that they may not have to change much their internal institutions reflecting their firm-specific norms, values and enforcement mechanism (Dunning and Lundan, 2008).

Similarly, Meyer (1998; 2001) found that investors prefer to invest in transition economies that have progressed furthest in institutional reform because progress in reform brings the institutional framework closer to that of developed countries, therefore reducing *psychic distance* and thus facilitates international business. Low psychic distance reduces the need to invest in information, to train local staff and to adapt management processes to the local environment. Indeed, among the Central and Eastern European countries the most successful countries in attracting foreign investments have been those more advanced in the transition process toward market economies, namely Czech Republic, Poland and Hungary (Resmini, 2000; Bevan and Estrin, 2002; Holland and Pain, 1998). More particularly, researchers revealed that foreign investors gravitate towards transition economies that have predictable future policy regime (Mudambi and Navarra, 2002), low corruption level (Lipsey, 1999), political stability and low perceived risk level (Lankes and Venables, 1996), progress in reforms of capital market, regulations on property rights, and labor market (Hoskisson *et al.*, 2000; Bevan *et al.*, 2004).

Besides studying the effect of institutions on FDI location at country level, researchers recently have paid increasing attention to institutions at local level when they knowledge that informal institutions such as the practices of law enforcement by local authorities may affect spatial distribution of FDI among regions in a country. In transition economies, reforms have primarily started with formal institutions at the central level, they then directly affect formal institutions at the sub-national level. However, the implementation of law and regulations issued by central governments at local level may vary due to variations of normative or cognitive aspects of local authorities. Especially in some transition economies such as China, Vietnam and Russia which implement decentralization policy, local authorities can decide how to practise policies set at central level. Many local policy makers therefore influence the implementation of institutional change with their individually held norms and cognitions. If conservative inherited norms and lack of recognition of the purpose of regulatory changes dominate, foreign investors may experience a lot of red tape at local level such as corruption or delays in administrative progress. On the other hand, friendly and supportive treatment by local authorities will reduce difficulties and transaction costs foreign firms have to bear when investing in transition economies, thereby encouraging their investment in the province (Meyer and Nguyen, 2004). It is noted that in industrialized countries with a federal structure, such as Australia, Germany or the United States, the responsibilities of different levels of government are clearly delaminated by the laws. In contrast, the formal institutions in transition economies are somewhat still vague such that the actual influence of provincial authorities is to a much higher degree based on informal institutions.

Regarding empirical studies, there is little research on the effect of informal institutions on FDI spatial distributions at regional level, most probably due to lack of dataset for institutional variable. We can count the studies of Meyer and Nguyen (2005) on Vietnam, Zhou *et al.* (2002) on China and Bruno *et al.* (2008) on Russia. Meyer and Nguyen (2005) show that foreign investors in Vietnam prefer to locate in provinces that have more developed market-supporting institutions proxied by facilitation by local authorities towards foreign firms to access scarce local resources. Zhou *et al.* (2002) stated that specific incentives policies issued by Chinese local governments such as tax incentives and development of special economic zone positively influence the location choice by Japanese firms. Bruno *et al.* (2008) find that in Russia, regions with better institutional practices measured by the region's risk index attract more foreign investments.

Our central hypothesis of this study is that just as institutions at the national level affect the overall volume of FDI inflows to the country, informal institutions such as implementations of laws and regulations by local authorities affect the spatial distribution of investment among regions within the country. Foreign investors prefer to locate in places where institutional barriers least inhibit their access to local resources, thereby reducing the transaction costs of setting up and develop their local operations. We therefore expect a relationship between informal institutions at the sub-national level and the FDI distributions.

Hypothesis 1: *Regions with better developed market-supporting institutions attract more foreign investors.*

To test this hypothesis, Vietnam is a suitable choice for empirical setting as Vietnam has gone through a major economic transition process since 1986 while weakness in the formal and informal institutions remains obstacles to business. The communist party still remains in power and many aspects of the economy are subject to regulations or direct interference by the authorities of the local government or the ruling party. Moreover, the important amendment of the FDI law in 1996 decentralized some policy responsibilities to provinces such as investment licensing, land leasing, and import and export licensing for some FDI projects. For larger FDI projects, provinces are responsible for supporting foreign investors in the preparation of application at central level. Provincial authorities vary in how they implement central regulations and may develop different ways to deal with foreign firms. In section 2, we have stated that the variation in institutional practices among provinces in Vietnam may come from differences between urban and rural, the North and the South and the ambiguity of the laws and regulations.

3.2. Focus on institutions: which ones really matter?

In order to discover which aspects of institutions are more likely to impact the FDI location in transition economies, in this section we extend the literatures on institutions and develop two other hypotheses.

The key element of formal institutional change in transition economies possibly is the change of ownership (The World Bank Report 1996). Balcerowicz (2002) stated that in the early stage of transition, the main task of the reform program is the transfer of enterprises from the state ownership to private ownership in order to encourage development of private sector and reduce the

dependence of the overall economy on inefficient state-owned enterprises. Under the planned economy, SOEs were tripped of most subsidiaries and other privileges and they played a leading role in the economies. However, most SOEs suffered from inefficiency, outdate of technology, non-competitive products, poor management and an inability to respond to market demands. During the reform period, transition economies have privatized many SOEs and encouraged development of private domestic and foreign firms. The privatization process increases competitiveness in the economy and creates opportunities for foreign firms to explore new markets.

Although the number of SOEs in transition economies is strongly reduced during the reformation, they, as incumbents, still control local resources including business networks, distribution channels and labor markets. Incumbent local firms normally have long-standing personal relationships with central or local governments and may lobby them to protect their interests and thus create administrative barriers to entry (Meyer and Nguyen, 2005). For example, in Vietnam despite the reform in the SOE sector, private firms often complain that provinces have favorable treatments toward the SOEs, especially in access to bank credit and land (The PCI 2006 Report). As a result, SOEs continue growing and remain the largest sector of the Vietnamese economy, contributing around 38% to GDP in 2007 (The GSO website). We expect that incumbent SOEs use their power to influence provincial institutions, especially informal ones, to favor their interests over those of foreign investors which in turn create a business environment that is perceived as less favorable by foreign firms.

Hypothesis 2: *Foreign investors are less likely to locate in regions where local governments are biased toward SOEs.*

As mentioned before, the role of institutions in an economy is to reduce both transaction costs and information costs through reducing uncertainty and establishing a stable structure that facilitates interactions (Hoskisson *et al.*, 2000). Economic agents in transition economies therefore have to pay higher transaction cost and information costs arising from inconsistent and unstable institutional frameworks. In this system, domestic firms lack knowledge of using market mechanism and correctly indentifying potential partners and competitors. This increases transaction costs and information costs associated with searching, negotiating and contracting new business relationships between foreign firms and domestic partners (Meyer, 2001). During the early phase of transition, uncertainties in formal institutional constraints and lack of information about local

environment often force foreign firms to rely on informal and international relationships not only with managers of other firms but also with governmental officials or to create joint ventures and alliances with local partners (Peng and Health, 1996; Peng, 2003). As a consequence, foreign investors may have to pay higher costs of obtaining information about such as local knowledge, local suppliers, market opportunities, and skilled labor compared with domestic firms. Indeed, information transparency is one of the most crucial factors highlighted by academics and development practitioners in distinguishing between environments that are conductive or not conductive to private sector (The PCI 2006 Report).

Vietnam just like other transition economies has been characterized by a lack of transparency and a service sector to provide economic agents with information about business environment. Managers often complain about the lack of market information about inputs, output, alternative suppliers, buyers, price and price trend. Moreover, information about changes in policies and regulations as well as basic business registration such as firm name, address, and other details is not available to public and responsible officials (Tran *et al.*, 2008). The capacity of access to market information or new regulations and policies somewhat is based on the relationship with provincial officials (The PCI 2006 Report). Acknowledging the importance of information to investors, the government has issued policies to encourage provinces to set up agencies and centers to provide market information and trade promotion. However, information provision to firms is differently implemented among the provinces in Vietnam. For instance, Dong Nai province, known to be investor friendly and supportive, is one of the provinces that have attracted many direct foreign investments. Local authorities in this province provide a timely, clearly and consistent interpretation of laws and regulations to investors so that they would know "the rules of the game" before committing to invest (Meyer and Nguyen, 2004). We therefore expect that foreign firms consider information costs they have to confront with when deciding to invest in a region.

Hypothesis 3: *Foreign investors prefer to locate in regions where information about market and legal documents necessary to run their business is transparent and easy to access.*

4. The measurement of institutional practices in Vietnam

An indicator which measures the attitude and the practice of laws and regulations issued by the central government at provincial level is the Vietnam

provincial competitiveness index (PCI). This index was developed at the first time in 2005 by the Vietnam Chamber of Commerce and Industry (VCCI) and the U.S. Agency for International Development (USAID)-funded Vietnam Competitiveness Initiative (VNCI). The PCI is an effort to explain the reasons why some parts of the country perform better than others in terms of private sector dynamism and growth. The PCI is a composite index of the ten sub-indices capturing different elements of business environment that can be directly influenced by provincial authorities in the short-to-medium term: business entry costs, land access and security of tenure, transparency and access to information, time costs of regulatory compliance, informal charges, state-owned enterprise bias (competitive environment), pro-activity of provincial leadership, private sector development services, labor training and legal institutions (see Appendix 2.1 and Table 2.1 for more details).

Compared to the PCI 2005, the PCI 2006 had some modifications and improvements. First, the PCI 2006 based on a larger sample of 6379 responses from firms compared to 2020 of the PCI 2005. Second, all 64 provinces of the country included in the survey, up from 42 in the previous year. Most impressively, the PCI 2006 had the strong response from the smaller and more remote provinces that were not included in the PCI 2005. A larger dataset allows for greater flexibility and more robustness in the statistical analyses of provincial performance. Third, the PCI 2006 included two new sub-indices Legal institutions and Labor training, two key areas where provincial authorities can take actions that affect the local business environment. Moreover, there are some modifications in weighting the sub-indices that will allow for easier replication of the index in subsequent years. As the PCI 2006 is more reliable and robust in terms of statistical analyses, this study will use the PCI 2006 and its sub-indices in econometric regressions.

The PCI's methodology can be divided into three major steps: data collection of company perceptions survey and hard data; construction of sub-indices; and weighting of each sub-index to create the final PCI.

Data collection

Two general types of data were used to construct the sub-indices. The first was company perceptions data, drawn from a mail-out survey to 31186 private firms across all 64 provinces. This perceptions, or "soft", data was combined with objective, or "hard", data gathered from statistic yearbooks and interviews with third parties, such as state-owned commercial banks or estate real firms, or collected from business associations.

The survey instrument was an updated version of the Asia Foundation (TAF)-VCCI economic governance survey used in 14 provinces in 2003. It asked questions about basic business performance data, as well as covering twelve separate dimensions of economic governance, across 60 questions (See Appendix B). Some of the questions were modified from the World Bank's Business Environment and Enterprise Performance Survey, but most questions were specifically for the Vietnamese context. After the survey was written, it was translated into Vietnamese and then circularly translated into English to make sure the original meaning of the questions was retained.

Following the technique used for the PCI 2005, a list from the Tax Authority of tax-paying private firms was used to generate the firm sample. The tax list is more reliable than business registration lists, which sometimes are not updated to exclude firms that have gone out of business and often include firms that have not yet begun operations. As of November 2005, this list provided information on 151140 active tax paying private firms. As it was not feasible to survey every firm on this list, a stratified sample of firms was generated that would be representative of the total population of firms. For this reason, this tax list of firms was then categorized into 24 stratifications, across 3 dimensions: ownership type (joint stock, limited liability and sole proprietorship), sector (manufacturing, natural resource exploitation, trade/service, and agriculture), and age of firm (established before or after 2000).

A random stratified sample of 31186 firms was then constructed. The total number of firms per province in this sample depended upon the total population of private firms in the province. In provinces with less than 500 private firms on the tax list, the entire population of firms was sampled. The research team then sent out the questionnaire to stratified sample of firms. By April 2006, VCCI had received 6379 responses, delivering a response rate of 20.5%.

Hard data was collected from as many published data sources as possible. These included data compilations such as the Statistic Yearbook of the GSO, Labor Statistics from the Ministry of Labor, Invalids and Social Affairs, data on court cases from the People's Supreme Court, and GSO's Enterprise Census, and the General Department of Vocational Training. A final important source was provincial budget data and targets from the Ministry of Finance. The research team also engaged in third-party interviews to collect additional hard data. Logistic and freight forwarding companies were surveyed to collect price data on the cost of shipping. Real estate firms and local business associations were interviewed regarding the price of land. State Commercial Banks were asked to provide their lending data to SOEs and private firms by province.

Construction of the ten sub-indices

An important strength of the PCI is that it compares provincial economic governance against best practices already found in Vietnam, not against some idealized standard. For this reason, each indicator was standardized to a ten-point scale[5], whereby the best and worst performing provinces were awarded the scores of 10 and 1 respectively, and the other 62 provinces distributed somewhere along scale between these two scores.

Table 2.1: Detailed description of sub-indices and component indicators

1. Entry Costs

- % of firms waiting over 01 month to start a business
- % of firms waiting over 03 months to start a business
- Effective land wait days (determined by government efforts, not supply/demand conditions)†
- Length of business registration in days
- Length of business re-registration in days
- Number of licenses and permits required to operate
- % of firms having difficulty to obtain all licenses/ permits to start a business

2. Land Access and Security of Tenure

- Land Access
  - % of firms with LURCs or in the process of receiving them
  - If land is easier to obtain, business would expand
  - % of firms without LURCs that rent land from the state sector
  - Firm rating of provincial land conversion policies
  - % of total land with LURCs*
- Security of land tenure
  - Risk of expropriation
  - Perception of fair compensation values
  - Risk of change in lease contract
  - Perception of fair process for disputing changes in lease contracts
  - Duration of tenure

3. Transparency

- Transparency #
  - Transparency of planning documents
  - Transparency of decisions and decrees
- Equity and consistency of application
  - Importance of "relationship" to get access to these provincial documents
  - Importance of family and friends when dealing with government officials
  - Negotiations with tax officials are an essential part of doing business
- Predictability and consistency
  - Predictability of local implementation of laws
  - Provinces discuss regulatory changes with firms
  - Quality of services provided by provincial public agencies on business consulting on regulatory information
- Openness: Assessment of provincial webpage. Note that this is worth 40% of the sub-index.

4. Time Costs of Regulatory Compliance

- Days reduced dealing with bureaucracy since the Enterprise Law
- % of firms spending over 10% of time dealing with bureaucracy
- Median number of inspections and median tax hours

[5] The following standardization formula was used if a high score on an indicator meant good governance: [9*((Province Score – Sample Minimum)/ (Sample Maximum – Sample Minimum)) + 1]. If a high score on an indicator meant poor performance, the above formula was subtracted from 11, that is: 11 - [9*((Province Score – Sample Minimum)/ (Sample Maximum – Sample Minimum)) + 1].

- Decrease in inspections since the Enterprise Law

5. Informal Charges

- Informal charges are a major obstacle to doing business
- Firms in the same line of business make extra payments
- % of firms paying over 10% of revenue in informal charges
- Officials use compliance with local regulations to extract rents
- Informal charges delivered expected results

6. SOE Bias (Competition Environment)

- Perception of bias toward SOEs
  - Provincial government is biased toward SOEs
  - Provincial government is biased toward equitized companies
  - Provincial attitude toward the private sector
  - Attitude to the private sector is improving
  - Monetary contributions influence attitude toward the private sector
  - Firm rating of provincial equitization effort
- Hard indicators of bias toward SOEs
  - The ratio of local SOE share of liabilities to their share of revenue*
  - % change in number of SOEs (2000-2004)*
  - Average proportion of bank loans to state sector*

7. Pro-activity

- Province is good at working within central laws
- Province is creative and clever in solving problems confronting business community
- Good initiatives at provincial level but center frustrates
- No initiatives at provincial level

8. Private Sector Development (PSD) Services

- Perception of quality of services provided by provincial public agencies
  - Market information and trade promotion
  - Technology and technology-related services
  - Match-making for business partners
  - Export promotion and trade fairs
  - Industrial zones
- Hard indicators of PSD activities
  - Trade fairs held by province (2004-2005)*

9. Labor Training and Development

- Education services provided by provincial public agencies
- Labor vocational training services provided by provincial public agencies
- Labor exchange services provided by provincial public agencies
- Number of vocational schools adjusted for provincial differences in population*

10. Legal Institutions

- Legal system provided mechanism for firms to appeal officials' corrupt behavior
- Firm confidence in legal institution
- Use of legal institutions as primary mode of dispute resolution
- Number of cases (where claimant was not an SOE or an FIE) per 100 active firms*

Note: The first three soft indicators worth 60% of the sub-index and the last one hard indicator worth 40%.

Notes:
* denotes component uses only hard data
# derived from factor analysis
† indicator modified in 2006

In all sub-indices, each primary component is given equal weight unless otherwise noted.

(Source: The PCI 2006 Report)

Using the existing literature on the business environment as a guide, indicators were grouped into 10 sub-indices. Considerable effort was made to ensure that these sub-indices correspond with previous research on the obstacles to private sector entry and growth in Vietnam. Once the indicators were standardized, an average (either weighted or simple) of all indicators was taken to create the sub-index. Table 2.1 provides detailed description of sub-indices and component indicators. Weighted averages were used to integrate hard data into four of the sub-indices (Land access and security of tenure, SOE bias, labor training, and legal institutions).

Construction of the final PCI

A simple summation of these sub-indices yields the un-weighted index, with a maximum possibility of 100 points. While this is clearly the easiest and simplest method of calculating the final PCI, it would be less appropriate as a policy tool, as some sub-indices are more important than others in explaining private sector development. Hence it was important to re-weight the sub-indices, based on their actual contributions to private sector development. To do this, the research team used multivariate regression analysis to determine how each of the sub-indices impacted upon *three* key economic performance variables which researchers and practitioners in Vietnam deem to be the most important gauges of private sector development.

- *The ratio of private enterprises actively operating in the provinces to the number of citizens in the province in 2004*. The number of active enterprises allows for the identification of firms that completed registration procedures and have been successful enough to continue their business operations beyond the entry stage.
- *Average private sector long-term investment per capita (2000-2004)* was chosen to gauge the size of the risk entrepreneurs were willing to make. The assumption is that private entrepreneurs will be more willing to make sizable investments in more conducive regulatory environments, where they can more accurately assess the long-term potential risks and benefits to their enterprise
- A*verage profit per firm in millions of VND (2000-2004)* was selected as a measure of the success of individual firms over the Post-Enterprise Law period. Competitive provinces are more likely to create an environment in which entrepreneurialism is encouraged and rewarded by business profits, rather than by public largesse.

In each case, the research team regressed the above economic performance variables, controlling for the initial structural conditions of private sector development, specifically:

- The distance from markets measured by the distance in kilometers from the provincial capital to Ha Noi or Ho Chi Minh City;
- The quality of human capital measured by the secondary school graduates as a percentage of the population in 2000 to account for the relevant labor force private firms would draw upon; and
- Initial infrastructure endowment measured by telephones per capita in 1995.

Table 2.2: Sub-index weights

Sub-index	Average weight	Round weight	Weight class
PSD services	17.21%	15%	High
Transparency	16.25%	15%	High
Labor training	15.35%	15%	High
Pro-activity	13.15%	15%	High
Time cost of regulatory compliance	11.92%	10%	Medium
Legal institutions	7.62%	10%	Medium
SOE Bias	5.98%	5%	Low
Informal charge	5.76%	5%	Low
Land access and security	3.57%	5%	Low
Entry cost	3.18%	5%	Low
	100%	100%	

(Source: The PCI 2006 Report)

Determination of sub-index weights would involve regressing all ten sub-indices on the three dimensions of competitiveness, controlling for the structural conditions. Weights could be read directly from the coefficients of the regression output, which records the substantive impact of a one-point change in the sub-index. These weights were then rounded to the nearest 5% to deliver three basic classes of weights, as shown in Table 2.2. These weights were then applied to the sub-indices, which were then aggregated into the final PCI[6]. Appendix 2.2 presents PCI sub-indices scores by province in Vietnam.

[6] See "The PCI 2006 Report" for more details in the methodology behind the PCI.

5. Methodology and empirical results

5.1. Data and variables

The dataset is obtained from the yearly surveys of the enterprises operating in Vietnam conducted by the General Statistics Office of Vietnam since 2000. These are comprehensive surveys covering all state enterprises, non-state enterprises that have equal or greater than 10 employees, 20% of sampled non-state enterprises with fewer than 10 employees, and all foreign enterprises across 64 provinces and cities in Vietnam. The contents of the surveys cover indicators to identify enterprises including their name, address, type, and economic activities of the enterprises, and indicators to reflect production situations of the enterprises such as their employees, income of employees, asset and capital source, turnover, profit, contributions to the state budget, investment capital, taxes and other obligations to the government, job training, and evaluations on the investment environment.

The main purpose of this chapter is to investigate the effect of institutional practices by provincial authorities on the entry rates of foreign firms across 56 industries (2-digit SIC) and 64 cities and provinces in Vietnam over six years from 2000 to 2005. Following Geroski (1995), the entry rate of new foreign firms in a particular year is defined as the number of new foreign firms divided by the total number of both Vietnamese and foreign incumbents plus new foreign firms operating in that year. We include Vietnamese firms in the equation because a foreign entrant when entering a new market obviously has to compete with both domestic and foreign firms. As average size of Vietnamese firms that is measured by the number of employees is quite small of which nearly 50% have fewer than 10 employees (The GSO, 2007), we use all kinds of firms to calculate the denominator.

In order to identify new foreign firms created in each year, we implement a two-step procedure. First, we merge all foreign firms over the six years from 2000 to 2005 by using tax codes that are unique for each firm. It is noted that numbers of foreign firms that are surveyed in a particular year include foreign firms that already started their operations and still exist until the day of survey and new foreign entrants of that year. After merging, we can obtain the longitudinal information of all foreign firms during the six years. Second, by using the information about the year of starting operation, we can keep new foreign firms created in a particular year. The first step provides longitudinal information that allows a firm to be followed over time, therefore we can find out the foreign firms that in fact were surveyed in the previous years but had the year of operation of the later years due to mistakes during conducting the surveys. For instance, some

firms that have the year of operation equal 2002, but in fact they already appeared in the survey in 2001. Thus, by using both tax codes and the year of starting operation, we can find the exact number of new foreign firms created in a specific year. In sum, there were 187 new foreign firms created in 2000, 291 in 2001, 263 in 2002, 363 in 2003, 409 in 2004 and 568 in 2005.

This study uses the PCI 2006 as a proxy for institutional practices of local authorities to test hypothesis 1 and its two sub-indices reflecting attitudes of local governments toward state-owned enterprises (*SOE bias*) and the capability of private enterprises to access information (*transparency and access to information*) to test hypotheses 2 and 3. In addition, some other variables affecting the entry rates of new foreign firms are also included in the empirical analysis. At the industrial level, we analyze the influences of the density of large SOEs and large foreign firms in industries by province. Following the argument of Head *et al.* (1995) and Mariotti and Piscitello (1995), we expect that existence of these incumbent firms in a region attract more new foreign firms to locate there in order to obtain benefits arising from agglomeration economies. Numbers of incumbent SOEs and foreign firms with equal and greater than 500 employees in the same 2-digit industry and province cumulated up to the year of entry are proxies respectively for the density of large SOEs and large foreign firms.

At the provincial level, we control for the initial endowments of provinces that can affect the entry of firms. According to the factor endowment theory, firms have tendencies to locate in places where the required factors of their production are relatively abundant to reduce production and transportation costs (Krugman and Obstfeld, 1997). The control variables for the location-specific characteristics are the size of local consumer market measured by the proportion of population of each province over the total population of the country, income per capita by province, human capital development measured by the proportion of undergraduate students in the total population of each province or the proportion of students enrolled in professional schools in the total population of each province, and infrastructure conditions proxied by the distance to the nearest big harbor. It is noted that there are some other candidates that can be proxies for infrastructure conditions such as the distance to the nearest international airport, the number of kilometres of highways, or the number of telephone registrations, but we believe that the distance to the nearest big harbour is the most appropriate choice because foreign firms prefer to transport goods by sea than by air. All this information is taken from the Statistical Yearbooks of Vietnam published by the GSO in the period 2000-2005. Table 2.3 and Table 2.4 present the descriptive statistics and the correlations of variables used in this study.

Table 2.3: Descriptive statistics

Variables	Obs	Description	Average	Min	Max
1. Entry rate	21504	The entry rates of foreign firms across 56 industries and 64 provinces and cities over six years from 2000 to 2005	0.16	0	1
2. Large foreign firm	21504	The number of incumbent foreign firms with equal and greater than 500 employees in the same 2-digit industry by province	0.09	0	48
3. Large SOE	21504	The number of incumbent SOEs with equal and greater than 500 employees in the same 2-digit industry by province	0.25	0	128
4. Student (1)	19768*	The percentage of undergraduate students in the total population of each province	0.83	0.01	16.3
5. Student (2)	19488*	The percentage of students enrolled in professional schools in the total population of each province	0.29	0.01	2.54
6. Income per capita	20776*	Income per capita in the province where foreign firms locate (thousand VND/person)	4191	1354	43360
7. Population	20944*	The proportion of population of each province over the total population of the country	1.60	0.36	7.11
8. Distance to harbor	21504	The distance in km to the nearest big harbour by province	150	0	388
9. Institutional practice	21504	The Vietnam provincial competitiveness index in 2006 by province	52.45	36.76	76.23

Note: * There are 21504 observations in total. The smaller number of observations is due to the missing information on the provincial characteristics for two years of 2003 and 2004 because since 2003 the Vietnamese government divided the 61 provinces in to 64.

Table 2.4: Correlations in the dataset

Variables	1	2	3	4	5	6	7	8	9
1. Entry rate	1								
2. Large foreign firm	0.09	1							
3. Large SOE	0.06	0.13	1						
4. Student (1)	0.09	0.10	0.23	1					
5. Student (2)	0.07	0.08	0.16	0.73	1				
6. Income per capita	0.08	0.10	0.08	0.21	0.16	1			
7. Population	0.08	0.19	0.18	0.35	0.16	0.16	1		
8. Distance to harbor	-0.10	-0.11	-0.07	-0.19	-0.26	-0.27	-0.25	1	
9. Institutional practice	0.07	0.14	0.03	0.18	0.29	0.20	0.08	-0.29	1

5.2. Econometric model

In order to estimate the effect of institutional performance on the entry rates of new foreign firms in Vietnam across 56 industries and 64 provinces and cities over the six years from 2000 to 2005, we use the Tobit model on three-dimension panel database (industry, province and year). The Tobit model is appropriate when the dependent variable is roughly continuous over strictly positive values but is zero for a nontrivial fraction of the population (Wooldridge, 2003). The values of the entry rates of foreign firms range from 0 to 1, and totally there are 21504 observations[7] of entry rates (equal 56 industries*64 provinces*6 years) of which 20663 entry rates equal zero. Thus, the entry rate of foreign firms is a good candidate for a Tobit model.

The basic Tobit equation specification is:

$$ER_{irt} = \beta_0 + \beta_1 I_r + \beta_2 X_{irt} + \beta_3 Z_{rt} + \varepsilon_{irt}$$

where "*i*" stands for industry, "*r*" for province and city and "*t*" for year; ER_{irt} is the entry rates of foreign firms across 56 industries and 64 provinces and cities over the six years from 2000 to 2005; I_r is a vector of institutional performance by local authorities in 64 provinces including the PCI 2006 and its two sub-indices; X_{irt} is a vector of the industrial characteristics including the number of large SOEs and large foreign firms across 56 industries and 64 provinces and cities over the six years from 2000 to 2005; Z_{rt} is a vector of the provincial characteristics from 2000 to 2005 including the size of local consumer market, income per capita, human capital development and infrastructure condition, and ε_{irt} is the error term. The estimations are performed by maximum likelihood methods.

5.3. Empirical results

Table 2.5 presents the empirical results generated by the maximum likelihood estimation. In Column 1, we estimate the effect of the *institutional practice* on the entry rates of foreign firms proxied by the PCI 2006 controlling for the differences in industrial and provincial characteristics. The percentage of professional-school students is not included in the model due to its high correlation with the percentage of undergraduate students. As expected, the provinces that have better practices of laws and regulations issued by the central government and have more friendly and supportive attitude toward private sector attract more foreign firms. We can take Dong Nai, one of the provinces that have attracted more FDI, as an example. The local authorities in this province have

[7] In the regressions, there will be fewer numbers of observations due to missing variables for location-specific characteristics. See Table 2.3 for more details.

created flexible mechanism to facilitate the process of obtaining investment licenses. In some cases, the chairman of the province accompanied investors in person to support investment plan in front of higher authorities. The authorities also support FDI enterprises beyond issuing investment licenses, for instance by providing advice on how to deal with the complex regulations on import, export, labor recruitment, construction, land lease, etc (Meyer and Nguyen, 2004).

Table 2.5: the effects of institutional practices at local level in Vietnam

Independent Variables	Dependent variable: entry rate of new foreign firm		
	1	2	3
Large foreign firm	0.030**	0.033**	0.030**
	(0.0027)	(0.0027)	(0.0027)
Large SOE	0.004**	0.004**	0.004**
	(0.0013)	(0.0013)	(0.0013)
Student (1)	0.015**	0.015**	0.013**
	(0.0020)	(0.0023)	(0.0020)
Income per cap.	0.000**	0.000**	0.000**
	(9.88e-07)	(1.03e-06)	(9.87e-07)
Population	0.024**	0.022**	0.021**
	(0.0045)	(0.0045)	(0.0045)
Distance to harbor	-0.001**	-0.001**	-0.001*
	(0.0001)	(0.0001)	(0.0001)
Institutional practice	0.006**		
	(0.0008)		
SOE Bias		0.001	
		(0.0112)	
Transparency and access to information			0.052**
			(0.0057)
Number of obs.	19656	19656	19656
Log likelihood	-2017.9	-2003	-2048.5
Pseudo R2	0.228	0.233	0.216
Chi square	1191.7**	1221.5**	1130.4**

Note: Standard error in parentheses. ***p*-value < 0.01.

(+) When the variable *student (1)*, the percentage of number of undergraduate students in the total provincial population, is replaced with the variable *student (2)*, the percentage of number of professional school students in the total provincial population, the significance and the sign of the variable *institutional practice* and other control variables do not change.

This result supports our argument that informal institutions influence the FDI spatial distributions among regions within a country. Foreign investors are particularly concerned about the implications of regional policy for institutional development and investment risk. Formal legal changes initiated at the centre have varied impacts across provinces because the implementation of laws and regulations at local level depends on the informal institutions determined by attitudes (norms and cognitions) of local authorities. For instance, the Vietnamese government acknowledged the importance of information openness to investors and issued policies to encourage provinces to set up agencies and centers to provide market information and trade promotion. However, information transparency to firms is implemented differently by provinces. The empirical finding confirms that decentralization policy may, on the one hand, generate opportunities for entrepreneurial local authorities, but on the other hand, it can create barriers to investors if local decision makers possess conservative inherited norms and lack recognitions of the purpose of regulation changes.

In Column 2, we estimate the effect of the local authorities' treatment towards SOEs compared with other private enterprises on FDI decisions in the province by including the sub-index *SOE bias* in the regression. This index measures the competition regime confronting private business focusing on the perceived bias of provincial governments toward SOEs in terms of incentive, policy and access to capital. It therefore reflects attitudes of local governments in creating a fair and balanced competition environment for all economic actors. However, the estimated result shows that favorable treatments of local authorities toward SOEs do not inhibit the entry of foreign firms to the region. The coefficient is positive as predicted in Hypothesis 2, but statistically insignificant. The result indicates that lobbying and economic bargaining power of SOEs at the provincial level do not have a significant deterrent effect on foreign investors, or the incumbents may not perceive foreign entrants as a threat to their market share.

This empirical result is consistent with the finding of Meyer and Nguyen (2005). The authors show that the domination of SOEs measured by the ratio of output by SOEs over output of domestic firms does not constrain the inflow of FDI at the local level. As mentioned in the previous parts, under the planned economy, SOEs received most subsidiaries and other privileges from the government and played a leading role in the economy. However, most SOEs suffered from inefficiency, outdate of technology, non-competitive products, poor management and an inability to respond to market demands. Weak SOEs therefore may consider partnering with foreign investors as a means to enhance their competitiveness rather than perceive FDI as threat to their market position.

Girma *et al.* (2005) found that partnering with foreign firms increases innovation activity of SOEs in China. Moreover, SOEs with their privileged positions and local business network could help foreign firms a smooth entry into market in the case of Vietnam (Kokko *et al.*, 2003).

The impacts of information access on location decision by foreign firms are investigated through two sub-indices, *transparency and access to information* and *private sector development services*. While the first indicator is a measure of whether firms have access to the proper planning and legal documents necessary to run their business, whether those documents are equitably available, whether new policies and laws are communicated to firms and predictably implemented, and the business utility of the provincial web page, the second indicator reflects the availability of market information and the assistances of provincial authorities toward firms in understanding unclear regulations and policies. However, only *transparency and access to information* is included in the econometric regression because these two indices are highly correlated and the second one has lower fitted values (Pseudo R2).

The statistical significance of the variable *transparency and access to information* in Column 3 shows that foreign firms prefer to locate in the regions where they can easily access necessary information relating to legal documents, provincial master socio-economic plans and market information such as information about inputs, outputs, alternative suppliers, buyers, price and price trends. Moreover, the assistances of provincial leaders in working with unclear national regulatory frameworks to assist and interpret in favor of local private firms can increase attractiveness of provinces toward foreign firms. It is noted that this variable has the strongest effect on the entry rates of foreign firms in provinces compared with the other sub-indices.

As discussed in section 3, economic agents in transition economies have to pay high transaction cost and information costs arising from inconsistent and unstable institutional frameworks. Especially, foreign firms from mature market economies that are unfamiliar with local culture, language and business environment may have to pay high cost to get information about local market such as local knowledge, local suppliers, market opportunities, and skilled labor compared with domestic firms. The more firms know about their business environments or "the rules of the game", the better they can assess the costs and risks of subsequent investment decisions and the more comfortable they feel about risking their hard-earned capital. It is noted that this variable is among the four sub-indices that have the highest impacts on investments, profitability and growth of private sector in Vietnam (see Table 2.2). The ranking of the PCI 2006 shows

that the provinces that lie in the "excellent" or "high" performing group performed well on these four sub-indices.

The empirical finding confirms the importance of information transparency that we advance in Hypothesis 3, suggesting that foreign firms in transition economies prefer to locate in place where they can access necessary information about business environment at the lowest costs. For instance, Binh Duong, a province in the Southeast region of Vietnam that has the highest score in the PCI 2006, can be a good an example for the empirical result. While the population of Binh Duong equals to only nearly 1% of the total population in the country, it accounted for nearly 20% of the total foreign firms in Vietnam in 2005 (The GSO, 2007). This province is famous for having innovative ways to make relevant national legal documents and provincial implementing documents from the previous years available for investors as well as friendly attitudes of local authorities toward investors.

The effect of information costs on location choices by foreign firms have been investigated recently by some scholars such as Mariotti and Piscitello (1995) and He (2002). According to these studies, information costs arise from the physical or cultural distance between the home countries of foreign firms and the host countries where they invest. Foreign investors' location decisions are affected by market uncertainty stemmed from a lack of knowledge of how to run business operations in an unfamiliar environment. Foreign firms therefore are likely to locate in economic centers or metropolitan communities where better quality information appears and spreads. However, in this study we argue that information costs are influenced by the recognition of policy makers on the importance of information openness toward foreign investors. They can issue appropriate policies to reduce information costs incurred by foreign investors. Compared with domestic investors, foreign firms may always have disadvantages in accessing information about local business environment due to differences in language, culture and business manners. Yet, these disadvantages will reduce if firms locate in regions where local authorities can create the ways to make necessary information transparent and easy to access for investors. This can explain the reason why in the PCI 2006 Report private enterprises evaluated Lao Cai, a small and poor province in the Northeast region of Vietnam, better than Hanoi, the capital of Vietnam, in information provision to investors.

With regard to the control variables, all the variables reflecting provincial-specific characteristics have statistically significant effects as predicted. Provinces with larger local consumer market, higher income per capita, better human capital development and infrastructure conditions can attract more new foreign entrants.

As expected, new foreign firms are likely to locate in places already hosting large incumbent SOEs and large incumbent foreign firms. Clearly, locating near these large firms, new foreign firms can get benefits from positive externalities. For instance, Crozet *et al.* (2004) find that proximity allows foreign entrants to learn experience from others and to exploit earlier investors' understanding of new business environment. Head *et al.* (1995; 1999) show that foreign firms in the same industries prefer to cluster to obtain benefits from technology spillovers, specialized labor markets, and availability of input suppliers to the industry. Further, Mariotti and Piscitello (1995) stated that by locating near large firms, especially the world's leading multinational enterprises, new foreign firms can access sources of important and cost-free information about new business market.

6. Conclusions

In order to succeed in foreign markets, especially in transition economies characterized by inconsistent and unstable institutional framework, foreign investors have to adapt their strategies to formal and informal institutions of the host countries. In this study, we argue that formal institutions, such as laws and regulations, and informal institutional, such as practices of law enforcement by local authorities, shape the transaction costs in transition economies and consequently, location decision by foreign investors.

We use the Tobit model to investigate the effect of institutional practice by local authorities on the entry rate of foreign firms in Vietnam over the period 2000-2005. The Vietnamese provincial competitiveness index in 2006 (PCI 2006) and its two sub-indices reflecting attitudes of local government toward state-owned enterprises (SOEs) and the probability of private enterprises to access to necessary information for their business are used as proxies for institutional implementation by provincial authorities. The empirical findings show that provinces with better institutional performance attract more foreign firms. The efforts of local authorities in interpreting and implementing central regulations and policies are important factors creating attractiveness toward domestic as well as foreign investors. Transparency and access to information is found to have a strong effect on the attractiveness of a province to foreign investors, suggesting that more efforts both of the central and local governments should be made to assure that information relating to regulatory procedures and market are as openly available and easy to understand as possible for foreign investors. By contrast to our prediction, the favorable treatments of local authorities toward SOEs do not inhibit the entry of foreign firms to the region, indicating that lobbying and the economic bargaining power of SOEs do not have a significant deterrent effect on

foreign investors, or the incumbents may not perceive foreign entrants as a threat to their market share.

The empirical results support our argument that just as institutions at the national level affecting the overall volume of FDI inflows, informal institutions at the sub-national level influence FDI spatial distributions among regions within the country. Formal legal changes initiated at the centre have varied impacts across provinces because the implementation of laws and regulations at local level depends on the informal institutions determined by attitudes (norms and cognitions) of local authorities. This shows that decentralization policy may, on the one hand, generate opportunities for entrepreneurial local authorities, but on the other hand, it can create barriers to investors if local decision makers possess conservative inherited norms and lack recognitions of the purpose of regulation changes. However, in our opinion, this policy is successful in encouraging creativeness of and competitiveness among provinces to attract foreign investment.

With this study, we provide a better understanding of how formal and informal institutions influence entry strategies of foreign investors in transition economies at the national and regional levels. Indeed, the effect of informal institutions on location choices by foreign firms in Vietnam has investigated by Meyer and Nguyen (2005). However, the authors only employ data at provincial level and their proxies for institutions do not allow a clear separation of the formal and informal aspects of the institutional framework. The empirical findings suggest that the government should encourage provinces to exchange information and experience as well as facilitate cross-provincial communication and learning.

This study has some limitations. First, we discover the effects of only two aspects of institutions (SOEs bias and transparency and access to information). Future research should consider other aspects that may have important influence on business strategies of foreign firms. Second, we use the PCI referring to only the year 2006 as a proxy for institutions. This can lead to bias conclusions about the effect of institutional practice due to un-variation of the variable PCI across time. Any future study should exploit the PCI variable in longer periods, so as to increase its cross time variance and ensure the exactness of the empirical results.

Appendix 2.1: The summarized descriptions of the ten sub-indices of the PCI 2006.

(Source: The PCI 2006 Report)

1. *Entry Costs*: A measure of time it takes firms to register, acquire land, and receive all the necessary licenses to start business, the number of licenses required and the perceived degree of difficulty to obtain all licenses/ permits.
2. *Land Access and Security of Tenure*: A measure combining two dimensions of the land problems confronting entrepreneurs: how easy it is to access land and the security of tenure once land is acquired. The first dimension comprises whether firms possess their official land use rights certificate, whether they have enough land for their business expansion requirements, whether they are renting from SOEs and an assessment of land conversion efforts. The second dimension includes perceptions of various tenure security risks (such as expropriation, unfair compensation values, or changes in the lease contract) as well as the duration of tenure.
3. *Transparency and Access to Information*: A measure of whether firms have access to the proper planning and legal documents necessary to run their business, whether those documents are equitably available, whether new policies and laws are communicated to firms and predictably implemented, and the business utility of the provincial web page.
4. *Time Costs of Regulatory Compliance*: A measure of how much time firms waste on bureaucratic compliance as well as how often and how long firms must shut their operations down for inspections by local regulatory agencies.
5. *Informal Charges*: A measure of how much firms pay in informal charges, how much of an obstacle those extra fees pose for their business operations, whether payment of those extra fees results in expected results or 'services', and whether provincial officials use compliance with local regulations to extract rents.
6. *SOE Bias (Competition Environment):* A measure of the competition regime confronting private business focusing on the perceived bias of provincial governments toward state owned enterprises (SOES) and equitized firms in terms of incentives, policy, and access to capital.
7. *Pro-activity of Provincial Leadership*: A measure of the creativity and cleverness of provinces in both implementing central policy, designing their own initiatives for private sector development, and working within sometimes

unclear national regulatory frameworks to assist and interpret in favor of local private firms.

8. *Private Sector Development Services*: A measure of provincial services for private sector trade promotion, provision of regulatory information to firms, business partner matchmaking, provision of industrial zones or industrial clusters, and technological services for firms.
9. *Labor Training*: A measure of the efforts by provincial authorities to promote vocational training and skills development for local industries and to assist in the placement of local labor.
10. *Legal Institutions*: A measure of the confidence of the private sector in the provincial legal institutions, whether firms regard provincial legal institutions as an effective vehicle for dispute resolution or as an avenue for lodging appeals against corrupt official behavior.

Appendix 2.2: The PCI 2006 sub-indices scores by province in Vietnam

(Source: The PCI 2006 Report)

Rank	Province	Entry cost	Land access and security	Trans-parency	Time costs	Informal changes	SOE bias	Pro-activity	PSD service	Labor training	Legal institution	**Weighted PCI**
1	Binh Duong	8.49	6.21	8.5	7.12	6.46	7.24	9.08	8.86	6.52	5.46	**76.23**
2	Da Nang	9.17	4.7	7.68	5.83	6.18	6.47	6.38	9.62	9.6	6.38	**75.39**
3	Binh Dinh	7.16	6.86	7.97	4.93	6.88	7.5	6.64	8.15	6.18	3.95	**66.49**
4	Vinh Long	8.44	6.8	6.25	4.91	6.8	7.33	5.1	7.5	7.96	4.86	**64.76**
5	Dong Nai	7.02	6.27	6.18	4.95	6.99	6.31	6	7.76	8.45	3.79	**64.64**
6	Lao Cai	7.78	5.93	7.8	4.33	6.78	8.4	6.59	7.01	6.46	3.52	**64.11**
7	Ho Chi Minh	7.07	5.07	6.97	5.12	6.02	6.35	6.18	7.63	7.35	3.81	**63.39**
8	Vinh Phuc	7.31	6.3	6.27	3.25	6.13	6.36	7.74	6.31	6.98	4.03	**61.27**
9	An Giang	7.64	6.37	6.64	4.57	7	6.43	7.59	7.06	4.55	3.38	**60.45**
10	Can Tho	6.55	6.7	6.83	4.87	5.7	6.57	3.52	8.68	5.56	3.8	**58.3**
11	Dong Thap	7.92	6.38	5.81	3.87	7.44	7.43	6.06	6.3	6.14	3.2	**58.13**
12	Yen Bai	7.2	6.32	5.99	5.7	6.9	8.3	6.38	4.49	5.12	3.81	**56.85**
13	Tra Vinh	6.85	6.35	5.79	3.81	6.86	6.46	6.31	6.14	5.85	3.63	**56.83**
14	Quang Nam	7.76	5.55	4.44	4.32	5.27	6.96	6.61	5.26	5.7	6.31	**56.42**
15	Bac Giang	8.18	6.01	5.81	4.78	6.32	6.66	4.89	5.31	6.41	4	**55.99**
16	Hung Yen	6.65	6.91	6.49	5.36	7.64	7.82	5.82	5.53	3.89	3.52	**55.97**
17	Ba Ria - Vung Tau	7.49	5.38	5.43	5.59	5.85	5.7	5.46	5.82	5.56	4.73	**55.95**
18	Ninh Binh	7.87	5.92	5.11	5.87	6.29	6.17	5.64	4.78	6.6	3.63	**55.82**
19	Soc Trang	7.82	7.98	5.78	4	6.3	7.2	7.31	4.5	4.16	4.06	**55.34**
20	Khanh Hoa	8.23	5.3	6.02	5.37	6.51	6.36	5.11	6.12	5.08	3.27	**55.33**
21	Phu Yen	8.83	7.03	6.09	2.64	5.35	6.58	5.09	6.49	5.44	3.73	**54.93**
22	Bac Ninh	7.25	6.06	6.09	3.04	6.24	6.76	5.75	4.6	6.53	4.14	**54.79**
23	Nghe An	7.85	5.56	5.78	5.06	6.29	6.15	4.69	4.28	6.53	4.53	**54.43**
24	Phu Tho	8.32	6.5	5.35	4.73	6.61	6.96	4.59	5.7	5.56	3.7	**54.42**
25	Quang Ninh	6.81	6.31	4.77	4.74	6.47	6.46	6.03	5.25	4.74	4.3	**53.25**
26	Ben Tre	7.65	6.2	4.9	3.73	8.35	5.99	6.38	4.42	5.47	3.54	**53.11**
27	Gia Lai	7.08	6.16	6.03	3.26	7.32	6.36	4.91	5.77	5.06	3.68	**53.06**
28	Thai Nguyen	7.02	5.66	6.08	3.66	6.18	6.66	3.53	5.25	6.64	4.05	**52.71**
29	Hai Duong	6.19	6.15	5.81	4.23	5.7	7.28	5.84	5.09	4.52	3.91	**52.7**

30	Binh Thuan	6.39	5.92	6.71	4.22	7.27	7.06	4.47	4.58	5.64	3.02	**52.66**
31	Hau Giang	7.67	6.01	5.12	3.97	7.74	6.08	6.79	3.98	4.67	4.06	**52.61**
32	Lam Dong	7.2	6.97	5.54	4.83	6.56	6.37	3.82	6.39	4.19	3.93	**52.25**
33	Tien Giang	5.85	6.43	4.48	4.59	7.25	6.65	5.31	5.76	5.05	3.6	**52.18**
34	Quang Tri	8.83	5.67	4.93	4.79	6.52	6.85	4.26	4.12	6.78	3.32	**52.18**
35	Dak Lak	6.48	5.95	4.99	4.83	6.03	6.74	5.87	5.27	4.19	3.74	**51.65**
36	Kien Giang	7.87	7.72	4.86	4.42	6.63	6.01	5.6	4.88	3.89	3.89	**51.27**
37	Thai Binh	6.89	5.46	5.27	6.13	6.62	7.17	4.81	3.73	5.13	2.92	**50.54**
38	Thua Thien - Hue	7.52	4.99	5.43	4.4	5.98	6.23	4.63	4.68	5.79	2.98	**50.53**
39	Long An	7.88	7.07	3.62	3.88	5.68	7.02	5.59	5.63	4.85	3.16	**50.4**
40	Ha Noi	5.73	4.19	5.6	5.25	5.21	4.7	4.23	6.12	5.24	3.39	**50.34**
41	Hoa Binh	6.62	6.57	5.13	5.02	7.39	7.3	4.61	3.51	5.16	3.62	**50.17**
42	Hai Phong	7.38	4.48	6.07	4.41	5.54	5.85	3.76	4.98	5.83	2.98	**49.98**
43	Lang Son	6.87	4.39	5.65	5.17	6.21	6.5	3.3	5.2	5.07	3.65	**49.64**
44	Nam Dinh	7.4	5.71	3.63	4.84	6.65	7.54	5.16	4.75	4.48	3.37	**48.89**
45	Bac Kan	7.21	4.34	3.18	4.6	6.47	7.04	4.02	3.28	6.21	6.55	**48.73**
46	Ha Giang	7.39	6.19	5.03	3.44	6.01	6.44	4.92	4.87	4.52	3.04	**48.49**
47	Tay Ninh	8.49	6.26	4.56	3.7	6.12	6.06	4.11	4.42	4.3	5.09	**48.35**
48	Quang Binh	8.02	6.07	5.46	4.05	7.22	6.17	3.55	3.84	4.92	3.46	**47.9**
49	Ha Nam	6.58	5.58	6.48	3.9	6.51	6.29	4.79	4.39	2.87	3.09	**47.27**
50	Tuyen Quang	8.59	5.13	4.04	4.09	6.47	7.02	4.57	5.3	3.43	3.5	**47.21**
51	Cao Bang	7.65	4.83	4.62	4.7	6.3	7.44	4.38	3.07	5.1	3.07	**46.63**
52	Binh Phuoc	4.96	6.82	4.36	5.28	6.12	6.37	4.72	4.36	4.13	2.52	**46.29**
53	Ninh Thuan	7.5	6.66	5.39	3.48	6.08	5.52	2.6	3.84	5.5	3.47	**45.82**
54	Thanh Hoa	7.83	5.95	4.63	4.73	5.24	6.79	3.11	4.61	3.73	3.53	**45.3**
55	Son La	7.78	5.94	3.95	3.5	5.82	7.4	4.37	4.65	3.44	3.63	**45.22**
56	Quang Ngai	6.73	5.99	5.24	4.42	5.44	5.79	2.36	4.57	4.94	2.13	**44.2**
57	Ca Mau	5.99	5.74	5.07	4.33	6.97	5.73	4.1	3.47	3.65	3	**43.99**
58	Bac Lieu	5.67	6.91	2.53	4.24	6.34	5.6	4.17	4.32	4.3	3.41	**42.89**
59	Ha Tinh	7.36	5.93	2.86	4.93	5.05	6.22	3.09	3.99	5.1	2.59	**42.35**
60	Dien Bien	8.82	5.72	4.38	4.19	6.45	5.6	3.24	3.42	3.5	2.99	**42.28**
61	Kon Tum	8.73	4.95	4.28	3.22	5.17	6.09	3.43	3.33	3.6	3.74	**41.38**
62	Ha Tay	6.12	4.92	5.56	4.28	5.07	6.7	2.53	3.6	2.92	3.13	**40.73**
63	Dak Nong	5.56	4.82	2.15	3.81	6.66	5.07	4.15	2.4	4.11	4.83	**38.91**
64	Lai Chau	7.99	3.84	2.46	3.06	5.2	7.1	4.32	2.96	1.99	4.05	**36.76**

Chapter 3

Agglomeration Economies and Location Choices by Foreign Firms in Vietnam

1. Introduction

According to traditional trade theory, location choice by a foreign firm depends on factor endowments of host countries such as natural resources, labor capital and infrastructures. The "factor endowment" theory, which was developed from Ricardo's theory of comparative advantages by Heckscher and Ohlin (Krugman and Obstfeld, 1997), claims that firms have tendencies to locate in places where the required factors of their production are relatively abundant. However, recent theories of economic geography suggest that firms in the same industries may be drawn to a particular location in order to benefit from positive externalities or agglomeration effects.

The theory of agglomeration economies was introduced by Marshall (1920) in which he provided three reasons for the clustering of firms in the same industries: it provides a pooled market for workers with specialized skills, facilitates the development of specialized inputs and services, and enables firms to benefit from technological spillovers. Subsequent research by Krugman (1991) and Saxenian (1994) construct formal models to analyze and extend the concepts.

To date, there have been few empirical studies on agglomeration effects, especially in transition economies. Head, Ries and Swenson (1995) examine location choices by Japanese firms in manufacturing industries in the United States, showing that Japanese firms prefer to locate near both US and Japanese firms in the same manufacturing industries. Guimaraes *et al.* (2000) and Crozet, Mayer and Mucchielli (2004) also indicate similar behavior by foreign firms in France and Portugal, respectively. However, there are also studies that do not support the existence of agglomeration effects. Shaver and Flyer (2000) examine foreign manufacturing firms in the United States and find that large firms are not

likely to locate near other firms because the benefits they contribute to agglomeration economies are less than what they receive from agglomeration effects. Empirically, Baum and Mezias (1992) and Baun and Haveman (1997) also support this conclusion. For transition economies, there are many fewer studies of agglomeration effects on location choices by foreign investors. Most important are the works of Boudier-Bensebaa (2005) on Hungary, Meyer and Nguyen (2005)[8] on Vietnam, and Head and Ries (1996) and Cheng and Kwan (2000) on China. However, due to the lack of detailed firm-level information, these studies can use only aggregate numbers of firms or foreign investment projects at provincial levels to estimate agglomeration effects.

This study includes investments of 568 newly created foreign firms in 2005 in about 150 different 4-digit industries. We also controls for the effects of province-specific factor endowments by using provincial characteristics in the model and for the effect of industry-specific endowments by using the geographical patterns of 88420 Vietnamese firms in the same industries during 2004. The study shows that the deviation of foreign firms from these patterns indicates agglomeration effects. Different from many other studies, "country of origin" is used as a new dimension in the measurement of agglomeration effects.

We apply the negative binomial regression model and the conditional logit model to estimate the effects of agglomeration economies on location choices by newly created foreign firms in Vietnam in 2005. By using a large dataset and detailed information about individual firms, it is possible to measure the effects of the country of origin and the industry of a firm on its location choice. The study shows that foreign investors are not only likely to locate near other foreign firms but also prefer to locate near foreign firms in the same industries and from the same countries of origin. Similar to Head *et al.* (1995), it is argued that this pattern of location choice supports an agglomeration-externality theory rather than a theory based on the differences of endowment factors. Further, the empirical results reveal that there is competition among provinces in attracting foreign investors, and the locations of Vietnamese firms have no effect on the location decisions by foreign investors in the same industries.

This study contributes to the existing literature on agglomeration economies, location and foreign direct investment. To the best of our knowledge, this is the first study of agglomeration effects on the location choices by foreign investors in Vietnam using detailed information about individual firms. The

[8] Meyer and Nguyen (2005) did not concentrate on agglomeration. Yet, the authors have a small data analysis and discussion about the effects of economic agglomeration on the location choices by foreign investors in Vietnam.

empirical results are particularly important for Vietnam's provincial authorities in designing policies aimed at attracting foreign investments.

The structure of this chapter is organized as follows. Section 2 provides an overview of regional economies and the stylized facts of the FDI patterns by provinces in Vietnam. Section 3 reviews theories on localization. Section 4 describes the dataset. Section 5 presents methodology and empirical results. The final section is devoted to conclusions.

2. An overview of regional economies and the stylized facts of the FDI pattern in Vietnam

Regional economies

Vietnam is divided into fifty-nine provinces and five centrally-controlled municipalities in eight regions based on geographical and socio-economic conditions. The eight regions are Red River Delta, Northeast, Northwest, North Central Coast, South Central Coast, Central Highlands, Southeast, and Mekong River Delta (see Fig. 3.2). The Red River Delta, the Southeast, and the Mekong River Delta have much smaller areas compared with the others, but they are the most densely populated areas, accounting for 58.7% of the country's population in 2005. By contrast, the Northwest and the Central Highlands are the least populated regions with less than 9% of the country's population in 2005 (see Table 3.1).

Table 3.1: General indicators of the regions in Vietnam

Region	Population share 2005 (%)	Agricultural share 2005 (%)	Industrial share 2004 (%)	Service share 2005 (%)	Income per capita 2004 (thousand VND)
Red River Delta	21.7	17.6	19.2	19.9	5858.4
Northeast	11.3	8.1	4.5	6.2	4558.8
Northwest	3.1	2.2	0.2	1.1	3188.4
North Central Coast	12.8	8.5	2.4	6.1	3805.2
South Central Coast	8.5	5.2	4.0	7.8	4978.8
Central Highlands	5.7	11.8	0.6	3.4	4682.4
Southeast	16.2	11.7	57.1	36.3	9996.0
Mekong River Delta	20.8	35.0	8.0	19.3	5653.2

Source: The Statistical Yearbook of Vietnam in 2005.

Note: The agricultural output value is at constant 1994 prices, the other indicators are at current prices.

The Red River Delta including Hanoi, the capital and the Southeast including Ho Chi Minh City, the largest city of Vietnam are also the most

developed regions in Vietnam. These regions are the major industrial centers of the country, producing 19.2% and 57.1% respectively of the country's industrial output in 2004. The Northwest and the Central Highlands, on the other hand, are the least industrialized regions with industrial output less than 1% of the nation's total in 2004 (The Statistical Yearbook of Vietnam in 2005).

Regarding agricultural production, the Mekong River Delta and the Red River Delta are the two major rice-producing areas in Vietnam, accounting for 52.6% of the country's agricultural output in 2005. The Southeast, the Mekong River Delta, and the Red River Delta are also the most important centers for services in Vietnam, and they have the three largest cities of Ho Chi Minh City, Can Tho, and Hanoi, respectively. Those regions accounted for 75.5% of the country's total service output in 2005 (see Table 3.1).

As a result of being the biggest centers in agriculture, industry, and services, the living standards of people in the South East, the Red River Delta, and the Mekong River are the highest in Vietnam.

The FDI pattern

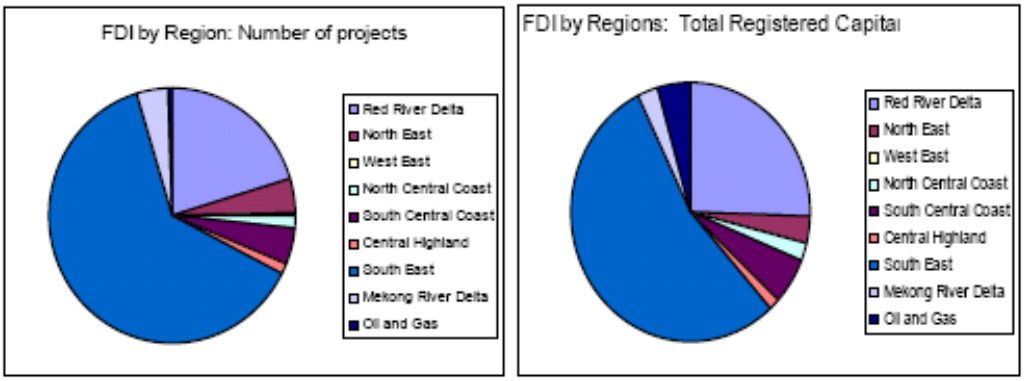
Since the Law of Foreign Investment was passed in 1987, the flows of FDI into Vietnam have been considerable and have also increased over time. However, the increasing trend has not been smooth. After a big jump during the period 1988-1996, Vietnam experienced a sharp decline in FDI flows at the final years of 1990s due to strong influence of the Asian financial crisis in 1997. However, the FDI inflows started to pick up again as countries in the region recovered from the crisis and the United States-Vietnam Bilateral Trade Agreement was signed in 2001. Especially, the situation has changed much since Vietnam became a formal member of the WTO in the beginning of 2007. According to the Ministry of Planning and Investment of Vietnam (MPI), in 2007 FDI inflows into Vietnam achieved the highest record with $21.3 billion of registered capital after twenty years of issuing the first Law on Foreign Direct Investment.

The statistic data of the MPI show an uneven distribution of FDI in both industrial sectors and regions during the period 1988-2007 by the number of investment projects and the amount of registered capital. In terms of industrial sector, nearly 70% of projects and registered capital were running to manufacture, around 20% to service and the rest to agriculture. Within the manufacture, while during the early part of 1990s, the majority of FDI were in oil and mining sector, but recently light and heavy industries dominate the field. In addition, the share of FDI in agricultures now is increasing compared with that in the 1990s. In service

sector, the hotel and tourism activities account for the largest proportion. A different point is that in the early history of the FDI in Vietnam, in the service sector, there was no investment in construction of industrial zones, offices and apartments, but now these fields start attracting significant part of FDI inflows.

In terms of nationalities of investors, the data of the MPI reveals that during 1988-2007, there were eighty one countries and territories investing in Vietnam. The inward FDI in Vietnam is dominated by regional investors, accounting for nearly 80% of the total number of investment projects, registered capital and implemented capital. The top five investors were South Korea, Taiwan, Japan, China, and Singapore. Although the United States is a late comer, its investment in Vietnam has increased since the Bilateral Trade Agreement between the two countries was signed, and now it is in the eighth position of investment ranking. The investments from European countries were still small, accounting for about 10% of the numbers of projects, 15% of the registered capital and 20% of the implemented capital.

Figure 3.1: The regional distributions of FDI in Vietnam during 1988-2007



Source: The MPI

Regarding regional distribution, during the period 1988-2007, all sixty four provinces in Vietnam had received FDI, but most of them flew to the Southeast and the Red River Delta regions. Figure 3.1 shows that more than 60% of projects and 52% of registered capital ran to the Southeast region of which most of them flew to Ho Chi Minh City and its two neighboring provinces, Dong Nai and Binh Duong, and nearly 25% of investment projects and registered capital went to the Red River Delta of which Hanoi, the capital city, accounted for the largest proportion. By contrast, the Northwest and the North Central Coast attracted less than 1% of the FDI inflows. These results are consistent with the statistics come from the enterprise surveys conducted by the GSO that are presented in Chapter 1,

therefore confirming a highly uneven distribution of FDI among regions within Vietnam.

It seems that there is a relationship between the regional economic conditions and the FDI inflows. In Chapter 1, we summarized the empirical studies on the distribution of the FDI in Vietnam to show that market potential, labor force, infrastructure, agglomeration effects and institutional performance by local authorities are important determinants of FDI inflows into regions within Vietnam. However, besides conventional determinants of FDI location, recent theories of economic geography suggest that benefits arising from agglomeration economies drive foreign firms to locate in a particular place, therefore affecting FDI inflows. In the next section, we first review the theories that explain agglomeration economies and then we advance three hypotheses of this study.

3. Theories of localization

Industry localization is defined as "the geographic concentration of particular industries" (Head *et al.*, 1995). One of the mechanisms motivating this concentration is the existence of agglomeration economies, which are positive externalities that stem from the geographic clustering of industries. In this context, firms contribute to the externalities and also benefit from the externalities (Shaver and Flyer, 2000).

The issue on industry localization attracted the attention of economists in the late nineteenth century. The work of Marshall (1920) is considered as an early and influential economic analysis on this phenomenon. Marshall identifies three externalities that stem from industry localization: (i) localization enables firms to benefit from technological spillovers, (ii) localization provides a pooled market for workers with specialized skills that benefits both workers and firms, and (iii) localization creates a pool of specialized intermediate inputs for an industry in greater variety and at lower cost. These positive externalities have the potential to enhance the performance by firms that agglomerate.

According to Krugman (1991), the concept of technological spillovers is quite vague and general but it is the most frequently mentioned as a source of agglomeration effects. Useful information can flow between near firms, designers, engineers, and managers. For foreign companies, the spillovers of information can be the flows of experience-based knowledge about how to operate efficiently in the host countries (Head *et al.*, 1995). Many authors use such clusters as California's Silicon Valley and Boston's Route 128 to show that technological externalities are the most obvious reason for firms to agglomerate (Krugman,

1991; Saxenian, 1994). However, by contrast with the labor pooling or intermediate goods supply that are in principle measurable, technological spillovers can be invisible and difficult to measure. It can therefore be difficult to state clearly that either technological spillovers or specialized labor play a more important role in creating high-technological clusters, for instance in Silicon Valley and the high-fashion cluster in Milan.

As anticipated by Marshall (1920), localized industry allows a pooled market for workers with specialized skills to benefit both workers and firms. David and Rosenbloom (1990) argue that an increased number of firms reduce the possibility that a worker will be unemployed for a long time. Finally, this also benefits firms by increasing the supply of specialized employees and reducing the risk of high-wage requirements from labor. Popular examples of this phenomenon are microelectronic manufacture in Silicon Valley (Saxenian, 1994) and carpet manufacture in Dalton, Georgia (Krugman, 1991).

Krugman (1991) argues that the combination of scale economies and transportation costs will motivate the users and suppliers of intermediate inputs to cluster near each other. Such agglomerations reduce the total transportation costs and make large centers of production become more efficient and have more diverse suppliers than small ones. This will encourage firms in the same industries to concentrate in one location. Krugman points out that a historical accident makes a firm locate in a particular place, and then the cumulative location choices allow such an accident to influence the long-run geographical pattern of industry.

From these observations, it seems that firms benefit from geographical localization when agglomeration economies exist. So far, there have been two types of studies that support the existence of agglomeration benefits. The first is qualitative studies of agglomerations that identify the existence of industry clusters and document the existence of agglomeration externality mechanism (Krugman, 1991; Saxenian, 1994). The second is empirical studies that try to find whether a firm has benefits when locating near other firms in the same industry or from the same country of origin. For example, the empirical research of Head *et al.* (1995), Head and Ries (1996), Head, Ries and Swenson (1999), Crozet *et al.* (2004), Guimaraes *et al.* (2000), and Coughlin and Segev (2000) find that firms in the same industries and from the same countries of origin have tendencies to locate near each other. However, the empirical study of Shaver and Flyer (2000) shows that under the existence of agglomeration economies, many firms will perform better if they do not cluster. These authors argue that firms not only capture benefits from agglomeration economies but also contribute to agglomeration economies. Therefore, large firms with the greatest capacity in

technologies, human capital, training programs, suppliers, and distributors will try to locate away from their competitors because the benefits they gain from locating near their competitors will be less than what the competitors gain from them.

The problems firms will experience when participating in an industrial cluster can be the spillover of technology, employee defection to competitors, and the sharing of distributors and suppliers with neighboring firms. Yoffie (1993) shows that semiconductor managers decide to locate far from their competitors due to their concern that their technology might spill over to the near firms. Baum and Mezias (1992) indicate that locating closer to other hotels in Manhattan increases the survival chance of a hotel, but this benefit of agglomeration diminishes when hotel districts become crowded, pushing up prices and exacerbating competition.

In this study, based on the FDI patterns in Vietnam, three hypotheses aimed at verifying the existence of agglomeration economies are tested. The empirical research on different countries – see the studies of Boudier-Bensabaa (2005) on Hungary, Meyer and Nguyen (2005) on Vietnam, Head and Ries (1996) and Cheng and Kwan (2000) on China, Crozet *et al.* (2004) on France, and Guimaraes *et al.* (2000) on Portugal – show that new foreign firms are likely to locate near other foreign investors. By doing that, they may use the experience and performance by earlier investors as indicators of the underlying business climate at the location. Hence, it is possible to expect an empirical relationship between the location choice by a new foreign firm and the prior number of foreign firms in a particular province.

Hypothesis 1: *The greater the number of foreign firms already established in a province, the more likely new foreign investors are to invest in that province.*

In the case of Vietnam, as presented in section 2 of this chapter, there is an uneven distribution of foreign investments. It is proposed that the provinces that already have a lot of foreign investment will be more attractive to new foreign investors due to agglomeration effects. Following the work of previous authors (Boudier-Bensabaa, 2005; Meyer and Nguyen, 2005; Cheng and Kwan, 2000), the stock number of foreign investors at provincial level in the previous year is used as a proxy for foreign-specific agglomeration.

When studying the behavior by Japanese firms in the United States, Head *et al.* (1995; 1999) find that new Japanese firms prefer to locate near both Japanese and US firms in the same industries. Moreover, Japanese firms are likely to locate

near Japanese firms in the same manufacturer-led *keiretsu*[9]. Crozet *et al.* (2004) also find similar evidence about the industrial concentrations of foreign firms in France. It seems that the benefits from technological spillovers, specialized labor markets, and the availability of input suppliers to the industry motivate firms in the same industries to cluster. Based on the empirical results of previous studies, the following hypothesis is advanced.

Hypothesis 2: *The greater the number of domestic firms and foreign firms in a specific industry already located in a province, the more likely new foreign investors in that industry are to locate in that province.*

In order to test this hypothesis, it is proposed that new foreign firms have a tendency to locate in the provinces where many Vietnamese firms and other foreign firms in the same industries already existed. The lagged stock number of Vietnamese firms and foreign firms in the same industries by province are used as proxies for industry-specific agglomeration.

Besides finding that foreign firms are likely to locate near firms in the same industries, Head *et al.* (1995; 1999) and Crozet *et al.* (2004) also show that foreign firms prefer to locate near firms from the same countries of origin. Head *et al.* (1999) argue that agglomeration effects between Japanese firms may arise due to their different characteristics from the firms of other countries. For example, the preference for higher skilled workers because of a stronger desire for quality control or greater use of complex machinery might motivate a new Japanese firm to locate near earlier arrivals to be able to hire away employees trained in Japanese methods. Thus, it is possible to expect an empirical relationship between location choice by a new foreign firm and the prior number of foreign firms from the same countries of origin in a particular province.

Hypothesis 3: *The greater the number of foreign firms from a specific country already located in a province, the more likely new foreign investors from that country are to locate in that province.*

Based on the location patterns of foreign investors in Vietnam, it is proposed that foreign investors from the same countries of origin are likely to concentrate in a particular region. Following the work of Crozet *et al.* (2004), the

[9] Keiretsu can be considered as industrial or vertical groups, i.e. those headed by large manufacturing companies whose members consist largely of component suppliers.

lagged stock number of foreign firms from the same countries of origin by province is used as a proxy for country-specific agglomeration.

4. Data

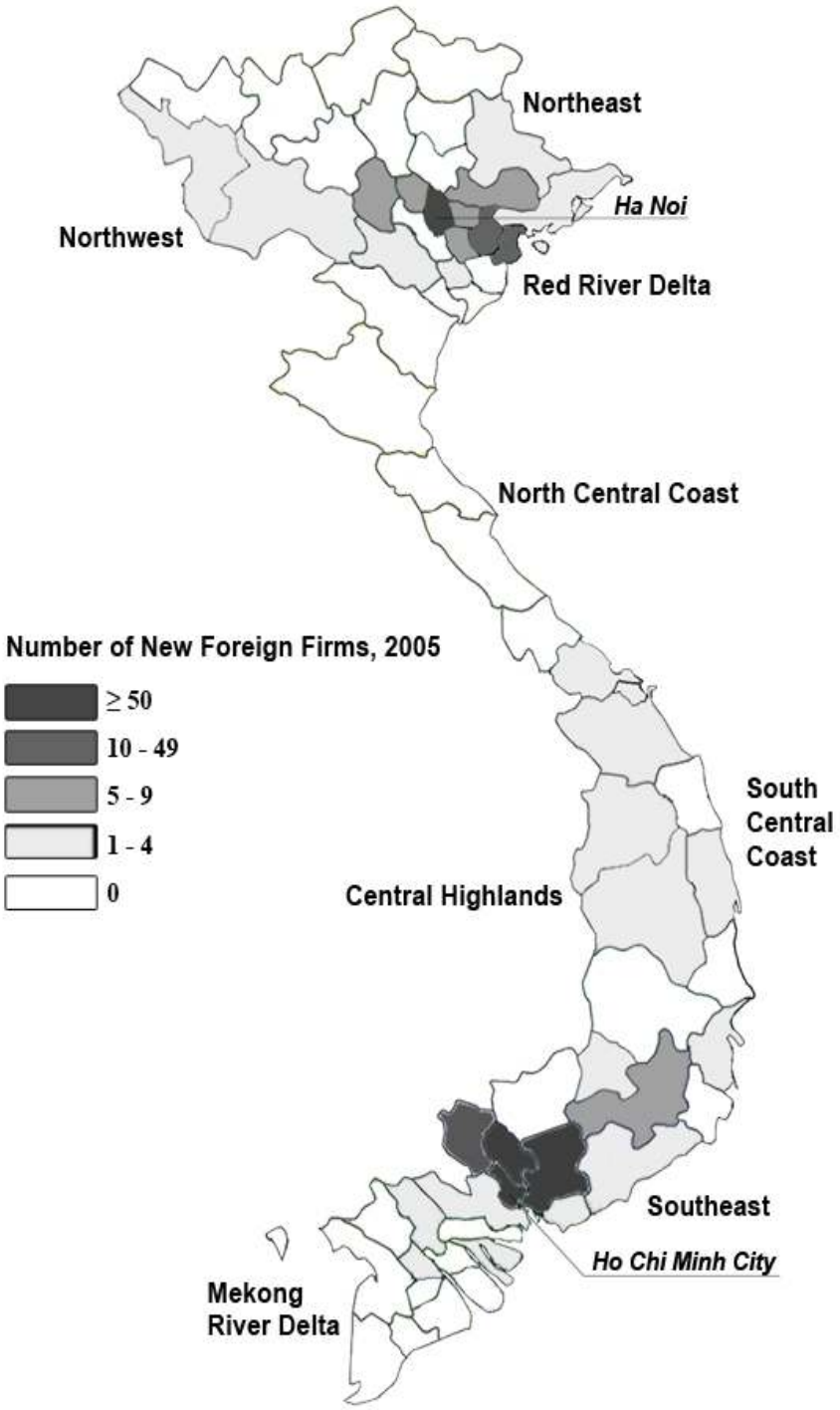
The dataset that is used in this study is obtained from the yearly surveys of the enterprises operating in Vietnam conducted by the General Statistics Office of Vietnam since 2000. These are comprehensive surveys covering all state enterprises, non-state enterprises that have equal or greater than 10 employees, 20% of sampled non-state enterprises with fewer than 10 employees, and all foreign enterprises across 64 provinces and cities in Vietnam. The contents of the surveys cover indicators to identify enterprises including their name, address, type, and economic activities of the enterprises, and indicators to reflect production situations of the enterprises such as their employees, income of employees, asset and capital source, turnover, profit, contributions to the state budget, investment capital, taxes and other obligations to the government, job training, and evaluations on the investment environment. To our knowledge, this dataset has not been used for studies on location choices by foreign investors in Vietnam.

The sample includes foreign investors that started their activities in 2005. The newly created foreign firms in 2005 are identified by using tax codes that are unique for each firm to merge the cumulative number of foreign firms in 2005 with those in 2004, 2003, 2002, 2001 and 2000. Then the years in which foreign firms started their operation and industrial codes are used to track back the data to guarantee that the remaining firms are the newly created foreign firms in 2005. In sum, there were 568 new foreign firms created in 2005. The previous investors that are used to form the agglomerations are the cumulative number of foreign or Vietnamese firms up to 2004. In this study, firms from all industrial sectors in 4-digit industries and in all forms of ownership such as 100% foreign-owned and joint venture firms are included in the regression models.

Fig.3.2 depicts the geographical patterns of new foreign firms in 2005 by province. By looking at the color changes over the provinces on Fig. 1, we can see that most of the new foreign firms concentrated in Ho Chi Minh City and its two neighboring provinces, Binh Duong and Da Nang that belong to the Southeast region, and Hanoi that belongs to the Red River Delta region. While just these four provinces and cities accounted for 78.5% of the 568 new foreign firms in 2005, 30 out of the 64 provinces in Vietnam had no new foreign investors in

2005. Most of these provinces are in the North Central Coast, the Northwest and the Mekong River Delta regions (see Appendix 3.1 for more details).

Fig. 3.2: The geographical distribution of new foreign firms in Vietnam, 2005



Source: Based on the dataset of the Survey on Enterprises in Vietnam in 2005, the GSO.

5. Methodology and empirical results

Various modeling approaches and levels of aggregation have been used for analyzing industrial location such as ordinary least squares (Boudier-Bensabaa, 2005), conditional logit model (Head *et al.*, 1995; Crozet *et al.*, 2004; Guimares and Figueiredo, 2000), negative binomial regression model (Meyer and Nguyen, 2005; Coughlin and Segev, 2000), and Generalized Method of Moments (Cheng and Kwan, 2000). These procedures have been applied to foreign direct investment aggregated to the country level or the provincial level and, more frequently in recent years, to the firm level. By virtue of possessing a large and detailed dataset, this study can use two different models to examine the three hypotheses: the negative binomial regression model and the conditional logit model. With the negative binomial regression model, it is possible to use only aggregated number of foreign firms at the provincial level. However, this model cannot exclude the fixed effects of the provinces that may lead to the biasness of the estimates. The conditional logit model can overcome this disadvantage by using the information about each foreign firm.

5.1. Agglomeration effects on location choices by foreign firms in Vietnam, using the negative binomial regression model

The model and variables

Following the works of Coughlin and Segev (2000) and Meyer and Nguyen (2005), the negative binomial regression model is used with the provincial-level data across the sixty four provinces in Vietnam. A Poisson or a negative binomial distribution is frequently used to characterize processes that generate nonnegative integer outcomes such as the number of accidents that occur at a particular intersection. Thus, the number of new foreign firms locating in a specific province is a reasonable candidate for a Poisson or a negative binomial distribution. If there is overdispersion (i.e. the variance greater than the mean), estimates from the Poisson regression model will be inefficient (Long, 1997). In this case, the negative binomial regression model is preferred.

Dependent variables

The dependent variables are the number of newly created foreign firms and the number of new foreign firms by province that operate in the manufacturing sector. In 2005, there were 568 new foreign firms of which 381 were manufacturers. The Poisson or the negative binomial regression model only

allows examining Hypotheses 1 and 2. Table 3.2 and Table 3.3 present the descriptive statistics and the correlations of variables used in this analysis.

Agglomeration variables

In order to examine Hypothesis 1 that new foreign investors tend to locate in provinces where many other foreign firms have already existed, the cumulative number of foreign firms by province up to 2004 is used as a proxy. To examine Hypothesis 2 that firms in the same industries tend to cluster in particular regions, the cumulative number of foreign and Vietnamese firms in the manufacturing sector at provincial level up to 2004 is used as proxies. By 2004, there were 3145 foreign firms of which 2325 operate in the manufacturing sector, and 88420 Vietnamese firms of which 18125 are manufacturers.

Control variables

It is expected that provincial endowment factors can influence a firm's desire to invest in a particular province, such as the size of the provincial economy, the size of the provincial market, infrastructure, human resources, and geographical location. For instance, Ho Chi Minh City will always have a larger market than Ha Tinh province. Binh Duong will always enjoy a better location than Kon Tum or Ca Mau. Ha Noi will always have better infrastructure and more developed human resources than Ha Giang. So, the larger and more developed provinces such as Ho Chi Minh City, Ha Noi, Ba Ria – Vung Tau, Da Nang, Dong Nai, and Hai Phong will have more competitiveness simply because of their initial endowments. For this reason, following the work of Meyer and Nguyen (2005), the control variables that are included in the regression model are the size of local consumer market measured by the population of province, GDP by province, human capital development measured by the number of undergraduate students by province, and infrastructure conditions proxied by the number of industrial zones by province and the distance to the nearest big harbor. These data are cumulated up to 2004 and taken from the Statistical Yearbooks of Vietnam, the GSO.

Table 3.2: Descriptive statistics

Variables	Description	Mean	S.D.	Minimum	Maximum
1. New firm	Number of newly created foreign firms by province in 2005	8.87	30.34	0	201
2. New manufacturing firm	Number of newly created foreign manufacturing firms by province in 2005	5.95	18.20	0	109
3. Foreign firm	Number of foreign firms by province, cumulated up to 2004	49.14	157.45	0	1004
4. Foreign manufacturing firm	Number of foreign manufacturing firms by province, cumulated up to 2004	36.32	117.39	0	652
5. Vietnam manufacturing firm	Number of Vietnamese manufacturing firms by province, cumulated up to 2004	283.20	670.73	10	4845
6. Population	Average population, in thousands by province, in 2004	1281.74	865.72	295.1	5730.8
7. Student	Number of undergraduate students by province in 2004	21635.31	76338.09	356	498928
8. GDP	GDP in million VND by province in 2004	1.13e+07	2.07e+07	818111	1.37e+08
9. Industrial zone	Number of industrial zones by province cumulated up 2004	0.95	2.40	0	12
10. Distance to harbor	The distance in km to the nearest big harbor by province	149.99	99.26	0	387.61

Table 3.3: Correlations in the dataset

Variables	Notation	1	2	3	4	5	6	7	8	9	10
1. New firm	newfirm	1									
2. New manufacturing firm	newmanfirm	0.89	1								
3. Foreign firm	forfirm04	0.99	0.90	1							
4. Foreign manufacturing firm	manfirm04	0.95	0.97	0.97	1						
5. Vietnam manufacturing firm	manvn04	0.89	0.62	0.87	0.75	1					
6. Population	pop04	0.62	0.40	0.61	0.51	0.76	1				
7. Student	student04	0.65	0.40	0.64	0.48	0.84	0.59	1			
8. GDP	gdpmil04	0.74	0.49	0.74	0.63	0.84	0.68	0.66	1		
9. Industrial zone	iz04	0.83	0.84	0.86	0.88	0.66	0.48	0.42	0.71	1	
10. Distance to harbor	harbordis04	-0.33	-0.36	-0.34	-0.35	-0.31	-0.29	-0.20	-0.32	-0.38	1

Empirical Results

The empirical analysis is implemented as follows. First, Hypothesis 1 is examined to see if the number of already existing foreign firms in a province affects location decision by a new foreign in that province. Then, the regression model is applied to the foreign manufacturing firms for testing Hypothesis 2.

Table 3.4: Agglomeration effects in the negative binomial and Poisson models

Independent Variables	Negative binomial regression		Poisson regression	
	New firm 1	New mnf firm 2	New firm 3	New mnf firm 4
Foreign firm	0.0086** (0.0040)	-	0.0034**** (0.0005)	-
Foreign manufacturing firm	-	0.0140** (0.0071)	-	0.0059**** (0.0012)
Vietnam manufacturing firm	-	-0.0004 (0.0013)	-	-0.0010** (0.0004)
Population	-0.0004 (0.0004)	-0.0002 (0.0005)	0.0001 (0.0001)	0.0003** (0.0001)
Student	3.91e-06 (3.49e-06)	7.65e-06 (4.85e-06)	6.15e-06**** (4.33e-07)	7.63e-06**** (1.06e-06)
GDP	-2.14e-08 (1.79e-08)	-2.97e-08 (3.77e-08)	-3.39e-08**** (7.17e-09)	-1.10e-08 (1.10e-08)
Industrial zone	-0.0058 (0.1568)	-0.1180 (0.2089)	0.1591**** (0.0292)	0.0654 (0.0525)
Distance to harbor	-0.0074**** (0.0022)	-0.0082**** (0.0024)	-0.0083**** (0.0013)	-0.0101**** (0.0015)
α	1.4781 (0.4485)	1.5355 (0.4926)		
Obs (provinces)	61	61	61	61
Pseudo R2	0.18	0.17	0.86	0.80
Chi square	53.01****	46.29****	2036.72****	1192.52****

Note: Standard error in parentheses with significance at the **** 0.5%, *** 1%, **5%, and *10% levels.

New mnf firm: New manufacturing firm

After testing for Hypothesis Ho: $\alpha = 0$, we find a strong and statistically significant evidence of overdispersion [chibar2 (01) = 89.52, *p*-value < 0.01][10]. So the negative binomial regression model is used instead of the Poisson regression model to estimate empirical results. The number of observations is 61 because the information about the variable *student*, the number of undergraduate students cumulated up to 2004, is missing for three provinces - Lai Chau, Dac Nong, and Hau Giang – for three years of 2000, 2001 and 2002 because the Vietnamese government divided the 61 existing provinces into 64 in 2003.

The empirical results in Column 1 of Table 3.4 show evidence of agglomeration economies as the coefficient of the variable *foreign firm,* the cumulative number of foreign firms cumulated up to 2004, is positive and statistically significant. This result suggests that new foreign firms are more likely to locate in provinces with greater numbers of already existing foreign firms.

In order to test Hypothesis 2, the sample was restricted to include only newly created foreign firms in manufacturing sector. The negative binomial regression model was used since the testing of Hypothesis Ho: $\alpha = 0$ shows strong evidence of overdispersion [chibar2 (01) = 76.37, p-value < 0.01].

In Column 2 of Table 3.4, the positive and statistically significant coefficient of the variable *foreign manufacturing firm*, the number of foreign manufacturing firms cumulated up to 2004, supports the hypothesis that foreign firms in the same industries are likely to locate near each other. However, the negative and statistically insignificant estimate of the variable *Vietnam manufacturing firm*, the number of Vietnamese manufacturing firms cumulated up to 2004, suggests that the locations of Vietnamese firms do not influence the location decisions by foreign firms in the same industries.

Different from the results of Meyer and Nguyen (2005), most of the control variables are statistically insignificant except the variable *distance to harbor*[11], the distance to the nearest big harbor. The negative sign of the variable *distance to*

[10] The Poisson regression model accounts for only observed heterogeneity (i.e., observed difference among sample members). In practice, the Poisson regression model rarely fits due to *overdispersion*. That is, the model underfits the amount of dispersion in the outcome, leading to biased-downward standard errors that result in spuriously large *z*-values and spuriously small *p*-values. The negative binomial regression model addresses the failure of the Poisson regression model by adding a parameter, α, that determines the degree of dispersion in the predictions by reflecting unobserved heterogeneity among observations (see Long and Freese, 2006 for more details).

[11] The study has run the regression model with the quadratic variable *harbordissq* (the square value of the variable *distance to harbor*) and found that the coefficient of *harbordissq* is statistically insignificant while the coefficient of the variable *distance to harbor* is still statistically significant and negative although the significance is reduced. This evidence suggests that the effect of *distance to harbor* on the location decisions by foreign firms is linear.

harbor means that the nearer a province is to a big harbor, the more attractive it is to foreign investors. This evidence suggests that foreign investors prefer to locate in a place with upgraded infrastructure to reduce transportation costs.

Columns 3 and 4 of Table 3.4 present the estimates of the Poisson regression model. By contrast with the results of the negative binomial regression model, the coefficients of most variables are highly statistically significant and the Pseudo R2 is very high. The reason is that the Poisson regression model in this case ignores unobserved heterogeneity among observations, leading to biased-downward standard errors that result in spuriously large *z*-values and spuriously small *p*-values.

It is noted that Table 3.3 shows high correlations between the variables *foreign manufacturing firms* and *Vietnamese manufacturing firms* as well as between the variables *population* and *GDP*. We suspect that the result of non-significance of the variable related to the presence of Vietnamese firms is due to collinearity problems among explanatory variables. In order to check if the empirical results suffer from these problems, we have re-run some additional regressions inserting alternatively the variable *foreign manufacturing firms* and the variable *Vietnamese manufacturing firms* as well as between the variable *population* and the variable *GDP* and find that the estimated results are robust and do not appear to result from collinearity among the regressors (See Appendix 3.2 for more details).

Overall, the regression results support the hypotheses that foreign firms agglomerate. Foreign firms in Vietnam are likely to locate near each other and near other foreign firms in the same industries. However, the locations of Vietnamese firms have no influence on the location decisions by foreign firms in the same industries. The findings are consistent with many previous studies on location choices by foreign investors in different countries such as the studies of Boudier-Bensebaa (2005), Meyer and Nguyen (2005), Head *et al.* (1995), Cheng and Kwan (2000), and Crozet *et al.* (2004).

5.2. Agglomeration effects on location choices by foreign firms in Vietnam, using the conditional logit model

By using the negative binomial model, we find the evidence of agglomeration effects. However, the concern is that there may be provincial fixed effects which generate a misleading correlation between the cumulative number of firms which have entered a province and the new entries in the year in question. These results may be caused by unobserved heterogeneity across provinces

leading to a spurious agglomeration coefficient. Suppose that we have attributed the entry to clustering while it is in fact the better facilities of a province that are responsible. These facilities are defined as fixed effects if they are unchanged over time, unobservable and affect the number of new entries in provinces. If unobserved effects correlate with the explanatory variables, the estimation will be biased and inconsistent.

In order to eliminate fixed effects of the provinces, the conditional logit model is used since this model bases on the information about individual firms to estimate the effects of agglomeration on its location choice. With the detailed and precise information about each foreign firm operating in Vietnam, it is feasible to apply this model to examine all the three hypotheses mentioned in section 3.

The conditional logit model is widely used in previous empirical works on agglomeration effects (Head *et al.*, 1995; Crozet *et al.*, 2004; Shaver and Flyer, 2000; Guimaraes *et al.*, 2000). This model is derived from the result of McFadden (1974) with the assumption that each investor chooses a location that will yield the highest profit. Profit depends on the available inputs that go into firms' production function including agglomeration effects stemming from economic activities of near similar firms. In this model, the information about the location choice that an investor made and attributes for the chosen location and other locations in the choice set are exploited.

Following Head *et al.* (1995), the study considers that the investor i, if it locates in province j, will derive an expected profit of Π_{ij}. This investor chooses the location with the greatest expected profitability that can be represented as followed:

$$\Pi_{ij} = \alpha_j + \beta' X_{ij} + \varepsilon_{ij}$$

where α_j includes the characteristics of province j. α_j is considered as province-specific endowment effects that determine the attractiveness of provinces to investors[12]. X_{ij} is agglomeration variables measured as the count number of firms cumulated up to 2004. Each measure varies across investors i, because investors differ by industry and country of origin. ε_{ij} is an investment location specific random disturbance that is attributable to errors associated with imperfect perception and optimization by decision makers and unobservable location characteristics that affect the profitability of locating in a given site.

[12] Head *et al.* (1995) show that in both theories of localization, *endowment-driven localization and agglomeration model of industry localization*, firms in the same industry cluster geographically. However, only in the presence of agglomeration externalities does the clustering *add* to the attractiveness of the location.

The investor i prefers the location j among the choice set M if it yields higher profits than any other possible choices:

$$\Pi_{ij} > \Pi_{ik} \quad \forall\, k,\ k \neq j, \text{ and } j,\ k \in M.$$

The probability of choosing the location j is thus:

$$\text{Prob}(\Pi_{ij} > \Pi_{ik}) \quad \forall\, k,\ k \neq j.$$

McFadden (1974) shows that if, and only if, ε_{ij} is distributed as a Type I Extreme Value independent random variable, then the probability that a location j yields the highest profitability for investor i among all the alternative locations in the choice set M is presented by the logit model:

$$\Pr(ij) = \frac{\exp(\alpha_j + \beta' \mathrm{X}_{ij})}{\sum_{M} \exp(\alpha_m + \beta' X_{im})} \qquad j,\ m \in M$$

The maximum likelihood techniques are used to estimate endowment effects and agglomeration effects.

Variables

As the part using the negative binomial negative model, the data in this part is from the surveys of all firms operating in Vietnam conducted by the General Statistics Office of Vietnam since 2000. In the conditional logit model, the information about the industry, the country of origin, and the location of each foreign firm is used. The attributes of provinces in the location choice set are collected from the Statistical Yearbooks of Vietnam. Table 3.5 and Table 3.6 present the descriptive statistics and the correlations of variables used in this model.

Dependent variable

The dependent variable is the province chosen by each foreign firm that was newly created in 2005. In total, there were 568 new foreign firms that distribute in 34 provinces among 64 provinces in Vietnam. Conditional logit model requires that all choices be selected at least once. So, 30 provinces that are not selected any time from the choice set are removed, including Ha Tay, Nam Dinh, Ninh Binh, Ha Giang, Cao Bang, Lao Cai, Bac Kan, Tuyen Quang, Yen Bai, Thai Nguyen, Lai Chau, Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, Quang Ngai, Phu Yen, Dak Lak, Ninh Thuan, Binh Phuoc, An Giang, Tien Giang, Vinh Long, Kien Giang, Hau Giang, Tra Vinh, Soc Trang, Bac Lieu, and Ca Mau. Most of these provinces are from the Northeast, the North Central Coast, and the Mekong

River Delta regions. The other 34 provinces create a set of unordered choice for each foreign firm, say, $M = 1, 2,\ldots, 34$. Let y_{ij} ($j \in M$) be a dependent variable for the choice actually chosen by the i^{th} foreign firm. That is, $y_{ij} = 1$ if foreign firm i chooses the location j, and $y_{ij'} = 0$ for $j' \neq j$; $j, j' \in M$. In total, there are 19312 observations that equal 568 foreign firms multiplied with 34 provinces.

Agglomeration variables

The study estimates the effects of three types of agglomerations on the location choices by foreign investors in Vietnam. In each case, the agglomeration is measured as cumulative counts of firms up to 2004. It is noted that cumulated up to 2004, there were 3145 foreign firms and 88420 Vietnamese firms. Following the work of Guimaraes *et al.* (2000), Head *et al.* (1995) and Crozet *et al.* (2004), there are three types of agglomeration effects as follows:

- Foreign-specific agglomeration: the cumulative number of foreign firms by province up to 2004 is used as a proxy.
- Industry-specific agglomeration: the cumulative number of Vietnamese firms in the same 4-digit industries by province, the cumulative number of foreign firms in the same 4-digit industries by province and the cumulative number of foreign firms in the same industries in the neighboring provinces up to 2004 are used as proxies.
- Country-specific agglomeration: the cumulative number of foreign firms from the same countries of origin by province up to 2004 is used as a proxy.

Including the cumulative number of Vietnamese firms in the same 4-digit industries is a strategy to separate agglomeration and endowment effects. The reason is that although α_j captures the attractiveness of province j to the "average" investors, unobserved characteristics of investors can make some provinces more attractive to certain investors. For example, a firm in an industry with high factor intensities will choose provinces with abundant endowments of these factors. This suggests that industry-level agglomeration variables will be correlated with the unobserved factor conditions pertaining to that industry that constitute the error term in the model. This problem can be solved by including province- and industry-specific characteristics. However, this strategy is infeasible with the sample of 568 foreign firms in about 155 different 4-digit industries. The significant attraction of the old firms to new ones in the same industries or the countries of origin, after controlling for the patterns of Vietnamese firms, can provide the evidence of agglomeration effects (see Head *et al.*, 1995). In other

words, the number of Vietnamese firms in the same 4-digit industries acts as a proxy for industry-specific endowment effects.

Using the idea of Head *et al.* (1995), the number of foreign firms in the neighboring provinces is included in the model. This variable allows the possibility that, for example, Binh Duong province is attractive to wearing apparel manufacturers not only because of the wearing apparel producers there but also because of the wearing apparel producers in the neighboring provinces: Ho Chi Minh City, Tay Ninh, Dong Nai, Ba Ria-Vung Tau, Long An, and Tien Giang.

Control variables

In the conditional logit model, the same control variables of the negative binomial regression model are used. These control variables reflect the characteristics of the provinces that are considered as province-specific endowment effects determining the attractiveness of the provinces to foreign investors. The control variables for the size of local consumer market measured by the population of province, GDP by province, human capital development measured by the number of undergraduate students by province, and infrastructure conditions proxied by number of industrial zones by province and the distance to the nearest big harbor are included in the model. These data are cumulated up to 2004 and taken from the Statistical Yearbooks of Vietnam, the GSO.

Table 3.5: Descriptive statistics

Variables	Obs	Description	Mean	S.D.	Min	Max
1. Choice	19312	Dummy variable which equals 1 if firm i chooses location j and equals 0 for other location j', j≠ j' and j, j' belong to the location choice set	0.03	0.16	0	1
2. Foreign firm	19312	The cumulative number of foreign firms by province up to 2004	89.29	206.10	0	1004
3. Vietnamese firm	19312	The cumulative number of Vietnamese firms in the same 4-digit industries by province up to 2004	14.48	65.74	0	1905
4. Same industry	19312	The cumulative number of foreign firms in the same 4-digit industries by province up to 2004	2.00	9.32	0	146
5. Neighboring firm	19312	The cumulative number of foreign firms in the same 4-digit industries in neighboring provinces up to 2004	8.43	23.13	0	201
6. Same country	18802*	The cumulative number of foreign firms from the same countries of origin by province up to 2004	12.13	41.67	0	328
7. Population	19312	Average population in thousands by province in 2004	1344.40	922.07	366.1	5730.8
8. Student	18744**	Number of undergraduate students by province in 2004	35782.88	100522.5	434	498928
9. GDP	19312	GDP in million VND by province in 2004	1.57e+07	2.72e+07	1527060	1.37e+08
10. Industrial zone	19312	Number of industrial zones by province in 2004	1.64	3.08	0	12
11. Distance to harbor	19312	The distance in km to the nearest big harbors by province	115.07	94.90	0	384.42

Notes: * In 568 new foreign firms in 2005, there are 15 firms without information about countries of original (18802 obs = 19312 – 15x34).

** The information about number of students is missing in one province of the location choice set (18744 obs = 19312 – 1x568).

Table 3.6: Correlations in the dataset

Variables	Notation	1	2	3	4	5	6	7	8	9	10	11
1. Choice	choice	1										
2. Foreign firm	forfirm04	0.41	1									
3. Vietnamese firm	vnfirm4dgsic	0.25	0.47	1								
4. Same industry	same4dgsic	0.34	0.53	0.59	1							
5. Neighboring firm	border4dgsic	0.07	0.28	0.13	0.37	1						
6. Same country	samecountry	0.32	0.68	0.31	0.42	0.26	1					
7. Population	pop04	0.33	0.78	0.51	0.44	0.12	0.48	1				
8. Student	student04	0.26	0.62	0.49	0.32	0.00	0.34	0.73	1			
9. GDP	gdpmil04	0.30	0.74	0.46	0.41	0.23	0.45	0.77	0.65	1		
10. Industrial zone	iz04	0.34	0.86	0.33	0.44	0.40	0.61	0.58	0.39	0.71	1	
11. Distance to harbor	harbordis04	-0.13	-0.34	-0.13	-0.18	-0.21	-0.24	-0.34	-0.17	-0.30	-0.40	1

Empirical results

Table 3.7 presents the agglomeration coefficients generated by maximum likelihood estimation. The highly statistically significant coefficients of the variables *foreign firm*, the cumulative number of foreign firms by province up to 2004 and *Vietnamese firm*, the cumulative number of Vietnamese firms in the same 4-digit industries by province up to 2004, in Column 1 reveal that new foreign firms are likely to locate in provinces where already existed a relatively large number of foreign firms in the same industries.

In Columns 2, the cumulative number of foreign firms in the same 4-digit industries up to 2004 (*same industry*) is added to the regression model. The positive and highly statistically significant coefficient of the variable *same industry* proves that the locations of new foreign investments are influenced by the previous location choices by other foreign firms in the same industries. Head *et al.* (1995) consider this phenomenon as the "follow the leader" pattern of foreign firms; that is difficult to interpret as anything other than agglomeration effects.

However, when we insert the variable related to the number of foreign firms in the same industry (*same industry)*, the coefficient of the cumulative number of Vietnamese firms in the same 4-digit industries (*Vietnamese firm*) becomes negative and statistically insignificant while there is no change for the variable *foreign firm*. This result shows that the positive correlation (0.60) between *same industry* and *Vietnamese firm* is important. Vietnamese firms and foreign firms in the same industries tend to invest in the same locations. If we do not include the variable *same industry* in the regression, its effect is attributed to *Vietnamese firm* giving a positive bias to the *Vietnamese firm* coefficient. Whenever we include *same industry* variable, the coefficient of *Vietnamese firm* is negative and insignificantly different from zero. Moreover, by running the likelihood ratio tests we find that the models which omit the variable *same industry* appear misspecified and are dominated by the models including it in the regressions.

Compared with Head *et al.* (1995), this result reflects a different tendency in the location decisions by foreign investors in Vietnam from that of Japanese investors in the United States. Head *et al.* (1995) found that Japanese firms prefer to locate near US firms in the same industries. The regression model, however, shows that the location choices by new foreign investors are not influenced by the locations of Vietnamese firms. Different from the location patterns of US and Japanese firms, Appendix 3.1 shows that the location distributions of foreign firms and Vietnamese firms are not very matched. While most foreign investments concentrate in the Red River Delta and Southeast regions, especially

in the cities and provinces of Hanoi, Ho Chi Minh City, Binh Duong, and Dong Nai, Vietnamese firms are distributed quite evenly in all provinces. The negative and statistically insignificant coefficient of the variable *Vietnamese firm* encourages us to believe that the estimates of agglomerations are not influenced by industry-specific endowment effects.

Table 3.7: Agglomeration effects in the conditional logit model

Independent variable	Dependent variables: location choice			
	1	2	3	4
Foreign firm	0.0042****	0.0038****	0.0039****	0.0033****
	(0.0006)	(0.0007)	(0.0006)	(0.0006)
Vietnamese firm	0.0015****	-0.0005	-0.0004	-0.0004
	(0.0004)	(0.0005)	(0.0004)	(0.0004)
Same industry	-	0.0226****	0.0207****	0.0195****
		(0.0032)	(0.0031)	(0.0031)
Neighboring firm	-		-0.0073***	-0.0081****
			(0.0026)	(0.0026)
Same country	-		-	0.0032****
				(0.0008)
Population	0.0006***	0.0007***	0.0006***	0.0006***
	(0.0002)	(0.0003)	(0.0002)	(0.0002)
Student	4.50e-06****	4.98e-06****	4.86e-06****	4.91e-06****
	(4.48e-07)	(4.54e-07)	(4.56e-07)	(4.56e-07)
GDP	-5.08e-08****	-5.14e-08****	-5.28e-08****	-5.18e-08****
	(1.12e-08)	(1.12e-08)	(1.13e-08)	(1.12e-08)
Industrial zone	0.1078****	0.1081****	0.1225****	0.1263****
	(0.0323)	(0.0324)	(0.0328)	(0.0328)
Distance to harbor	-0.0037****	-0.0037****	-0.0037****	-0.0037****
	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Log-likelihood	-1203.2	-1175.21	-1171.4	-1163.8
Pseudo R2	0.37	0.39	0.39	0.40
Chi square	1453.8****	1509.7****	1517.4****	1532.3****
No. of choosers	568	568	568	568
No. of choices	34	34	34	34

Note: Standard error in parentheses with significance at the **** 0.5%, *** 1%, ** 5%, and * 10% levels.

The negative and statistically significant coefficient of the variable *neighboring firm* in Columns 3 and 4 indicates that a larger number of foreign firms in the same industries in a province decrease the attractiveness of its neighboring provinces to new foreign investors. It appears that there is

competition among provinces in attracting foreign investors. In Column 4, the number of foreign firms from the same countries of origin is added in the regression model to determine whether firms from the same countries of origin tend to locate near each other. The positive and statistically significant coefficient of the variable *same country*, the cumulative number of foreign firms from the same countries of origin up to 2004, indicates that new foreign firms benefit from locating near firms from the same countries of origin. The larger coefficient of the variable *same industry* than that of the variable *same country* suggests that the benefits foreign firms gain from industry-specific agglomerations are higher than from country-specific agglomerations.

Different from the results of the negative binomial model, all control variables here are statistically significant except the negative sign of the variable GDP is out of expectation. These results indicate that the characteristics of the provinces are important determinants in attracting foreign investors.

As discussed in the previous part, we are also concerned that high correlations between the variables *same industry* and *Vietnamese firms* as well as between the variables *population* and *GDP* may lead to the result of non-significance of the variable related to the presence of Vietnamese firms in the same industry. In order to check if the empirical results suffer from collinearity problems, we have re-run some additional regressions inserting alternatively the variable *same industry* and the variable *Vietnamese firms* as well as between the variable *population* and the variable *GDP* and find that the estimated results are robust and do not appear to result from collinearity amongst the regressors. (See Appendix 3.2 for more details).

In summary, the empirical results support the hypotheses that foreign investors are not only likely to locate near other foreign firms but also prefer to locate near foreign firms in the same industries and from the same countries of origin due to the benefits from agglomeration economies. Moreover, we found that provinces in Vietnam compete with each other to attract foreign firms and location choices by foreign investors are not affected by location of domestic firms.

5.3. Robustness tests

In order to investigate whether the empirical results are robust, the both regression models are re-estimated by using a variety of sub-samples of the dataset. Following Guimaraes *et al.* (2000), it is possible to test the existence of

agglomeration economies in location decisions by foreign investors according to firms' capital ownership and size.

Table 3.8: Agglomeration effects in the negative binomial regression model

Independent Variables	nffewer100emp 1	nf100%forcap 2	mffewer100emp 3	mf100%forcap 4
Foreign firm	0.0074** (0.0039)	0.0086** (0.0045)	-	-
Foreign manufacturing firm	-	-	0.0144* (0.0081)	0.0160** (0.0082)
Vietnam manufacturing firm	-	-	-0.0009 (0.0014)	-0.0006 (0.0014)
Population	-0.0003 (0.0004)	-0.0004 (0.0005)	-0.0001 (0.0005)	-0.0001 (0.0006)
Student	4.67e-06 (3.45e-06)	3.56e-06 (3.85e-06)	9.57e-06 (5.17e-06)	8.73e-06 (5.27e-06)
GDP	-1.81e-08 (1.76e-08)	-2.09e-08 (1.92e-08)	-1.96e-08 (3.82e-08)	-3.16e-08 (4.63e-08)
Industrial zone	0.0263 (0.1575)	0.0017 (0.1761)	-0.1404 (0.2425)	-0.1696 (0.2360)
Distance to harbor	-0.0080**** (0.0025)	-0.0087**** (0.0026)	-0.0104**** (0.0032)	-0.0108**** (0.0030)
Obs	61	61	61	61
Pseudo R2	0.20	0.17	0.19	0.18
Chi square	51.68****	46.93****	42.58****	42.94****

Notes: Standard error in parentheses with significance at the **** 0.5%, *** 1%, ** 5%, and * 10% levels.

nffewer100emp: new firms have fewer than 100 employees

nf100%forcap: new firms of 100% foreign capital

mffewer100emp: new firms have fewer than 100 employees in manufacturing sector

mf100%forcap: new firms of 100% foreign capital in manufacturing sector

In the previous parts, all kinds of investments with foreign participations i.e., 100% foreign capital owned firms and joint venture enterprises are included in the regression models. For the first test of the results' robustness, only newly created firms of 100% foreign capital are used. We argue that these firms can decide the locations by themselves while the decisions by join venture enterprises somehow depend on the both Vietnamese and foreign sides. Of 568 newly created foreign firms in 2005, there were 491 firms of 100% foreign capital, of which 347 are operating in the manufacturing sector.

Table 3.9: Agglomeration effects in the conditional logit model

Independent Variables	Dependent variable: location choice		
	nffewer100emp 1	nfmore100emp 2	nf100%forcap 3
Foreign firm	0.0030**** (0.0008)	0.0033*** (0.0012)	0.0033**** (0.0007)
Vietnamese firm	0.0000 (0.0005)	-0.0002 (0.0013)	-0.0003 (0.0004)
Same industry	0.0317**** (0.0046)	0.0149** (0.0067)	0.0193**** (0.0032)
Neighboring firm	-0.0083** (0.0041)	-0.0024 (0.0032)	-0.0074*** (0.0027)
Same country	0.0032**** (0.0010)	0.0032** (0.0015)	0.0023*** (0.0008)
Population	0.0006** (0.0003)	0.0006 (0.0004)	0.0006** (0.0002)
Student	5.93e-06**** (5.13e-07)	-9.41e-08 (1.80e-06)	4.85e-06**** (5.19e-07)
GDP	-5.31e-08**** (1.39e-08)	-4.24e-08** (1.93e-08)	-5.11e-08**** (1.12e-08)
Industrial zone	0.1473**** (0.0400)	0.0627 (0.0602)	0.1457**** (0.0347)
Distance to harbor	-0.0042*** (0.0015)	-0.0031* (0.0019)	-0.0044**** (0.0013)
Log-likelihood	-820.4	-302.6	-990.6
Pseudo R2 Chi square	0.46 1373.1****	0.29 240.8***	0.41 1361.4****
No. of choosers	445	123	491
No. of choices	34	34	34

Note: Standard error in parentheses with significance at the **** 0.5%, *** 1%, ** 5%, and *10% levels

nffewer100em: new firms have fewer than 100 employees in manufacturing sector.

nfmore100emp: new firms have equal or more than 100 employees in manufacturing sector.

To investigate how agglomeration economies affect location decisions by firms with different size, we divide new foreign firms created in 2005 into kinds: large and small ones. Foreign firms are defined small if they have fewer than 100 employees, otherwise they are considered large. It is argued that regions in general compete for large firms. However, location is not a big concern for a giant firm because in any places it might have higher competitiveness than the others. In 2005, there were 445 new foreign firms with fewer than 100 employees, of which 265 are manufacturers. To make it more simple, we include only small foreign firms in the negative binomial model, but include both of small and large firms in the conditional logit model.

The empirical results of the negative binomial regression and conditional logit models with the restricted samples are presented in Tables 3.8 and 3.9. Despite the smaller dimensions of the samples, the coefficients of variables are remarkably stable. All the agglomeration variables that were statistically significant in Tables 3.4 and 3.7 are still statistically significant in these regressions (see Table 3.8 and Columns 1 and 3 of Table 3.9).

However, the double coefficient of the variable *same industry*, the cumulative number of foreign firms in the same 4-digit industries up to 2004, in Column 1 compared with that of Column 2 (Table 3.9) shows that small foreign firms have a stronger motivation to locate near other foreign firms in the same industries than large foreign firms. This seems consistent with the argument of Shaver and Flyer (2000) that under the existence of agglomeration economies, small firms will have greater benefits since the agglomeration externalities allow them to access technologies of near larger competitors.

By contrast with Shaver and Flyer (2000), large foreign firms in this study also agglomerate. However, the statistically insignificant coefficient of the variable *neighboring firm,* the cumulative number of foreign firms in the same 4-digit industries in neighboring provinces, shows that large firms do not care about the existence of firms in the same industries in the bordering provinces. Different from the estimation results of small foreign firms or total foreign firms, most control variables for the large foreign firms are statistically insignificant (see Column 2 of Table 3.9). It seems that the characteristics of provinces are not a big concern for a large foreign firm.

6. Conclusions

This study argues that agglomeration externalities influence the location decisions by foreign firms. The empirical results show that the location choices by new foreign firms in Vietnam are affected by the locations of the prior foreign investments in general and by those of firms in the same industries and from the same countries of origin in particular. These findings hold even when province-specific endowment and industry-specific endowment effects are controlled by using the variables indicating the characteristics of each province and the industry-level stocks of Vietnamese firms. Moreover, we find that the geographical distributions of Vietnamese firms have no effect on the location choices by foreign investors and there is competition among provinces in attracting foreign investors. It is noted that the empirical results hold when we test

the existence of agglomeration economies in location choices by foreign firms regarding their ownership and size.

These findings are consistent with the empirical results that are estimated for foreign investments in developed countries such as the United States, France, and Portugal (Head *et al.*, 1995; Crozet *et al.*, 2004; Guimaraes *et al.*, 2000). It indicates that the behavior by foreign investors in both developed and developing countries are probably similar. Their same motivations are to obtain the highest benefits when investing abroad. Apparently, the positive externalities such as technological spillovers will induce foreign firms to cluster in a particular region. Moreover, locating near each other creates a network of foreign firms that allows a foreign firm to access suppliers and to exchange information more easily. This network may consist of foreign firms in the same industries that are considered as industrial or vertical groups. These groups might be headed by large manufacturing companies whose members are component suppliers. Vertical linkages can create a pool of specialized intermediate inputs to an industry in greater variety and at lower cost as suggested by Marshall (1920). So, for example, a firm that produces plastic auto parts might be attracted to a province that has considerable auto production even if there is no concentration of plastic parts producers in that province (Head *et al.*, 1995).

This research contributes to the literature on agglomeration economies, location and foreign direct investment in some aspects. To the best of our knowledge, the study on location decisions by individual firms has never been carried out in Vietnam due to the lack of detailed data at firm level. This is also one of a very few studies of agglomeration effects on location choices by foreign investors in developing and transition economies. The empirical findings on agglomeration economies may be useful for provincial authorities in designing policies to attract more foreign direct investment. Benefits of agglomeration externalities suggest that authorities should create policies to draw *initial* investments into concentrated production regions such as industrial zones. Then the cumulative number of foreign firms will create positive agglomeration externalities and make that region more attractive. This policy has been implemented effectively in the small province Binh Duong in the Southeast region of Vietnam. In 2005, Binh Duong province accounted for 19.8% of the total foreign investment in Vietnam while hosting only 2% of the total number of Vietnamese firms. This success is partially based on the policies of this province to establish many industrial zones and to create a good business environment for foreign investors from the first days when the central government granted the provinces more autonomy in the management of foreign investment.

This study has two limitations. The first is that the empirical results refer to only 2005. In order to see whether the results apply to other time periods, future research will have to work with larger dataset covering more years, so as to increase the cross time variance in the set of agglomeration variables. Moreover, there is a concern that as in the conditional logit model the observations related to provinces that were not selected by new foreign firms in 2005 are lost. This might potentially distort results if the cumulated number of foreign firms up to 2004 in these "omitted provinces" that used as a proxy for agglomeration effects is not trivial. By calculating this proxy, we find that the cumulated number of foreign firms up to 2004 in these "omitted provinces" accounted for a very small proportional, around 0.035% of the total number of foreign firms up to 2004. Our choice set of location thus may reinforce the results: those provinces there were not selected in the year 2005 are probably also provinces where the cumulated number of firms is negligible thus confirming the argument of agglomeration economies. Therefore, by working with larger dataset covering more years, we also can have more exact conclusions about agglomeration effects. The second limitation is that we have studied the location decisions by foreign firms only at the provincial level. The conditional logit model may work better with a smaller choice set. Therefore, future research should extend to macro areas by looking at the location choices by foreign firms at the regional level.

Appendix 3.1: The location distributions of firms in Vietnam

Region/ Province/ City	No. of newly created foreign firms in 2005	No. of cumulative foreign firms up to 2004	No. of cumulative Vietnamese firms up to 2004
Red River Delta	**128**	**650**	**24537**
Ha Noi	72	379	14698
Hai Phong	22	127	2498
Vinh Phuc	7	29	680
Ha Tay	0	24	1236
Bac Ninh	7	10	877
Hai Duong	10	42	1081
Hung Yen	7	26	526
Ha Nam	2	1	438
Nam Dinh	0	4	986
Thai Binh	1	6	851
Ninh Binh	0	2	666
Northeast	**15**	**99**	**6097**
Ha Giang	0	0	271
Cao Bang	0	1	262
Lao Cai	0	8	517
Bac Kan	0	1	242
Lang Son	2	10	324
Tuyen Quang	0	0	299
Yen Bai	0	4	356
Thai Nguyen	0	11	791
Phu Tho	6	24	966
Bac Giang	5	13	894
Quang Ninh	2	27	1175
Northwest	**3**	**9**	**1035**
Lai Chau	0	0	129
Dien Bien	1	0	251
Son La	1	2	272
Hoa Binh	1	7	383
North Centra Coast	**1**	**30**	**5343**
Thanh Hoa	0	7	1184
Nghe An	0	7	1422
Ha Tinh	0	2	547
Quang Binh	0	1	749
Quang Tri	0	3	478
Thua Thien - Hue	1	10	963
South Central Coast	**8**	**95**	**6167**
Da Nang	2	30	1908
Quang Nam	2	12	622
Quang Ngai	0	2	669
Binh Dinh	1	9	1031
Phu Yen	0	8	474
Khanh Hoa	3	34	1463

Central Highlands	**11**	**51**	**2829**
Kon Tum	1	0	253
Gia Lai	1	2	671
Dak Lak	0	1	832
Dak Nong	1	3	156
Lam Dong	8	45	917
Southeast	**396**	**2129**	**29737**
Ho Chi Minh	201	1004	22723
Ninh Thuan	0	4	329
Binh Phuoc	0	3	472
Tay Ninh	20	49	675
Binh Duong	111	625	1734
Dong Nai	62	373	2063
Binh Thuan	1	14	676
Ba Ria - Vung Tau	1	57	1065
Mekong Delta River	**6**	**82**	**12675**
Long An	2	48	1083
Dong Thap	1	2	966
An Giang	0	3	1139
Tien Giang	0	5	1489
Vinh Long	0	3	833
Ben Tre	1	3	964
Kien Giang	0	2	1759
Can Tho	2	13	1284
Hau Giang	0	0	338
Tra Vinh	0	0	446
Soc Trang	0	0	740
Bac Lieu	0	2	546
Ca Mau	0	1	1088
Total	**568**	**3145**	**88420**

Source: The GSO, the Enterprise Surveys in Vietnam in 2004 and 2005

Appendix 3.2: Robustness checks of the models

A. Negative binomial regression

As discussed in the previous parts, we are concerned that empirical results may suffer from collinearity problems among explanatory variables. In order to check robustness of the models, we have re-run some additional regressions inserting alternatively the variable *foreign manufacturing firms* (*manfirm04*) and the variable *Vietnamese manufacturing firms* (*manvn04*) as well as between the variable *population* (*pop04*) and the variable *GDP* (*gdpmil04*). We always include in the regressions all control variables, except the variable *pop04* and find that the estimated results are robust and do not appear to result from collinearity amongst the regressors, therefore confirming that foreign firms are likely to locate near each other and near other foreign firms in the same industries. However, their location choices are not affected by location of Vietnamese firms. It is noted that the conclusions are the same if we always include in the regressions all control variables, except the variable *gdpmil04.*

A1- Include only *forfirm04* and exclude *pop04*

```
Negative binomial regression                    Number of obs   =         61
                                                LR chi2(5)      =      52.05
Dispersion     = mean                           Prob > chi2     =     0.0000
Log likelihood = -119.7585                      Pseudo R2       =     0.1785

------------------------------------------------------------------------------
     newfirm |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   forfirm04 |    .007203   .0034923     2.06   0.039     .0003583    .0140478
   student04 |   3.43e-06   3.45e-06     1.00   0.320    -3.32e-06    .0000102
    gdpmil04 |  -2.57e-08   1.78e-08    -1.44   0.149    -6.05e-08    9.22e-09
        iz04 |   .0233513   .1584438     0.15   0.883    -.2871929    .3338954
   harbordis |  -.0070175   .0022052    -3.18   0.001    -.0113396   -.0026954
       _cons |   1.525112   .3949372     3.86   0.000     .7510495    2.299175
-------------+----------------------------------------------------------------
    /lnalpha |    .395117   .3060559                     -.2047416    .9949755
-------------+----------------------------------------------------------------
       alpha |   1.484558   .4543577                      .8148579    2.704658
------------------------------------------------------------------------------
Likelihood-ratio test of alpha=0:  chibar2(01) =   89.58 Prob>=chibar2 = 0.000
```

A2- Include only *manfirm04* and exclude *pop04*

```
Negative binomial regression                    Number of obs   =         61
                                                LR chi2(5)      =      45.95
Dispersion     = mean                           Prob > chi2     =     0.0000
Log likelihood = -109.35944                     Pseudo R2       =     0.1736

------------------------------------------------------------------------------
  newmanfirm |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   manfirm04 |   .0127158    .007093     1.79   0.073    -.0011861    .0266177
   student04 |   6.58e-06   3.67e-06     1.79   0.073    -6.24e-07    .0000138
    gdpmil04 |  -4.62e-08   3.00e-08    -1.54   0.123    -1.05e-07    1.26e-08
        iz04 |  -.0838512    .201955    -0.42   0.678    -.4796757    .3119733
   harbordis |  -.0080103   .0024052    -3.33   0.001    -.0127245   -.0032961
       _cons |   1.568937   .4080033     3.85   0.000     .7692647    2.368608
-------------+----------------------------------------------------------------
    /lnalpha |   .4328395   .3201442                     -.1946316    1.060311
-------------+----------------------------------------------------------------
       alpha |   1.541629   .4935435                      .8231379    2.887268
------------------------------------------------------------------------------
Likelihood-ratio test of alpha=0:  chibar2(01) =   82.55 Prob>=chibar2 = 0.000
```

A3- Include only *manvn04* and exclude *pop04*

```
Negative binomial regression                    Number of obs   =         61
                                                LR chi2(5)      =      41.17
Dispersion     = mean                           Prob > chi2     =     0.0000
Log likelihood = -111.74867                     Pseudo R2       =     0.1555

------------------------------------------------------------------------------
  newmanfirm |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     manvn04 |   .0013518   .0012212     1.11   0.268    -.0010416    .0037453
   student04 |   3.03e-06   4.90e-06     0.62   0.536    -6.57e-06    .0000126
    gdpmil04 |  -6.02e-08   3.60e-08    -1.67   0.094    -1.31e-07    1.03e-08
        iz04 |   .3050211   .1091187     2.80   0.005     .0911523    .5188898
   harbordis |  -.0085718   .0024574    -3.49   0.000    -.0133881   -.0037554
       _cons |   1.667939   .4223932     3.95   0.000     .8400633    2.495814
-------------+----------------------------------------------------------------
    /lnalpha |    .575509    .310987                     -.0340144    1.185032
-------------+----------------------------------------------------------------
       alpha |   1.778035   .5529459                      .9665576    3.270793
------------------------------------------------------------------------------
Likelihood-ratio test of alpha=0:  chibar2(01) =   94.37 Prob>=chibar2 = 0.000
```

B. Conditional logit model

Similarly as in the negative binomial model, we have re-run some additional regressions inserting alternatively the variable *same industry* (*same4dgsic*) and the variable *Vietnamese firms* (*vnfirm4dgsic*) as well as between the variable *population* (*pop04*) and the variable *GDP* (*gdpmil04*). We always include in the regressions all control variables, except the variable *pop04* and find that the estimated results are robust and do not appear to result from collinearity amongst the regressors.

When we insert the variable related to the number of foreign firms in the same industry (*same4dgsic)*, the coefficient of the variable *vnfirm4dgsic*, numbers

of Vietnamese firms in the same industry, becomes negative and statistically insignificant while there is no change for the other variables. This result shows that the positive correlation (0.60) between *same4dgsic* and *vnfirm4dgsic* is important. Vietnamese firms and foreign firms in the same industries tend to invest in the same locations. If we do not include the variable *same4dgsi* in the regression, its effect is attributed to *vnfirm4dgsic* giving a positive bias to the *vnfirm4dgsic* coefficient. Whenever we include *same4dgsic* variable, the coefficient of *vnfirm4dgsic* is negative and insignificantly different from zero. Moreover, by running the likelihood ratio tests we find that the models which omit the variable *same4dgsic* appear misspecified and are dominated by the models including it in the regressions.

It is also noted that the conclusions are the same if we always include in the regressions all control variables, except the variable *gdpmil04*.

B1 - Include only *vnfirm4dgsic* and exclude *pop04*

```
Conditional (fixed-effects) logistic regression   Number of obs   =      18216
                                                  LR chi2(5)      =    1384.81
                                                  Prob > chi2     =     0.0000
Log likelihood = -1237.6667                       Pseudo R2       =     0.3587

------------------------------------------------------------------------------
      choice |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
vnfirm4dgsic |   .0017871   .0004152     4.30   0.000     .0009734    .0026009
   student04 |   5.68e-06   4.07e-07    13.95   0.000     4.88e-06    6.48e-06
    gdpmil04 |  -1.70e-08   1.84e-09    -9.23   0.000    -2.06e-08   -1.34e-08
        iz04 |   .2958584   .0162552    18.20   0.000     .2639989     .327718
   harbordis |  -.0048122   .0012235    -3.93   0.000    -.0072102   -.0024142
------------------------------------------------------------------------------
```

B2- Include *vnfirm4dgsic*, *same4dgsic* and exclude *pop04*

```
Conditional (fixed-effects) logistic regression   Number of obs   =      18216
                                                  LR chi2(6)      =    1457.91
                                                  Prob > chi2     =     0.0000
Log likelihood = -1201.1171                       Pseudo R2       =     0.3777

------------------------------------------------------------------------------
      choice |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
vnfirm4dgsic |  -.0006223   .0005087    -1.22   0.221    -.0016193    .0003746
  same4dgsic |   .0262433   .0032533     8.07   0.000     .0198671    .0326196
   student04 |   6.09e-06   4.16e-07    14.64   0.000     5.28e-06    6.91e-06
    gdpmil04 |  -1.80e-08   1.88e-09    -9.59   0.000    -2.17e-08   -1.43e-08
        iz04 |   .2765016   .0167227    16.53   0.000     .2437256    .3092775
   harbordis |  -.0046295    .001217    -3.80   0.000    -.0070147   -.0022443
------------------------------------------------------------------------------
```

B3- Exclude *vnfirm4dgsic* and *pop04*

```
Conditional (fixed-effects) logistic regression   Number of obs   =      18216
                                                  LR chi2(8)      =    1522.52
                                                  Prob > chi2     =     0.0000
Log likelihood = -1168.8133                       Pseudo R2       =     0.3944

------------------------------------------------------------------------------
      choice |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   forfirm04 |   .0021584   .0004492     4.80   0.000     .0012779    .0030389
  same4dgsic |   .0180987   .0025865     7.00   0.000     .0130294    .0231681
border4dgsic |  -.0081448   .0026788    -3.04   0.002    -.0133951   -.0028945
 samecountry |    .003184   .0008453     3.77   0.000     .0015274    .0048407
   student04 |  5.17e-06   4.45e-07    11.64   0.000     4.30e-06    6.05e-06
    gdpmil04 |  -2.37e-08   2.07e-09   -11.41   0.000    -2.77e-08   -1.96e-08
        iz04 |   .1747559   .0281758     6.20   0.000     .1195324    .2299794
   harbordis |  -.0039081   .0011754    -3.32   0.001    -.0062118   -.0016044
------------------------------------------------------------------------------
```

B4- Exclude *same4dgsic* and *pop04*

```
Conditional (fixed-effects) logistic regression   Number of obs   =      18216
                                                  LR chi2(8)      =    1479.23
                                                  Prob > chi2     =     0.0000
Log likelihood = -1190.4593                       Pseudo R2       =     0.3832

------------------------------------------------------------------------------
      choice |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   forfirm04 |    .002459   .0004417     5.57   0.000     .0015933    .0033247
vnfirm4dgsic |   .0013815   .0004043     3.42   0.001     .0005891    .0021738
border4dgsic |  -.0089385    .002313    -3.86   0.000    -.0134719    -.004405
 samecountry |   .0036842   .0008468     4.35   0.000     .0020246    .0053438
   student04 |  4.77e-06   4.44e-07    10.74   0.000     3.90e-06    5.64e-06
    gdpmil04 |  -2.37e-08   2.07e-09   -11.47   0.000    -2.78e-08   -1.97e-08
        iz04 |   .1795017   .0282227     6.36   0.000     .1241862    .2348173
   harbordis |  -.0039263    .001169    -3.36   0.001    -.0062175   -.0016351
------------------------------------------------------------------------------
```

Notes:

We are also concerned about the fact that - a part from *iz04* and *harbordis* - all the regressors we include in the analysis are in absolute numbers, and they might all capture the effect of the size of the province. We thus have re-run regressions including the variables *iz04*; *harbordis*; *student* = student04/ pop04; *gdp_per capita* = gdpmil04/pop04; and with or without *gdpmil04*. The estimated results show that the original results of both the negative binomial model and conditional logit model are robust and the scale of GDP appears important rather than GDP per capita.

In sum, by re-running alternative regressions, we confirm that the estimated results presented in Tables 3.4 and 3.7 are robust and do not appear to result from collinearity among the regressors.

Chapter 4

The Survival of New Foreign Firms in Vietnam

1. Introduction

A rich body of empirical studies, spanning numerous countries and time periods, has provided sufficient evidence for several leading scholars (Cave, 1998; Sutton, 1997; Geroski, 1995) to infer stylized facts and stylized relationships about the basic elements concerning firm dynamics and industry evolution, or the manner in which firms enter into an industry, grow or stagnate and ultimately survive or exit from the market.

Considerable studies on the survival of new firms have revealed that these firms experience of high failure rates (Dunne, Roberts, and Samuelson, 1989; Mata and Portugal, 1994) and this finding is largely shared by those studies which have focused especially on the survival of new foreign firms. However, most of these studies are empirically carried out on foreign firms in developed countries. Typical are the works of Li (1995) on the survival of foreign subsidiaries in US computer and pharmaceutical industries; Mitchell, Shaver, and Yeung (1994) on Canadian firms that entered US medical sector market; Berkema, Bell, and Pennings (2002) on entries in different countries by Dutch firms; McCloughan and Stone (1998) on foreign manufacturing plants in UK Northern region; Mata and Portugal (2000; 2002) on foreign entries in Portugal. By contrast, there is a remarkable lack of study on the survival of foreign entries in transition and developing countries.

This is the reason why this paper intends to contribute to the existing literatures on firm survival with the focus on the life time of foreign firms subsequent to entry in Vietnam. The empirical results can be important for managers of multinational companies in evaluating the chances of their success and implementing strategic choices for their survival in a foreign market, especially in a transition economy just like Vietnam.

Most studies have used panel data of firms in varied countries to investigate determinants of firm survival (Dunne *et al.*, 1989; Audretsch and Mahmood, 1994, 1995; Audretsch, 1991; Agarwal and Audretsch, 2001; Mata and Portugal, 1994, 2000, 2002; Mata, Portugal and Guimaraes, 1995; Li, 1995). At the firm level, these studies mostly show that firm size, number of plant firms possess, entry mode as a fully-owned subsidiary, ownership advantages, the extent of diversification, and organizational learning and experience exert a negative effect on the failure rate of firms. At the industrial level, technological regime, industry life cycle, and industry growth have been proved to have a positive effect on the firm survival while minimum efficient scale, entry rate, and industry concentration are likely to decrease the chances of survival of new firms.

This chapter studies the life span of 187 new foreign firms in Vietnam that were created in 2000 and measures for how many years they stay in the market over the 2000-2005 period. The Cox proportional hazard model is employed to ascertain the relative importance of industry- and firm-specific variables in explaining the time period between firm birth and its disappearance from economic activity. The empirical results show that foreign firms with larger start-up size and growing current size are more likely to stay longer in the market. We also find that foreign firms entering the market with wholly-owned subsidiaries rather than doing joint ventures with local partners can live longer. In addition, locating in industrial zones or export processing zones increases the survival probability of foreign firms due to tax priority and other incentives. However, by contrast to our prediction, agglomeration economies have no significant effect on firm survival. Further, cultural distance is found to have a quite strong impact on the survival of foreign firms. Proximities in culture make it easier for foreign firms in cooperating with local partners; therefore increasing their success in foreign markets.

The study is organized as follows. Section 2 presents the hypotheses to be tested and variables. Section 3 discusses methodological issues, including the description of the data source, the methods used in computing the variables, and the statistical methodology employed. Also in this section, the study gives an overview of the sample characteristics and exit patterns. Section 4 provides empirical results. Section 5 tests the robustness of the estimates. The final section is conclusions.

2. Hypotheses and variables

Many academic studies have focused on patterns of international expansion (Dunning, 1993; Head *et al.*, 1995; Meyer and Nguyen, 2005). However, most of them have concentrated exclusively on the firm-level factors that motivate the parent firm to pursue overseas investment or factors to allow a host country to attract foreign investment. There are few empirical studies that have addressed the issues of performance and survival of foreign subsidiaries after their entry in a new foreign market (Li, 1995). The goal of this section is to discuss the characteristics, industries as well as locations of firms which are likely to affect their survival and to develop a set of specific hypotheses about their expected effects.

2.1. Firm size

Many empirical studies found that the probability of firm survival increases with firm size (Evans, 1987; Dunne *et al.*, 1989; Mata and Portugal, 1994, 2000, 2002; Mata *et al.*, 2005, Disney *et al.*, 2003). Firm size is mostly measured by number of employees, but alternative proxies such as value added and sales yield a very similar picture (Dosi, 2007). Researchers proved that both firm initial size and current size are important determinants on firm survival and have positive effect on the firm survival probability (Mata *et al.*, 1995; Dunne *et al.*, 1988).

According to Mata *et al.* (1995), new firms enter markets typically below the minimum efficient scale in the industry. Therefore, they are confronted by a cost disadvantage vis a vis their efficiently scaled competitors which makes their survival more difficult. Hence, entrants with small initial size should be more likely to exit than large ones, because they cannot compete with incumbents while the larger firms can. Regarding foreign entrants, Dunning (1993) showed that when entering a new foreign market, a foreign firm has to face considerably higher entry costs than local firms, for instance the costs of acquiring information about that foreign market. As small firms own less resources such as financial capital and management skills, they are naturally disadvantaged and find it difficult to compete with local and other foreign firms, and hence more likely to fail. Further, Dunne *et al.* (1989) stated that initial size is a significant factor because it shows the role of firm history in explaining current failure. Indeed, Evan (1987) and Audretsch (1991; 1995) found that among a cohort of new firms in U.S. manufacturing, the probability of plant exit was decreasing with initial size. This finding is consistent with the empirical result of Mata and Portugal (1994) on Portuguese manufacturing firms.

Besides studying the effect of initial size on the firm survival, the scholars paying special attention to the post-entry evolution of new firms and its effects on survival prefer to employ the firm's current size in their models (Mata *et al.*, 1995). As mentioned above, new firms generally enter market at small scales and have to face cost disadvantages compared with incumbents, which makes it more difficult for them to survive. Therefore, for those that are able to survive, they need to reduce this cost gap. This provides them with a strong incentive to grow. This is the main argument in Audretsch (1995), who found that initial size is positively related to survival, but negatively related to post entry growth, meaning that smaller firms grow faster. Because growth reduces average costs, firms should be less likely to exit after having grown. In other words, current size should be a better predictor of failure than initial size because the current size of firms can reflect the firm's growth and the capacity of its reaction to their market success over time (Dunne *et al.*, 1988; Mata *et al.*, 1995).

Indeed, Jovanovic (1982) is the first person discussing the importance of post-entry learning and growth on firm survival. The author argues that at birth new firms do not know their true ability. They decide the entry scale based on their beliefs about their ability level, but this level is very imprecisely estimated. By going into activity and observing their outcomes in the market, firms learn about their true abilities and revise the initial estimates. They therefore have to adapt to changing environments and link changes in their strategy choices to the changing configuration of that environment so that they can shape the process of selection and survival. Those firms which experience bad outcome realise that they are inefficient and accordingly exit from the market. On the contrary, those which perform well recognize that they are efficient. These firms not only survive, but they also grow. The empirical studies of Mata and Portugal (2000; 2002) and Mata *et al.* (1995) reveal that both domestic and foreign firms in Portugal with larger current size, being the most efficient, are less likely to exit. These results are also supported by the works of Dunne *et al.* (1989) on U.S. manufacturing plants and Disney *et al.* (2003) on manufacturing firms in the United Kingdom.

Based on the above arguments, we in this study will investigate the effects of both initial and current sizes on the survival of new foreign firms in Vietnam and propose the following hypothesis:

Hypothesis 1: *Larger foreign firms are less likely to exit from the market than smaller ones.*

2.2. Ownership structure

Hymer (1976) stated that foreign investors have a competitive disadvantage relative to local competitors due to lack of information on local market conditions and higher costs of communication and transportation. To overcome these disadvantages and to operate profitably in foreign markets, they must have some kind of firm specific advantage.

According to the resource-based view (Wernerfelt, 1984; Barney, 1991), the sources of firm specific advantages arise from "tacit knowledge" such as technical knowledge, patents, and management skills. Tacit knowledge as illustrated in the work of Nelson and Winter (1982) is an embedded component of both individual skills and organization routines. Unlike machines or blueprints, they cannot be easily transferred to other firms. They can exist and create value only in the firms in which they have evolved. Kogut and Zander (1993) find that the more tacit the technology is, the more firms prefer to set up wholly-owned subsidiaries rather than sharing the knowledge with other partners. In their views, there is a distinguishable boundary in the knowledge between the partners in the joint venture. It therefore is difficult to have a common understanding between partners by which to transfer knowledge from idea in to productions and markets efficiently.

According to transaction cost theory (Williamson, 1975), foreign firms when making joint venture with local partners might suffer from transaction costs arising from writing and enforcing contracts, haggling over terms and contingent claims, and administering transactions (Kogut, 1989). Moreover, Mata and Portugal (2000) state that a joint venture may be troubled not only by cultural differences between the partners, but also by difficulties in sharing proprietary assets. Further, by making both parties residual claimants on firm's profits, they create in both parties incentives to free-rider, which make these ventures highly unstable. And as the co-operative ventures ages, local partners may learn the firm's technology to their own advantage and become competitors in the future (Barba Navaretti and Venables, 2004). Such costs and conflicts among parties make wholly-owned subsidiaries preferable to joint ventures.

Nevertheless, in some cases, joint ventures are preferred than wholly-owned subsidiaries. From the point of view of host countries, the benefits they can expect to obtain from foreign investment are knowledge about the latest technologies as well as management skills of foreign firms. However, market failures emerge because these knowledge and skills cannot be always tradable or imitated by the outsiders. Local firms find it difficult to acquire knowledge about the unspecified details of the technology, and foreign firms also find it difficult to buy knowledge

about the local markets such as information about administrative procedures, labour skills, demand conditions and relationship with local authorities (Mata and Portugal, 2000). It thus becomes cheaper for the parties to share both assets through a joint venture than to trade them through the market. For example, joint ventures frequently assign management tasks to local partners who are better qualified than home country individuals to manage the local labour force and relationships with local suppliers, buyers, and governments.

In terms of empirical works, most researchers use transaction cost theory to study entry mode choices by foreign firms. For instance, Meyer (2001) found that foreign firms in transition economies prefer to set up wholly owned subsidiaries rather than joint ventures with local partners. In these countries, foreign firms lack information about local partners, and domestic firms lack knowledge of market mechanism and inexperience in doing business with foreign partners. Therefore, a foreign firm has to pay high transaction costs relating to searching, negotiating and monitoring local partners. Moreover, in transition economies, the diffusion of knowledge is of particular concern because the institutional framework does not provide for the efficient protection of intellectual property rights. Hence, technology-intensive firms would prefer to internalize their transactions in high-tech goods and services, including transfer of production know-how, assessment of market opportunities for innovation products, as well as the training of sales and service personnel (Oxley, 1999; Hennart 1991). Similarly, Anderson and Gatigon (1986) and Brouthers (2002) find that in a market where transaction costs associated with finding, negotiating and monitoring potential partners are perceived to be high, foreign firms tend to use wholly owned mode while firms perceiving low transaction costs tend to use joint venture mode. Moreover, Hennart (1991) and Yamawaki (1997) reveal that wholly-owned subsidiaries of Japanese multinationals were less likely to exit than joint ventures.

The above arguments suggest a higher exit hazard for joint ventures when compared to wholly-owned subsidiaries, leading to the second hypothesis.

Hypothesis 2: *Wholly-owned subsidiaries are less likely to exit from the market than joint ventures.*

2.3. Location

The factor endowment theory of international trade developed by Heckscher and Ohlin suggests that location of international production is based on comparative advantages of factor costs. Therefore, if firms use FDI to minimize

costs, they will move to the location where production costs are lowest. Location advantages can help firms reduce production costs, thereby increasing the likelihood of firms' survival compared with their competitors locating in worse conditions. The concept of location advantages as reviewed by Cave (1982), Dunning (1993) and Brainard (1997) covers many aspects, including production costs and factor endowments such as labor force and infrastructure; market size; and policies to attract FDI.

As mentioned in Chapter 1, the economic open policy in transition economies creates potential business opportunities for foreign firms. Most investors are attracted by new markets, low labor costs and favorable policies towards FDI in these countries (Meyer, 1998). One of the most important policies to attract foreign investors is establishment of industrial zones or export processing zones with priority policies mostly on taxation for foreign investors (Zhou *et al.*, 2002). For instance, in China foreign firms locating in such as Special Economic Zones and Open Coastal Cities not only receive priorities in terms of profit tax, import duties and land use fees, but also get benefit from good infrastructure conditions and supporting services such as relating to administrative procedures. In fact, these special zones have attracted a major FDI inflows to China (Cheng and Kwan, 2000; Zhou *et al.*, 2002). In Vietnam, similar zones have been established since 1991 and offer lower profit tax and other incentives, especially if at least 80% of output is exported. The statistical data shows that in Vietnam the provinces possessing more industrial zones attract more foreign investors (The Ministry of Planning and Investment of Vietnam – MPI website).

Besides the attraction of preferential treatments, foreign firms are likely to locate in these special zones due to the existence of agglomeration economies, which are positive externalities stemming from the geographic clustering of industries. The localization theory stipulates that firms benefit from locating in the vicinity of other firms in the same industry. They benefit from specialized labour markets, the availability of suppliers to the industry, and the exchange of knowledge with other firms in the cluster (Marshall, 1920; Krugman, 1991). Moreover, new foreign investors which are unfamiliar with the new environment may use the experience and performance of earlier investors as indicators of the underlying business climate at the location. Crozet *et al.* (2004) study foreign firms in France and find that proximity allows foreign entrants to learn experience from others and to exploit earlier investors' understanding of new business environment. Further, Head *et al.* (1995; 1999) showed that Japanese manufacturing firms in the United States prefer to cluster to obtain benefits from technology spillovers, specialized labor markets, and availability of input

suppliers to the industry. Some empirical studies in transition economies such as China (Head and Ries, 1996; Cheng and Kwan, 2000) and Hungary (Boudier-Bensabaa, 2005) also reveal that foreign firms prefer to concentrate in the same place. Indeed, in Chapter 1 and Chapter 2 of this dissertation, we find evidence to support the existence of agglomeration effects on location choices by foreign firms in Vietnam. Foreign investors are not only likely to locate near other foreign firms but also prefer to locate near foreign firms in the same industries and from the same countries of origin.

However, some empirical studies showed that firms would strategically choose locations to gain exposure to others' localized knowledge while reducing leakage of their own knowledge because they are not only receivers but also sources of knowledge spillovers. Shaver and Flyer (2000) shows that under the existence of agglomeration economies, many foreign firms will perform better if they do not cluster. Large foreign firms with the greatest capacity in technologies, human capital, training programs, suppliers, and distributors will try to locate away from their competitors because the benefits they gain from locating near their competitors will be less than what the competitors gain from them. Alcacer and Chung (2007) also find that foreign firms consider not only gains from inward knowledge spillovers but also the possible cost of outward spillovers. While less technologically advanced firms favor locations with high levels of industrial innovative activity, technologically advanced firms choose only locations with high levels of academic activity and avoid locations with industrial activity to distance themselves from competitors.

The problems firms will experience when participating in an industrial cluster can be the spillover of technology, employee defection to competitors, and the sharing of distributors and suppliers with neighboring firms. Yoffie (1993) shows that semiconductor managers decide to locate far from their competitors due to their concern that their technology might spill over to the near firms. Baum and Mezias (1992) indicate that locating closer to other hotels in Manhattan increases the survival chance of a hotel, but this benefit of agglomeration diminishes when hotel districts become crowded, pushing up prices of the input resources and exacerbating competition.

In this study we suppose that in a transition economy like Vietnam, benefits that a new foreign firm locating in industrial zones gains from tax priority policies, good infrastructure conditions and agglomeration economies may higher than the loss it suffers from high competition with other proximal firms. The next hypothesis therefore is posited as follows:

Hypothesis 3: *Locating in industrial zones or export processing zones increases the likelihood of survival of foreign firms.*

However, in order to have a better understanding of the effect of agglomeration economies on firm survival, we include in the model the agglomeration economies variable proxied by the number of foreign firms in the same industry in the province where the firm locates. The following part will present a more detailed discussion about this issue.

2.4. Control variables

Other variables need to be taken into account in the empirical analysis. At the firm level, the study includes the *cultural distance*, *profit before tax*, and *multi-plant operation*.

Dunning (1993) suggests that one of the disadvantages of foreign firms compared with local firms is differences in culture. The differences in culture may lead foreign firms to difficulties in understanding and cooperating with local partners that can reduce their potential performance. In fact, in recent years intra-regional foreign investment has tendency to increase and plays a key role in transnational corporations-controlled international networks. During the period 2002-2004, average annual intra-Asian flows are the largest stream of foreign direct investment within the group of developing countries (The World Investment Report 2006). In addition, Barkema *et al.* (1996) find that cultural distance is a prominent factor in foreign entry, especially when this involves another firm. Because the venture requires 'double layered acculturation', and the firm has to accommodate both strange corporate and national cultures. Based on these arguments and evidence, the study suggests that cultural differences decrease the probability of foreign firm survival.

Besides factors foreign firms possess at the time of entry such as initial sizes, countries of origin and entry modes that can affect the likelihood of firm survival, the performance by firms after entry are also an important factor. Scholars have used many different indicators to measure firm performance such as sales growth, numbers of employees, turnovers, volume of export, and profit (Malmberg *et al.*, 2000; Hansen and Wernerfelt, 1989; Baum and Wally, 2003). In this study, we use profit as an indicator for firm performance and argue that a foreign firm is considered to be successful in doing business if it can consistently generate profit over time.

Regarding the factor of multiple plants, Mata and Portugal (2000; 2002) when studying the survival of foreign firms in Portugal find that foreign firms are significantly more likely to operate multiple plants than their domestic counterparts. Moreover, numbers of plants operated by foreign firms have positive effect on their likelihood of survival. The authors explain that in difficult situations, multi-plant firms can accommodate the failure of one of their plants without failing themselves, while single-plant firms cannot.

Besides firm-specific characteristics that are supposed to have impact on the firm survival, we also analyze the effects of the environment in which entry occurs. The characteristics of industries, locations and effects of agglomeration economies will be considered.

At the industry level, this study analyzes the influences of *entry rate*, *industry size*, and *industry growth* on the survival of firms. Mata and Portugal (1994; 2002) indicate that the extent of entry in a market increases the competitiveness in that market. So in markets with high entry rate, the firms' lifetime is expected to be shorter. Because in such market, not only is each new firm subjected to more intense competition from those of its own kind, but also each generation of entrants has to face a continuously renewed challenge posed by the new waves of entrants each years. There is plenty of evidence that industries where entry is easy are also industries where exit is more likely. Dunne *et al.* (1988) and Mata and Portugal (1994) find a strong positive correlation between the flows of entry and exit across markets. Because the effects of entry depend on the relationship between the extent of entry and market size, the study also includes a variable of industry size and expects that the industry size will have a negative effect on the survival of foreign firms.

We also control for the growth rate in the industry. Industries which are quickly growing are likely to be environments in which the probability of exit of new foreign firms is lower. Because in fast growing industries, firms may grow without inflicting market share losses to their rivals and, therefore, the likelihood of aggressive reactions is lower. Audretsch and Mahmood (1994), Mata and Portugal (1994; 2000; 2002), and Mata *et al.* (1995) find a positive and statistically significant effect of industry growth on the survival of new firms, and Li (1995) and Shaver (1995) find this effect to hold specially for foreign firms.

As discussed in the previous section, foreign firms have tendencies to locate in places where required factors of their production are relatively abundant to reduce production and transportation costs. This study thus supposes that locating in regions with high income per capita, development in human capital, and advantages in infrastructures and transportation will decrease the likelihood of

failure of foreign firms. Fotopoulos and Louri (2000) when studying the survival of newly-created Greek manufacturing firms find that firms located in the country's largest urban environment, Athens, face better survival prospects. This result suggests that 'centripetal' forces such as agglomeration economies and other market-pull factors remain a strong determinant in location choices by foreign firms.

Moreover, the region with good conditions attracts more and more new foreign investments. Then at a certain level, the cumulative number of foreign firms will create positive agglomeration externalities and make that region more attractive. Many empirical studies have found that benefits from agglomeration economies motivate foreign firms in the same industries to locate in a specific place. For example, Head, Ries and Swenson (1995; 1999) find that new Japanese firms prefer to locate near both Japanese and US firms in the same industries, and Crozet, Mayer and Mucchielli (2004) also find a similar evidence about the industrial concentrations of foreign firms in France. It is thus possible to expect a positive relationship between agglomeration economies and the likelihood of foreign firm survival.

3. Methods

3.1. Data

The dataset used in this study is also obtained from the yearly surveys of the enterprises operating in Vietnam conducted by the General Statistics Office of Vietnam since 2000. These are comprehensive surveys covering all state enterprises, non-state enterprises that have equal or greater than 10 employees, 20% of sampled non-state enterprises with fewer than 10 employees, and all foreign enterprises across 64 provinces and cities in Vietnam. The contents of the surveys cover indicators to identify enterprises including their name, address, type, and economic activities of the enterprises, and indicators to reflect production situations of the enterprises such as their employees, income of employees, asset and capital source, turnover, profit, contributions to the state budget, investment capital, taxes and other obligations to the government, job training, and evaluations on the investment environment. Moreover, its longitudinal capacity, i.e., each firm is identified through a unique tax code, allows a firm to be followed over time; therefore we can find out the foreign firms that in fact were surveyed in the previous years but have the year of operation of the later years due to mistakes during conducting the surveys. For instance, some foreign firms that have the year of operation of 2002, but in fact they already

appeared in the survey in 2000. Thus, by using both tax code and the year of starting operation, we can find the exact number of new foreign firms created in a specific year and to establish the longevity of their investments in Vietnam over time. To our knowledge, this dataset has not been used for studies on the survival of foreign firms in Vietnam.

The purpose of this study is to follow a cohort of firms that started operations in 2000 to measure their life span in the period 2000-2005. For this purpose, survival is defined as the continued presence of the foreign firms in Vietnam, and failure as the firms' exit. To identify the changes of the foreign firms created in 2000, the study implemented a three-step procedure. First, we merge all surveyed foreign firms over six years from 2000 to 2005 by using their tax codes. It is noted that numbers of foreign firms that are surveyed in a particular year include foreign firms that already started their operations and still exist until the day of survey and new foreign entrants of that year. After merging, we can obtain the longitudinal information of all foreign firms during the six years. Second, by using the information about the year of starting operation, we can keep all foreign firms that were created in 2000 and have their history records during the period 2000-2005. In 2000, we have 187 newly-created foreign firms. Finally, we measure the life span of each new foreign firm.

The dataset also has several limitations. First, we do not know the identity of the foreign owners. This prevents us from using the parents' characteristics to explain the exit of subsidiaries. Second, we are not able to distinguish greenfield and acquisition foreign entrants. So the study cannot analyze how the entry mode affects the probability of firm survival. Third, we cannot tell mergers and acquisitions from true exits. This can happen when a foreign firm after a period of operation decides to merge with or to acquire another foreign firm. So the identifiers (tax code) of the merging firm or the acquired firm disappear, and they are thus counted as exits in the dataset while they are in fact still surviving. Furthermore, there are some foreign firms that appeared in one survey and disappeared in the next survey and then reappeared after that. This can be due to mistakes when conducting the surveys, or because the firm did not want to answer the questionnaire, or many other reasons. For these cases, the study uses the last time the foreign firms appeared during the period 2000-2005 to calculate their life time.

3.2. Statistical model

Conventional statistical methods, such as the method of ordinary least squares, are ill-suited to deal with duration analysis. The main reason is that

information with respect to duration is typically incomplete, since at the time of the survey there is a number of cases that did not fail. Those observations are called right-censored because their durations in fact exceed a given (known) threshold. Standard estimation procedures do not account properly for this problem, producing biased and inconsistent estimates (see Mata and Portugal, 1994). We need, therefore, to employ models especially designed to take this problem into account, which lead us naturally to the hazard model. The key concept in the hazard model is the hazard rate which gives the probability that a unit exits the initial state within a particular time interval, given that it survived up until then.

Following Wooldridge (2002), the hazard function $h(t)$ without covariates that is the instantaneous rate of leaving per unit of time is written:

$$h(t) = \lim_{\Delta t \to 0} \frac{P(t \le T < t + \Delta t \mid T \ge t)}{\Delta t} = \frac{f(t)}{S(t)}$$

where T is the firm's life duration, $f(t)$ is probability density function of T and $S(t)$ is the survivor function that is the probability of "surviving" past time t. Empirical estimates of either survival or hazard rates can easily be computed employing respectively the Kaplan-Meier estimator or the life-table methodology.

Usually in economics, we are interested in hazard functions conditional on a set of covariates. When the covariates do not change over time, the conditional hazard is:

$$h(t; x) = \lim_{\Delta t \to 0} \frac{P(t \le T < t + \Delta t \mid T \ge t, x)}{\Delta t}$$

And when the covariates change over time, the conditional hazard is:

$$h\left[t; x(t)\right] = \lim_{\Delta t \to 0} \frac{P\left[t \le T < t + \Delta t \mid T \ge t, x(t + \Delta t)\right]}{\Delta t}$$

However, this study aims at not only evaluating either survival or hazard rates but also investigating the influence of the covariates on the probability of failure. In other words, the study will implement a multivariate model of the survival of foreign firms. For this purpose, the proportional hazard model proposed by Cox (1972) will be applied. The proportional hazard that a foreign firm j faces can be written as:

$$h_j(t; x) = h_0(t) \exp(\beta_x X_j)$$

where $h_0(t)$ is the baseline hazard function that is common to all foreign firms in the population, X is a vector of explanatory variables for the j^{th} firm that can be time-invariant or time-variant covariates, and β is a vector of parameters.

Negative coefficients equivalent to risk ratios exp(βX) less than one implies that the hazard rate decreases and the probability of survival increases, while positive coefficients and risk ratio greater than one imply an increase in the hazard rate and a decreases in the probability of survival.

Clearly, the baseline hazard function equals the hazard function for $X = 0$. Accordingly, the effect of a unit change in a covariate is to produce a constant proportional change in the hazard rate. In other words, the hazard subject *j* faces is multiplicatively proportional to the baseline hazard, and the function exp(βX) was chosen simply to avoid the problem of $h(t; x)$ ever turning negative. Parametric procedures require that $h_0(t)$ assumes a specific form, but an improper choice of the baseline hazard function can produce unreliable or unstable estimates. However, this problem can be solved since the β vector can be estimated with unspecified hazard baseline function via the definition of the proper partial likelihood function (Cox, 1972). Thus, a non-parametric procedure can be used to estimate the effects of covariates.

Estimation is performed by maximum likelihood methods. The lifetime variable is an increasing count of the years that a foreign firm survives and will be right censored if it still survives until the end of the period 2000-2005. The hazard rate (dependent variable) is the probability that a firm exits its lifetime period, given that it survives up till the last year of the period.

Following the discussions of the hypotheses, the explanatory variables are computed mostly based on the works of Mata and Portugal (1994; 2000; 2002) and Head *et al.* (1995) as follows:

- *Initial size*: the number of employees when foreign firms started operation in 2000.
- *Current size*: the current number of employees over years.
- *Ownership structure*: Dummy variable which takes the value 1 if foreign firms are wholly owned by foreign investors, 0 if they are joint ventures.
- *Location*: Dummy variable which takes the value 1 if foreign firms are located in an industrial zone or an export processing zone, 0 otherwise.
- *Cultural distance*: Dummy variable which takes the value 1 if foreign investors are from the Asian countries, 0 otherwise.
- *Multi-plant operation*: the number of plants operated by foreign firms.
- *Firm performance*: Profit before tax.
- *Entry rate*: the number of new foreign firms created in 2000 in the same 2-digit industry.

- *Industry size*: the number of all kinds of firms in the industry; and the number of employees in all kinds of firms in the same 2-digit industry.
- *Industry growth*: Growth rate of industry employment, computed as the difference in the log of employment in all kinds of firms in the same 2-digit industry in two consecutive years.
- *Location-specific characteristics:* income per capita by province, human capital development measured by the number of undergraduate students, and infrastructure conditions proxied by the distance to the nearest big harbor.
- *Agglomeration economies:* the number of foreign firms in the same 2-digit industry by province.

With the exception of initial size and entry rate which refer to the conditions at the time of the firm's entry and the distance to the nearest big harbors that does not change over time, all variables are time-varying. It means that they can have different values over the life time of foreign firms. In some cases, these variables reflect post-entry decisions and in other cases they simply reflect the evolution of the environment. The study specifies exit between moment *t*-1 and *t* as a function of the independent variables observed at moment *t*.

3.3. Sample

The sample includes 187 foreign firms that entered in Vietnam in 2000. These new foreign firms are identified by using the procedures previously discussed in section 3.1. Table 4.1 and Table 4.2 present some descriptive statistics of the sample and the correlations of the variables.

Table 4.1 shows that 87% of the total numbers of entrants are wholly-owned by foreign investors. This is consistent with the argument of Meyer (2001) that foreign entries in transition economies where institutional frameworks are only partially reformed, and therefore inconsistent and unstable prefer to establish wholly-owned subsidiaries to reduce transaction costs. Over the five years of operation from 2000 to 2005, the ownership structure of foreign firms is quite stable. There are only two firms that transferred from joint ventures to wholly-owned firms. Most foreign firms operate a single establishment at the time of entry and there is no big change after the five years. Regarding the nationalities of foreign investors, around 83% are Asian investors of which a half are from Taiwan. Around 50% of new foreign firms are located in industrial zones or export processing zones, and most of them are operating in manufacturing sector. Nearly 43% of new foreign firms chose Hanoi, the capital and Ho Chi Minh City,

the biggest city to set up their operation. On average, foreign entrants employed 139 employees at the first year of operation. However, there is a big gap between the minimum and maximum number of employees. At the minimum level, entrants employed only 1 employee while the maximum number is 2627. Over the five years of operation, the firm size that is measured by the number of employees increased. In 2005, the average number of employees was 375, increasing more than twice and a half time as large as the average start-up size. The statistics on the industry variables presented in Table 4.1 are less straightforward to interpret than the data on firm variables because these variables refer to the industry.

Sample correlations between the independent variables are shown in Table 4.2. In general, the correlation coefficients are low and no serious collinearity problems are detected in the regression estimation.

3.4. Patterns of exit

First, the study estimates the probability of firm survival at the different ages by using the Kaplan-Meier estimator. Table 4.3 shows that the overall survival rate is about 89% in the year foreign firms were created, but around 23% of them die before they reach the age of five. The highest numbers of foreign firms died in the year of entry (21 firms had exited in 2000) compared with the later years implying that the first year of operation is the most difficult time for new entrants. However, these figures are substantially altered if the study takes into account the differences in firm-specific characteristics such as initial size, current size, ownership structure, location, and cultural distance.

The results in Table 4.3 and Graph 4.1 demonstrate that larger foreign firms are likely to live longer than small foreign firms in both initial size and current size. Foreign firms are defined large if they have equal or more than 100 employees, otherwise they are considered small. It seems that the effect of current size on the survival of foreign firms is stronger than initial size. Firms with small current size are more likely to exit than firms with small initial size, and firms with larger current size have higher survival rates than firms with larger initial size after five years of operation. It is noted that in the first year, only 33% of the entrant had large size but after five years large firms accounted for 61% of the total surviving firms. This result indicates that post-entry evolution is an important determinant of firm performance (Mata *et al.*, 1995).

As expected, foreign firms that entered under wholly-owned mode are likely to live longer than joint ventures. After five years of operation, only 57% of joint ventures survive while 81% of wholly-owned foreign firms can continue their

sixth year. In terms of the firm location, the results also support the hypothesis that locating in industrial zones or export processing zones increases the likelihood of survival of foreign firms. While only 12% of foreign firms located in industrial zones died before reaching the fifth year, this number is 33% for firms located outside industrial zones. Moreover, Kaplan-Meier estimator shows that foreign firms belonging to Asian investors can live longer than firms owned by the other countries. Whereas 80% of Asian firms can survive until the sixth year, only 63% of foreign firms owned by other investors can do that. In addition, the results and the graphs also show that ownership structure has the strongest and immediate effect on the firm survival compared with the other indicators. It seems that being a wholly-owned foreign firm creates super advantages and increases its competitiveness compared with being a joint venture.

Table 4.1: Descriptive statistics

	Variables	Obs	Description	Average	Min	Max
1.	Initial size	973	The no. of employees when foreign firms started operation in 2000	149.50*	1	2627
2.	Current size	943**	The current number of employees over years	253.82*	1	4773
3.	Ownership structure	973	Dummy variable which takes the value 1 if foreign firms are wholly owned by foreign investors, 0 if they are joint ventures	0.87	0	1
4.	Location	973	Dummy variable which takes the value 1 if foreign firms are located in an industrial zone or an export processing zone, 0 otherwise	0.51	0	1
5.	Cultural distance	973	Dummy variable which takes the value 1 if foreign investors are from Asian countries, 0 otherwise	0.83	0	1
6.	Plant	973	The number of plants operated by foreign firms	0.34	0	25
7.	Profit	922**	The profit before tax of foreign firms in mill. VND	3528.05	-347129	248848
8.	Entry rate	973	The number of new foreign firms created in 2000 in the same 2-digit industry.	10.25	1	20
9.	Number of all firms	973	The number of all kinds of firms in the same 2-digit industry	1535.02	12	25003
10.	Number of all employees	973	The number of employees in all kinds of firms in the same 2-digit industry.	144832.30	1028	1005981
11.	Industry growth	786**	Growth rate of industry employment, equal the difference in the log of employment in all kinds of firms in the industry in two consecutive years	0.15	-2.21	2.42
12.	Income per capita	973	Income per capita (VND/person) in the province where firms locate	8796.32	1940.26	43359.81
13.	Student	973	Number of undergraduate students in the province where firms locate	122803.50	226	515723
14.	Distance to harbor	973	The distance in km to the nearest big harbors by province	34.54	0	313.01
15.	Agglomeration economies	973	The no. of foreign firms in the same 2-digit industries in the province where firms locate	26.59	0	147

Note: * These numbers are not exact because the average values here are divided by 973 obs., over five years 2000-2005 and each year the number of firms were reduced. The true values that are calculated based on the obs. of each year are 138.80 (2000), 175.33(2001), 247.72(2002), 286.28(2003), 335.11(2004), 374.56(2005).

** There are 973 observations in total. The smaller numbers of observations are due to missing or lacking information during the surveys.

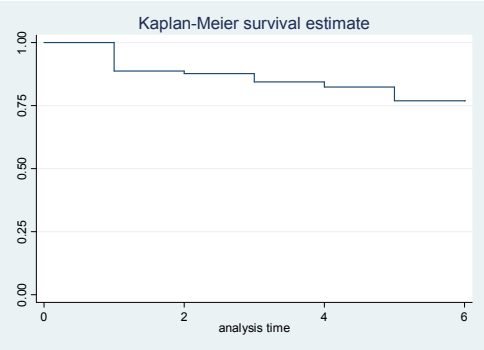
Table 4.2: Correlations in the dataset

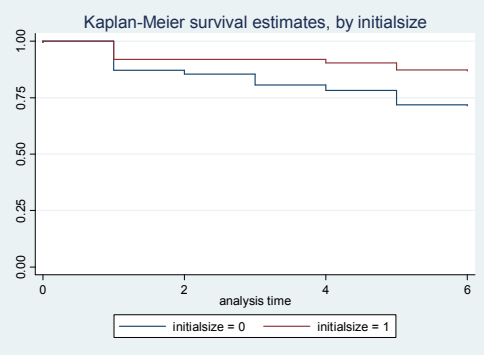
Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Initial size	1														
2. Current size	0.71	1													
3. Ownership structure	-0.06	0.01	1												
4. Location	0.10	0.16	0.16	1											
5. Cultural distance	0.05	0.00	0.11	0.05	1										
6. Plant	0.14	0.09	-0.17	-0.07	-0.21	1									
7. Profit	0.04	0.04	-0.09	0.01	0.12	-0.05	1								
8. Entry rate	0.03	0.01	0.16	0.15	0.17	-0.16	0.07	1							
9. Number of all firms	0.03	-0.01	-0.01	-0.02	-0.09	0.20	-0.07	0.08	1						
10. Number of all employees	0.24	0.18	0.14	0.10	0.11	0.04	0.03	0.22	0.55	1					
11. Industry growth	-0.03	-0.01	-0.01	-0.05	-0.04	0.01	-0.07	-0.07	-0.09	-0.15	1				
12. Income per capita	-0.13	-0.01	-0.15	-0.09	-0.15	0.05	-0.13	-0.23	0.06	-0.01	0.05	1			
13. Student	-0.17	-0.07	-0.08	-0.29	-0.09	0.08	-0.09	-0.19	0.15	0.01	0.13	0.58	1		
14. Distance to harbor	0.10	0.01	-0.14	-0.26	0.03	0.03	0.12	0.11	0.11	0.07	-0.04	-0.39	-0.12	1	
15. Agglomeration economies	-0.01	-0.01	0.13	0.15	0.04	-0.13	-0.04	0.14	-0.04	0.19	0.06	0.34	0.22	0.36	1

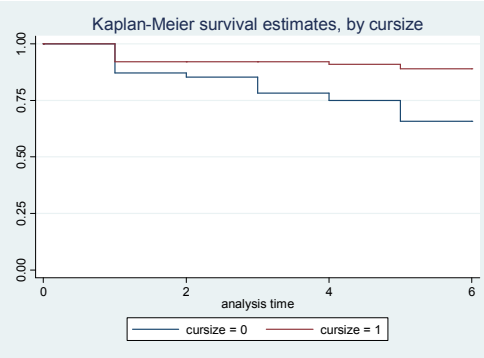
Table 4.3: Kaplan-Meier estimator for survival function of foreign firms by different indicators

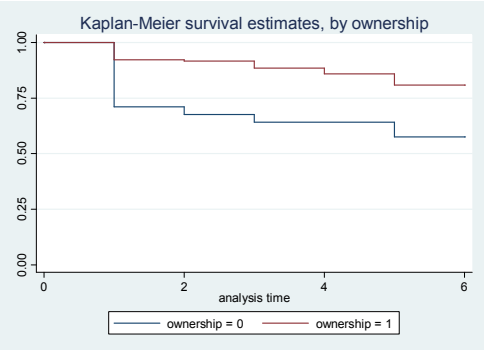
Duration	Sample			Survival rates										
	No. at risk	*Fail*	*No. censored*	*All firms*	*Initial Size (0-100)*	*Initial Size (100+)*	*Cur. Size (0-100)*	*Cur. Size (100+)*	*Ownership (equal 0)*	*Ownership (equal 1)*	*Unlocate in IZ*	*Locate in IZ*	*Not Asian country*	*Asian country*
Year 2000	187	21	0	0.89	0.87	0.92	0.87	0.92	0.71	0.92	0.86	0.92	0.79	0.91
After 1 year	166	2	0	0.88	0.85	-	0.85	0.92	0.67	0.91	0.84	-	0.76	0.90
After 2 years	164	6	0	0.84	0.80	-	0.78	0.92	0.64	0.88	0.78	-	0.71	0.88
After 3 years	158	4	0	0.82	0.78	0.90	0.74	0.91	-	0.85	0.74	0.91	0.71	0.85
After 4 years	154	10	0	0.77	0.72	0.87	0.65	0.89	0.57	0.81	0.67	0.88	0.63	0.80
After 5 years	144	0	144	0.77	0.72	0.87	0.65	0.89	0.57	0.81	0.67	0.88	0.63	0.80

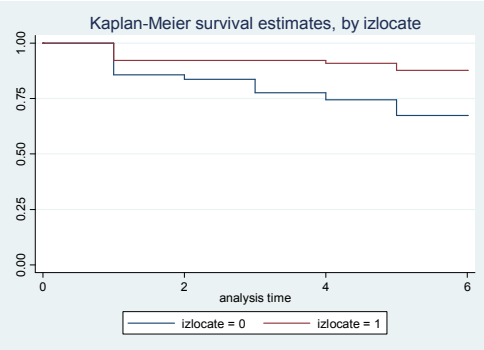
Graph 4.1: Kaplan-Meier survival estimates

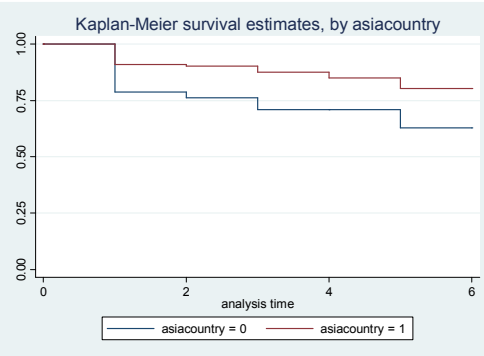












4. Empirical results

Table 4.4 presents the empirical results with the risk ratios and their *p*-value. We recall that risk ratios less than one imply decreases in the hazard rate. In the first regression, the variables *initial size* and *industry growth* are not included. Because the variable *initial size* is highly correlated with the variable *current size* and the variable *industry growth* has missing information for the year 2000. Column 1 shows that the hazard ratios of the variables *current size*, *ownership structure*, l*ocation*, and *cultural distance* are less than one and strongly statistically significant.

The risk ratio on the variable *current size* indicates that foreign firms with large current size will face a lower probability of exit. However, compared with the variables *ownership structure* and *location*, the risk ratio of the variable *current size* is much higher, almost equals one. It shows that although current size has effect on the hazard rate of foreign firms, but the effect is not strong. However, Table 4.3 shows a big difference in survival rates estimated by Kaplan-Meier estimators between firms with current size less and greater than 100 employees. After five years of operations, 89% of large foreign firms can continue their sixth year while this number is 65% for small ones. In the second regression, the study uses the variable *initial size* instead of *current size* and finds that it also has the same effect as current size on the survival of foreign firms, but its statistical significance is lower than the current size (see Column 2). These results indicate that both initial size and current size have positive effects on the likelihood of the survival of foreign firms. However, the higher statistical significance of current size seems to emphasize the importance of post-entry growth to firm performance on their survival probability.

As expected, the *ownership structure* has a strong effect on the exit hazard of foreign firms in Vietnam. Wholly-owned foreign firms face hazard of exit of 54% less than joint ventures. Consistent with the estimates by Kaplan-Meier estimator, the ownership has the strongest effect compared with firm size and firm location. To understand this result more clearly, it is important to summarize some stylized facts about the structure of foreign investments in Vietnam.

During 1990s, joint ventures were the most common form of foreign investment, often with state-owned enterprises (SOEs) as the Vietnamese partner. In this period, two-thirds of total foreign investment commitments were made with SOEs and only 2% in joint ventures with private sectors. Because in the early years after the economic reformation in 1986 SOEs were the only legal partners for foreign firms desiring to enter as joint ventures. At that time, private enterprises not only accounted for a small share of the economy but also they

were too small to meet the requirements of large foreign investors. Moreover, SOEs with their privileged positions could help foreign firms a smooth entry into the Vietnamese market (Kokko *et al.*, 2003). However, since 2000, the licensed capital for wholly-owned projects has been larger than that of joint ventures. One explanation is the amendment to the Law on Foreign Investment in 1992 which gave wholly-owned firms the same status as joint ventures. Further, it becomes easier for foreign investors to access information about investment environment in Vietnam, leading to a reduction in the role of local partners. As a result, by 2006 wholly-owned foreign firms accounted for about 75% of foreign investment in Vietnam (The MPI).

In the context of Vietnam, both the transaction cost theory and the resource-based view are suitable to explain the entry mode choices by foreign investors. As a transition economy, the institutional framework of Vietnam is still in the process of changing and only partially reformed, therefore unstable, inconsistent and inefficient. Several important legal documents, such as the law on the protection of intellectual property right, were issued but of low enforcement. Foreign firms in Vietnam are therefore concerned about the knowledge diffusion and prefer to internalize their transactions. Further, Vietnam has been characterized by a lack of transparency and a service sector to support business development (The PCI 2006 Report). Foreign firms have difficulties in access to information about local economic agents, and domestic firms lack knowledge of market mechanism and inexperience in doing business with foreign partners. Hence, by setting a wholly owned subsidiary rather than a joint venture, a foreign firm can avoid transaction costs relating to searching, negotiating and monitoring local partners.

These arguments suggest that being a wholly-owned foreign firm in a transition country like Vietnam brings foreign firms advantages, thereby increasing the survival probability compared with setting up joint ventures with local partners. However, we should note that given the dataset, we do not have information about merger or acquisitions from true exits. For instance, as joint ventures often end with one of the partners acquiring the commonly owned venture, this may lead to conclude that failure is more likely in case of a joint venture although the firm has not really exit, but it has been bought by one of the partners. This problem might distort the empirical result if most joint ventures disappear with this way.

Table 4.4: The determinants of exit hazard of foreign firms in Vietnam

Independent Variables	(1) Risk ratio	(2) Risk ratio	(3) Risk ratio
Initial size		0.996*	
		(0.07)	
Current size	0.996**		0.996*
	(0.03)		(0.10)
Ownership structure	0.468**	0.492**	0.735
	(0.04)	(0.05)	(0.64)
Location	0.503*	0.473*	0.249**
	(0.09)	(0.06)	(0.04)
Cultural distance	0.552*	0.564	0.493
	(0.09)	(0.11)	(0.19)
Plant	0.884	0.844	0.664
	(0.58)	(0.51)	(0.51)
Profit	0.999	0.999	0.999
	(0.43)	(0.59)	(0.99)
Entry rate	0.996	0.991	1.008
	(0.91)	(0.78)	(0.87)
Number of all firms	0.999	0.999	1.000
	(0.96)	(0.95)	(0.63)
Number of all employees	1.000	1.000	1.000
	(0.78)	(0.76)	(0.92)
Industry growth			2.572
			(0.30)
Income per capita	0.971	0.968	0.795
	(0.57)	(0.56)	(0.34)
Student	1.000	1.000	1.000
	(0.36)	(0.41)	(0.26)
Distance to harbor	1.001	1.001	0.983
	(0.69)	(0.61)	(0.27)
Agglomeration economies	0.998	1.000	0.999
	(0.86)	(0.98)	(0.94)
Number of obs.	922	922	745
Number of firms	187	187	166
Number of exit	40	40	19
Log likelihood	-188.8	-190.2	-81.86
Chi square	30.18***	27.44***	26.71**

Note: ***p< 0.01, **p< 0.05, *p<0.10. p-values are in parentheses.

The *location* of foreign firms also has the expected sign. Locating in industrial zones or export processing zones decreases the likelihood of exit of foreign firms by 50%. The most important explanation to this result can be the favoring policies issued by the Vietnamese government in order to attract foreign investments into industrial zones, export processing zones and hi-tech zones[13]. The standard profit tax rate is 28% and preferred rates range from 10% to 20% if the investment is located in priority areas or satisfies certain investment promotion criteria (Law on Enterprise Profit Tax, No. 09/2003/QH11 issued on June 17, 2003 by the Vietnamese Assembly). For instance, foreign enterprises operating in export processing zones enjoy a profit tax rate at 10% and 15% in respect of production and service enterprises; operating in industrial zones enjoy profit tax rates at 15%, 10%, and 20% respectively for production, exporting and service enterprises; and operating in hi-tech zones have to pay 10% of profit tax after an eight-year tax holiday from the first year in which the enterprises are profitable. Moreover, these foreign firms also receive preferential policies on land renting prices, factory renting prices as well as supports in administrative procedures by provincial authorities. These priority policies drive foreign firms to cluster in these zones. The spatial patterns of foreign enterprises by region in Vietnam somehow reflect this phenomenon. In 2005, just Ho Chi Minh City and its two neighboring provinces, Binh Duong and Dong Nai, that are located the Southeast region accounted for about 65% of the total foreign firms (The GSO, 2007). These city and provinces also accounted for more than 50% of the total number industrial zones and export processing zones in Vietnam.

In the previous part, we have supposed that besides tax priority and other incentives foreign firms are also attracted to locate in industrial zones due to benefits stemming from agglomeration economies. Indeed, in Chapter 2 and Chapter 3 we have found the evidence to support the existence of agglomeration effects on location choices by foreign firms in Vietnam. Foreign investors in the same industry prefer to concentrate in the same place. However, the statistical insignificance of the control variable *agglomeration economies* seems to contradict the results obtained in the previous chapters. It shows that agglomeration has no effect on the firm survival and the effect of location is attributed only to tax priority and other incentives offered by industrial zones. It is

[13] An industrial zone is a concentrated zone specializing in the production of industrial goods and services for industrial goods production.

An export processing zone specialized in the production of goods for export and in provision of services of services for the production of export goods and export activities.

A hi-tech zone is a zone where hi-technology industrial enterprises and units providing hi-technology development services, including scientific technological research and development, training and other related services are concentrated.

noted that we have re-run the regressions by inserting alternatively the variable *location* or the variable *agglomeration economies* but the results do not change.

This contradiction can be explained by using the works of Shaver and Flyer (2002) and Alcacer and Chung (2007). These authors argue that firms not only capture benefits from agglomeration economies but also contribute to agglomeration economies. Firms would therefore strategically choose location to gain exposure to others' localized knowledge while reducing leakage of their own knowledge to their competitors. Hence, once a firm locates in a certain place where other firms already established, the firm may obtain benefits from agglomeration economies, therefore increasing its probability of survival. However, the firm's specific knowledge can be spilled over and it benefits the proximal firms, therefore increasing the competition and reducing firm survival probability. Particularly, if agglomerating firms are in the same industries, the competition is much higher as input resources become scarce and their prices are bid up. For example, Baum and Mezias (1992) show that locating closer to other hotels in Manhattan increases the survival chance of a hotel, but this benefit of agglomeration diminishes when hotel districts become crowded, exacerbating competition. The opposite effects of firm localization make the variable *agglomeration economies* statistically insignificant.

With respect to other control variables, except *cultural distance*, all other variables reflecting firm-specific characteristics, industry-specific characteristics, and location advantages have no statistically significant effects on the foreign firm survival. In the third regression (see Column 3), when the variable *industry growth* is included in the model, it reduces the statistical significance of the current size, increases the statistical significance of firms' location and makes ownership structure statistically insignificant. The un-robustness of the results may be due to the many missing observations of the variable *industry growth*, leading to the inconsistent estimates.

As predicted, cultural distance has an effect on the survival of foreign firms. Foreign firms owned by Asian investors face a hazard of exit of 45% less than foreign firms from other countries. Similarities in culture make foreign investors easier to understand and cooperate with local partners, therefore reducing transaction costs in negotiating or monitoring local partners. This finding is consistent with the pattern of foreign investors in Vietnam. For example, up to the end of 2005, there were seventy five countries and territories investing in Vietnam. Among them, the number of investors from Asian countries accounted for 78.7%, Europe 11.6%, and America and Caribbean 5% of the total foreign

enterprises. The top five investors were Taiwan, South Korea, Japan, Singapore, and China (The GSO, 2007).

In summary, the empirical results support the hypotheses that firm size (current and initial sizes), being a wholly-owned foreign firm and locating in industrial zones or export processing zones have positive effects on the survival of foreign firms. Compared with ownership structure and firm location, firm size shows a smaller influence on the firm survival. However, the higher statistical significance of current size than start-up size suggests that the ability to adapt to changing environment as well as the post-entry successful performance increase the survival likelihood of foreign firms. Moreover, we also find that similarities in culture create advantages for foreign firms in cooperating with local partners, therefore increasing the chance of their success.

5. Robustness tests

In order to validate the robustness of the empirical results, the regression model is re-estimated using a larger dataset covering new foreign firms created in 2000 and 2002, so as to increase the cross time variance in the set of time-varying variables. We do not consider foreign firms created in 2001 because there is quite a lot of missing information about their characteristics in this year.

Following the steps used to compute the number of foreign entries in 2000, we have 263 new foreign firms created in 2002. Similar to new firms in 2000, most entrants in 2002 are wholly-owned firms. The majority of them operate a single establishment at the time of entry and there is no big change after three years of operation. Regarding the nationalities of foreign investors, around 86% are Asian investors. More than a half of entrants locate in industrial zones or export processing zones, and most of them are operating in manufacturing sector. On average, foreign entrants employed 164 employees at the first year of operation, higher than entrants in 2000. After the three years of operation, the average firm size increases more than twice times.

By using the Kaplan-Meier estimator, the patterns of exit of foreign entrants in 2002 are similar to that of foreign entrants in 2000. The first year of operation is still the most difficult time for new firms when the number of new firms that exited in this year is highest. Compared with 2000, the overall survival rate of foreign entrants after three years of operation is lower, implying that competition among firms in the market becomes stronger by time.

Table 4.5: The determinants of exit hazard of foreign firms in Vietnam created in 2000 and 2002

Independent Variables	(1) Risk ratio	(2) Risk ratio
Initial size		0.998**
		(0.05)
Current size	0.997***	
	(0.001)	
Ownership structure	0.632*	0.672
	(0.07)	(0.12)
Location	0.654*	0.638*
	(0.07)	(0.06)
Cultural distance	0.730	0.713
	(0.21)	(0.18)
Plant	0.774	0.758
	(0.42)	(0.38)
Entry rate	1.018*	1.016
	(0.09)	(0.11)
Number of all firms	0.999	1.000
	(0.87)	(0.80)
Nymber of all employees	1.000	1.000
	(0.14)	(0.36)
Income per capita	1.038**	1.040**
	(0.03)	(0.02)
Student	1.000	1.000
	(0.59)	(0.60)
Distance to harbor	1.001	1.001
	(0.29)	(0.28)
Agglomeration economies	0.996	0.996
	(0.45)	(0.48)
Number of obs.	1874	1918
Number of firms	450	450
Number of exit	93	93
Log likelihood	-527.1	-535.0
Chi square	46.70***	34.38***

Note: ***p< 0.01, **p< 0.05, *p<0.10. p-values are in parentheses.

As expected, larger foreign firms are likely to live longer than smaller ones in both initial size and current size. Foreign firms that entered under wholly-owned mode are likely to live longer than joint ventures. However, due to the shorter period of analysis, the difference is not as big as new firms created in 2000. After the three years of operation, 78% of joint ventures survive while 82% of wholly-owned foreign firms can continue their forth year. In terms of firm location and cultural distance, the results also show that locating in industrial zones or export processing zones helps firms live longer, and similarities in culture reduce the exit hazard of foreign firms.

To test the robustness of the estimated results, this study combines the foreign firms created in 2000 and 2002, forming a pooled cross section. We use the same methods to compute the explanatory variables. Kaplan-Meier estimators show that when the dataset is extended, the expected patterns of exit are remarkably stable as discussed in section 3.4. Table 4.5 presents the estimated results with the coefficients, the risk ratios and their *p*-value by applying the proportional hazards model. In the models, we exclude the variables profit and industrial growth because they have a lot of missing information. Again, it is noted that negative coefficients and risk ratios less than one imply a decrease in hazard rate while positive coefficients and risk ratios greater than one imply an increase in hazard rate.

Column 1 of Table 4.5 presents that the three hypotheses are still hold, meaning that foreign firms with larger start-up size and growing current size are more likely to stay in the market for more periods. Moreover, being wholly-owned foreign firms or locating in industrial zones or export processing zones increase the likelihood of the survival of foreign firms. However, the effect of cultural distance loses its statistical significance although its sign is still as expected. In Column 2, we replace current size with initial size to regress the model. The estimated result of initial size is quite stable, showing that foreign firms with larger initial size are more likely to stay in the market.

Another difference in this model is that the variables *entry rate* and *income per capita* by province have statistically significant effects on the failure rate of new foreign firms (Column 1). The positive and statistically significant coefficient of the variable *entry rate* implies that when industries are characterized by higher entry rate, the hazard rates of new foreign firms are higher. This result is consistent with the argument of Mata and Portugal (1994; 2002) that in industries with high turbulence, not only is each new firm subjected to more intense competition from those of its own kind, but also each generation of entrants has to face a continuously renewed challenge posed by the new waves of entrants each

year. In fact, the positive correlation between flows of entry and exit across industries are found in many studies such as Geroski (1995), Mata and Portugal (1994), and Dunne, Roberts, and Samuelson (1988).

In terms of the effect of income per capita by province, its positive and highly statistically significant coefficient implies that new foreign firms that locate in provinces with high income per capita face a higher probability of failure. In Vietnam, large and major cities or provinces have higher income per capita than the other provinces. They also have better conditions to attract the foreign investments. For example, in 2005 just two cities (Ho Chi Minh City and Hanoi) and one province (Binh Duong) accounted for nearly 65% of the total foreign firms. This also means that foreign firms located in such cities have to face higher competition, leading to a higher rate of firm exit. This result is consistent with the estimated result of entry rate, supporting the classical argument by Geroski (1995) that entry and exit rates are highly positively correlated.

6. Conclusions

This study has examined the longevity of new foreign firms created in 2000 in Vietnam over the period 2000-2005. We find that more than 10% of new foreign firms died during the year of entry and more than 20% cannot reach the age of five. Moreover, the survivors become larger inside over time. Five years after having started, the average size of new foreign firms is more than twice and a half as large as their start-up size.

The Cox proportional hazard model is used to estimate the effects of firm size, ownership structure and firm location on the survival of new foreign firms. The empirical results show that foreign firms with larger start-up size and growing current size are more likely to stay in the market for a longer time. This finding is consistent with the studies of Dunne *et al.* (1989) and Mata *et al.* (1995). This result confirms that the ability to adapt to new environments and post-entry growth are important for the survival of new foreign firms. We also find that by setting up wholly-owned subsidiaries rather than doing joint ventures with local partners, foreign entrants can increase their survival probability because they can avoid high transaction costs arising from searching, negotiating and monitoring local partners.

In addition, the study indicates that preferential polices on taxation and other incentives decrease the failure hazard of foreign firms locating in industrial zones or export processing zones. However, by contrast to our prediction,

agglomeration economies have no significant effect on firm survival. Our explanation to this result is that firms are not only the receivers but also the source of knowledge spillovers. These opposite effects make the variable *agglomeration economies* statistically insignificant. Moreover, cultural distance is found to have a strong impact on the survival of foreign firms. Proximities in culture make it easier for them in cooperating with local partners; therefore increasing their success in doing business in a foreign market. It is noted that these empirical results are robust when the dataset is extended by including both new foreign firms created in 2000 and 2002 in the regression models.

This study contributes to the existing literature on the firm survival, especially the survival of foreign subsidiaries in a transition country just like Vietnam. The empirical results are important for managers of multinational companies in evaluating the chances of their success and implementing strategic choices for the survival of their subsidiaries in a foreign market. The study suggests that foreign firms should establish wholly-owned subsidiaries rather than joint ventures to avoid transaction costs arising from imperfect market. Moreover, industrial zones or export processing zones may be the best choice of location for foreign entrants. The empirical findings could be also useful for the provincial authorities in Vietnam in designing policies to attract more foreign direct investment. Institutions shape the efficiency of markets and influence firms' strategies and organizational forms (North, 1990). So it is important to have a stable, efficient and consistent institutional framework that can reduce or eliminate transaction costs, and under this framework, foreign and local firms are treated equally. This creates a fair playing field for all firms so that they can apply the best strategies when doing business without being concerned about transaction costs or costs caused by a weak institutional framework.

An obvious limitation of this study is the short duration of the time span of foreign firms considered for the analysis, just five years (2000-2005) due to the limitation of the dataset. This can lead to incomplete conclusions about the effects of explanatory variables on failure rates of new foreign firms. Future research should work with longer-period dataset, so as to increase the cross time variance in the set of time-varying variables and ensure the unbiasness of the empirical results.

Conclusions

This dissertation studies behavior by foreign firms in a transition economy like Vietnam which is characterized by high transaction costs arising from unstable and inconsistent institutional frameworks. We focus on three main issues. First, we investigate the effect of institutional practices by local authorities on the entry rates of foreign firms in Vietnam. Second, we explore factors affecting location choices by foreign investors, thereby suggesting an explanation of agglomeration effects. Finally, we study the survival of foreign entrants in Vietnam.

The dataset used for empirical studies is obtained from the yearly surveys of the enterprises operating in Vietnam conducted by the General Statistics Office of Vietnam since 2000. These are comprehensive surveys covering all state enterprises, non-state enterprises that have equal or greater than 10 employees, 20% of sampled non-state enterprises with fewer than 10 employees, and all foreign enterprises across 64 provinces and cities in Vietnam. The contents of the surveys cover indicators to identify enterprises including their name, address, type, and economic activities of the enterprises, and indicators to reflect production situations of the enterprises such as their employees, income of employees, asset and capital source, turnover, profit, contributions to the state budget, investment capital, taxes and other obligations to the government, job training, and evaluations on the investment environment. This dataset provides a very useful source to analyze the behavior by foreign investors at the firm level.

This dissertation is started with theoretical reviews on FDI with the aim to explore the motivations driving a firm to expand investment abroad, the reasons why FDI is preferred to other investment forms and the main factors affecting location decisions by foreign firms. Since our thesis focuses on location choices by foreign firms in Vietnam, we spend more room on the discussion of the location theories such as the theory of comparative advantages, localization theory, institutional based view and information cost approach. Subsequently, we present a literature review on FDI determinants in transition economies and in

Vietnam. We state that market size, labor costs and the riskiness of investment environments are key factors affecting FDI inflows into these countries. The final section provides the description of data source that is used for the empirical studies in Vietnam.

The second chapter studies the effect of institutional practices by local authorities on the entry rates of foreign firms in Vietnam over the period 2000-2005. The Vietnamese provincial competitiveness index in 2006 (PCI 2006) and its two sub-indices reflecting attitudes of local government toward state-owned enterprises and the capability of private enterprises to access to necessary information for their business are used as proxies for institutional implementations by provincial authorities. The empirical results reveal that provinces with better institutional practices attract more foreign firms. The efforts of local authorities in interpreting and implementing central regulations and policies are an important factor creating attractiveness toward domestic and foreign investors. Transparency and access to information are found to have a strong effect on the attractiveness of a province to foreign investors. By contrast to our prediction, the favorable treatments of local authorities toward SOEs do not inhibit the entry of foreign firms to the region. The empirical findings support our argument that institutional practices by local governments influence the FDI spatial distributions among regions within the country. Formal legal changes initiated at the centre have varied impacts across provinces because the implementation of laws and regulations at local level depends on the informal institutions determined by attitudes (norms and cognitions) of local authorities.

The third chapter examines the effects of agglomeration economies on the location choices by foreign firms in Vietnam. We argue that foreign firms have tendency to locate in a particular location due to the existence of agglomeration economies, which are positive externalities that stem from the geographic clustering of industries. As indicated by Marshall (1920), the positive externalities which include technological spillovers among producers, a pooled market for workers with specialized skills that benefits both workers and firms, and a pool of specialized intermediate inputs for an industry in greater variety and at lower cost have the potential to enhance the performance by firms that agglomerate. By using a large dataset that provides detailed information about individual firms, we examine the location choices by 568 newly created foreign firms in 2005 in about 150 different 4-digit industries. The estimates of the negative binomial regression model and the conditional logit model strongly support our hypotheses that agglomeration benefits motivate foreign firms in the same industries and from the same countries of origin to locate near each other. Moreover, the empirical results

show that provinces in Vietnam compete with each other to attract FDI and the locations of Vietnamese firms have no effects on the location decisions by foreign firms in the same industry.

The last chapter investigates the survival probability of foreign entrants in Vietnam by looking at the life span of 187 foreign firms created in 2000 over the period 2000-2005. By applying the Cox proportional hazard model, we find that foreign firms with larger start-up size and growing current size are more likely to stay longer in the market. We also find that when entering in transition economies where transaction costs are high, foreign firms prefer to be internalized rather than combined with a local partner. The advantages from a being wholly-owned foreign firms decrease their failure hazard. Further, by locating in industrial zones or export processing zones, foreign firms can increase the probability of survival thank to the priorities on taxes as well as the supports from local authorities. However, by contrast to our prediction, agglomeration economies have no significant effect on firm survival. As expected, cultural distance is found to have a strong impact on the survival of foreign firms. Proximities in culture make it easier for foreign firms in cooperating with local partners, therefore increasing their success in foreign markets.

In summary, three sets of main conclusions emerge from this dissertation. *First*, the location choices by foreign firms in Vietnam are driven by traditional location advantages, agglomeration effects and the institutional practices by provincial authorities. Vietnam characterized by a new market with more than 80 million people and relatively low factor and labor costs is an attractive place for market-seeking, resource-seeking and efficiency-seeking investors. In addition, economic openness and favoring policies toward foreign firms, especially those locating in industrial zones or export processing zones, also encourage FDI inflows. As a result, FDI is highly concentrated in and around two economic hubs- Ho Chi Minh City and Hanoi that are characterized by good infrastructure conditions, large market, relatively better human capital and an intensive existence of industrial zones. Moreover, the concentration in a particular place once again benefits foreign firms thanks to agglomeration effects. Consequently, these two economic hubs attract more and more foreign investment over time compared with other provinces, creating unequal distribution of FDI inflows and uneven economic development among regions within Vietnam.

Second, we have learned that although the economic openness and changes in policies toward supporting the establishment and operation of private enterprises encourage foreign firms to invest in Vietnam, they still have to face a complex institutional environment with both formal and informal aspects due to

the inconsistency and variation in institutional performance among regions and between the central and local levels. While decentralization of administrative responsibilities to provinces has created opportunities for entrepreneurial-minded local authorities to push forward economic reform, and just foster the development of both local businesses and foreign investment, it is also a risky political strategy because the success of the reform depends on decisions made in the provinces that are not centrally controlled. The main risks include the possibilities of insufficient administrative capabilities, or self-serving policy decisions made to protect local interests or to create rents for the officials in charge. Moreover, decentralization of authority also implies that rules may be different across country which is great concern to some businesspersons. We therefore can state that the uneven progress of reform creates transaction costs that may inhibit business development, both because of additional risks of institutional changes and because of adjustment costs for business operating across multiple provinces. However, in our opinion, decentralization policy is successful in encouraging creativeness and competitiveness among provinces to attract foreign investments in Vietnam.

Finally, we can recognize that in the context of Vietnam, foreign investors have to consider many different factors such as modes of entry and locations when making their investment decision to succeed in the market. The majority of foreign firms prefer the mode of wholly owned affiliate when entering Vietnam to avoid high transaction costs associated with finding, negotiating, contracting and monitoring domestic partners as the statement of Brouthers (2002). In addition, most of foreign investors in Vietnam are from Asian countries such as Taiwan, Singapore, Japan, South Korean, and Malaysia. Similarity in culture may create advantage for foreign firms in understanding local partners, thereby reducing transaction costs. Furthermore, many foreign firms, especially operating in manufacturing sector, consider industrial zones as the best choice to locate their plants in order to overcome early difficulties in the new market due to the government's supports in taxes as well as favoring policies on land and factory renting prices and supports in administrative procedures. Indeed, the empirical results of the last chapter reveal that being a wholly-owned foreign firm or locating in industrial zones or export processing zones increase the likelihood of the survival of foreign firms. And similarities in culture may make foreign firms easier in cooperating with local firms, therefore increasing the chance of their survival.

1. Contributions

We believe that this dissertation can contribute to the debate around FDI at several levels. *First*, to the best of our knowledge, this is the first study on FDI in Vietnam using data at the firm level to investigate investment behavior by foreign firms. Due to the lack of and difficulties to access detailed information, all other empirical studies on FDI in Vietnam can exploit only data at the provincial level. Moreover, possessing detailed information about individual firms allows us to apply the right econometric models such as the conditional logit model to analyze location choices by foreign firms and the Cox proportional hazard model to analyze the survival of new foreign firms that have never been used to study FDI in Vietnam before.

Second, we explore new aspects relating to behavior by foreign firms in Vietnam. For instance, in Chapter 2, we study institutional performance by local authorities as a main deterrence for foreign entrants. Indeed, there were the works of Tran *et al.* (2008) and Nguyen Ngoc Anh and Nguyen Thang (2007) discussing this issue. But like the other studies on FDI in Vietnam, they only employ data at the provincial level with time-constant variables. In our study, we use panel data for six years with a huge number of observations covering new foreign entrants in all industries and provinces and include both time-varying and time-constant variables in the Tobit model. In Chapter 3, we focus on agglomeration effects as an important factor to motivate firms to cluster in a particular province, thereby affecting their location decisions by looking at the location choice by each individual foreign firm. In fact, agglomeration effects were mentioned in the studies of Meyer and Nguyen (2005) and Le Viet Anh (2004), but they just stopped at exploiting data at the provincial level and using only lagged FDI stock as proxy. They also did not have deep analysis of effects of agglomeration economies. In Chapter 4, the survival of foreign firms for the first time in Vietnam is analyzed. By examining factors influencing the survival probability of foreign firms, we can learn how they behave to overcome difficulties arising from a developing and transition country like Vietnam.

Third, our studies contribute a better understanding of FDI in developing and transition economies as there is still very little empirical research on FDI in these countries and most of them focus on East European Countries (Meyer, 1998; 2001; 2004) and China (Head and Ries, 1996; Cheng and Kwan, 2000; etc.).

2. Policy implications

In this dissertation, we have mentioned the opportunities for facilitating foreign investment by allowing local authorities to take initiatives, and we show that the substantial variation of FDI within Vietnam is to a large extend induced by the diverse development of informal institutions and the uneven implementation of reform initiatives. Provinces that pursue FDI-friendly policies in the liberalization process such as Binh Duong or Dong Nai provinces may benefit from first-mover advantages in the long run and develop into a hub of economic activity. In addition, we have learned that provinces with industrial zones attract more FDI because provincial authorities providing land to industrial zones not only create real estate markets, but they also signal a commitment to creating a favorable investment climate. Moreover, benefits from agglomeration economies also make industrial zones become more attractive locations for foreign firms.

Based on the above considerations, we suggest that policies to improve the investment climate in emerging countries like Vietnam have to incorporate both a national and a local level. The government needs to create means to encourage local authorities to pursue policies in the same spirit of reform and decentralization of FDI-related responsibilities requires development of institutions at the local level. In addition, we mentioned in Chapter 2 that although most provinces in Vietnam have made important improvements in economic governance which have contributed to the recent increase of FDI, a number of issues such as relating to land access, dispute resolution and information provision continue to constrain development of foreign sector. Thus, the government needs to tackle the remaining issues on the reform agenda and prepares the Vietnamese economy for increasing international competition. In the scope of this dissertation, we suggest some main policies that the government should do in the coming time in order to surge FDI in the whole country as well create a better distribution of FDI among the regions within Vietnam as following.

- Improving transparency of regulation information especially in tax system, land, and administrative procedures to ensure that all economic actors have the same chance to access necessary information; therefore reducing corruptions and informal charges.
- Providing technical assistance that may support the creation of administration capabilities at local level for instance by training local officials and providing monitoring mechanism that prevents self-serving administrative governance and corruption.

- Enhancing the confidence of foreign firms in legal institutions by establishing courts for setting contractual disputes, protecting property rights, and appealing corrupt or self-serving behavior by government officials.
- Investing more in vocational training in order to supply firms with more suitably trained/ skilled labors as foreign firms as well as other entrepreneurs steadily move into more sophisticated production processes and services sectors.
- Beyond changing formal institutions, reform minded government may aim to influence informal institutions. Besides changing the law, it is important to build political support and create awareness for the benefits of new rules. For example, it does not suffice to declare a special economic zone; rather the quality of the entire institutional framework pertaining to the zone is crucial to attract FDI.
- Encouraging the horizontal exchange of information and experience between provinces and middle levels in ministries. In other words, the highly departmentalized structure of the public sector in Vietnam should be opened to facilitate cross-departmental and cross-provincial communication and learning.
- The only way for less developed regions such as Northeast, Northwest, North Central, North Central Highland and Mekong River Delta to attract more FDI is to build strategies based on their comparative advantages. And more public investment on infrastructure and education should be spent in these regions. However, all these actions are difficult to be implemented in short or middle term.

Although these policy lessons are suggested to apply in Vietnam, they are also relevant for other developing and transition economies that are large and administratively decentralized such as China and India. In these countries, there also exists a very unequal distribution of FDI with concentration on a small number of locations, creating a big gap in economic development among regions within countries, and the governments are concerning about attracting FDI to other places. If done well, they may benefit from decentralization of policy responsibilities to allow local authorities to take their own entrepreneurial initiative.

3. Limitations and further research

Besides the contributions to the debate around FDI, this dissertation also has some limitations. With respect to Chapter 2, we discover the effects of only two aspects of institutions (SOEs bias and transparency and access to information) on the location of foreign entrants. Future research should consider other aspects that may have important influence on business strategies of foreign firms. In addition, we use the PCI referring to only the year 2006 as a proxy for institutions. This can lead to bias conclusions about the effect of institutional practice due to un-variation of the variable PCI across time. Future studies should exploit the PCI variable in longer periods, so as to increase its cross time variance and ensure the exactness of the empirical results. In Chapter 3, the empirical results refer to only 2005. In order to see whether the results apply to other time periods, future research will have to work with larger dataset covering more years, so as to increase the cross time variance in the set of agglomeration variables. Moreover, in this chapter, we study the location decisions by foreign firms only at the provincial level. The conditional logit model may work better with a smaller choice set, suggesting that future research should extend to macro areas by looking at the location choices by foreign firms at the regional level. Regarding Chapter 4, due to the limitation of the dataset, we can study the life span of foreign firms only for five years, from 2000 to 2005. The short time of research can lead to inexact conclusions about the effects of explanatory variables on failure rates of new foreign firms. Therefore, future research should work with longer-period dataset, so as to increase the cross time variance in the set of time-varying variables and ensure the unbiasness of the empirical results.

In addition to limitations arising from each empirical study that require us more work to improve them, we also need to expand our research to other aspects, thereby providing a more comprehensive understanding of the foreign firms' behavior in Vietnam. In this dissertation, we mentioned that in the context of Vietnam as a developing and transition economy, foreign firms have to consider many different factors such as entry mode and location when making their investment decisions. However, up till now we have mainly examined the latter aspect by exploring determinants affecting location preference of foreign investors and studying factors influencing the survival probability of foreign entrants. Thus, the future study should concentrate on the entry mode choices by foreign firms when entering Vietnamese market. At present, the FDI law in Vietnam does not permit acquisitions for foreign investors, except for special cases such as acquisitions from other foreign owners. This reduces the options for entry modes to either wholly-owned enterprise or joint venture. The starting point of the study

will be the papers of Meyer (2001), Meyer *et al.* (2009) and Brouthers (2002). Meyer (2001) and Meyer *et al.* (2009) find that entrants are more likely to establish wholly-owned subsidiaries in economies that have progress in the market-supporting institutions. Moreover, they discover that entrants originating from countries with lower distance proximity to transition economies are more likely to establish wholly-owned firms. Similarly, Brouthers (2002) examines the entry mode choices by European Union firms that have invested mostly in developing and transition economies and finds that firms perceiving high transaction costs in a market tend to use wholly-owned mode while firms perceiving low transaction costs tend to use joint venture mode. He also explores that the mode selection appears to be driven by a combination of general transaction cost characteristics, institutional context (legal restriction), and cultural context (investment risk).

The second future research will focus on the effects of location choices and mode choices on performance by foreign firms. So far, we have investigated the effects of location and mode choices on the survival probability of foreign firms but we do not know how these choices affect firm performance. Entry mode theory assumes that firms will select the mode that provides the best return on investment. Brouthers *et al.* (2000) and Woodcock *et al.* (1994) suggest that mode choices based on the transaction costs model provide firms with the most efficient structure. Agarwal and Ramaswami (1992) find that in high market potential countries, firms utilizing wholly-owned mode can achieve economies of scale that provide them with lower marginal cost, and as a consequence better performance. Malmberg *et al.* (2000) study the relationship between agglomeration effects and firm performance that is measured by export value and find that firms that locate in the region where there are larger numbers of other firms operating in the same industry will have larger export values.

The final issue that I plan to study consists of the mutual interdependence between FDI strategies and the local environments in emerging or transition economies. We have mentioned in Chapter 2 that in transition economy like Vietnam when formal institutions fail to ensure efficient functioning of market and law enforcement may be inefficient, local firms may adjust to the context by just relying on network-based coordination mechanism to overcome various forms of market failure. So far, the literature has analyzed the issues largely separately: strategy scholars analyze how FDI strategies are adjusted to local contexts, and institutions in particular (Peng, 2000; Meyer, 2001; Brouthers, 2002), whereas development scholars analyze the way FDI influences the local context. However, foreign investors may have to adjust to local institutions, but at the same time they

also can influence the institutional development. Informal institutions may be influenced by different values and norms arisen from different kind of businesses, and even formal institutions may be influenced by governments changing legislation in view of attracting FDI, possibly even under direct negotiations or lobbying by large foreign firms. On the other hand, the local environment, and in particular the institutional framework can influence entry and subsidiary strategies of multinational enterprises (Meyer, 2004; Lewin *et al.* 1998; Lewin and Kim, 2004).

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Appendix A

Questionnaire 1A-ĐTDN and Selected Variable Definitions for the Enterprise Survey in 2005

(Source: The GSO, 2007)

Questionnaire 1A- ĐTDN is used for the survey of all state enterprises, non-state enterprises that have equal or more 10 employees, 20% of sampled non-state enterprises with fewer than 10 employees, and all foreign enterprises in all industrial sectors excluding cooperatives of agricultural, forestry, fishing sectors and business households. The survey was implemented in all sixty four cities and provinces in Vietnam. The data is calculated up to the 31st of December each year.

1. **Name of the enterprise**: the business name, the tax code and the year of starting operation.

2. **Address of the enterprise**: number of house, commune, district, province, telephone and fax numbers and email address.

3. **Ownership type of enterprise**

   An enterprise in these surveys is defined as an economic unit that independently keeps business account and acquires its own legal status. It may be set up and operate under the regulations of State Enterprise Law, Cooperative Law, Enterprise Law, Foreign Investment Law or the Agreements between the Government of Vietnam and the Governments of Foreign Countries. There are three types of enterprise in the surveys:

   - The state enterprises: enterprises with 100% of state capital operating according to State Enterprise Law and under control of central or local governmental agencies; enterprises with 100% of state capital operating according to Enterprise Law, which are limited liability state enterprises and under the control of central or local governmental agencies; and stock companies with domestic capital, of which the government shares more than 50% of registered capital.
   - The non-state enterprises: they are set up by domestic capital. The capital may be owned by cooperative, private with one or an individual group, or the

government whose share is equal or less than 50% of registered capital.

There are following types of non-state enterprises: cooperatives; private companies; collective name enterprises; private limited liability companies; private stock companies; stock companies with equal or less than 50% of registered capital shared by the Government.

- The foreign direct invested enterprises: they are enterprises with capital directly invested by foreigners without considering how many percentages of the capital they share.

There are following types of foreign enterprises: 100% of capital invested by foreigners and joint venture enterprises between domestic and foreign investors.

Table A1: Type of ownership, code and names

Code	Names of ownership type
01	Central state enterprise
02	Local state enterprise
03	Limited liability central state enterprises
04	Limited liability local state enterprises
05	Stock companies with governmental capital (> 50%)
06	Cooperative
07	Private company
08	Cooperative name company
09	Private limited liability companies
10	Stock companies without governmental capital
11	Stock companies with governmental capital (≤ 50%)
12	100% owned foreign enterprise
13	Joint venture between state and foreign enterprises
14	Joint venture between non-state and foreign enterprises

4. Business industry

Industrial classification is based on main activity of enterprises. Each enterprise should belong to only one economic industry in which they have main activity. Main business activity is one that contributes the largest share to total gross output of the enterprise or was projected when the enterprise set up. It decides business direction and production target of the enterprise. If all these criteria cannot be satisfied, main activity of the enterprise is one that uses the highest number of employee during the year of survey.

5. Employees

Employees of the enterprise are the total persons that the enterprise directly controls, uses, and pays wages or salaries.

This concept does not include: persons who receive material of the enterprise to produce goods at their home; persons who are working as apprentices sent from vocational schools or training centers for practice and the enterprise does not pay salary; and persons who are sent to the enterprise to work by joint venture partners and the enterprise does not pay salary.

Table A2: Questionnaire on the number of employees

	Code	At the begin of the year		At the end of the year	
		Total	Of which: female	Total	Of which: female
1. Total of employees	01	-	-	-	-
- Unpaid salary	02	-	-	-	-
- Without working contract	03	-	-	-	-
3. Number of new employees employed during the year	04	-	-	-	-
4. Number of employees reduced during the year	05	-	-	-	-

6. Assets

Assets are the total assets of the enterprise including current assets and short-term investments; fixed assets and long-term investments.

- Current assets and short-term investments: they are assets that are owned and used by the enterprise. The time of using, rotation and recovering their values happens in a particular period or one year. They include money (cash, pay-in, certificates having value like money, gold and jewelry), inventories, receivable accounts, and short-term investments.

- Fixed assets and long-term investments: they are total remaining values of fixed assets, values of under-construction projects, amount of long-term cosigning and long-term investments.

A fixed asset is a production instrument that has the time of using more than one year and its value is equal or greater than 5 million of Vietnamese dong (VND). Fixed assets include tangible, intangible and financial hired fixed assets.

7. Capital sources

Capital sources are total capital of the enterprise that come from different sources: capital of proprietor (equity) and other debts that enterprise has to pay (liability), including:

- Equity: it is total capital that belongs to proprietor of the enterprise or of members of joint venture company or of shareholders of joint stock company and funds that are submitted to parent company by its subsidiary companies.
- Liability: it is total debts the enterprise has to pay, including: borrowed money; debts the enterprise has to pay for sellers, the government, and employees (salary); or other types of debts.

8. Net turnover

Turnover of the enterprise is total income of the enterprise gained by selling its products or services after subtracting taxes (special selling tax, export tax, value added tax) and other reductions. Turnover is calculated during a certain period, usually one year.

Net turnover does not include turnover gaining from financial activities except lending asset with its controllers and turnover gaining from irregular activities such as selling off asset and income from contract violating punishment from partners, etc.

9. Profit before tax

It is the amount of gains before paying enterprise profit tax from production, financial and other activities. It is total profits of enterprise, meaning that it is the remaining amount after taking gains minus losses of all activities. Profit is calculated during a certain period, usually one year.

10. List of the enterprise's branches

The enterprise's branches are its member units or divisions such as factories, shops, and mines. These units locate in particular places that implement economic activities under the control of one or two persons and accounting report to the parent enterprise.

Appendix B

Provincial Competitiveness Index
Firm-Level Survey Questionnaire

(Source: The PCI 2005 Report)

Background information[71]

1. Name of firm .....
2. Address .....
3. Phone number .....
4. Fax .....
5. E-mail .....
6. Name of interviewee .....
7. Position .....

A. Basic business information

1. What year was the firm originally founded? .....

   What year was the firm registered as a legal private company at the Department of Planning and Investment (DPI)? .....

   If the registration at DPI was a re-registration, what year did you originally register the firm? .....

2. Where are your principal operating facilities located? .....
3. What is this company's current legal form?
   - Private
   - Limited liability
   - Shareholding company
   - Other
4. What is the ownership history of this enterprise?
   - 100% privately-owned and independent since start-up
   - 100% private now, but previously fully/partly owned by or legally connected to public sector/government
   - 100% private now, but previously owned or legally connected to a larger private company at start-up
   - 100% private now, but has joint venture with government agency or SOE.
   - Currently majority-private, but some shares held by government agency or SOE.
   - Other
5. What is the principal sector in which your firm operates?
   - Industry/Manufacturing
   - Construction
   - Service
   - Trade
   - Agriculture/Forestry/Aquaculture

6. What are the firm's main product lines or service activities? .....

7. What was the registered capital of your firm:
   - At the time of establishment .....
   - In 2002 .....
   - In 2003 .....

8. What was the actual owner's equity capital of your firm:
   - At the time of establishment .....
   - In 2002 .....
   - In 2003 .....

9. What were the liabilities (borrowings and accounts payable) of your firm:
   - At the time of establishment .....
   - In 2002 .....
   - In 2003 .....

10. What was the total number of employees of your firm?
   - At the time of establishment .....
   - In 2002 .....
   - In 2003 .....

11. What were the gross revenue of your firm:
   - At the time of establishment .....
   - In 2002 .....
   - In 2003 .....

12. What percentage of your sales results from exports? .....%

13. What were the profits of your firm:
   - At the time of establishment .....
   - In 2002 .....
   - In 2003 .....

14. What was the value of fixed assets of your firm:
   - At the time of establishment .....
   - In 2002 .....
   - In 2003 .....

15. By your best estimates, what percentage of your sales was reinvested in 2003:
   - Less than 5%
   - 5-10%
   - 10-15%
   - 15-20%
   - 20-25%
   - Greater than 25%

16. Who are your main customers?
    - Foreign individuals
    - Foreign companies (including representative offices and branches)
    - Vietnamese individuals
    - Private Vietnamese firms
    - Vietnamese cooperatives
    - Vietnamese SOEs
    - Central Vietnamese government agencies
    - Local/Provincial authorities
    - Other .....

17. From whom do you purchase your inputs?
    - Foreign individuals
    - Foreign companies (including representative offices and branches)
    - Vietnamese individuals
    - Private Vietnamese firms
    - Vietnamese cooperatives
    - Vietnamese SOEs
    - Central Vietnamese government agencies
    - Local/Provincial authorities
    - Other .....

18. What percentage of your inputs do you import from abroad? .....%

B. Basic Implementation of the Enterprise Law

B1. Land Issues

1. Where is the location of your main facilities or office?
    - Business property
    - Part of my household property
    - Inside the compound of a state-owned enterprise
    - Household property of a business partner, friend, or relative.
    - In an industrial estate (industrial zone or industrial concentration)
    - Other
2. How did you obtain the land that your business sits on?
    - I purchased the land (Go to question 2.1).
    - I inherited the land (Go to question 2.2).
    - I am renting the land (Go to question 2.3).
    - I have an informal arrangement to use the land of another party (Go to question 3).
    - Other (Please describe) .....(Go to question 3).

2.1. If you purchased the land:

2.1.1. What year did you purchase the land? .....

2.1.2. From whom did you purchase the land?

- Vietnamese individuals
- Private Vietnamese firms
- Vietnamese cooperatives
- Vietnamese SOEs
- Local/Provincial authorities
- Other.....

2.1.3. Does the land that your firm currently sits on have any legal documentation?

- Red book or official certificate of land use rights (CLUR)
- Presently applying for a red book
- No official CLUR, but not applying for red book
- Other .....

2.1.4. From the time of application to the receipt of the CLUR, how many days did you have to wait or how long have you waited thus far? .....

(Please go to question 3)

2.2. If you inherited the land:

2.2.1. Did the land have a formal land use right certificate when you inherited it?

- Yes
- No

2.2.2. If you did not have a formal land use rights certificate after inheriting it, how long did it take provincial officials to grant you a CLUR? ..... days. What year did you received the formal CLUR? .....

(Please go to question 3)

2.3. If you are leasing the land:

2.3.1. From whom are you leasing?

- Vietnamese individuals
- Private Vietnamese firms
- Vietnamese cooperatives
- Vietnamese SOEs
- Local/Provincial authorities
- Other .....

(Please go to question 3)

3. How would your business change if land was easier to obtain?

- We would expand plan size
- We would diversify into new activities requiring more land
- Our dependence on SOEs would be reduced
- Other, please explain .....

B2. Licenses and Permits

4. Currently, how many registrations, licenses (environmental, labor, natural resource exploitation, etc.), and permits does your firm have (Please count all the licenses, permits, etc, issued by different agencies, even if they deal with the same type of activity)? .....

5. What are the three most important licenses, registration, and permits for your business? How long did it take you to receive them?

License/Permit	Days to receive
1.	
2.	
3.	

6. If you registered before the Enterprise Law of 2000, how long did it take you to register your business? ..... (days)?

7. If you registered after the Enterprise Law of 2000, how long did it take you to register your business at the Department of Planning and Investment (DPI)..... (days)?

8. How long did it take you to get all the relevant documents necessary to be a fully legal business in your province?
   - Same day
   - Within one week
   - Less than a month
   - 1-3 months
   - 3-6 months
   - More than 6 months
   - Other.....

9. Did you have trouble obtaining licenses and permits that you have?
   - Yes
   - Somewhat
   - No

10. If so, with which documents and what kinds of problems did you encounter .....

B3. Inspections and examination visits

11. How many total times was your business inspected/examined in 2003? ..... (times).

12. How did the number of inspections/examination compare to the period prior to the 2000 Enterprise Law?
   - Decreased
   - No Change
   - Increased

13. On average, how many hours did the inspection last, and what were the costs of it?

Agency	No. of visits per year	Average hour per visit	Cost of fines or seized goods (VND)	Informal costs (VND)
Tax Inspectors				
Customs Agency				
Fire and Safety				
Sanitation				
Local Police				
Construction				
Market Regulator				
Traffic Police				
Other				

14. How many times tax inspections were voluntary visits of the tax authority to assist your preparation rather than inspections of problems or investigations? .....

C. Planning and Policies

1. Could you please rate the overall quality and efficiency of services delivered by the following central public agencies as they apply to your business? Please check only one box per agency.

Agency	Very good	Good	Slightly good	Slightly bad	Bad	Very bad
1. National Assembly						
2. Prime Minister's Office						
3. Ministry of Planning and Investment						
4. Ministry of Industry						
5. Ministry of Finance						
6. Ministry of Natural Resources and Environment (National Land Authority)						

2. Could you please rate the overall quality and efficiency of services delivered by the following local public agencies as they apply to your business? Please check only one box per agency.

Agency	Very good	Good	Slightly good	Slightly bad	Bad	Very bad
1. Provincial People's Committee						
2. Department of Planning and Investment						
3. Department of Finance						
4. Department of Industry						
5. Department of Natural Resources and Environment (Land Authority)						
6. Tax Authority						
7. Provincial People's Court						
8. Provincial Union of Cooperatives						
9. District People's Court						
10. Branches of the State Bank of Vietnam in your province						

3. Could you please rate the overall quality and efficiency of these services delivered by provincial public agencies as they apply to your business? Please check only one box per agency.

Regulation	Very good	Good	Slightly good	Slightly bad	Bad	Very bad
1. Roads quality						
2. Port quality						
3. Telephone						
4. Electricity						
5. Water						
6. Public health care						
7. Education						
8. Business information						
9. Business consulting						
10. Labor training						

4. Could you please rate the overall quality and efficiency of these services delivered by provincial public agencies as they apply to your business? Please check only one box per agency.

5. According to your best estimate, how much progress has been made in implementing the above provincial plans?

Plan	Very good	Good	Slightly good	Slightly bad	Poor	Very poor
1. Infrastructure development						
2. Industrial concentrations for SMEs						
3. Conversion of agricultural land for business development						
4. Equitization of local SOEs						
5. Business partner match-making						
6. Attraction of FDI						
7. Development Assistance Fund						
8. Improving access to capital						
9. Labor capacity training						
10. Export promotion						

- Positive improvement in all areas
- Generally positive, but with slow growth in some areas
- Mixed results.
- Generally negative, but with some highlights.
- No improvement in all areas.

D. Transparency and Accountability

1. Could you have access to these provincial documents?

Plan	Very easy	Easy	Possible	Possible, but difficult	Impossible
Provincial budget					
Ten-year master plan					
Five-year master plan					
Yearly planning documents					
Private sector action plans					
Central government decisions and decrees					
People's committee decisions and circulars					
Plans for new infrastructure projects					
Central investment plans					
Land use allocation plans and maps					
Applications for business registration and land use.					
Information on changes in tax laws					

2. How important is having a relationship in government for receiving access to these documents?
   - Very important
   - Often
   - Sometimes
   - Seldom
   - Never
3. How often do representatives from the provincial People's Committee or provincial departments meet with you and other private domestic businesses to discuss changes in laws or polices?
   - Very often
   - Often
   - Sometimes
   - Seldom
   - Never
4. How predictable are changes in the central government's rules, laws, and regulations about economics and finance which materially affect your business?
   - Always
   - Usually
   - Sometimes
   - Seldom
   - Never
5. How predictable is the implementation of these rules, laws, and regulations at the provincial level?
   - Usually

- Frequently
- Sometimes
- Seldom
- Never

6. Do you agree with the following statements? Please check only one box per statement.

Statement	Strongly agree	Agree	Disagree	Strongly disagree
1. The attitude of the provincial government does not depend on contribution to local development (i.e. labor or revenue)				
2. Provincial government officials use compliance with local regulations to extract rents				
3. I have noticed that it becomes more difficult to interact with provincial government officials when important party/government events (such as Party Congresses) are approaching.				
4. Negotiations with provincial tax authorities are a necessary part of doing business.				

7. How important are your family and friends in dealing with the following:

Problem	Very important	Important	Somewhat important	Not at all
1. Infrastructure problems				
2. Bargaining with government officials				
3. Source of capital				
4. Dealing with company's internal problems				
5. Bargaining with banks				
6. Sales				
7. Business service provision				

E. Transaction costs

1. How many days per year does the firm's senior management spend dealing with requirements imposed by government regulations (For example: taxes, customs fees, labor regulations, licensing and registration)? ……. (days).

2. Since the enactment of the Enterprise Law in 2000, the amount of time that senior management deals with government regulations has:
   - Increased
   - Stayed the same
   - Decreased
   - Not applicable to my business

3. What percentage of senior management's time per year is spent meeting with government officials in order to correctly interpret and better apply laws and regulations?
   - Up to 1%
   - 1 to 5%
   - 6 to 10%
   - 11 to 15 %
   - 15 to 50%
   - More than 50%

4. If you import, what was the longest number of days in 2003 that it took import to from the time your goods arrived at the port of entry (e.g. port, airport) until the time you could claim them from customs? ……..(days).

5. If you export, what was the longest number of days in 2003 that it took to export from the time your goods arrived at the port of exit (e.g. port, airport) until the time they cleared customs? ……..(days).

6. Would you pay additional taxes to raise the salaries of local officials and thereby eliminate incentives for corruption, crime, and excessive regulations?
   - Yes
   - No

7. Do you agree with this statement? "It is common for firms in my line of business to have to pay some irregular 'additional payments.'
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

8. What is the most likely reason for such payments?
   - To speed up the services needed
   - To avoid bottlenecks in administrative procedures.
   - It was requested by an official
   - Other (Please specify) ……

9. On average, what percent of revenues do firms in your line of business typically pay per annum in unofficial payments to public officials?
   - 0%
   - Less than 1%
   - 1-1.99%
   - 2-9.99%
   - 10-12%
   - 13-25%
   - Over 25%

10. Firms in my line of business, usually know in advance how much this 'additional payment' is?
   - Yes
   - No

11. Once other government agencies have heard that a firm has paid such an additional fee, are they more likely to ask for 'additional payments' themselves?
    - Yes
    - No
12. If a firm pays the required 'additional payment' how often is the service is usually also delivered as the firm expected?
    - Always
    - Usually
    - Sometimes
    - Seldom
    - Never
13. In your opinion, bribes to public officials to avoid taxes and regulations are a….
    - Major obstacle
    - Moderate obstacle
    - Minor obstacle
    - No obstacle
14. When firms in your industry do business with government, do they generally pay commissions?
    - Yes
    - No
15. How often is the following statement true? "If a government agent acts against the rules I can usually go to another official or to his superior and get the correct treatment with recourse to unofficial payments."
    - Always
    - Usually
    - Sometimes
    - Seldom
    - Never
16. When a new law, rule, regulation or decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have at the provincial level of government to try to inform (advise) the implementation or content of the legal document?
    - None
    - Very little
    - Some
    - Influential
    - Very influential
17. What channel do you most often use to comment on the implementation or content of legal documents?
    - Speak directly with the People's Committee office
    - Speak directly with officials of the relevant provincial department
    - Participation at business forums hosted by the provincial government

- Speak to a representative of my business association who related my comments to government officials
- Other .....

F. Provincial proactivity and dynamism toward the private sector

1. What do you think is the attitude of provincial government officials toward private business?
   - Negative
   - Somewhat negative
   - Neutral
   - Somewhat positive
   - Positive
2. What do you think is the attitude of the central government toward private business?
   - Negative
   - Somewhat negative
   - Neutral
   - Somewhat positive
   - Positive
3. From your point of view, the attitude of the provincial government toward private business is .....
   - Improving
   - No major change
   - Deteriorating
4. From your point of view, the attitude of the central government toward private business is .....
   - Improving
   - No major change
   - Deteriorating
5. If there is a lack of clarity on certain central regulations, the provincial People's Committee tends to:
   - Interpret it in our favor
   - Postpone decision and consult the relevant central authority
   - Interpret it against us
6. If there is a lack of clarity on certain central regulations, the provincial departments tend to:
   - Interpret it in our favor
   - Postpone decision and consult the relevant central authority
   - Interpret it against us
7. How helpful is the provincial government toward a business of your type and scale?
   - Very unhelpful
   - Mildly unhelpful
   - Neutral
   - Mildly helpful
   - Very helpful

8. Do you agree with the following statements? *Please check only one box per statement.*

Statement	Strongly agree	Agree	Disagree	Strongly disagree
1. Policies are applied consistently by the different government agencies at all levels				
2. Coordination between the central government and my province's People's Committee is good.				
3. My provincial People's Committee is very good at working within central laws to create a profitable private business environment				
4. My provincial People's Committee is creative and clever about solving new business problems.				
5. My provincial People's Committees is willing to risk punishment from the central government to pass decisions that may aid my business.				
6. There are good initiatives at the provincial level, but central laws and regulations frustrate their impact.				
7. There are good policies at the central level, but provincial officials frustrate implementation				
8. There are good initiatives at the provincial level, but implementation by departments of line ministries in the province is problematic.				
9. There are not initiatives at the provincial level, all policies come from the center				
10. I am confident that the provincial legal system will uphold my contract and property rights in business disputes				
11. Disputes with customer and suppliers within my province are easier to resolve than disputes outside my province.				

9. Do you agree with the following statements? Please check only one box per statement.

Statement	Strongly agree	Agree	Disagree	Strongly disagree
1. Favoritism toward the state sector is an obstacle to my business				
2. Favoritism toward foreign investors is an obstacle to my business				
3. Favoritism toward equitized companies is an obstacle to my business				

Appendix C

The Map of Vietnam

Source: http://it.wikipedia.org/wiki/Vietnam