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Master in Management Program

The Impact of Foreign Direct Investment (FDI) on the
Vietnamese Companies Performance: Resource-Based View

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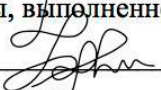
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**ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ
ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ**

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25.05.2017 (Дата)

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I, Pham Tien Manh, second year master student, program «Management», state that my master thesis on the topic «The Impact of Foreign Direct Investment (FDI) On Vietnamese Companies Performance: Resource-Based View», which is presented to the Master Office to be submitted to the Official Defense Committee for the public defense, does not contain any elements of plagiarism.

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25.05.2017 (D ate)

АННОТАЦИЯ

Автор	Фам Тиен Мань
Название магистерской диссертации	Влияние прямых иностранных инвестиции (ПИИ) на продуктивность вьетнамских компаниях: ресурсный подход
Факультет	Высшая школа менеджмента
Специальность	Международный менеджмент
Год	2017
Научный руководитель	Гаранина Ольга Леонидовна
Описание цели, задач и основных результатов	<p>Цель исследования: понять связь между присутствием прямых иностранных инвестиций (ПИИ) в капитале вьетнамских компаний и особенностями управления.</p> <p>Основные задачи исследования: проанализировать влияние ПИИ на фирмы в странах-реципиентах на основе обзора научных исследований; проанализировать влияние иностранной собственности на управление в компаниях-реципиентах с помощью концепций RBV и 5M; возможность применения концепции для оценки эффективности управления бизнесом; эмпирически проверить влияние присутствия ПИИ в капитале вьетнамских компаний и его влияние на характеристики управления; предоставить научные и управленческие рекомендаций.</p> <p>Основные результаты:</p> <p>Была изучена существующая литература о влиянии ПИИ на фирмы в странах-реципиентах; концепция ресурсного подхода была использована для определения комплекса характеристик управления; эмпирические модели исследования были построены на основе данных BEEPS 1050 компаний в 2009 году и 995 компаний в 2015 году; выборки были проанализированы с использованием бинарной логистической регрессии в двух спецификациях; результаты бинарной логистической регрессии были интерпретированы и обсуждены.</p>
Ключевые слова	Прямые иностранные инвестиции, Вьетнам, ресурсный подход, 5M

ABSTRACT

Master Student's Name	Pham Tien Manh
Master Thesis Title	The Impact of Foreign Direct Investment (FDI) on Vietnamese Companies Performance: Resource-Based View
Faculty	Graduate School of Management
Major subject	International Management
Year	2017
Academic Advisor's Name	Garanina Olga Leonidovna
Description of the goal, tasks and main results	<p>Goal of the research: is to understand the link between the presence of foreign direct investment (FDI) in the capital of Vietnamese companies and the characteristics of management.</p> <p>Main objectives of the research: to analyse the impact of FDI on firms in recipient countries based on the review of the contemporary scientific research; to analyse the impact of foreign ownership on management of the companies-recipients through RBV and 5M concepts; the possibility of its application to the evaluation of business management performance; to test empirically the impact of presence of FDI in the capital of Vietnamese companies and its impact on the characteristics of management; to provide scientific and management recommendations.</p> <p>Main results: Existing literature on the impact of FDI on firms in recipient countries was studied; the resource-based view concept was used to determine the complex of management characteristics; empirical models for the research was build based on the data of BEEPS of 1050 companies in 2009 and 995 companies in 2015; the samples were analysed using binary logistic regression in two specifications; results of binary logistic regression were interpreted and discussed.</p>
Keywords	Foreign direct investments, Vietnam, Resource-based view, 5M

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INTRODUCTION

Introduction and overview of research

In countries with transitional economies, including in Vietnam, foreign direct investment (FDI) often serve as one of the main channels for the transfer of new production technologies, modern marketing practices, and management knowledge and experience. Empirical evidence suggests that firms with foreign participation in these countries outstrip local enterprises and become a good example in a number of performance indicators and become good role-models.

Vietnam, a nation once ravaged by war, has been one of Asia's economic success stories over the past quarter century. Since the comprehensive economic reforms commenced in 1986, Vietnam has experienced a sustained growth at an average of 6.72 percent per annum from 1986 to 2010. (Appendix 1) Foreign direct investment (FDI) is considered as one of the most important sources contributing to such remarkable economic performance. Vietnam has been extremely successful in attracting FDI and has remained one of the most attractive destinations for FDI inflows in the region.

In the academic literature there are a lot of studies on the impact of foreign capital on the economy of recipient countries, as well as work comparing activities of enterprises with foreign participation and local firms (usually in the search for an "effective owner"). At the same time, the main attention is traditionally drawn to various performance indicators (productivity) of the enterprise, and not to management technologies and practices. There are also existing studies of the effectiveness (productivity) of Vietnamese enterprises, but they cover mainly the period of the first half of 2000-ies (Nguyen et al, 2008a). It is very difficult to find scientific works analysing the relationship between the modernization of enterprises and foreign participation in their capital. Therefore, it is advisable to assess the role of FDI in business modernization during the period of rapid economic growth of the Vietnamese economy, accompanied by the FDI inflow, and also during the crisis of the second half of the 2000s and the post-crisis recovery of 2015s.

To determine the complex of management characteristics, it is proposed to address the resource-based view concept in management, explaining the difference in the results of firms' activities by the heterogeneity of their resources and the management features of these resources (Wernerfelt, 1984; Barney, Ketchen, Wright, 2011). Evaluation of the role of foreign ownership

in the development of significant firm resources that contributing to the increment of its competitiveness helps explain the differences in the efficiency of firms with foreign participation and local firms. The presence of the best management practices at enterprises with foreign participation will testify to the fact that FDI is a source of gaining advantages for the recipient company.

With above reasons, the topic: “The impact of foreign direct investment on productivity of Vietnamese companies” was chosen as a master thesis topic.

The goal of this thesis is to understand the link between the presence of foreign direct investment (FDI) in the capital of Vietnamese companies and the characteristics of management.

The subject of the study is the impact between foreign capital and management characteristics.

The object of the study is a sample of Vietnamese companies with and without foreign ownership.

Research objectives are:

- To analyse the impact of FDI on firms in recipient countries based on the review of the contemporary scientific research;
- To analyse the impact of foreign ownership on management of the companies-recipients through RBV and 5M concepts;
- The possibility of its application to the evaluation of business management performance;
- To test empirically the impact of presence of FDI in the capital of Vietnamese companies and its impact on the characteristics of management;
- To provide scientific and management recommendations.

Methodology of the study consists of applying binary logistic regression to the samples of Vietnamese companies with and without foreign ownership, which were implemented by the European Bank for Reconstruction and Development and the World bank in 2009 and 2015.

Expected results is to find that the fact of the presence of foreign ownership in capital under control of other management factors is positively correlated to the existence in the company its international quality certificates, the use of modern technologies and the export of products, the presence of educational programs and the release of new products to both of the year. As for the fact of investing in R&D, it is expected to have no significant correlation. All this results will

testify to the fact of positive horizontal spillover effects. All regression coefficients are expected to show significant positive correlation at least at the 5% level.

The structure of the thesis is organized as follows. First, Chapter 1 reviews empirical literature on the impact of foreign investment on the activities of enterprises in developed countries, countries in transition and developing economies including Vietnam, moreover the concept of Resource-based view and 5M concept and the possibility of its application to the evaluation of business management performance. The review will help clarify the existing gap in the literature as well as highlight the contribution of this study. Chapter 2 discusses methodology, data and questions for empirical analysis. Chapter 3 introduces model specifications and discusses estimation method. This section also presents the results from the empirical analysis and further application and recommendations.

CHAPTER 1. THEORETICAL BACKGROUND ON FDI AND RESOURCE-BASED VIEW.

1.1 The impact of foreign capital on firms in recipient countries.

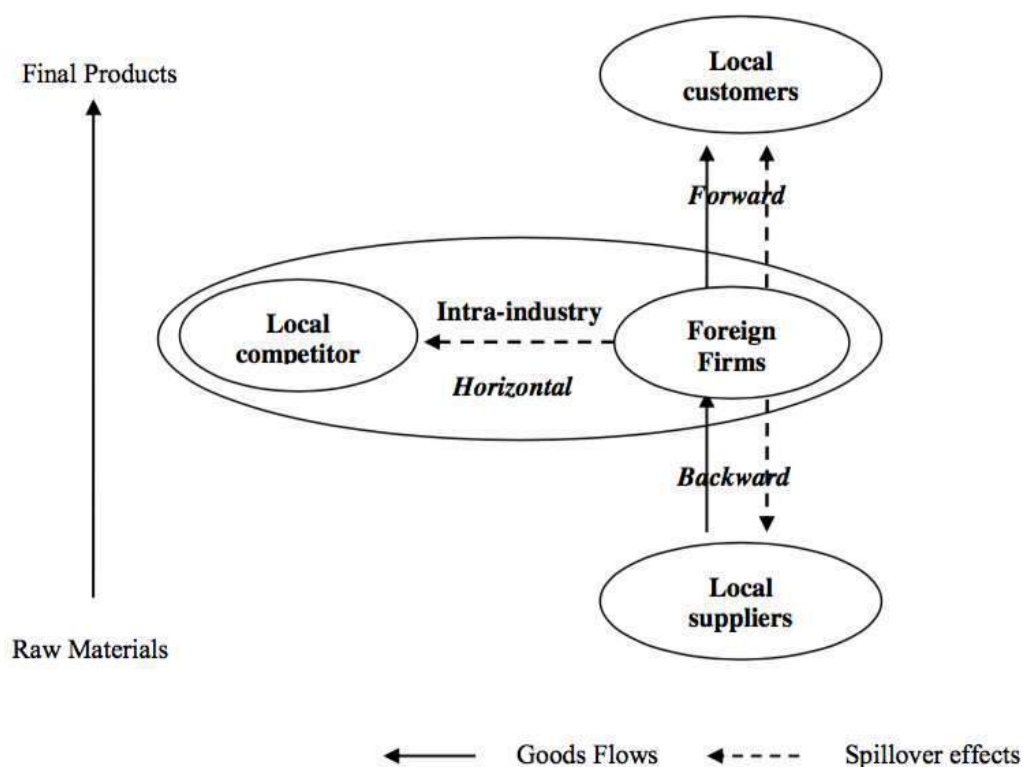
Globalization creates opportunities for investors to expand their activities and use their potential to obtain greater benefits in the business environment. Foreign direct investment (FDI) is the way that the firms use to enter foreign markets. Possessing enormous potential to create jobs, improve productivity, expand exports and transfer technology, FDI is a vital factor for long-term economic growth, especially for developing countries.

FDI include the transfer of a package of assets, which includes financial capital, technology, managerial 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 investments are investments of firms or individuals in financial instruments issued by a foreign government or a foreign company (for example, government bonds, foreign stocks ...). Investors can obtain the benefits but have no right to control the decision-making process (Dunning, 2008).

A large and growing body of literature has attempted to ascertain whether the presence of foreign direct investment generates spillover effects on domestic firms. Productivity spillovers take place under various channels and forms. Theoretically, the presence of FDI generally predicts positive effects on domestic firms' productivity. However, domestic firms may fail to gain from spillovers or could even be negatively affected by the presence of foreign firms. The findings from empirical studies seem to be mixed.

Depending on the linkages between foreign firms and domestic firms, the literature on FDI spillovers can be divided into horizontal spillover studies and vertical spillover studies (Fig. 1). As summarized in Table 1, most of the literature focuses on examining the intra-industry spillovers (horizontal spillovers) rather than inter-industry spillover (backward spillovers and forward spillovers). A possible reason could be the fact that data is not available on the economic structure for intermediate input transactions. Vertical spillovers are defined as the weighted sum of horizontal spillovers from backward industries, or forward industries. Therefore, they are commonly computed basing on the economic structure in input-output tables.

Spillover channels of FDI effects on local firm productivity



Source: (Merlevede, Schoors, 2007)

In terms of horizontal spillovers, there are a large body of the literature examining intra-industry productivity spillovers from FDI to domestic firms. As compiled in Table 1, (Djankov, Hoekman, 2000), (Li et al., 2001), (Angelucci et al., 2002), (Yudaeva, Kozlov, Melentieva, 2003), (Damijan et al., 2003), (Sinani, Meyer, 2004), (Haskel et al., 2007), (Javorcik, Spatareanu, 2008), (Marcin, 2008), (Keller, Yeaple, 2009), (Suyanto et al., 2009) and (Liu et al., 2009) reported significant and positive effects. Meanwhile, (Aitken, Harrison, 1999), (Waldkirch, Ofosu, 2010), and (Tran, 2013) found negative effects. Several studies found no or weak evidence for FDI effects to domestic firms, such as (Javorcik, 2004), (Ruane, UĞUR, 2005), (Nguyen, Nguyen, 2009), and (Hale, Long, 2011). In addition, there are a number of studies reporting mixed results due to the differences in: (i) the measurements of FDI effects (Merlevede, Schoors, 2007), (Nguyen et al., 2008b); (ii) the selection of case studies (Caves, 1974), (Konings, 2001); (iii) firm and industry characteristics (Girma et al., 2001), (Li et al., 2001), (Girma, 2005); (iv) period of analysis (Le, 2005); or (v) regions (Girma, 2005), (Higón, Vasilakos, 2011).

Regarding vertical spillovers, there are fewer empirical studies in this area. The evidence

on vertical productivity spillovers from FDI is mixed. For example, among the several studies on backward productivity spillovers reviewed on Table 1, (Chung et al., 2003), (Taymaz, Lenger, 2004, (Javorcik, 2004), (Sabirianova, Svejnar, and Terrell, 2005), (Brown, Earle, Telegdy, 2006), (Nguyen et al., 2008), (Liu et al., 2009), and (Tran, 2013) found positive productivity spillovers. Meanwhile, (Hale, Long, 2011) and (Nguyen, Nguyen, 2009) reported no evidence and (Merlevede, Schoors, 2007) showed mixed results.

On the other hand, the evidence regarding forward spillovers is also mixed. As shown in Table 1, the studies of (Damijan et al., 2003), (Merlevede, Schoors, 2007), and (Liu et al., 2009) reported positive spillovers from foreign firms to their domestic customers. In contrast, the studies of (Javorcik, 2004), (Nguyen et al., 2008), and (Tran, 2013) showed evidence of negative forward spillovers. Meanwhile, (Hale, Long, 2011) showed no evidence found of any impact of FDI to domestic firms in the downstream industries.

Examination of existing empirical studies allowed to distinguish three stages of FDI impact on businesses of developed countries and countries with economies in transition as summarized in Table 1. The main criteria for the selection of these phases were the difference in performance (efficiency) and characteristics of governance of companies with foreign capital and without it.

The first stage is the arrival of foreign investors to the new market from more developed countries. As a rule, between the two groups of companies (with foreign ownership and without it), there are no significant differences in performance. Although the company-recipients have access to more modern management techniques. The lack of differences is due to the fact that the restructuring of the acquired firms takes time, as well as on the formation of newly created.

The second stage — the emergence and formation of a gap in the productivity of enterprises and the distribution of spillovers from the companies-recipients that have already adapted to this new market. Local businesses in the same industries are forced to seek more effective ways of functioning, and some of them under the pressure of increased competition from foreign companies and firms with foreign participation have to leave the market. At this stage, there is a transfer of management and production of knowledge and technology companies of the recipient country in the framework of both horizontal and vertical linkages.

The third stage is the alignment differences between the two groups of firms. Most of the enterprises without foreign ownership in sectors with FDI begins to function less efficiently than their competitors with foreign capital. The difference in performance and management practices in comparison with the previous stage is greatly reduced. Firms of the recipient country become more engaged in the innovation, do get in international capital markets and become direct investors in other countries.

It is notable that there are a number of empirical studies focusing on the case of developing and transition economies as summarized in Table 1 and as reviewed by (Görg, Greenaway, 2004). This is due to the fact that the developing and transition economies are commonly the main destinations of FDI inflow (World Investment Report, 2016).

Evidence of FDI spillovers effects in Vietnam has been mixed (see Table 1). In the case of Vietnam, although there has been rapid expansion in FDI inflow into the economy in the last two decades, the empirical studies on the FDI effects are still very rare. Earlier studies seem to use macro-level data or industry-level data, such as (Schaumburg-Muller, 2003) and (Le, 2005). Meanwhile, latter studies take advantages of firm-level panel data constructed from the Enterprise surveys.

(Le, 2005) examined the technology spillovers from FDI to Vietnamese domestic industries in terms of labour productivity. Using industry level data during the period from 1995 to 2002, the results show evidence of positive spillovers on labour productivity of domestic industries from FDI in the period 1995-1999, but weak spillover effects in the later period from 2000 to 2002.

(Nguyen et al., 2008b) is an early study that used firm level data to examine FDI effects to output performance of domestic firms in Vietnam's manufacturing and service sector during 2000-2005. Horizontal effects are measured through both output shares and employment shares of foreign invested firms. The results from estimating Cobb-Douglas production function directly showed that FDI effects via forward linkages are significant and negative to the output performance of domestic firms. The findings show FDI positively affects the output of domestic firms via backward linkages. In terms of horizontal linkages, while the estimated coefficient of horizontal output measures of FDI presence is negative and statistically significant, horizontal employment measure of FDI presence in the industry is positive and statistically significant.

(Nguyen et al., 2008a) is one of few studies in the literature examining spillover effects of FDI on technical efficiency of domestic firms in Vietnam by using two-step SFA¹ and firm-level panel data. The authors found that the presence of FDI in terms of output-based horizontal measure reduces production inefficiency of domestic firms intra-industry due to competition and demonstration effects, not labour mobility effects. In addition, local customers can improve their production efficiency by gaining access to new and less costly intermediate inputs that are provided by foreign invested firms. However, the results show weak evidence of negative technical spillovers through backward linkages.

(Nguyen, Nguyen, 2009) examined spillover effects of FDI in Vietnam's manufacturing sector during 2000-2005. Productivity spillovers are estimated directly from Cobb-Douglas production function using Levinsohn and Petrin Approach. The results show no evidence of productivity spillovers through horizontal linkages and backward linkages. They argue that productivity spillovers from FDI may need a longer time to take place.

(Tran, 2013) examined productivity spillovers from FDI effects to domestic firms in Vietnam during 2001-2005. Firm-level data in three main economic sectors (agriculture, manufacturing and service sectors) and the Stochastic Frontier Approach are used to measure total factor productivity and three of its components of the firms (technical change, technical efficiency change, and scale efficiency change). Horizontal effects are measured based on a combination and employment of foreign firms to total employment. The author found evidence that FDI negatively affects domestic firms intra-industry both in terms of total factor productivity and technical change. However, with a lag of one year for horizontal variable, the findings show positive coefficients. The possible interpretation is that the imitation effect takes time to produce positive spillovers obtained by domestic firms. With regards to vertical linkages between foreign firms and domestic firms, the study found positive spillovers to upstream industries (backward spillovers), but negative spillovers to downstream industries (forward spillovers). Overall, the findings show the net effect of FDI presence is negative by -2.1 percent². Horizontal spillovers account for -1.7 percent while vertical spillovers account for -0.4 percent.

The evidence on productivity spillovers from MNCs to domestic firms is mixed. The existence, sign, and magnitude of productivity spillovers depend on a number of determinant

¹ Stochastic Frontier Approach are used to measure total factor productivity

² The net effect was computed based on the estimated coefficients and the value of the variable. Percentage presents the net effect for an average firm in 22 aggregated industries.

factors, related to FDI characteristics, domestic firm characteristics, the conditions of sectors, and host countries. The mixed finding in the literature is partly due to the different methodology and data applied. The extent of productivity spillovers are not necessarily proportional to foreign presence (Merlevede, Schoors, 2007). The FDI effects are also influenced by determinant factors of spillover benefits, such as technology gap and level of competitiveness between foreign and domestic firms as well as technological capability of domestic firms (Wang, Blomström, 1992), (Cantwell, 1995), (Perez, 1997), (Blomstrom et al., 2001). If technology of domestic firms is not lagging too far behind their foreign partners, they can gain benefits from FDI through technology and knowledge transfers, yet conversely, domestic firms can be left further behind and replaced under competitive pressure from MNCs.

Domestic firms also may fail to obtain productivity spillovers or even be negatively affected by the presence of FDI. (Liu et al., 2009) argue that horizontal spillovers from MNCs to domestic firms rarely work effectively. Operating in the same industry as their competitors, MNCs have obvious reason to prevent technology leakage to domestic firms through intellectual property and trade secrecy. Paying higher wages is also common protection method to prevent labour turnover (Javorcik, 2004). Furthermore, domestic firms may also be negatively affected through labour turnover. MNCs have incentive to attract the best workers from domestic firms by offering higher wages and bonuses⁸⁵ (Crespo, Fontoura, 2007). The presence of MNCs may lead to significant losses of market share for domestic firms. Consequently, domestic firms have to operate on a less efficient scale by producing at a lower output level (Aitken, Harrison, 1999), (Crespo, Fontoura, 2007), (Driffield, Love, 2007). Moreover, as argued in (Javorcik, 2004) and (Liu et al., 2009), MNCs may choose to locate in countries or industries where local firms have limited imitative capacity and inability to absorb their technology in order to prevent any technology leakage to domestic firms. Thus, horizontal spillovers from MNCs to domestic firms may be negative.

To sum up, empirical researches on the effects of foreign capital on the recipient companies are based on panel data obtained from the reporting firms or surveys of their top managers and business owners. Researchers have traditionally used a production function with added factor of having a foreign owner or its shares in analysing the impact of the presence of foreign capital on the performance of companies from less developed countries. As a rule, in these works the emphasis is on resource productivity and efficient operation of specific firms or groups of firms that allows to see the differences between firms with foreign capital and as well as spillovers from the presence of the industry's stronger players. At the same time, there are less

studies of conditions that lie in the field of management, which leads these firms to better performance, i.e. characteristics of management such as having training programs, R&D programs, an internationally-recognized quality certification, years of top-management experience etc.

The contradictory in empirical results on productivity spillovers from FDI to Vietnamese firms in the existing literature suggests that more updated empirical research need to be done. This study will contribute to the literature by providing new evidence on the spillovers effect from FDI to domestic firms by using panel data of 2009 and 2015.

The empirical analysis in this thesis is focused on the search for managerial advantages of firms with foreign participation. This research covers different types of activity, including rapidly developing in the Vietnamese economy sectors such as manufacturing and service. This will allow more reasonable to determine to what stage the impact of FDI on the activities of enterprises includes the Vietnamese economy at present.

Table 1

Summary of empirical literature of FDI Spillover

Authors	Country/Period	Data level	Spillover channels	Results	Stage of FDI impact
<i>Developed country</i>					
Caves (1974)	Canada 1965-1967 Australia 1962-1966	Industry	Horizontal (Y&K)	No evidence (Canada) Positive (Australia)	III
Girma et al. (2001)	UK 1991-1996	Firm	Horizontal (L) (level and share)	Mixed	III
Chung et al. (2003)	US 1979-1991	Firm	Backward	Positive	III
Girma (2005)	UK 1989-1999	Firm	Horizontal (L)	Mixed	III
Ruane, UĞUR (2005)	Island 1991-1998	Firm	Horizontal (L&K)	No evidence	II
Haskel et al (2007)	UK 1973-1992	Firm	Horizontal (L)	Positive	III

Authors	Country/Period	Data level	Spillover channels	Results	Stage of FDI impact
<i>Developed country</i>					
Keller and Yeaple (2009)	US 1987-1996	Firm	Horizontal (L)	Positive	III
<i>Developing country</i>					
Aitken and Harrison (1999)	Venezuela 1976-1989	Firm	Horizontal	Negative	I
Suyanto et al (2009)	Indonesia 1988-2000	Firm	Horizontal	Positive	II
Waldkirch and Ofofu (2010)	Ghana 1992-1998	Firm	Horizontal (K)	Negative	I
<i>Transition economy</i>					
Djankov, Hoekman (2000)	Czech Republic 1992-1997	Firm	Horizontal	Positive	II
Konings (2001)	Bulgaria, Romania and Poland 1993-1997	Firm	Horizontal (Y)	Negative (Bulgaria & Romania) No evidence (Poland)	I-II
Li et al (2001)	China 1995	Firm	Horizontal	Positive	II
Angelucci et al (2002)	Bulgaria, Romania 1997-1998 Poland 1994-1998	Firm	Horizontal	Positive	II
Yudaeva, Kozlov, Melentieva (2003)	Russia 1992-1997	Firm	Horizontal	Positive	II
Damijan et al (2003)	10 transition economies 1995-1999	Firm	Horizontal Vertical	Positive	II
Sinani, Meyer (2004)	Estonia 1994-1999	Firm	Horizontal	Positive	II
Taymaz, Lenger (2004)	Turkey 1983-2000	Firm	Horizontal	Mixed	II
Javorick (2004)	Lithuania 1996-2000	Firm	Horizontal (Y/K) Backward Forward	No evidence Positive Negative	II
Sabirianova, Svejnar, and Terrell (2005)	Czech Republic, Russia 1992-2000	Firm	Horizontal	Mixed	III
Brown, Earle, Telegdy (2006)	Hungary, Romania, Russia, Ukraine 1992-2002	Firm	Horizontal	Mixed	II

Authors	Country/Period	Data level	Spillover channels	Results	Stage of FDI impact
<i>Transition economy</i>					
Merlevede and Schoors (2007)	Romania 1998-2001	Firm	Horizontal (Y) Horizontal (L) Backward Forward Supply-backward	No evidence Positive Mixed Positive Positive Positive	II
Javorcik, Spatareanu (2008)	Romania 1998-2000	Firm	Horizontal	Positive	II
Marcin (2008)	Poland 1996-2003	Firm	Horizontal	Positive	II
Liu et al. (2009)	China 2001	Firm	Horizontal (L/K) Backward Forward	Positive	II
Hale and Long (2011)	China 2001	Firm	Horizontal (K) Backward Forward	No evidence	II
<i>Vietnam</i>					
Le (2005)	Vietnam 1995-2002	Industry	Horizontal	Positive (1995-1999) No evidence (2000-2002)	I
Nguyen et al. (2008a)	Vietnam 2002-2004	Firm	Horizontal (Y) Horizontal (L) Backward Forward	Positive Negative Weak evidence Positive	I
Nguyen et al. (2008b)	Vietnam 2002-2004	Firm	Horizontal (Y) Horizontal (L) Backward Forward	Negative Positive Positive Negative	I-II
Nguyen and Nguyen (2009)	Vietnam 2000-2005	Firm	Horizontal (Y) Backward	No evidence	I-II
Tran (2013)	Vietnam 2001-2005	Firm	Horizontal (L) Backward Forward	Negative Positive Negative	I-II

Note: Y – output, L – employment, K – total assets.

Source: Author's summary

1.2 Resource-Based View

Resource-Based View or RBV is the most appropriate concept to justify the empirical analysis of the impact of foreign ownership on various aspects of the management of the companies-recipients in strategic management (Pitelis, 2007). The value of this approach is the possibility of combining work on strategic management, the economics of the firm, human resource management and marketing in the study of the activities of enterprises (Barney, Ketchen, Wright, 2011). Thus the RBV does not replace but is based on previous theories of

strategic management, combining the internal analysis of phenomena within the organization and external industry analysis and competitive environment (Collis, Montgomery, 1995).

Before the advent of this approach, it was assumed that firms within the same industry or strategic group are identical from the point of view of resources, and the emerging heterogeneity of short-term and can be caused by their mobility. From the perspective of the RBV, resources are heterogeneous and poorly transportable — hence, heterogeneity can be long-term. Firms are viewed as different sets of material assets (buildings, constructions, equipment, raw materials) and intangible assets (reputation, brands, patents, know-how) organized in different ways. There are no two similar companies, as they have different assets, experiences, skills, and organizational culture. The firm will be successful if it has the best and most appropriate resources and applies appropriate strategies for their use and development.

Let's review the concepts of RBV (resources of the firm, competitive advantage and sustainable competitive advantage). Under resources, it is understood as “all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc., which controlled by a firm that enables the firm to develop and implement strategies that improve its effectiveness” (Barney, 1995). Resources can be viewed as sets of tangible and intangible assets such as management skills, organizational processes, and practices, knowledge, and information under the control (Barney, Wright, Ketchen, 2001). The company has a competitive advantage when it produces more effective and better meet customer needs. In addition, the company applied a strategy of value creation that can not be spontaneously used by any actual or potential competitor. The firm has a sustainable competitive advantage if its strategy of creating value can not be used by competitors, but they also can't get the same level of benefits from its application (Barney, 1995).

In the academic literature resources and capabilities are understood in different ways (Makadok, 2001; Katkalo, 2008). In one case, an expanded interpretation of resources is suggested, in which the firm's capabilities are considered as their variety allowing to use the resources in a certain way. In another case, capabilities serve as a distinctive feature that allows using resources in a certain way. In this context often referred to the words of the Grant, who noted that “while resources are the source of the abilities of the firm, capabilities are the main source of its competitive advantage” (Grant, 1991).

Resource approach was widely adopted in the 1980-1990-ies, as a result of the development of ideas of the book by E. Penrose, “The theory of the growth of the firm” (Penrose, 1995/2009). Unlike the existing micro-economic approach to the firm, the author acknowledged the differences between firms and reason saw their resource potential. Penrose noted the dependence of the firm’s competitive advantage from its organizational abilities on the use of a set of resources. In addition, references to “legacy resources” had already pointed to the complexity of copying them because of the unique organizational cost of the company (see more: (Rugman, Verbeke, 2002)). While research on firms with regard to their resources have a long tradition prior to the publication of the book, Penrose’s analysis was largely limited to such factors as labour, capital, and land. Ideas of her work is at once underdeveloped, largely because of the difficulty of measurement of some key resources such as technological skills.

In 1984, (Wernerfelt, 1984) for the first time pointed to “the usefulness of analysing firms from the point of view of its resources and not products” and suggested that this approach may become a new paradigm of strategic management. He transformed the known tools to analyse the product portfolio of the company at industry level described by (Porter, 1980/1998), to explore portfolio-level resource firms that have opened new opportunities for enterprises of strategic behaviour. The optimal growth scenario assumed a balance between the maintenance of existing resources and development of new (Wernerfelt, 1995). In the same period, (Rumelt, 1984), who studied the influence of stochastic factors on the performance of firms, showed that firms are initially homogeneous, over time, accumulate the differences and be unable to accurately copy the model of the behaviour of each other. (Teece, 1984) at the same time also noted that successful firms have at least one important for their intangible asset, usually by some technological or managerial know-how.

After the release of the article of (Prahalad, Hamel, 1994/2006), which explained with examples of companies advantages of the concept of the firm as a portfolio of organizational competencies, the resource-based approach has become dominant in managerial studies. Studying the successful experience in the 1980s of companies, the authors came to the conclusion that the real sources of competitive advantages of the leaders were the ability of management to consolidate technologies and production skills into competencies that give the business unit the ability to quickly adapt to changing conditions. (Collis, Montgomery, 1995) noted that the resource is important in a particular industry or in a certain period of time, maybe not in demand in another industry or in another temporal context, and existing assets can not

meet the demands of the future markets because of their volatility. It is, therefore, necessary to develop the resources of the firm.

So, in the framework of the RBV shows that the effective corporate strategy requires continual investment in the creation of new and modernization of existing tangible and intangible assets. At the same time, both in theoretical and in empirical works on management it is emphasized that the following resource approach in assessing the level of control is a very difficult task. (Godfrey, Hill, 1995) argued that certain organizational resources are not amenable to external observation, by its nature, therefore, cannot always be measured. It was noted in a review paper (Newbert, 2007) which was based on 55 empirical research on RBV concept, that most of the authors focus on the heterogeneity of resources and determine the benefit from the existence of the company of any single valuable, rare, not imitated and/or irreplaceable resource. At the same time, there is much less research, taking into account the totality of the resources, capabilities and core competencies of the firm. For example, the authors (Hansen, Perry, 2004), to evaluate the economic consequences of a number of administrative decisions taken by the new managers of large companies, did not take into account at the same production resources.

As a possible approach to measure the resources, let's use 5M concept (Manpower, Money, Materials, Machines, Methods), which is part of the popular management tool and allows to systematically analyse the diversity of its aspects. The concept 5M arising from the main sections topics of cause-and-effect diagrams or the fishbone diagram. Professor Kaoru Ishikawa, the founder of the Quality Management System (det. See: (Ishikawa, 1985)), allows to consider the activities of the company comprehensively. The causes of a particular problem in the quality of the products classified in this chart by resource type, including the following:

- 1) Manpower or human resources of the firm;
- 2) Money or funds available to the firm (in other versions of the chart is also used business environment (Mother nature));
- 3) Materials needed for production;
- 4) Machines or equipment and other means of production;
- 5) Methods, i.e. methods of production organization and management.

Different researchers examined the impact of FDI on the resources of the company. But their works were limited by only analysing a separate resource.

(Chi, Wu, Lin, 2008) explores relationships between small- and medium-sized enterprises (SMEs) foreign direct investment (FDI), FDI-related training programs and organizational performance. Research results suggest that FDI leads to higher SME performance. This relationship was partially mediated by the implementation of FDI-related training programs.

(Clougherty, Grajek, 2008) analysed the effects of having the international quality certificate, i.e. ISO 9000. The diffusion of ISO 9000 on trade and foreign direct investment (FDI) have gone understudied. They use panel data of OECD nations during the period 1995-2002 to assess the impact of the adoption of ISO on economic relations between countries. They found that the diffusion of ISO has no effect in developed nations, but positively pull FDI (i.e., increasing FDI inflows) and positively stimulate trade (i.e., expand exports) in developing nations.

International knowledge can spillover through exporting activities. Exporters in domestic market can learn from their foreign importers by meeting their requirements in terms of product quality and product designs. Foreign importers might also support local firms through technical and managerial supports (Park et al., 2010, Kiriyama, 2012). Through this process, domestic exporters can gain technology and knowledge spillovers that enhance their technological progress. It can be seen that the technological progress gained from exporting activities is basically the idea of “learning-by-exporting”.

In paper (Wei, Liu, 2006), the authors assessed the side effects of R&D productivity, exports and the very presence of foreign direct investment (FDI) in the manufacturing sector of China, based on a panel data of more than 10,000 companies from indigenous and foreign companies for 1998-2001. Positive cross-sectoral productivity disruptions were found as a result of R&D and export activities, as well as positive internal and cross-sectoral side effects from foreign presence in local Chinese firms in the regions.

(Vahter, 2010) investigated how FDI affect productivity growth, innovation, and knowledge sourcing activities of domestic firms by using firm-level panel-data from Estonia’s manufacturing sector. He found the evidence of positive spillovers on process innovation.

Since the 5M typology of resources is the system and also allows to highlight the reasons for success, RBV is also suitable for research purposes, including for complex analysis of various aspects of enterprise management. Using the concept of 5M and the results of surveys

BEEPS, further research will highlight features of resource management that contribute to consolidating its position in the market in a complex and rapidly changing business environment and eventually improving its effectiveness.

CHAPTER 2. METHODOLOGY OF EMPIRICAL ANALYSIS: SAMPLING AND HYPOTHESIS

2.1 Characteristics of the sample

The empirical analysis was conducted on the samples of the Vietnamese companies of the BEEPS project for 2009 and 2015 rounds implemented by the European Bank for Reconstruction and Development and the World Bank. [EBRD-World Bank, 2009; 2015]. The ES are repeated approximately every four years for a particular economy (or region). By tracking changes in the business environment, policymakers and researchers can look at the effects of policy and regulatory reforms on firm performance. Repeated surveys aid in studying the evolution of the business environment and how it affects the dynamics of the private sector.

The sample for Vietnam was selected using stratified random sampling.³ Stratified random sampling rather than simple random sampling for several reasons.

1. To obtain unbiased estimates for different subdivisions of the population with some accuracy.
2. For obtaining unbiased estimates for the entire population. The entire population or universe in research, is the non-agricultural economy.
3. To ensure that the total sample included companies from different sectors, and that it is not concentrated in one or two sectors / sizes / regions.
4. To use the benefits of stratified sampling where population estimates, in most cases, to be more accurate than when using the method of random sampling (i.e., low error rate, other things being equal.)
5. Stratification may produce a smaller margin of error estimates than would be produced by a simple random sample of the same size. This result is especially true if the measurements in the layers are homogeneous.
6. The costs of observation in the survey can be reduced by stratification of the population elements into convenient groups.

³ A stratified random sample is one obtained by separating the population elements into non-overlapping groups, called strata, and then selecting a simple random sample from each stratum. (Richard L. Scheaffer; Mendenhall, W.; Lyman, R., “Elementary Survey Sampling”, Fifth Edition).

Three levels of stratification were used by researchers from EBRD-World Bank in Vietnam: industry, establishment size, and geographic region.

The stratification of industry was designed in such a way: the universe was divided into 5 manufacturing industries and two service industries. Each manufacturing industry had a target of 120 to 145 interviews. In the service industry, 120 interviews were aimed. For the manufacturing industry, sample sizes were overestimated by approximately 25% to account for potential non-response cases when requesting confidential financial information, and also because of likely depletion in future surveys that would affect the construction of the group. Sector coverage is defined consistently across all economies and includes the entire manufacturing sector and most services sectors: retail, wholesale, automotive repair, hotels and restaurants, transportation, storage, communications, construction, and IT. Public utilities, government services, health care, and financial services sectors are not included in the sample. The BEEPS interview takes place with top managers and business owners.

Stratification by size was determined after the standard definition for implementation: small (from 5 to 19 employees), medium (from 20 to 99 employees) and large (more than 99 people). For stratification purposes, the number of employees was determined on the basis of registered permanent staff members. This seems to be a definition of the workforce, since seasonal/day-to-day/part-time employment is not a common practice, except for the construction and agricultural sectors.

Regional stratification was defined in four regions containing 14 provinces: Red River Delta (Hanoi, Ha Tay, Hai Duong, and Hai Phong), the North Centre Coast (Thanh Hoa, Nghe An), Mekong River Delta (Can Tho, Long An, Tien Giang), South Centre Coast (Khanh Hoa, Da Nang) and South East (Ho Chi Minh City, Binh Duong, Dong Nai).

The opportunities provided by BEEPS are related to the presence of questions about the performance of enterprises and indicators that characterize their behaviour and the state of management. These data allow us to compare Vietnamese firms with foreign participation with enterprises belonging exclusively to domestic owners.

Cross-sectional sampling across Vietnam in 2009 included data of 1,053 non-financial companies of 18 types of economic activity. In 2015, data of 996 non-financial enterprises of 28 types of economic activity were collected. From these data arrays, firms whose top managers and business owners did not know or did not answer whether the company owns a share in the

company's capital to foreign owners were excluded. As a result, the survey sample consisted of 1,050 companies (of which 149 companies or 14,2% were with the participation of foreign capital) in 2009 and 995 enterprises (89 enterprises with foreign participation, or 8.9%) in 2015. In the draft BEEPS there are no specific requirements for the ownership structure, joint ventures are randomly selected. The received frequencies confirm the opinion of UNCTAD experts (World Investment Report, 2016) that the Vietnamese investment climate is attractive for foreign investors.

The firms of both rounds (2009 and 2015) were grouped into two main groups: manufacturing (food and beverages, garments, non-metallic mineral products, fabricated metal products, other manufacturing) and services industries (retail and other services). Table 2 shows the distribution of enterprises by aggregated types of economic activity, size groups, as well as regions of the country.

Table 2

Structure of the research samples

Group of firms	2009		2015	
	Number of companies	Share, %	Number of companies	Share, %

Sectors distribution

Manufacturing	805	70	693	77
Service	245	30	302	23

Size distribution

Small	302	29	389	39
Medium	394	37	344	35
Large	354	34	262	26

Group of firms	2009		2015	
	Number of companies	Share, %	Number of companies	Share, %
<i>Region distribution</i>				
Red River Delta	332	32	301	30
North Central area and Central coastal area	111	11	240	24
South East and South Central Coast	493	47	306	31
Mekong River Delta	114	11	148	15
Total:	1050	100	995	100

Source: The data of BEEPS 2009/2015, calculations of the author.

The sample of 2015 year was characterized by a shift towards manufacturing industry compared with the 2009 sample (77% against 70% in 2009). In 2009, medium-sized firms prevailed. The share of large companies was the second most important. The sample of 2015 changed in which small enterprises dominated. The share of medium-sized companies was second in importance.

Regional stratification of both rounds (2009, 2015) of BEEPS survey was defined in four regions. In 2009, 47% of all surveyed firms were located in South East, which is the most economically developed region in Vietnam. Meanwhile, in 2015 only 31% of surveyed firms were from South East. Nevertheless, firms from South East region were dominated in the sample in 2015. If the number of full-time employees by median in 2009 was 6 (the mean is 21), then in 2015, only 10 (the mean is 82) people respectively.

Table 3 shows the structure of subsamples of firms with foreign capital in both rounds of the survey. In 2009, 79% of enterprises with foreign participation had a share of foreign capital in excess of half with a median of foreign ownership of 79%. In 2015, 68% of firms have 73% respectively. Foreign investors in small and medium-sized firms prefer to own controlling stakes

in shares or units. Both subsamples are dominated by manufacturing enterprises, although their share in 2015 slightly increased, while the share of service firms decreased. The most significant share of firms with foreign capital in both rounds of the survey were located in the South East region.

Table 3

Structure of subsamples of the firms with foreign capital, % in the group

Group of firms	Year	
	2009	2015
<i>Sectors distribution</i>		
Manufacturing	94	97
Service	6	3
<i>Size distribution</i>		
Small	6	12
Medium	23	21
Large	71	66
<i>Region distribution</i>		
Red River Delta	19	18
North Central area and Central coastal area	3	15
South East and South Central Coast	66	54
Mekong River Delta	11	13
Total:	100	100

Source: The data of BEEPS 2009/2015, calculations of the author.

2.2 Research Hypothesis

Given the current state and level of development of the Vietnamese economy, especially in the manufacturing industry, I believe that in the periodization presented earlier, Vietnam is in the second stage of the impact of FDI on enterprises. Accordingly, the main assumption is that enterprises with foreign participation will differ from local firms by better management characteristics measured from a resource-based view. Ultimately, this will be reflected in the higher productivity of resources in joint ventures. Thus providing new evidence on the positive intra-industry (horizontal) spillover effects.

To analyse the state of enterprise management, based on the prerequisites of a resource-based view for efficient use of existing and creation of new resources, we will correlate the concept of 5M with the most appropriate issues of BEEPS. Table 4 presents selected questions that we used to construct proxy variables in empirical calculations.

Table 4

Questions for measuring resources using the 5M model

Types of resources	BEEPS questions
Manpower	Over fiscal year, did this establishment have formal training programs for its permanent, full-time employees?
Money	During the last three years, did this establishment spend on formal research and development activities, either in-house or contracted with other companies?
Materials	In the last three years, has this establishment introduced new products or services?
Machines	Does this establishment at present use technology licensed from a foreign-owned company, excluding office software?
Methods	Does this establishment have an internationally-recognized quality certification?

Source: BEEPS survey (Appendix 2)

It should be noted that some of the BEEPS issues relatively adequately assess the management of resources defined by the 5M concept. To such questions it is possible to carry questions about personnel training programs, as a management contribution to the growth of the company's human capital; on the implementation of R&D expenditures, as a financial contribution to the development of the firm and its innovative potential, as well as on the use of foreign licensed technologies, usually more modern than Vietnamese ones. Although not always up to date, which characterizes the level of technological processes and partly the state of the equipment. However, in the BEEPS survey there are no adequate characteristics of raw materials and materials, and they had to be replaced with the question of bringing new products to the market, as this may require investments in new types of raw materials. In addition, the fact of launching new products on the market shows that the company adapts to the changing conditions and can better meet the needs of the consumer in the future, which in turn helps to create sustainable competitive advantages.

As for information and technology, their level is partly reflected not only in the use of foreign technologies, but also in the presence of at least one international certificate. This can be a certificate of quality management, and, for example, a certificate of compliance with environmental requirements or another certificate (as this question is formulated in BEEPS). Accordingly, both the management organization (business processes) and the quality of the technologies used can be considered. In addition, it was decided to additionally add the question of the participation of firms in export operations, since the orientation towards international markets can be the goal of successful business and signal about the competitive advantages of the products produced and thus the best resource capabilities of the company in the aggregate.

Based on the above arguments, we in this study will investigate the impact of presence foreign co-owners on Vietnamese companies on the characteristics of the company's management system and propose the following hypothesis. (Fig. 2)

H1: *The presence of foreign co-owners in the company's capital is positively related to the opportunities for staff development through training and referral to various training programs. Formal training may include classroom work, seminars, lectures, workshops, and audio-visual presentations and demonstrations. This does not include training to familiarize employees with equipment and machinery on the shop floor, training aimed at familiarizing employees with the establishment's standard operation procedures, or employee orientation at the beginning of an employee's tenure.*

H2: *The presence of foreign co-owners in the company's capital is positively related to the*

promotion of the supply of new products or services to consumers. For example, MNCs have marketing schemes to conquer new markets, in which incentives to update the goods and services are usually taken several steps forward.

H3: *The presence of foreign co-owners in the company's capital is positively related to the compliance of company with international standards of management and production, product quality, and therefore, the receipt of internationally recognized certificates. Examples are: ISO (International Organization for Standardization) for manufacturing and services, HACCP (Hazard Analysis and Critical Control Point) for food (especially, but not exclusively, for seafood and juices), and AATCC (American Association of Textiles Chemists and Colorists) for textiles.*

H4: *The presence of foreign co-owners in the company's capital is positively related to supports the modernization of production, i.e. the replacement of old production schemes with more efficient and modern ones.*

H5: *The presence of foreign co-owners in the company's capital is positively related to entering the international markets for company. Many foreign companies set the goal of creating a foreign subsidiary structure not only cheaper production for the domestic market of the recipient country, but also for export. However, a different assumption was made for one of the indicators of the expansion of the company's resources – the expenditure on R&D.*

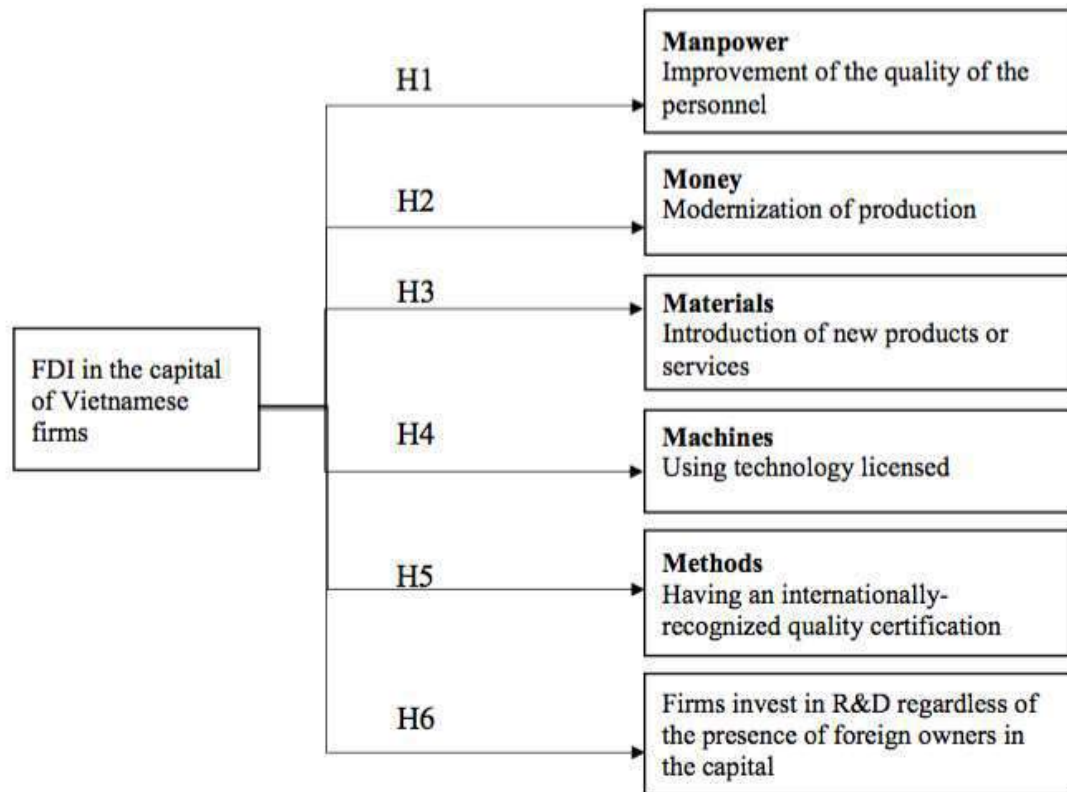
H6: *Firms invest in R&D regardless of the presence of foreign owners in the capital, i.e. no significant relation is expected. As noted in the literature (Hale, Long, 2011), R&D is often conducted by foreign parent companies, and their subsidiaries, especially in less developed countries, only implement the results of these developments.*

Taking into account the literature review, additional factors will be introduced in the analysis, such as the age of the firm, previous experience of its top manager and the quality of the organization's personnel, and the presence of state ownership in the capital. As the control variables are the size of the firm and its industry affiliation are taken. We expect that the more permanent employees are employed in the enterprise, the more difficult it is to organize effective management of it, and the more actively its management will use various management practices. As for industry sectors, it will be allocated belong to the manufacturing industry, where there are specific requirements for production management, i.e. generally used more complex organizational and technological processes and skilled manpower. The development of infrastructure, resource and commodity markets will be partly reflected by the control of the

regional location (aggregated by regions).

Figure 2

A research model on the impact of FDI on Vietnamese companies through characteristics of management



Source: Author’s summary

2.3 Comparison of firms on the characteristics of management

Before proceeding to binary logistic regression analysis, let’s compare the activity of enterprises with the presence of foreign owners in the capital and without it (Table 5). Based on the analysis of the 2009 survey, there is a link between the presence of foreign owners in the capital of the company and the majority of the analysed management characteristics, except R&D and introducing new products or services. The reason is the absence of questions on these factors in BEEPS survey in 2009. In 2015, the differences between the two groups of enterprises changed. Perhaps this is due to the consequences of the crisis, during which local firms immediately began to save on long-term and risky investments. Enterprises with foreign capital were more often exporters in both rounds of the survey.

According to the results of both rounds, for all the studied characteristics of management

and behaviour, the share of enterprises using them is positively related to the size of the business (Fig. 3). Except two factors like launching new product or services and investing in R&D in 2015.

However, the decline in the share of active enterprises for management characteristics, such as educational program and participation in export operations can also be linked to the consequences of the global crisis that helped focus on current issues like operational management. It is interesting that in all areas, except for the use of foreign licensed technologies and the presence of an international quality certificate, the dynamics turned out to be negative for companies with foreign capital. Fully domestic enterprises faced negative dynamics in all areas. At the same time, the degree of decline in activity in companies with foreign capital was so significant than in the latter, especially in such areas as the use educational programs and export. Such results can be partly considered a testimony in favour of finding the economy at the second stage of the impact of FDI on enterprises.

Table 5

Comparison of the activities of enterprises

Characteristics of management / behaviour of the enterprise	Year			
	2009		2015	
	Companies with foreign capital	Local firms	Companies with foreign capital	Local firms
Presence of educational programs for permanent employees	49	27	30	24
Investing in R&D	N/A	N/A	34	21
Release of new products or services within the last three years	N/A	N/A	29	31

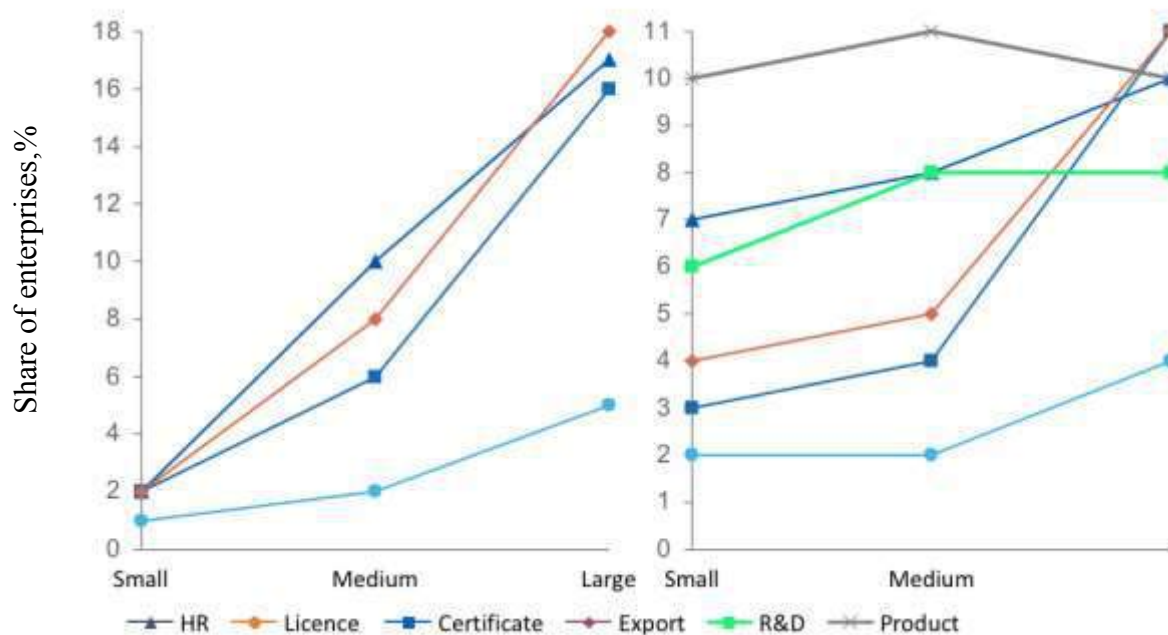
Characteristics of management / behaviour of the enterprise	Year			
	2009		2015	
	Companies with foreign capital	Local firms	Companies with foreign capital	Local firms
Use of foreign licensed technologies	20	6	29	5
Presence of an international quality certificate	46	21	55	14
Participation in export operations	69	21	58	17

Note: the table shows the % of respondents who answered yes to the questions that characterize the management / behaviour of the enterprise.

Source: The data of BEEPS 2009/2015, calculations of the author.

Figure 3

Share of enterprises performing a certain type of activity, by size groups, %



Source: The data of BEEPS 2009/2015, calculations of the author.

CHAPTER 3. RESEARCH FINDINGS

3.1 Models and their specifications

The selected management characteristics represent binary variables, most of which are rather closely correlated with each other. To calculate the correlations between binary variables, the tetrachoric coefficient was used. All ratios are significant at the 10% level for 2009 and 5% for 2015. In this case, the construction of any aggregated indicator of management evaluation is inexpedient and can lead to a distortion of results, an overestimation of the role of certain factors. At the same time, as in 2009 and in 2015, the correlations did not exceed 0.6, so we can expect a spread in the estimates of the connection of foreign investment and other factors with separate management characteristics.

To test the stability of pair relationships and to find the correlation between foreign capital and management (taking into account other factors), an econometric estimation of six binary logistic models of the following general type was carried out:

$$\text{ACTIVITY} = F(\ln L, \text{AGE}, \text{EXP}, \text{EDUs}, \text{FDI or FDIs}, \text{SOE}, \text{IND}, \text{REG}),$$

where ACTIVITY is one of the characteristics of enterprise management that we have identified. These six dependent and all independent variables are presented in Table 6.

Table 6

Variables of the model and types of activity of firms

Variable	Variable description and calculation method
<i>Dependent variables</i>	
<i>HR</i>	Human Resource. The dummy variable takes the value “1” if there are educational programs for permanent employees
<i>IC</i>	Presence of an international quality certificate. The dummy variable takes the value “1” if the enterprise has at least one international certificate or is in the process of obtaining it
<i>FT</i>	Use of foreign licensed technologies. The dummy variable takes the value “1” in case the company uses foreign licensed technologies, with the exception of office software
<i>NP</i>	Release of a new product. The dummy variable assumes a value of “1” in the event that an enterprise releases at least one new product or service during the last three years

Variable	Variable description and calculation method
<i>Dependent variables</i>	
<i>RD</i>	Investing in R&D. The dummy variable takes the value of “1” in the case of an enterprise investing in R&D within the last three years
<i>EX</i>	Participation of the company in export operations. The dummy variable takes the value “1” if the enterprise exports (both direct and indirect)
<i>Independent variables</i>	
<i>lnL</i>	The natural logarithm of the number of permanent employees in the enterprise at the end of the previous year
<i>AGE</i>	Age of the company, number of years
<i>EXP</i>	The work experience of the top manager in this sector, the number of years
<i>EDUs</i>	Share of employees with higher education
<i>IND</i>	Affiliation to manufacturing industries. A dummy variable takes the value “1” if the enterprise refers to them
<i>FDI</i>	The presence of a foreign owner in the capital of the company. The dummy variable takes the value “1” if it exists
<i>FDIs</i>	Share of foreign ownership in the company’s capital
<i>SOE</i>	The presence of state ownership in the capital of the company. The dummy variable takes the value “1” if it exists
<i>REG (South East; Red River Delta; North Central area and Central coastal area; Mekong River Delta)</i>	Location of firms by region. Dummy variables take the value “1” in case of location in South East

Source: Author’s summary

Each of the models was calculated in two specifications: Model 1 checks the relationship of a particular management characteristic with the presence of a foreign owner, Model 2 – with the sizes (shares) of foreign capital.

Tables 7 and 8 contain a descriptive statistics of independent variables. Model verification did not reveal the multicollinearity of most of the main and additional factors: the correlation between them did not exceed 0.25. The only exception is the age of the company, its

connection with the number of employees was 0.38 in both years, and with the work experience of the top manager only in 2015 reached 0.30.

Table 7

Descriptive statistics of the main independent variables, 2009

Variable	Number of observation	Min	Max	Mean	Median	Std. Dev.
<i>Characteristics of firm</i>						
<i>lnL</i>	1050	0,69	9,74	3,64	3,26	1,48
<i>AGE</i>	1050	3	115	14,77	13	9,68
<i>EXP</i>	1050	0	70	17,21	15	10,11
<i>EDUs</i>	1050	0	1	0,65	1	0,48
<i>IND</i>	1050	0	1	0,73	1	0,45
<i>Characteristics of the ownership structure</i>						
<i>FDI</i>	1050	0	1	0,09	0	0,29
<i>FDIs</i>	1050	0,00	1,00	0,07	0,00	0,25
<i>SOE</i>	1050	0	1	0,04	0	0,19

Source: The data of BEEPS 2009, calculations of the author.

Table 8

Descriptive statistics of the main independent variables, 2015

Variable	Number of observation	Min	Max	Mean	Median	Std. Dev.
<i>Characteristics of firm</i>						
<i>lnL</i>	995	0,69	9,61	4,04	3,91	1,5
<i>AGE</i>	995	0	107	11,72	8	11,14
<i>EXP</i>	995	0	50	16,21	15	9,52
<i>EDUs</i>	995	0	1	0,97	1	0,17
<i>IND</i>	995	0	1	0,85	1	0,36
<i>Characteristics of the ownership structure</i>						
<i>FDI</i>	995	0	1	0,14	0	0,35
<i>FDIs</i>	995	0,00	1,00	0,11	0,00	0,31
<i>SOE</i>	995	0	1	0,08	0	0,28

Source: The data of BEEPS 2015, calculations of the author.

3.2 Results of analysis

Regression analysis (Tables 9 and 10) showed that the fact of the presence of foreign ownership in capital under control of other factors is positively correlated to the existence in the company its international quality certificates, the use of modern technologies and the export of products to both of the year. The presence of foreign owners was not significantly correlated with the presence of educational programs and the release of new products. As we expected, the hypothesis regarding the fact of investing in R&D was not confirmed. As for the release of a new product, it is possible that such results are due to the vague understanding of “novelty” by respondents. Unlike other proxy indicators of management, the variable of output of a new product to the market is based on the subjective assessment of the respondent. As for the presence of educational programs, it is possible that the results of no significant correlation are due to the negative response. According to the BEEPS, the main reason why the establishments did not have formal training programs were:

- “No need for formal training programs” (64% of companies)
- “Lack of relevant training programs related to this establishment’s work” (4% of companies).
- “High cost of training programs” (3% of companies)
- “Lack of external agencies that can provide training” (2% of companies)
- “Unaware of training programs” (1% of companies)

Table 11 summarizes the results of the analysis and presents results that are stable for both groups of models (no less than at the 5% level of significance) for each year. For full information see Appendix 3

Table 11

Consolidated results of hypothesis testing on the relationship between management characteristics and the presence/share of foreign co-owners

Dependent variable	Expected results	Actual results	
		2009	2015
<i>H1. Presence of educational programs</i>	+	0	0
<i>H2. Release of new products or services</i>	+	N/A	0
<i>H3. Presence of an international quality certificate</i>	+	+	+
<i>H4. Use of foreign licensed technologies</i>	+	+	+

Dependent variable	Expected results	Actual results	
		2009	2015
<i>H5. Participation in export operations</i>	+	+	+
<i>H6. Investing in R&D</i>	0	N/A	0

Note: “+” – presence of significant positive correlation; “0” is the absence of a significant correlation at least at the 5% level.

Source: Author’s summary

Let’s give some results for additional factors (see details in Tables 9 and 10). Among the control variables, the size of the enterprise as expected was significant for all the surveyed management characteristics: in large companies, management usually receives much more attention than small ones. In terms of industry, in 2009 manufacturing enterprises were more often invested in the international quality certificates and participated often in export operation. But in 2015, there were significant differences comparing with 2009, namely manufacturing industry began to lag in investing to education program, R&D and foreign licensed technologies which is not surprising in the context of the recovered manufacturing industry after the crisis. However, manufacturing companies were resorted to export operations.

The presence of state property was not consistently correlated with any of the management aspects, except for a strong positive correlation in 2009 with the international quality certificates and weak negative correlation with the export. Talking respectively about 2015, there was not consistently correlation with any of the management aspects, except a strong positive correlation between the presence of state property and the international quality certificates and with the release of new products. The correlation with the use of foreign licensed technologies was weak negative.

Staff quality like higher education among employees demonstrated a significant positive relationship with all aspects of management in 2015, expect the presence of educational programs. Although earlier, in 2009, it was negatively associated with the presence of international certificates and the export. The previous experience of top managers did not show any significant correlation with the management characteristics. The basic idea was that the previous experience of top managers can positively affect on management characteristics, i.e. increase the chances of having educational programs, licensed technologies etc.

Not surprisingly, the older the firm is, the more attention is paid to management characteristics. There is a significant correlation between the age of the firm and the presence of international quality certificates in 2009. Older firms are usually better adapted to local markets. In 2015 there were no significant correlation between the age of the firm and management characteristics, except weak correlation with the presence of international quality certificates and the use of foreign licensed technologies. Perhaps this is due to post-crisis conditions in which it is difficult for any enterprise to restructure or develop a business.

Thus, the revealed interrelationships between the state of management and foreign direct investment in business are basically stable in time. This indicates that Vietnamese companies are still at a stage of development when foreign participation on average contributes to increasing the resource potential and quality of management, while local firms still lag behind partially or completely foreign enterprises. And shows the the evidence of positive horizontal spillover effects.

Table 9

Evaluation of the relationship between foreign participation and the peculiarities of managing firms, 2009

Variable	Model 1					
	<i>HR_1</i>	<i>IC_1</i>	<i>FT_1</i>	<i>NP_1</i>	<i>RD_1</i>	<i>EX_1</i>
<i>lnL</i>	0,536***	0,668***	0,417***	N/A	N/A	0,792***
<i>AGE</i>	0,019	0,025***	- 0,007	N/A	N/A	- 0,001
<i>EXP</i>	- 0,001	0,003	0,006	N/A	N/A	0,008
<i>EDUs</i>	- 0,053	- 1,310**	- 0,774	N/A	N/A	- 1,249**
<i>FDI</i>	0,025	0,363	0,673***	N/A	N/A	1,097***
<i>FDIs</i>						
<i>SOE</i>	0,453	1,133***	0,401	N/A	N/A	- 0,624**
<i>IND</i>	- 0,708	0,923***	1,121	N/A	N/A	1,981***
<i>REG</i>	- 0,257	- 0,075	0,104	N/A	N/A	0,219
<i>X²</i>	138,01***	215,23***	49,04***	N/A	N/A	229,78***
<i>R²</i>	0,132	0,237	0,096	N/A	N/A	0,214

<i>Variable</i>	<i>Model 2</i>					
	<i>HR_2</i>	<i>IC_2</i>	<i>FT_2</i>	<i>NP_2</i>	<i>RD_2</i>	<i>EX_2</i>
<i>lnL</i>	0,552***	0,708***	0,416***	N/A	N/A	0,803***
<i>AGE</i>	0,019**	0,024	- 0,006	N/A	N/A	0,001
<i>EXP</i>	- 0,001	0,004	0,006	N/A	N/A	0,009
<i>EDUs</i>	- 0,038	- 1,269	- 7,759	N/A	N/A	- 1,234
<i>FDI</i>						
<i>FDIs</i>	- 0,001	6,11	0,007**	N/A	N/A	0,011***
<i>SOE</i>	0,429	1,114	0,516	N/A	N/A	- 0,509*
<i>IND</i>	- 0,717	0,882***	1,103	N/A	N/A	1,965***
<i>REG</i>	- 0,241	- 3,552	0,109	N/A	N/A	0,229*
<i>X²</i>	138,32***	213,03***	48,49***	N/A	N/A	225,27***
<i>R²</i>	0,013	0,235	0,095	N/A	N/A	0,211

Notes: A binary logistic regression model was used;

If there are no sign it means a positive correlation, and the sign “-“ negative correlation;

*** - $p < 0.01$, ** - $p < 0.05$, * - $p < 0.10$;

For the convenience of the reader, lines that characterize the direction and significance of links in terms of foreign participation variables are highlighted in grey.

Source: Author’s summary

Table 10

Evaluation of the relationship between foreign participation and the peculiarities of managing firms, 2015

<i>Variable</i>	<i>Model 1</i>					
	<i>HR_1</i>	<i>IC_1</i>	<i>FT_1</i>	<i>NP_1</i>	<i>RD_1</i>	<i>EX_1</i>
<i>lnL</i>	0,435***	0,657***	0,378***	0,22***	0,347***	0,537***
<i>AGE</i>	0,007	0,017*	0,017	0,002	0,012	- 0,007
<i>EXP</i>	- 0,004	- 0,004	- 0,021	0,008	0,01	0,007
<i>EDUs</i>	0,047	0,884***	- 0,025	0,672***	0,713***	0,529**
<i>FDI</i>	- 0,286	0,955***	1,029***	- 0,578	0,009	0,688***
<i>FDIs</i>						
<i>SOE</i>	- 0,338	1,204***	- 1,269*	0,714*	- 0,004	- 0,108
<i>IND</i>	- 0,553**	- 0,193	- 0,788	- 0,237	- 0,549**	0,666**
<i>REG</i>	- 0,448***	0,095	- 0,116	- 0,499***	- 0,464***	0,71***

Variable	<i>Model 1</i>					
	<i>HR_1</i>	<i>IC_1</i>	<i>FT_1</i>	<i>NP_1</i>	<i>RD_1</i>	<i>EX_1</i>
X^2	73,09***	234,23***	50,99***	59,58***	77,62***	224,45***
R^2	0,066	0,256	0,111	0,049	0,074	0,189

Variable	<i>Model 2</i>					
	<i>HR_2</i>	<i>IC_2</i>	<i>FT_2</i>	<i>NP_2</i>	<i>RD_2</i>	<i>EX_2</i>
<i>lnL</i>	0,434***	0,661***	0,381***	0,233***	0,369***	0,534***
<i>AGE</i>	0,006	0,018*	0,019*	0,001	0,011	- 0,006
<i>EXP</i>	- 0,004	- 0,003	- 0,018	0,008	0,01	0,006
<i>EDUs</i>	0,042	0,913***	0,021***	0,665***	0,714***	0,541**
<i>FDI</i>						
<i>FDIs</i>	- 0,003	0,103***	0,011***	- 0,009	- 0,003	0,009***
<i>SOE</i>	- 0,370	1,305***	- 1,143*	0,61***	- 0,051	- 0,007
<i>IND</i>	- 0,549**	- 0,199	- 0,163*	- 0,219	- 0,530*	0,656**
<i>REG</i>	- 0,443***	0,077	- 0,163	- 0,477***	- 0,433**	0,697***
X^2	73,07***	233,41***	51,84***	63,25***	78,53***	225,25***
R^2	0,066	0,255	0,112	0,052	0,075	0,191

Notes: A binary logistic regression model was used;

If there are no sign it means a positive correlation, and the sign “-“ negative correlation;

*** - $p < 0.01$, ** - $p < 0.05$, * - $p < 0.10$;

For the convenience of the reader, lines that characterize the direction and significance of links in terms of foreign participation variables are highlighted in grey.

Source: Author’s summary

3.3 Research limitations

From a substantive point of view, the analysis on BEEPS data was limited to a range of issues that somehow allowed to roughly assess management practices in the context of the firm’s resources, and it should be recognized that not all the components of the resource-based view concept could be adequately measured. This is especially true of the proxies used in the research when assessing the improvement of raw materials and materials and the quality of the equipment. It should be noted that some new data for 2015 (for example, questions about process innovations included in this survey) had no analogues for comparison with the 2009 survey and therefore were not included in this work and marked as N/A. Unfortunately, all BEEPS data bases do not have the date of appearance of the foreign co-owner in the company, although this

information could help in assessing the endogeneity and lag of obtained benefits. Also, the data do not allow to identify the composition of donor countries of FDI by firms, which could clarify the strength and direction of influence.

Technically, analysis using binary models was hampered by the fact that the presence of certain management features in companies in 2015 is inherent in the so-called “rare events data”⁴ problem. The share of positive answers to questions turned out to be much less than the share of negative answers. Using the approach proposed in the article (King, Zeng, 2001) based on the random removal of some of the negative answers, calculations were made on “truncated” samples that did not show significant changes in the significance and signs of the coefficients (direction of influence) for independent variables. Also, we can not completely exclude the endogeneity caused by the problem of self-selection: it is not always obvious whether good management and higher efficiency of the enterprise result from the participation of foreign owners in its management or they simply invested in the best enterprises. For some of the firms with foreign capital that were created with foreign owners from scratch (14,2% in 2009 and 8,9% in 2015), the results of the activities are not related to the selection problem, but this can not be asserted about other firms.

3.4 Managerial implications

Based on the findings of FDI in Vietnam, this thesis can offer management recommendation.

The conceptual framework based on 5M (developed in Chapter 2) can be used as an analysis tool that helps the management team in the decision-making process, including the definition of its level of management characteristics. Managers will be acquainted with the resources of their organization. The conceptual framework can assist them in their investment decision-making process and the identification of countries which enable the optimum utilisation of their resources.

In this respect, of key importance is how a firm aligns the resources and management characteristics with the country characteristics through identifying the strength of these capabilities and moreover how they can exploit and augment these in different locations to gain

⁴ Rare events indicate “binary dependent variables characterized as by dozens to thousands of times fewer ones (events such as wars or coups) than zeroes (nonevents)” (King, Zeng, 2001)

and further sustain firm competitive advantages. Therefore, the managerial recommendations that were developed conceptually in Chapter 2 were then verified empirically in Chapter 3. Through identifying the correct management characteristics for their investment, the conceptual framework highlights the objectives of the managers in terms of sustaining, utilising, exploiting, and augmenting their firm's resources.

What was observed from the empirical evidence in a number of cases where firms combine different management characteristics was effectively, when a firm is investing abroad it could use its various aspects of enterprise management in an intersecting way. It could use the same resources and competences to allow itself the ability to utilise particular locational characteristics (Teece et al., 2009). This is something firms need to take into consideration so their dominant management characteristics may be complemented by other management characteristics in order to strategically take advantage of all their resources and capabilities. Resource alignment and matching characteristics of management system with firm's resources are important to the success of the firm's strategy and can contribute to consolidating its position in the market in a complex and rapidly changing business environment and eventually improving its effectiveness.

3.5 Scientific contributions

The academic contribution refers to the theoretical and conceptual contribution to the academic literature. As highlighted in the literature review, little research exists on the manner in which empirical research based on updated data of Vietnamese firms conducted. This study contributes to the literature by providing new evidence on the positive horizontal spillover effects from FDI to domestic firms by using panel data of 2009 and 2015. And also making clear to what stage of FDI impacts the Vietnamese enterprises currently (second stage of impact).

Given the lack on the research on the impact of presence of the best management practices at enterprises with foreign participation in Vietnamese companies, this work contributes to the scientific world by testify to the fact that FDI is a source of gaining advantages for the recipient company by using a resource-based view concept with 5M concept, were then verified empirically.

The empirical analysis in also proving an alternative way to examine horizontal spillover effect by using binary logistic regression model, whereas many others research are emphasizing

on the impact of the presence of foreign capital on the productivity (efficiency) of companies by using production function with added factors.

CONCLUSION

In this paper, we studied some differences in the management of Vietnamese enterprises that had foreign co-owners (owners), and completely local firms in 2009 and 2015. A significant part of these enterprises is geographically located in the South East region.

Regression analysis revealed the existence of positive links between the presence of foreign owners in the capital (and the proportion of their participation) and some features of management and behaviour of the recipient companies, which we tried to measure from a resource-based view. Under the control of additional factors, as well as the branch and regional affiliation and size of the firm, there are stable links between the presence of foreign ownership in the company's capital and the existence in the company its international quality certificates, the use of modern technologies and the export of products to both of the year. The presence of foreign owners was not significantly correlated with the presence of educational programs and the release of new products. As we expected, the hypothesis regarding the fact of investing in R&D was not confirmed. All in all, the results of the research shows a moderate level of positive horizontal spillover effects. Moreover, we find that Vietnamese firms are on the second stage of FDI impact.

The study has a number of limitations. First of all, the resource-based view is a qualitative concept that justifies the company's competitive advantages due to a set of specific resources (both tangible and intangible) and capabilities. The identification of the totality of these resources by researchers outside the firm, especially their quantitative assessment is possible only with a certain degree of conventionality. Therefore, the concept of the resource-based approach was approximated by the 5M resource typology, a management tool that provides the basis for assessing the five main types of resources. It should also be recognized that the objective limitations of existing BEEPS databases do not always allow the use of adequate indicators when measuring all the typical resources under consideration, and therefore, for some of their species, conditional proxy variables have to be selected.

The analysis of the BEEPS data for Vietnam for 2009 and 2015, naturally with reservations due to the indicators chosen for the characteristics of individual firm resources, confirmed the existence of significant differences in the activities of two groups of firms – foreign (fully or partially) and local. At the same time, if we abstract away from the branch and

size features of the samples, on average the gap in the assessment of the management characteristics of the firms of these groups after the crisis has worsened.

Managerial implications of the work is that the conceptual framework based on 5M can be used as an analysis tool that helps the management team in the decision-making process. Through identifying the correct management characteristics for their investment, the conceptual framework highlights the objectives of the managers in terms utilising firm's resources in a best way.

The academic contribution refers to the theoretical and conceptual contribution to the academic literature by providing new updated evidence on the positive horizontal spillover effects from FDI to Vietnamese firms and by providing a set of resources i.e. characteristics of management such as having training programs, R&D programs, an internationally-recognized quality certification and etc., which leads these firms to better performance. Also making clear that Vietnamese companies are on the second stage of the FDI impacts.

Of course, the deepening of quantitative analysis requires a detailed study of the discrepancies in the efficiency (productivity) of resources and the competitiveness of local and foreign (including joint) enterprises. Preliminary estimates of labour productivity on the BEEPS data for 2009 and 2015 confirm the leadership of firms with foreign participation (and there is a positive dependence on the size of such participation). At the same time, quantitative assessments require correct consideration of time lags and a more detailed reflection of other characteristics of ownership structure, as well as features of industries and markets. Ideally, the use of the 5M concept in the study should be based on a specially focused examination.

At the same time, it would leave room for discussion, because a certain part of the resources could still remain unobservable. In addition, it is important not only to identify the links between the characteristics of the management of a firm with the presence of foreign owners, but also to understand their real contribution to business management - both positive and possibly negative consequences of their intervention in the organization of business processes. To solve this problem, a formalized survey is usually not enough.

In my opinion, the definition of changes that foreigners bring to the enterprise management system is realistic with the help of qualitative methods. This is the direction of further research to develop a number of cases for disclosing the "on average" positive assessment of the role of foreign participation in the management of Vietnamese companies.

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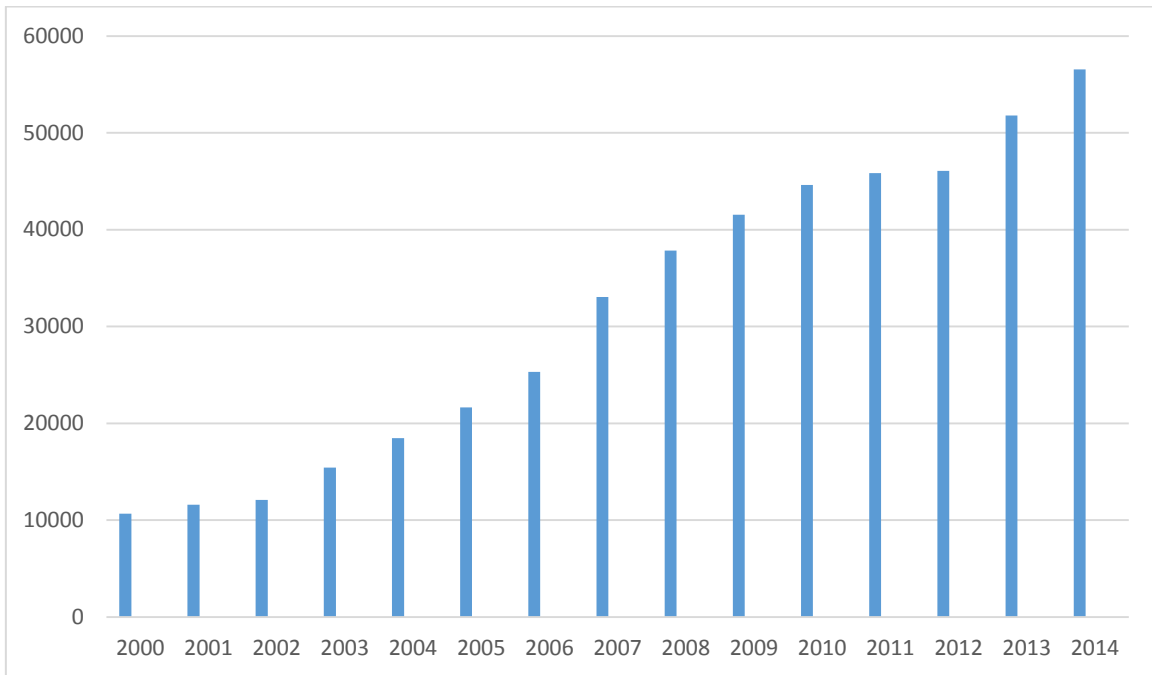
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APPENDICES

Foreign Direct Investment Inflow, 2000-2014 (Millions of dollars)



Source: Statistical Yearbook of Vietnam – GSO

Questionnaire example

QUESTIONNAIRE NUMBER **id**
 PREFERENCE NUMBER **preference**

THE WORLD BANK
Vietnam Enterprise Survey
Manufacturing Module (2015)

GPS Coordinates	
Degrees North (Latitude)	lat
Degrees East (Longitude)	lon

A. CONTROL INFORMATION [TO BE COMPLETED BEFORE INTERVIEW]

A.0 Questionnaire a0	Module
Manufacturing	1

A.1 Country

a1

A.1a Language

a1a

A.2 [customize]

	Sampling Region a2
Red River Delta	1
North Central Area & Central Coastal Area	2
South East	3
Mekong River Delta	4

A.3a [customize]

	Screener Region (coded ex post) a3a
Red River Delta	1
North Central Area & Central Coastal Area	2
South East	3
Mekong River Delta	4

A.3x Name of city/town/village

a3x

A.3b Is this city the official capital city?

a3b

Yes	1
No	2

A.3c Is this city the main business city? **a3c**

Yes	1
No	2

A.3 Size of locality **a3**

City with population over 1 million	2
Over 250.000 to 1 million	3
50.000 to 250.000	4
Less than 50.000	5

A.4 Industry

	Sampl g sector a4a	Screener sector a4b
Manufacturing :Section D	Food	15
	Tobacco	16
	Textiles	17
	Garments	18
	Leather	19
	Wood	20
	Paper	21
	Publishing, printing, and Recorded media	22
	Refined petroleum product	23
	Chemicals	24
	Plastics & rubber	25
	Non metallic mineral products	26
	Basic metals	27
	Fabricated metal products	28
	Machinery and equipment (29 & 30)	29

Manufacturing module

QUESTIONNAIRE NUMBER

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	Electronics (31&32)	31	31
	Precision instruments	33	33
	Transport machines (34&35)	34	34
	Furniture	36	36
	Recycling	37	37
Retail	Retail	52	52
Other Services	Wholesale	51	51
	IT	72	72
	Hotel and restaurants: section H	55	55
	Services of motor vehicles	50	50
	Construction Section F:	45	45
	Transport Section I: (60-64)	60	60

A.5 Sector match between screener information and sample frame

a5

Yes, screener and sample frame info match	1
No, screener and sample frame do not match but establishment still does activities that match sample frame	2
No, does not match	3

A.6 Size

	Sampling size a6a	Screening Size a6b
Small ≥ 5 and ≤ 19	1	1
Medium ≥ 20 and ≤ 99	2	2
Large ≥ 100	3	3

A.7 Establishment is part of a larger firm

a7

Yes	1
No, a firm on its own	2

A.7a

Number of establishments that form the firm	a7a
DON'T KNOW	-9

A.8a Type of establishment

a8a

HQ with production and/or sales in this location	1
Establishment other than HQ	2
DOES NOT APPLY	-7

A.9 Are establishment's financial statements prepared separately from HQ's statements?

a9

Yes	1
No	2
DOES NOT APPLY	-7

A.10 Are establishment's financial statements prepared separately from other establishments of the same firm?

a10

Yes	1
No	2
DOES NOT APPLY	-7

A.11 If HQ, are financial statements independent from the rest of establishments?

a11

Yes	1
No	2
DOES NOT APPLY	-7

A.11a How many establishments are included in the financial statements, including headquarters?

Number of establishments in the financial statements	a11a
DON'T KNOW	-9

A.12 Interviewer code

a12

--

A.13 Supervisor code

a13

--

QUESTIONNAIRE NUMBER

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A.14 Time face-to-face interview begins:

Day (dd)	Month (mm)	Year (yyyy)	Hour (00 to 23)	Minutes (00 to 59)
a14d	a14m	a14y	a14h	a14min

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING.

The goal of this survey is to gather information and opinions about the business environment in Vietnam. The information gathered here will help to develop new policies and programs that enhance employment and economic growth.

The information obtained here will be held in the strictest confidentiality. Neither your name nor the name of your business will be used in any document based on this survey.

B. GENERAL INFORMATION

READ OUT THE FOLLOWING INTRODUCTORY SENTENCE ONLY IF A7 = 1 (yes):
The first few questions apply to the firm which your establishment is part of.

B.1 What is this firm's current legal status? **SHOW CARD 1**

Shareholding company with shares trade in the stock market	1
Shareholding company with non-traded shares or shares traded privately	2
Sole proprietorship	3
Partnership	4
Limited partnership	5
OTHER (SPONTANEOUS-SPECIFY) ___b1x___	6
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION B.2

b1

INTERVIEWER: PLEASE NOTE WHEN b1 IS 3 (SOLE PROPRIETORSHIP), WRITE 100% FOR QUESTION b3.

B.3 What percentage of this firm does the largest owner or owners own?

	Percent
Percentage held by largest owner or owners	b3 %
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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B.2 What percentage of this firm is owned by each of the following: **SHOW CARD 2**

	Percent	DON'T KNOW (SPONTANEOUS)
Private domestic individuals, companies or organizations	b2a %	-9
Private foreign individuals, companies or organizations	b2b %	-9
Government or State	b2c %	-9
Other	b2d %	-9
	100 %	

IF 100% END INTERVIEW

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

B.4 Amongst the owners of the firm, are there any females?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION B.5
GO TO QUESTION B.5

b4

B.4a What percentage of the firm is owned by females?

	Percent
Percentage of female ownership	b4a %
DON'T KNOW (SPONTANEOUS)	-9

READ ONLY IF A7=1 (yes)

I want to proceed by asking you about this establishment only.

B.5 In what year did this establishment begin operations?

	Year
Year establishment began operations	b5
DON'T KNOW (SPONTANEOUS)	-9

INTERVIEWER: PROVIDE FOUR DIGITS FOR YEAR

B.6 How many full-time employees did this establishment employ when it started operations? Please include all employees and managers (**INTERVIEWER: INCLUDE RESPONDENT WHEN APPLICABLE**)

	Number
Full-time employees at start-up	b6
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

--	--	--	--	--	--	--	--	--	--

B.6a Was this establishment formally registered when it began operations?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

b6a

B.6b In what year was this establishment formally registered?

	Year
Year establishment formally registered	b6b
DON'T KNOW (SPONTANEOUS)	-9
NEVER REGISTERED (SPONTANEOUS)	-7

INTERVIEWER: PROVIDE FOUR DIGITS FOR YEAR.

B.7 How many years of experience working in this sector does the Top Manager have?

	Years
Manager's experience in sector	b7
LESS THAN ONE YEAR	1
DON'T KNOW (SPONTANEOUS)	-9

B.7a Is the Top Manager female?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

b7a

B.8 Does this establishment have an internationally-recognized quality certification?
(**INTERVIEWER: SOME EXAMPLES ARE ISO 9000 or 14000, or HACCP**)

Yes	1
No	2
STILL IN PROCESS	-6
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION C.3

GO TO QUESTION C.3

b8

B.8x Please specify the internationally-recognized quality certifications

Specify Certifications	b8x
------------------------	------------

QUESTIONNAIRE NUMBER

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C. INFRASTRUCTURE AND SERVICES

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING.

Now, we turn to the establishment's operations

C.3 Over the last two years, did this establishment submit an application to obtain an electrical connection?

Yes	1	<i>GO TO QUESTION C.6</i> <i>GO TO QUESTION C.6</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

c3

C.4 In reference to that application for an electrical connection, approximately how many days did it take to obtain it from the day of the application to the day the service was received?

	Days
Wait for electrical connection	c4
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

C.5 In reference to that application for an electrical connection, was an informal gift or payment expected or requested?

Yes	1	
No	2	
DON'T KNOW (SPONTANEOUS)	-9	
REFUSAL (SPONTANEOUS)	-8	

c5

C.6 Over fiscal year **[insert last complete fiscal year]**, did this establishment experience power outages?

Yes	1	<i>GO TO QUESTION C.10</i> <i>GO TO QUESTION C.10</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

c6

C.7 In a typical month, over fiscal year **[insert last complete fiscal year]**, how many power outages did this establishment experience?

	Number	
Number of power outages in a typical month	c7	<i>IF 0, GO TO QUESTION C.9</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION C.9</i>

QUESTIONNAIRE NUMBER

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C.8 How long did these power outages last on average?

	Hours	Minutes
Average duration of power outages	c8a	c8b
LESS THAN ONE MINUTE		1
DON'T KNOW (SPONTANEOUS)	-9	-9

C.9 Please estimate the losses that resulted from power outages either as a percentage of total annual sales or as total annual losses.

	Percent
Loss as percentage of total annual sales due to power outages	c9a %
NONE	0
DON'T KNOW (SPONTANEOUS)	-9

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Annual losses due to power outages	c9b
NONE	0
DON'T KNOW (SPONTANEOUS)	-9

C.10 Over the course of fiscal year **[insert last complete fiscal year]**, did this establishment own or share a generator?

Yes	1	GO TO QUESTION C.12 GO TO QUESTION C.12
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

c10

C.11 In fiscal year **[insert last complete fiscal year]**, what percentage of this establishment's electricity came from a generator or generators that the establishment owned or shared?

	Percent
Percentage electricity from generators	c11 %
DON'T KNOW (SPONTANEOUS)	-9

C.12 Over the last two years, did this establishment submit an application to obtain a water connection?

Yes	1	GO TO QUESTION C.15 GO TO QUESTION C.15
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

c12

QUESTIONNAIRE NUMBER

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C.13 In reference to that application for a water connection, approximately how many days did it take to obtain it from the day of the application to the day the service was received?

	Days
Wait for water connection	c13
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

C.14 In reference to that application for a water connection, was an informal gift or payment expected or requested?

Yes	1	c14
No	2	
DON'T KNOW (SPONTANEOUS)	-9	
REFUSAL (SPONTANENOUS)	-8	

C.15 Over fiscal year **[insert last complete fiscal year]**, did this establishment experience insufficient water supply for production?

Yes	1	GO TO QUESTION C.22a GO TO QUESTION C.22a GO TO QUESTION C.22a
No	2	
The establishment does not use water for production	-7	
DON'T KNOW (SPONTANEOUS)	-9	

c15

C.16 In a typical month, over fiscal year **[insert last complete fiscal year]**, how many incidents of insufficient water supply did this establishment experience?

	Number	
Number of incidents of water insufficiency in a typical month	c16	IF 0, GO TO QUESTION C.22a GO TO QUESTION C.22a
DON'T KNOW (SPONTANEOUS)	-9	

C.17 How long did these incidents of insufficient water supply last on average?

	Hours
Average duration of insufficient water supply	c17
LESS THAN ONE HOUR	1
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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C.22a At the present time, does this establishment use e-mail to communicate with clients or suppliers?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

c22a

C.22b At the present time, does this establishment have its own website?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

c22b

C.30	<p>Using the response options on the card; To what degree is Electricity an obstacle to the current operations of this establishment? SHOW CARD 3</p> <p>Using the response options on the card; To what degree is Telecommunications an obstacle to the current operations of this establishment? SHOW CARD 3</p>
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		(SPONTANEOUS)						
		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	DON'T KNOW	DOES NOT APPLY
Electricity	c30a	0	1	2	3	4	-9	-7
Telecommunications	c30b	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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D. SALES AND SUPPLIES

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:

The next topic to be covered is how and where this establishment makes its sales.

D.1a1 In fiscal year [insert last complete fiscal year], what was this establishment's main activity and product, that is, the activity and product that represented the largest proportion of annual sales?
ENUMERATOR: PLEASE SPECIFY THE ACTIVITY AND PRODUCT IN DETAIL, FOR EX., "LEATHER SHOE MANUFACTURING" NOT JUST SHOES' MANUFACTURING

Description

	d1a1x
--	--------------

INTERVIEWER: THE FOLLOWING QUESTION IS NOT PART OF THE INTERVIEW. IT WILL BE FILLED OUT IN THE OFFICE

D.1a2 PLEASE CHOOSE THE 4-DIGIT ISIC REV. 3.1 CODE THAT BEST APPLIES TO THE ESTABLISHMENT'S MAIN ACTIVITY AND PRODUCT.

CODE OF THE MAIN PRODUCT AND ACTIVITY	Code
	d1a2

D.1a3 What percentage of total sales does the main activity or product represent?

	Percent
Percentage of sales represented by main product or activity	d1a3
DON'T KNOW (SPONTANEOUS)	-9

INTERVIEWER: PLEASE NOTE THAT THE NEXT QUESTION REFERS TO THE TOTAL SALES OF ALL PRODUCTS AND SERVICES

D.2 In fiscal year [insert last complete fiscal year], what were this establishment's total annual sales for ALL products and services?

	LCUs
Last complete fiscal year's total sales	d2
DON'T KNOW (SPONTANEOUS)	-9
PLEASE ALSO WRITE OUT THE NUMBER (i.e. 50,000 as Fifty Thousand)	
	d2x

QUESTIONNAIRE NUMBER

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N.3 Looking back at the end of fiscal year [insert last complete fiscal year minus two], what were total annual sales for this establishment?

	LCUs
Total annual sales three years ago	n3
IF ESTABLISHMENT WAS NOT IN BUSINESS THREE YEARS AGO	-7
DON'T KNOW (SPONTANEOUS)	-9
PLEASE ALSO WRITE OUT THE NUMBER (i.e. 50,000 as Fifty Thousand)	
	n3x

D.3 Coming back to fiscal year [insert last complete fiscal year], what percentage of this establishment's sales were:
(INTERVIEWER: SKIP PATTERNS MUST BE FOLLOWED IN THE ORDER THEY APPEAR IN THE TABLE)
SHOW CARD 4

	Percent	DON'T KNOW (SPONTANEOUS)	
National sales	d3a %	-9	<i>IF 100, GO TO QUESTION D.10</i>
Indirect exports (sold domestically to third party that exports products)	d3b %	-9	<i>IF 100, GO TO QUESTION D.8</i>
Direct exports	d3c %	-9	<i>IF 0, GO TO QUESTION D.8</i>
	100%		

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

D.4 In fiscal year [insert last complete fiscal year], when this establishment exported goods directly, how many days did it take on average from the time this establishment's goods arrived at their main point of exit (e.g., port, airport) until the time these goods cleared customs?

	Days
Average number of days to clear customs	d4
LESS THAN ONE DAY	1
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY	-7

EAD.4a In fiscal year [insert last complete fiscal year], when this establishment exported goods directly, was a gift or informal payment expected or requested in order to clear customs?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

d4a

QUESTIONNAIRE NUMBER

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D.6 In fiscal year **[insert last complete fiscal year]**, what percentage of the value of the products exported directly was lost while in transit because of theft?

	Percent
Losses due to theft as percentage of the value of the products	d6 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY	-7

D.7 In fiscal year **[insert last complete fiscal year]**, what percentage of the value of the products exported directly was lost while in transit because of breakage or spoilage?

	Percent
Losses due to breakage or spoilage as percentage of the value of the products	d7 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY	-7

D.8 In which year did this establishment first export directly or indirectly?

	Year
Began exporting directly or indirectly	d8
DON'T KNOW (SPONTANEOUS)	-9

INTERVIEWER: WRITE YEAR USING 4 DIGITS

D.10 In fiscal year **[insert last complete fiscal year]**, what percentage of the value of products this establishment shipped to supply domestic markets was lost while in transit because of theft?

	Percent
Losses due to theft as percentage of the value of the products	d10 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
NO INTERNAL SHIPMENTS MADE (DOES NOT APPLY)	-7

**GO TO QUESTION
D.12**

D.11 In fiscal year **[insert last complete fiscal year]**, what percentage of value of products this establishment shipped to supply domestic markets was lost while in transit because of breakage or spoilage?

	Percent
Losses due to breakage or spoilage as percentage of the value of the products	d11 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
NO INTERNAL SHIPMENTS MADE (DOES NOT APPLY)	-7

QUESTIONNAIRE NUMBER

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D.12 In fiscal year **[insert last complete fiscal year]**, as a proportion of all material inputs or supplies purchased that year, what percentage of this establishment’s material inputs or supplies were: **SHOW CARD 4a**

	Percent	DON'T KNOW (SPONTANEOUS)
Material inputs or supplies of domestic origin	d12a %	-9
Material inputs or supplies of foreign origin	d12b %	-9
	100%	

IF 0, GO TO QUESTION D.16

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

D.13 Were any of the material inputs or supplies purchased in fiscal year **[insert last complete fiscal year]**, imported directly?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION D.16
GO TO QUESTION D.16

d13

D.14 In fiscal year **[insert last complete fiscal year]**, when this establishment imported material inputs or supplies, how many days did it take on average from the time these goods arrived to their point of entry (e.g. port, airport) until the time these goods could be claimed from customs?

	Days
Average number of days to clear customs	d14
LESS THAN ONE DAY	1
DON'T KNOW (SPONTANEOUS)	-9

D.16 At the present time, when this establishment receives delivery of its most important input, on average, how many days of inventory, measured in days of production, does this establishment keep? **(INTERVIEWER: IF RESPONDENT REQUIRES CLARIFICATION, DEFINE AS STOCK ON HAND)**

	Days
Days of inventory of most important input	d16
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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D.30 Using the response options on the card; To what degree is **Transport** an obstacle to the current operations of this establishment? **SHOW CARD 5**

Using the response options on the card; To what degree is **Customs and Trade Regulation** an obstacle to the current operations of this establishment? **SHOW CARD 5**

	No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
						DON'T KNOW	DOES NOT APPLY
Transport d30a	0	1	2	3	4	-9	-7
Customs and trade regulations d30b	0	1	2	3	4	-9	-7

--	--	--	--	--	--	--	--	--	--

E. DEGREE OF COMPETITION

E.1 In fiscal year **[insert last complete fiscal year]**, which of the following was the main market in which this establishment sold its main product?
SHOW CARD 5a

Local – main product sold mostly in same municipality where establishment is located	1
National – main product sold mostly across the country where establishment is located	2
International	3
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION E.6
GO TO QUESTION E.6

e1

E.2 In fiscal year **[insert last complete fiscal year]**, for the main market in which this establishment sold its main product, how many competitors did this establishment's main product face?

Number of competitors	e2b
TOO MANY TO COUNT	-4
DON'T KNOW (SPONTANEOUS)	-9

E.6 Does this establishment at present use technology licensed from a foreign-owned company, excluding office software?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

e6

E.11 Does this establishment compete against unregistered or informal firms?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

e11

E.30 Using the response options on the card; To what degree are **Practices of Competitors in the Informal Sector** an obstacle to the current operations of this establishment? **SHOW CARD 6**

	No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
						DON'T KNOW	DOES NOT APPLY
Practices of competitors in the informal sector e30	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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H. INNOVATION

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING

And now we switch to a different topic. In this section “new” means new to the establishment but not necessarily new to the market.

INTERVIEWER: SHOW CARDS IN THIS SECTION CONTAIN EXAMPLES OF INNOVATIONS. THEY ARE MEANT AS EXAMPLES ONLY - THEY DO NOT CONTAIN ALL POSSIBLE INNOVATIONS.

PRODUCT INNOVATION

H.1 During the last three years, has this establishment introduced new or significantly improved products or services?
SHOW CARD 7 FOR EXAMPLES

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION EAH.11
GO TO QUESTION EAH.11

h1

H.2 Were any of the new or significantly improved products or services also new for the establishment’s main market?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h2

INTERVIEWER READ THE FOLLOWING

The next questions are about this establishment’s main new or significantly improved product or service. The main new or significantly improved product or service is the one that represented the largest proportion of this establishment’s sales in value during fiscal year [insert last complete fiscal year].

EAH.2x Please describe in detail the main new or significantly improved product or service that this establishment introduced during the last three years.

Description

DESCRIPTION SHOULD BE AS DETAILED AS POSSIBLE

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eah2x

QUESTIONNAIRE NUMBER

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EAH.2a In fiscal year **[insert last complete fiscal year]**, what percentage of this establishment’s total sales was represented by sales from the main new or significantly improved product or service?

	Percent
Percentage of sales from the <u>main</u> new or significantly improved product or service	eah2a %
DON'T KNOW (SPONTANEOUS)	-9

EAH.4 I will now ask you a few questions about the main new or significantly improved product or service compared with all other products and services already produced in this establishment.
READ EACH OPTION ALOUD

	Yes	No	DON'T KNOW (SPONTANEOUS)	DOESN'T APPLY (SPONTANEOUS)
Does it have completely new functions? eah4a	1	2	-9	
Is it cheaper to produce or offer? eah4b	1	2	-9	-7
Is it a better quality product or service? eah4c	1	2	-9	-7

EAH.10 By who was the main new or significantly improved product or service developed?
SHOW CARD 8

Entirely by this establishment	1
By this establishment in cooperation with another firm or institution (e.g. parent firm, other firm, research or government institution)	2
Entirely by another firm or institution (e.g. headquarters, sister company or any other firm within your company or independent from your company)	3
DON'T KNOW (SPONTANEOUS)	-9

eah10

EAH.11 During the last three years, did this establishment **attempt to develop** a new or significantly improved product or service that was
READ EACH OPTION ALOUD

	Yes	No	DON'T KNOW (SPONTANEOUS)
Abandoned or suspended before completion eah11a	1	2	-9
Still ongoing at the end of fiscal year [insert last complete fiscal year] eah11b	1	2	-9

QUESTIONNAIRE NUMBER

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PROCESS INNOVATION

H.3 During the last three years, has this establishment introduced any new or significantly improved methods of manufacturing products or offering services? **SHOW CARD 9 FOR EXAMPLES**

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h3

H.4a During the last three years, has this establishment introduced any new or significantly improved logistics, delivery, or distribution methods for inputs, products, or services? **SHOW CARD 10 FOR EXAMPLES**

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h4a

H.4b During the last three years, has this establishment introduced any new or significantly improved supporting activities for your processes, such as maintenance systems or operations for purchasing, accounting, or computing? **SHOW CARD 11 FOR EXAMPLES**

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h4b

INTERVIEWER, PLEASE MARK THE FOLLOWING BASED ON THE ABOVE 3 QUESTIONS

ANY of above 3 questions are "yes"	1
NONE of 3 above questions are "yes"	2

CONTINUE WITH EAH.12

GO TO QUESTION H.5

eah4s

INTERVIEWER READ OUT THE FOLLOWING

The next questions refer to this establishment's **main** new or significantly improved process, that is, the new or significantly improved process that had the largest impact on the operations of the establishment.

EAH.12 Does the **main** new or significantly improved process:
READ EACH OPTION ALOUD

QUESTIONNAIRE NUMBER

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	Yes	No	DON'T KNOW (SPONTANEOUS)	DOESN'T APPLY (SPONTANEOUS)
Automate manual processes, partially or fully? eah12a	1	2	-9	-7
Introduce a new technology or method? eah12b	1	2	-9	-7

EAH.13 By who was the main new or significantly improved process developed?
SHOW CARD 12

Entirely by this establishment	1
By this establishment in cooperation with another firm or institution (e.g. parent firm, other firm, research or government institution)	2
Entirely by another firm or institution (e.g. headquarters, sister company or any other firm within your company or independent from your company)	3
DON'T KNOW (SPONTANEOUS)	-9

eah13

ORGANIZATIONAL INNOVATION

H.5 During the last three years, has this establishment introduced any new or significantly improved organizational structures or management practices? **SHOW CARD 13 FOR EXAMPLES**

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION H.6

h5

EAH.14 During the last three years, did the establishment make any changes in its organizational structure in any of the following ways:
READ EACH OPTION ALOUD

	Yes	No	DON'T KNOW (SPONTANEOUS)	DOESN'T APPLY (SPONTANEOUS)
Create a new unit or department eah14a	1	2	-9	-7
Dissolve any units or department eah14b	1	2	-9	-7
Merge any units or department eah14c	1	2	-9	-7

MARKETING INNOVATION

H.6 During the last three years, has this establishment introduced new or significantly improved marketing methods? **SHOW CARD 14 FOR EXAMPLES**

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h6

QUESTIONNAIRE NUMBER

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INNOVATION ACTIVITIES

H.7 During the last three years, did this establishment spend on formal research and development activities, either in-house or contracted with other companies, excluding market research surveys?
SHOW CARD 15 FOR EXAMPLES

Yes	1	h7
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

H.8 In fiscal year [**insert last complete fiscal year**], how much did this establishment spend on formal research and development activities, either in-house or contracted with other companies?

	LCU	
Cost of formal research and development activities		h8
NONE (SPONTANEOUS)	0	
DON'T KNOW (SPONTANEOUS)	-9	

EAH.15 During the last three years did this establishment provide **formal training** to any of its employees specifically for the development and/or introduction of new or significantly improved products or services and processes?

Yes	1	eah15
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

EAH.16 During the last three years did this establishment **purchase or license any patented or non-patented inventions, or other types of knowledge** for the development of new or significantly improved products or services and processes?

Yes	1	eah16
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

QUESTIONNAIRE NUMBER

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F. CAPACITY

F.1 In fiscal year **[insert last complete fiscal year]**, what was this establishment's output produced as a proportion of the maximum output possible if using all the resources available (capacity utilization)?

	Percent
Capacity utilization	f1 %
DON'T KNOW (SPONTANEOUS)	-9

F.2 In fiscal year **[insert last complete fiscal year]**, how many hours per week did this establishment normally operate? **(INTERVIEWER: RESPONSE CANNOT BE GREATER THAN 168 HOURS)**

	Hours
Typical hours of operation in a week	f2
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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G. LAND AND PERMITS

G.6 Of the buildings occupied by this establishment, what percentage is owned and what percentage is rented or leased? **SHOW CARD 16**

	Percent	DON'T KNOW (SPONTANEOUS)
Owned by this establishment	g6a %	-9
Rented or leased by this establishment	g6b %	-9
Other	g6c %	-9
	100%	

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% UNLESS RESPONDENT DOES NOT KNOW)

G.1 Of the **land** occupied by this establishment, what percent is: **SHOW CARD 17**

	Percent	DON'T KNOW (SPONTANEOUS)	DOES NOT APPLY IS A FLOOR IN A BUILDING (SPONTANEOUS)
Owned by this establishment	g1a %	-9	-7
Rented or leased by this establishment	g1b %	-9	-7
Other	g1c %	-9	-7
	100%		

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% UNLESS RESPONDENT DOES NOT KNOW OR IF ESTABLISHMENT OCCUPIES A FLOOR IN A BUILDING

G.2 Over the last two years, did this establishment submit an application to obtain a construction-related permit?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION G.30
GO TO QUESTION G.30

g2

G.3 In reference to that application for a construction-related permit, approximately how many days did it take to obtain it from the day of the application to the day the permit was granted?

	Days
Wait for a construction-related permit	g3
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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G.4 In reference to that application for a construction-related permit, was an informal gift or payment expected or requested?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

g4

G.30 Using the response options on the card; To what degree is **Access to Land** an obstacle to the current operations of this establishment? **SHOW CARD 18**

							(SPONTANEOUS)	
		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	DON'T KNOW	DOES NOT APPLY
Access to land	g30a	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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I. CRIME

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:

We now turn to another topic.

I.1 In fiscal year [insert last complete fiscal year], did this establishment pay for security, for example equipment, personnel, or professional security services?

Yes	1	<i>GO TO QUESTION I.3</i> <i>GO TO QUESTION I.3</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

i1

I.2 In fiscal year [insert last complete fiscal year], what percentage of this establishment's total annual sales was paid for security, or what was the total annual cost of security?

	Percent
Percentage of total annual sales for security	i2a %
DON'T KNOW (SPONTANEOUS)	-9

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Total annual cost of security	i2b
DON'T KNOW (SPONTANEOUS)	-9

I.3 In fiscal year [insert last complete fiscal year], did this establishment experience losses as a result of theft, robbery, vandalism or arson on this establishment's premises?

Yes	1	<i>GO TO QUESTION I.30</i> <i>GO TO QUESTION I.30</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

i3

I.4 In fiscal year [insert last complete fiscal year], what were the estimated losses as a result of theft, robbery, vandalism or arson that occurred on this establishment's premises either as a percentage of total annual sales or as total annual losses?

	Percent
Losses as percentage of total annual sales	i4a %
DON'T KNOW (SPONTANEOUS)	-9

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Total annual value of losses	i4b
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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I.30	Using the response options on the card; To what degree is Crime, Theft and Disorder an obstacle to the current operations of this establishment? SHOW CARD 19
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						(SPONTANEOUS)		
		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	DON'T KNOW	DOES NOT APPLY
Crime, theft and disorder	i30	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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K. FINANCE

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
I would like to ask you a few questions about how you finance the operations of this establishment.

K.1 In fiscal year [insert last complete fiscal year], what percentage, as a proportion of the value of total annual purchases of material inputs or services was purchased on credit?

	Percent	DON'T KNOW (SPONTANEOUS)
Purchased on credit	k1c %	-9

K.2 In fiscal year [insert last complete fiscal year], what percentage of this establishment's total annual sales of its goods or services was sold on credit?

	Percent	DON'T KNOW (SPONTANEOUS)
Sold on credit	k2c %	-9

K.3 Over fiscal year [insert last complete fiscal year], please estimate the proportion of this establishment's working capital, that is the funds available for day-to-day operations, that was financed from each of the following sources? **SHOW CARD 20**

	Percent	DON'T KNOW (SPONTANEOUS)
Internal funds or retained earnings	k3a %	-9
Borrowed from banks: private and state-owned	k3bc %	-9
Borrowed from non-bank financial institutions which include microfinance institutions, credit cooperatives, credit unions, or finance companies	k3e %	-9
Purchases on credit from suppliers and advances from customers	k3f %	-9
Other, moneylenders, friends, relatives, etc.	k3hd %	-9
	100 %	

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

K.4 In fiscal year [insert last complete fiscal year], did this establishment purchase any new or used fixed assets, such as machinery, vehicles, equipment, land or buildings?

Yes	1	GO TO QUESTION K.6 GO TO QUESTION K.6
No	2	
DON'T KNOW (SPONTANEOUS)	-9	
		k4

QUESTIONNAIRE NUMBER

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N.5 In fiscal year **[insert last complete fiscal year]**, how much did this establishment spend on purchases of:
INTERVIEWER: READ OUT

	LCUs	DON'T KNOW (SPONTANEOUS)
New or used machinery, vehicles, and equipment	n5a	-9
Land and buildings	n5b	-9

K.5 Over fiscal year **[insert last complete fiscal year]**, please estimate the proportion of this establishment's total purchase of fixed assets that was financed from each of the following sources:
SHOW CARD 21

	Percent	OR	Amount LCU	DON'T KNOW (SPONTANEOUS)
Internal funds or retained earnings	k5a%		k5a1	-9
Owners' contribution or issued new equity shares	k5i %		k5i1	-9
Borrowed from banks: private and state-owned	k5bc%		k5bc1	-9
Borrowed from non-bank financial institutions	k5e %		k5e1	-9
Purchases on credit from suppliers and advances from customers	k5f %		k5f1	-9
Other, moneylenders, friends, relatives, bonds, etc	k5hdj%		k5hdj1	-9
	100%			

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

K.6 Now let's talk about the establishment's present situation. At this time, does this establishment have a checking (current) or savings account?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

k6

K.7 At this time, does this establishment have an overdraft facility?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

k7

K.8 At this time, does this establishment have a line of credit or a loan from a financial institution?

Yes	1	GO TO QUESTION K.15d GO TO QUESTION K.15d
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

k8

QUESTIONNAIRE NUMBER

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K.9 Referring to the most recent line of credit or loan, what type of financial institution granted this loan?
SHOW CARD 22

Private commercial banks	1
State-owned banks or government agency	2
Non-bank financial institutions	3
Other	4
DON'T KNOW (SPONTANEOUS)	-9

k9

K.10 Referring only to this most recent line of credit or loan, in what year was the most recent line of credit or loan approved?

	Year
Year most recent line of credit or loan approved	k10
DON'T KNOW (SPONTANEOUS)	-9

INTERVIEWER: PROVIDE FOUR DIGITS FOR YEAR

K.11 Referring only to this most recent line of credit or loan, what was its value at the time of approval?

	LCUs
Size of most recent line of credit or loan approved	k11
REFUSAL (SPONTANEOUS)	-8
DON'T KNOW (SPONTANEOUS)	-9

K.13 Referring only to this most recent line of credit or loan, did the financing require collateral?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION K.15b
GO TO QUESTION K.15b

k13

K.14 Referring only to this most recent line of credit or loan, what type of collateral was required?
INTERVIEWER: READ OUT

Collateral		Yes	No	DON'T KNOW (SPONTANEOUS)
Land, buildings under ownership of the establishment	k14a	1	2	-9
Machinery and equipment including movables	k14b	1	2	-9
Accounts receivable and inventories	k14c	1	2	-9
Personal assets of owner (house, etc.)	k14d	1	2	-9
Other forms of collateral not included in the categories above	k14e	1	2	-9

QUESTIONNAIRE NUMBER

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K.15a Referring only to this most recent line of credit or loan, what was the approximate value of the collateral required?

	LCUs
Value of collateral	k15a
DON'T KNOW (SPONTANEOUS)	-9

K.15b What is the total number of open lines of credit or outstanding loans held by this establishment?

	Number	
Total number of open lines of credit or outstanding loans	k15b	<i>IF 1, GO TO QUESTION K.15d</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION K.15d</i>

K.15c What is the total value of open lines of credit or outstanding loans held by this establishment?

	LCUs
Total value of open lines of credit or outstanding loans	k15c
REFUSAL (SPONTANEOUS)	-8
DON'T KNOW (SPONTANEOUS)	-9

K.15d At this time, does the owner or owners of this establishment have any outstanding personal loans that are used to finance this establishment's business activities?

Yes	1	
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

k15d

K.16 Referring again to the last fiscal year [**insert last complete fiscal year**], did this establishment apply for any lines of credit or loans?

Yes	1	<i>GO TO QUESTION K.20a1</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION K.21</i>

k16

K.17 What was the **main** reason why this establishment did not apply for any line of credit or loan?
SHOW CARD 23

No need for a loan - establishment had sufficient capital	1	<i>GO TO QUESTION K.21</i>
Application procedures were complex	2	<i>GO TO QUESTION K.21</i>
Interest rates were not favorable	3	<i>GO TO QUESTION K.21</i>
Collateral requirements were too high	4	<i>GO TO QUESTION K.21</i>
Size of loan and maturity were insufficient	5	<i>GO TO QUESTION K.21</i>
Did not think it would be approved	6	<i>GO TO QUESTION K.21</i>

QUESTIONNAIRE NUMBER

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Other	7
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION K.21
GO TO QUESTION K.21

k17

K.20a1 Referring only to this most recent application for a line of credit or loan, what was the outcome of that application? **SHOW CARD 24**

Application was approved in full	1
Application was approved in part	2
Application was rejected	3
Application was withdrawn	4
APPLICATION STILL IN PROCESS	-6
DON'T KNOW (SPONTANEOUS)	-9

k20a1

K.21 In fiscal year [insert last complete fiscal year], did this establishment have its annual financial statements checked and certified by an external auditor?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

k21

K.30 Using the response options on the card; To what degree is **Access to Finance** an obstacle to the current operations of this establishment? **SHOW CARD 25**

							(SPONTANEOUS)	
		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	DON'T KNOW	DOES NOT APPLY
Access to finance	k30	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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J. BUSINESS-GOVERNMENT RELATIONS

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:

The following questions assess how establishments, such as this one, deal with government officials and their agencies.

J.1	I am going to read one statement describing the courts system and how it could affect business. Please tell me if you Strongly disagree, Tend to disagree, Tend to agree, or Strongly agree. SHOW CARD 26
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	Strongly disagree	Tend to disagree	Tend to agree	Strongly agree	(SPONTANEOUS)	
					DON'T KNOW	DOES NOT APPLY
"The court system is fair, impartial and uncorrupted." h7a	1	2	3	4	-9	-7

J.2	In a typical week over the last year, what percentage of total senior management's time was spent on dealing with requirements imposed by government regulations? (By senior management I mean managers, directors, and officers above direct supervisors of production or sales workers. Some examples of government regulations are taxes, customs, labor regulations, licensing and registration, including dealing with officials and completing forms)
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	Percent
Senior management's time spent on dealing with regulations	j2 %
NO TIME WAS SPENT	0
DON'T KNOW (SPONTANEOUS)	-9

J.3	Over the last year, was this establishment visited or inspected by tax officials?
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Yes	1	GO TO QUESTION J.6a GO TO QUESTION J.6a
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

j3

J.4	Over the last year, how many times was this establishment either inspected by tax officials or required to meet with them?
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	Number
Times inspected or met with tax officials	j4
DON'T KNOW (SPONTANEOUS)	-9

J.5	In any of these inspections or meetings was a gift or informal payment expected or requested?
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QUESTIONNAIRE NUMBER

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Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

j5

J.6a Over the last year, has this establishment secured or attempted to secure a government contract?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION J.7
GO TO QUESTION J.7

j6a

J.6 When establishments like this one do business with the government, what percent of the contract value would be typically paid in informal payments or gifts to secure the contract?

	Percent
Percent of the contract value paid as informal payments or gifts	j6 %
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8
NO PAYMENTS	0

J.7 It is said that establishments are sometimes required to make gifts or informal payments to public officials to “get things done” with regard to customs, taxes, licenses, regulations, services etc. On average, what percentage of total annual sales, or estimated total annual value, do establishments like this one pay in informal payments or gifts to public officials for this purpose?

	Percent
Percentage of total annual sales paid as informal payment	j7a %
NO PAYMENTS OR GIFTS ARE PAID	0
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Total annual informal payment	j7b
NO PAYMENTS OR GIFTS ARE PAID	0
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

QUESTIONNAIRE NUMBER

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J.10 Over the last two years, did this establishment submit an application to obtain an import license?

Yes	1	<i>GO TO QUESTION J.13</i> <i>GO TO QUESTION J.13</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

j10

J.11 Approximately how many days did it take to obtain this import license from the day of the application to the day it was granted?

	Days
Wait for import license	j11
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

J.12 In reference to that application for an import license, was an informal gift or payment expected or requested?

Yes	1	
No	2	
DON'T KNOW (SPONTANEOUS)	-9	
REFUSAL (SPONTANEOUS)	-8	

j12

J.13 Over the last two years, did this establishment submit an application to obtain an operating license?

Yes	1	<i>GO TO QUESTION J.30</i> <i>GO TO QUESTION J.30</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

j13

J.14 Approximately how many days did it take to obtain this operating license from the day of the application to the day it was granted?

	Days
Wait for operating license	j14
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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J.15 In reference to that application for an operating license, was an informal gift or payment expected or requested?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

j15

J.30 Using the response options on the card; To what degree is/are **[INSERT OPTION]** an obstacle to the current operations of this establishment?
SHOW CARD 27

ROTATE OPTIONS	No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
						DON'T KNOW	DOES NOT APPLY
Tax rates j30a	0	1	2	3	4	-9	-7
Tax administration j30b	0	1	2	3	4	-9	-7
Business licensing and permits j30c	0	1	2	3	4	-9	-7
Political instability j30e	0	1	2	3	4	-9	-7
Corruption j30f	0	1	2	3	4	-9	-7
Courts h30	0	1	2	3	4	-9	-7

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L. LABOR

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
Now I would like to ask you a few questions about this establishment's labor force.

L.1 At the end of fiscal year **[insert last complete fiscal year]**, how many permanent, full-time individuals worked in this establishment? Please include all employees and managers (Permanent, full-time employees are defined as all paid employees that are contracted for a term of one or more fiscal years and/or have a guaranteed renewal of their employment contract and that work a full shift)
(INTERVIEWER: INCLUDE INTERVIEWEE IF APPLICABLE).

	Number
Permanent, full-time workers end of last fiscal year	11
DON'T KNOW (SPONTANEOUS)	-9

L.2 Looking back, at the end of fiscal year **[insert last complete fiscal year minus two]**, how many permanent, full-time individuals worked in this establishment? Please include all employees and managers **(INTERVIEWER: INCLUDE INTERVIEWEE IF APPLICABLE).**

	Number
Permanent, full-time workers in [insert last complete fiscal year minus two]	12
IF ESTABLISHMENT WAS NOT IN BUSINESS IN [insert last complete fiscal year minus two]	-7
DON'T KNOW (SPONTANEOUS)	-9

L.3 Coming back to fiscal year **[insert last complete fiscal year]**, how many permanent, full-time individuals in this establishment were: **(INTERVIEWER: READ EACH CATEGORY)**

	Number	DON'T KNOW (SPONTANEOUS)
Production workers	13a	-9
Non-production workers [e.g., managers, administration, sales]	13b	-9

EAL.4 At the end of fiscal year **[insert last complete fiscal year]**, how many permanent, full-time individuals working in this establishment were: **INTERVIEWER: READ EACH CATEGORY**

		Number	DON'T KNOW (SPONTANEOUS)
Production	Skilled workers	14a	-9
	Unskilled workers	14b	-9
Non-production	Skilled workers [e.g., managers, administration, sales]	eal4c	-9
	Unskilled workers	eal4d	-9

QUESTIONNAIRE NUMBER

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EAL.5 At the end of fiscal year **[insert last complete fiscal year]**, how many female permanent full-time individuals working in this establishment were in the following categories?

		Number	DON'T KNOW (SPONTANEOUS)
Production	Female skilled production workers	eal5a	-9
	Female unskilled production workers	eal5b	-9
Non-production	Female skilled non-production workers	eal5c	-9
	Female unskilled non-production workers	eal5d	-9

INTERVIEWER, PLEASE MARK THE FOLLOWING BASED ON QUESTION EAL.5

AT LEAST ONE of the above 4 numbers is "Don't know"	1	CONTINUE WITH L.5
ALL of the above 4 numbers have been provided	2	GO TO QUESTION L.6

eal5s

L.5 At the end of fiscal year **[insert last complete fiscal year]**, how many permanent full-time individuals working in this establishment in the following categories were female?

	Number	DON'T KNOW (SPONTANEOUS)
Female permanent full-time production workers	l5a	-9
Female permanent full-time non-production workers	l5b	-9

L.6 How many full-time seasonal or temporary employees did this establishment employ during **[insert last complete fiscal year]**?
(Full-time, seasonal or temporary workers are all paid short-term (i.e. for less than a year) employees with no guarantee of renewal of contract employment and work full-time)

	Number	
Full-time seasonal or temporary workers employed last fiscal year	l6	
NO FULL-TIME SEASONAL OR TEMPORARY WORKERS	0	GO TO QUESTION L.9a
DON'T KNOW (SPONTANEOUS)	-9	GO TO QUESTION L.9a

L.6a How many full-time seasonal or temporary employees employed during **[insert last complete fiscal year]** were female?

	Number
Full-time female seasonal or temporary workers employed last fiscal year	l6a
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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L.8 What was the average length of employment of all full-time temporary employees in fiscal year **[insert last complete fiscal year]**?

	Months
Average length full-time seasonal or temporary employment last fiscal year, in months	18
LESS THAN ONE MONTH	1
DON'T KNOW (SPONTANEOUS)	-9

L.9a What is the average number of years of education of a typical permanent full-time production worker employed in this establishment?

	Number
Average number of years of education of typical production worker	19a
DON'T KNOW (SPONTANEOUS)	-9

L.9a2 What is the average number of years of education of a typical female permanent full-time production worker employed in this establishment?

	Number
Average number of years of education of typical female production worker	19a2
DON'T KNOW (SPONTANEOUS)	-9
NO FEMALE PRODUCTION WORKERS	-7

L.9b What is the percentage of full-time permanent workers who completed secondary school?

	Percent
Percentage of full time permanent workers who completed secondary school	19b
DON'T KNOW (SPONTANEOUS)	-9

L.10 Over fiscal year **[insert last complete fiscal year]**, did this establishment have formal training programs for its permanent, full-time employees?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION EAL.10b

110

EAL.10a Please indicate the main reason why this establishment did not have formal training programs?
SHOW CARD 28

QUESTIONNAIRE NUMBER

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Lack of external agencies that can provide training	1	<i>GO TO QUESTION EAL.12</i>
Lack of relevant training programs related to this establishment's work	2	<i>GO TO QUESTION EAL.12</i>
The quality of available training programs is low	3	<i>GO TO QUESTION EAL.12</i>
High cost of training programs	4	<i>GO TO QUESTION EAL.12</i>
No need for formal training programs	5	<i>GO TO QUESTION EAL.12</i>
Unaware of training programs	6	<i>GO TO QUESTION EAL.12</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION EAL.12</i>
		eal10a

EAL.10b What was the primary focus of the formal training programs?
SHOW CARD 29

Managerial and leadership skills	1
Interpersonal and communication skills	2
Writing skills	3
Work ethic and commitment	4
Foreign language skills	5
Computer or general IT skills	6
Technical skills (other than IT), vocational, or job-specific skills	7
Other	8
DON'T KNOW (SPONTANEOUS)	-9

eal10b

EAL.11 Referring to the training programs run over fiscal year [insert last complete fiscal year], what percentage of permanent, full-time employees of the following categories received formal training?

		Percent	IF NO EMPLOYEES IN A CATEGORY WERE TRAINED	DON'T KNOW (SPONTANEOUS)	DOES NOT APPLY
Production	Skilled production workers trained	eal11a%	0	-9	-7
	Unskilled production workers trained	eal11b%	0	-9	-7
Non-production	Skilled non-production workers trained	eal11c%	0	-9	-7
	Unskilled non-production workers trained	eal11d%	0	-9	-7

EAL.12 Over the last two years, were any of the permanent full-time workers of this establishment terminated or left due to lack of the required skills?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

eal12

QUESTIONNAIRE NUMBER

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EAL.13 Over the last two years, were any of the permanent full-time workers of this establishment terminated or left due to poor performance?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

eal13

FRICTIONS IN LABOR MARKETS

EAL.14 Over the last two years, did this establishment have any vacancies?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION MYAL.52
GO TO QUESTION MYAL.52

eal14

EAL.15a Over the last two years, how many vacancies were for skilled non-production workers?

	Number
Number of vacancies for skilled non-production workers	eal15a
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO EAL.15b

EAL.16a How many of these vacancies for skilled non-production workers were filled?

	Number
Number of vacancies for skilled non-production workers that were filled	eal16a
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO MYAL.17

EAL.17a What was the average number of weeks required to fill these vacancies for skilled non-production workers?

	Number
Average number of weeks to fill vacancies for skilled non-production workers	eal17a
DON'T KNOW (SPONTANEOUS)	-9

MYAL.17 Over the last two years, did this establishment try to hire any managers or senior-level professionals?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION MYAL.24
GO TO QUESTION MYAL.24

myal17

MYAL.18 Did the establishment encounter any of the following problems when trying to hire a manager or senior-level professional?

QUESTIONNAIRE NUMBER

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READ EACH OPTION ALOUD

Problem		Yes	No	DON'T KNOW (SPONTANEOUS)
There were no or few applicants	myal18a	1	2	-9
Applicants lacked required skills	myal18b	1	2	-9
Applicants expected higher wages than the establishment e can offer	myal18c	1	2	-9
Applicants did not like the working conditions	myal18d	1	2	-9

MYAL.18e Did the establishment encounter any other problems when trying to hire a manager or senior-level professional?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION MYAL.24
GO TO QUESTION MYAL.24

myal18e

MYAL.18x Please specify other problems encountered by the establishment when trying to hire a manager or senior-level professional.

Specify Problem	myal18x
-----------------	----------------

MYAL.24 Over the last two years, did this establishment try to hire any non-production technicians, associate professionals, and sales workers?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION EAL.15b
GO TO QUESTION EAL.15b

myal24

MYAL.25 Did the establishment encounter any of the following problems when trying to hire non-production technicians, associate professionals, and sales workers?
READ EACH OPTION ALOUD

Problem		Yes	No	DON'T KNOW (SPONTANEOUS)
There were no or few applicants	myal25a	1	2	-9
Applicants lacked required skills	myal25b	1	2	-9
Applicants expected higher wages than the establishment e can offer	myal25c	1	2	-9
Applicants did not like the working conditions	myal25d	1	2	-9

QUESTIONNAIRE NUMBER

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MYAL.25e Did the establishment encounter any other problems when trying to hire non-production technicians, associate professionals, and sales workers?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

*GO TO QUESTION EAL.15b
GO TO QUESTION EAL.15b*

myal25e

MYAL.25x Please specify other problems encountered by the establishment when trying to hire non-production technicians, associate professionals, and sales workers.

Specify Problem	myal25x
-----------------	----------------

EAL.15b Over the last two years, how many vacancies were for unskilled non-production workers?

	Number
Number of vacancies for unskilled non-production workers	eal15b
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO EAL.15c

EAL.16b How many of these vacancies for unskilled non-production workers were filled?

	Number
Number of vacancies for unskilled non-production workers that were filled	eal16b
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO MYAL.32

EAL.17b What was the average number of weeks required to fill these vacancies for unskilled non-production workers?

	Number
Average number of weeks to fill vacancies for unskilled non-production workers	eal17b
DON'T KNOW (SPONTANEOUS)	-9

MYAL.32 Did the establishment encounter any of the following problems when trying to hire unskilled non-production workers?
READ EACH OPTION ALOUD

Problem		Yes	No	DON'T KNOW (SPONTANEOUS)
There were no or few applicants	myal32a	1	2	-9
Applicants lacked required skills	myal32b	1	2	-9
Applicants expected higher wages than the establishment e can offer	myal32c	1	2	-9
Applicants did not like the working conditions	myal32d	1	2	-9

QUESTIONNAIRE NUMBER

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MYAL.32e Did the establishment encounter any other problems when trying to hire unskilled non-production workers?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION EAL.15c
GO TO QUESTION EAL.15c

myal32e

MYAL.32x Please specify other problems encountered by the establishment when trying to hire unskilled non-production workers.

Specify Problem	myal32x
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EAL.15c Over the last two years, how many vacancies were for skilled production workers?

	Number
Number of vacancies for skilled production workers	eal15c
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO EAL.15d

EAL.16c How many of these vacancies for skilled production workers were filled?

	Number
Number of vacancies for skilled production workers that were filled	eal16c
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO MYAL.39

EAL.17c What was the average number of weeks required to fill these vacancies for skilled production workers?

	Number
Average number of weeks to fill vacancies for skilled production workers	eal17c
DON'T KNOW (SPONTANEOUS)	-9

MYAL.39 Did the establishment encounter any of the following problems when trying to hire skilled production workers?
READ EACH OPTION ALOUD

Problem		Yes	No	DON'T KNOW (SPONTANEOUS)
There were no or few applicants	myal39a	1	2	-9
Applicants lacked required skills	myal39b	1	2	-9
Applicants expected higher wages than the establishment e can offer	myal39c	1	2	-9
Applicants did not like the working conditions	myal39d	1	2	-9

QUESTIONNAIRE NUMBER

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MYAL.39e Did the establishment encounter any other problems when trying to hire skilled production workers?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

*GO TO QUESTION EAL.15d
GO TO QUESTION EAL.15d*

myal39e

MYAL.39x Please specify other problems encountered by the establishment when trying to hire skilled production workers.

Specify Problem	myal39x
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EAL.15d Over the last two years, how many vacancies were for unskilled production workers?

	Number
Number of vacancies for unskilled production workers	eal15d <i>IF 0, GO TO EAL.18</i>
DON'T KNOW (SPONTANEOUS)	-9

EAL.16d How many of these vacancies for unskilled production workers were filled?

	Number
Number of vacancies for unskilled production workers that were filled	eal16d <i>IF 0, GO TO MYAL.46</i>
DON'T KNOW (SPONTANEOUS)	-9

EAL.17d What was the average number of weeks required to fill these vacancies for unskilled production workers?

	Number
Average number of weeks to fill vacancies for unskilled production workers	eal17d
DON'T KNOW (SPONTANEOUS)	-9

MYAL.46 Did the establishment encounter any of the following problems when trying to hire unskilled production workers?
READ EACH OPTION ALOUD

Problem		Yes	No	DON'T KNOW (SPONTANEOUS)
There were no or few applicants	myal46a	1	2	-9
Applicants lacked required skills	myal46b	1	2	-9
Applicants expected higher wages than the establishment can offer	myal46c	1	2	-9
Applicants did not like the working conditions	myal46d	1	2	-9

MYAL.46e Did the establishment encounter any other problems when trying to hire unskilled production workers?

QUESTIONNAIRE NUMBER

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Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION EAL.18
GO TO QUESTION EAL.18

myal46e

MYAL.46x	Please specify other problems encountered by the establishment when trying to hire unskilled production workers.
-----------------	--

Specify Problem	myal46x
-----------------	----------------

EAL.18	Over the last two years, using this card, please indicate the degree of difficulty in finding employees that have the following skills: SHOW CARD 30 READ EACH OPTION ALOUD
---------------	--

Skill	Very easy	Easy	Difficult	Very difficult	DON'T KNOW (SPONTANEOUS)	DOESN'T APPLY (SPONTANEOUS)
Managerial and leadership skills eal18a	1	2	3	4	-9	-7
Interpersonal and communication skills eal18b	1	2	3	4	-9	-7
Writing skills eal18c	1	2	3	4	-9	-7
Work ethic and commitment eal18d	1	2	3	4	-9	-7
Foreign language skills eal18e	1	2	3	4	-9	-7
Computer or general IT skills eal18f	1	2	3	4	-9	-7
Technical skills (other than IT), vocational, or job-specific skills eal18g	1	2	3	4	-9	-7

EAL.19	How many unfilled vacancies does this establishment currently have?
---------------	---

	Number
Establishment current unfilled vacancies eal19	-9
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO MYAL.52
GO TO MYAL.52

EAL.20	Have any of these unfilled vacancies being vacant for more than four months?
---------------	--

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

eal20

QUESTIONNAIRE NUMBER

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MYAL.52 In one year from now, how many permanent, full-time individuals do you expect this establishment to have in **[insert category]**?
READ EACH OPTION ALOUD

	Number	DON'T KNOW (SPONTANEOUS)
Skilled non-production workers: Managers and senior-level professionals	myal52a1	-9
Skilled non-production workers: Technicians, associate professionals, and sales	myal52a2	-9
Unskilled non-production workers	myal52b	-9
Skilled production workers	myal52c	-9
Unskilled production workers	mya52d	-9

L.30 Using the response options on the card; To what degree are **Labor Regulations** an obstacle to the current operations of this establishment? **SHOW CARD 31**

Using the response options on the card; To what degree is **an Inadequately Educated Workforce** an obstacle to the current operations of this establishment? **SHOW CARD 31**

	No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
						DON'T KNOW	DOES NOT APPLY
Labor regulations I30a	0	1	2	3	4	-9	-7
Inadequately educated workforce I30b	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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M. BUSINESS ENVIRONMENT

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:

M.1 By looking at card [insert card number] can you tell me which of the elements of the business environment included in the list, if any, currently represents the biggest obstacle faced by this establishment
INTERVIEWER: DO NOT READ OUT

- | |
|---|
| 1-Access to finance |
| 2-Access to land |
| 3-Business licensing and permits |
| 4-Corruption |
| 5-Courts |
| 6-Crime, theft and disorder |
| 7-Customs and trade regulations |
| 8-Electricity |
| 9-Inadequately educated workforce |
| 10-Labor regulations |
| 11-Political instability |
| 12-Practices of competitors in the informal sector |
| 13-Tax administration |
| 14-Tax rates |
| 15-Transport |

Biggest obstacle	m1a
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY (SPONTANEOUS)	-7

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N. PERFORMANCE

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:

Now, we would like to ask you a few questions about the financial results of this establishment. It is important that this information be as accurate as possible. The individual data are treated as confidential – the identity of your establishment will not be revealed at any point. Please provide the following information from the financial statements of this establishment.

N.2 From this establishment’s Income Statement for fiscal year [insert last complete fiscal year], please provide the following information: **SHOW CARD 32**

	LCUs	DON'T KNOW (SPONTANEOUS)
Total annual cost of labor including wages, salaries, bonuses, social security payments	n2a	-9
Total annual cost of raw materials and intermediate goods used in production	n2e	-9
Total annual cost of fuel	n2f	-9
Total annual cost of electricity	n2b	-9
Total cost of sales (cost of production)	n2p	-9

N.6 From this establishment’s Balance Sheet for fiscal year [insert last complete fiscal year], what was the net book value, that is the value of assets after depreciation, of the following:

	LCUs	DON'T KNOW (SPONTANEOUS)
Machinery, vehicles, and equipment	n6a	-9
Land and buildings	n6b	-9

N.7 Hypothetically, if this establishment were to purchase the assets it **uses now**, in their current condition and regardless of whether the establishment owns them or not, how much would they cost, independently of whether they are owned, rented or leased?

	LCUs	DON'T KNOW (SPONTANEOUS)
Machinery, vehicles, and equipment	n7a	-9
Land and buildings	n7b	-9

QUESTIONNAIRE NUMBER

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A.15a Please complete the following information about the interviewee(s)

	Position in the firm	Years with the firm	Gender
Main respondent	a15a1ax	a15a2a	a15a3
Second respondent	a15a1bx	a15a2b	a15b3
Third respondent	a15a1cx	a15a2c	a15c3

ENTER 1 WHEN YEARS WITH THE FIRM IS LESS THAN ONE. FOR GENDER 1: MALE, 2: FEMALE

THE SURVEY ENDS HERE
THANK YOU VERY MUCH FOR YOUR COOPERATION.

A.15 Time face-to-face interview ends:

Day (dd)	Month (mm)	Year (yyyy)	Hour (00 to 23)	Minutes (00 to 59)
a15d	a15m	a15y	a15h	a15min

INTERVIEWERS PLEASE ANSWER AT END OF THE INTERVIEW:

A.16 It is my perception that the responses to the questions regarding opinions and perceptions:

Truthful	1
Somewhat truthful	2
Not truthful	3

a16

A.17 The responses to the questions regarding figures (productivity and employment numbers):

Are taken directly from establishment records	1
Are estimates computed with some precision	2
Are arbitrary and unreliable numbers	3
Are in some case taken from books in some case estimates	4

a17

INTERVIEWER COMMENTS:

<div style="text-align: right; margin-top: 10px;">a17x</div>
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QUESTIONNAIRE NUMBER

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(Problems occurred/extraordinary circumstances which could influence results)

SUPERVISORS PLEASE ANSWER:

A.18	This questionnaire was completed in:
-------------	--------------------------------------

One visit in face-to-face interview with one person	1
One visit in face-to-face interview with different managers/staff	2
Several visits	3

STOP HERE

a18

A.19	If option 2 or 3 in A.18 , estimate duration of the whole interview
-------------	--

Hour	Minutes

a19h

a19m

Regression model validation

1. Evaluation of the relationship between foreign participation and the peculiarities of managing firms by using binary logistic regression, 2015 (Model 1).

ACTIVITY = F (lnL, AGE, EXP, EDUs, FDI or FDI_s, SOE, IND, REG), where ACTIVITY is one of the characteristics of enterprise management that we have identified

```
. logit HR lnL AGE EXP EDUs FDI SOE IND REG
```

```
Iteration 0:  log likelihood = -551.69898
Iteration 1:  log likelihood = -519.02062
Iteration 2:  log likelihood = -518.39917
Iteration 3:  log likelihood = -518.39896
Iteration 4:  log likelihood = -518.39896
```

```
Logistic regression              Number of obs   =      1050
                                LR chi2(8)      =      73.09
                                Prob > chi2       =      0.0000
Log likelihood = -518.39896      Pseudo R2      =      0.0664
```

HR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.4351516	.0605425	7.15	0.000	.3144905	.5518127
AGE	.007984	.008642	0.58	0.564	-.011954	.021922
EXP	-.004516	.0080095	-0.20	0.840	-.0173143	.0140823
EDUs	.0475275	.2418765	-0.08	0.932	-.4945968	.4535417
FDI	-.2868316	.2832593	-1.36	0.175	-.9390097	.1713464
SOE	-.3386563	.4083346	-0.83	0.405	-1.140077	.4605648
IND	-.5534507	.2519639	-1.97	0.049	-.9892909	-.0016104
REG	-.4485535	.2155426	0.04	0.009	-.4139023	.4310092
_cons	-2.390139	.2623786	-9.11	0.000	-2.904392	-1.875887

```
. logit RD lnL AGE EXP EDUs FDI SOE IND REG
```

```
Iteration 0:  log likelihood = -523.40156
Iteration 1:  log likelihood = -482.29658
Iteration 2:  log likelihood = -480.49631
Iteration 3:  log likelihood = -480.48713
Iteration 4:  log likelihood = -480.48713
```

```
Logistic regression              Number of obs   =      1050
                                LR chi2(8)      =      77.62
                                Prob > chi2       =      0.0000
Log likelihood = -480.48713      Pseudo R2      =      0.0740
```

RD	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.3472349	.061663	5.68	0.000	.2293775	.4710922
AGE	.0125925	.0086105	0.88	0.378	-.0092838	.0244689
EXP	.014334	.0081878	1.75	0.080	-.0017138	.0303818
EDUs	.7133632	.2713772	2.26	0.013	.0824737	1.146253
FDI	.0094644	.2775946	-0.36	0.717	-.6445398	.4436111
SOE	-.0042372	.397079	0.00	0.998	-.7770234	.7794978
IND	-.5496369	.2835286	-1.58	0.015	-1.002343	.1090691
REG	-.4646326	.2856106	-3.49	0.000	-1.556419	-.4368462
_cons	-2.932912	.285231	-10.28	0.000	-3.491954	-2.373869

. logit NP lnL AGE EXP EDUs FDI SOE IND REG

Iteration 0: log likelihood = -607.47299
 Iteration 1: log likelihood = -571.68705
 Iteration 2: log likelihood = -570.86959
 Iteration 3: log likelihood = -570.86623
 Iteration 4: log likelihood = -570.86623

Logistic regression

Number of obs = 1050
 LR chi2(8) = 59.58
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.0493

Log likelihood = -570.86623

NP	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.2267943	.0563453	4.03	0.000	.1163596	.337229
AGE	.0021075	.0082349	-0.38	0.706	-.0192476	.0130326
EXP	.0082221	.007536	1.62	0.115	-.0025482	.0269924
EDUs	.6725956	.2300194	2.54	0.011	.1337658	1.035425
FDI	-.5782103	.2766355	-2.56	0.110	-1.250406	-.1660148
SOE	.7149842	.3906796	1.87	0.061	-.0347338	1.496702
IND	-.2375553	.2438099	-0.54	0.589	-.6094138	.3463033
REG	-0.499194	.2475069	-4.40	0.000	-1.575299	-.6050898
_cons	-1.962417	.248867	-7.89	0.000	-2.450187	-1.474646

. logit IC lnL AGE EXP EDUs FDI SOE IND REG

Iteration 0: log likelihood = -457.93133
 Iteration 1: log likelihood = -354.76288
 Iteration 2: log likelihood = -341.32621
 Iteration 3: log likelihood = -340.86755
 Iteration 4: log likelihood = -340.86623
 Iteration 5: log likelihood = -340.86623

Logistic regression

Number of obs = 1050
 LR chi2(8) = 234.23
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.2566

Log likelihood = -340.86623

IC	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.6570523	.0770133	8.53	0.000	.506109	.8079956
AGE	.017462	.010525	1.61	0.101	-.0036666	.0375906
EXP	-.0040869	.0098258	-0.42	0.677	-.023345	.0151712
EDUs	.8946932	.3697509	2.43	0.015	.1749947	1.624392
FDI	.9557228	.2799905	3.48	0.001	.4249514	1.522494
SOE	1.204971	.4281571	2.81	0.005	.3637984	2.042143
IND	-.193737	.395135	-0.52	0.606	-.9781872	.5707133
REG	.0951213	.2845597	-0.30	0.762	-.643848	.4716055
_cons	-5.14285	.4244254	-12.12	0.000	-5.974709	-4.310991

logit FT lnL AGE EXP EDUs FDI SOE IND REG

Iteration 0: log likelihood = -231.34603
 Iteration 1: log likelihood = -207.98588
 Iteration 2: log likelihood = -201.2511
 Iteration 3: log likelihood = -201.13216
 Iteration 4: log likelihood = -201.1317
 Iteration 5: log likelihood = -201.1317

Logistic regression

Number of obs = 1050
 LR chi2(7) = 50.99
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1116

Log likelihood = -201.1317

PT	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.3787043	.0936007	4.20	0.000	.2092504	.5761583
AGE	.0171551	.0125858	1.05	0.296	-.0115127	.0378229
EXP	-.0211963	.0136382	-1.19	0.235	-.0429267	.0105342
EDUs	-.0259824	.00012	3.55	0.210	.0001906	.0006611
FDI	1.029047	.325613	3.01	0.003	.3408573	1.617237
SOE	-1.269025	.7609958	-1.60	0.109	-2.71155	.2714991
IND	-.7888058	.6177901	-1.06	0.288	-1.866652	.5550405
REG	-.1169523	.6189149	-2.54	0.111	-2.782551	-.3564488
_cons	-3.017265	.7157891	-4.22	0.000	-4.420186	-1.614344

logit EX lnL AGE EXP EDUs FDI SOE IND REG

Iteration 0: log likelihood = -592.87772
 Iteration 1: log likelihood = -492.7342
 Iteration 2: log likelihood = -489.04217
 Iteration 3: log likelihood = -489.01022
 Iteration 4: log likelihood = -489.01022

Logistic regression

Number of obs = 1050
 LR chi2(8) = 224.45
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.1892

Log likelihood = -489.01022

EX	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.5374604	.0636213	8.23	0.000	.3987649	.6481559
AGE	-.007413	.0088474	-0.50	0.618	-.0217536	.0129276
EXP	.0076915	.008046	0.33	0.738	-.0130783	.0184614
EDUs	.5299821	.2568081	2.45	0.014	.1246474	1.131317
FDI	.6885713	.2727218	3.09	0.002	.3090463	1.378096
SOE	-.1082574	.4070901	-0.26	0.794	-.9041393	.6916245
IND	.6667886	.2933787	1.94	0.052	-.0052232	1.1448
REG	.7123431	.2251579	-0.59	0.014	-.5736444	.3089584
_cons	-3.861451	.3225044	-11.97	0.000	-4.493548	-3.229354

2. Evaluation of the relationship between foreign participation and the peculiarities of managing firms by using binary logistic regression, 2015 (Model 2).

```
. logit HR lnL AGE EXP EDUs FDIs SOE IND REG
```

```
Iteration 0: log likelihood = -551.69898
Iteration 1: log likelihood = -519.87497
Iteration 2: log likelihood = -519.28169
Iteration 3: log likelihood = -519.28151
Iteration 4: log likelihood = -519.28151
```

```
Logistic regression      Number of obs   =      1050
                        LR chi2(8)                =       73.07
                        Prob > chi2                 =       0.0000
Log likelihood = -519.28151  Pseudo R2        =       0.0668
```

HR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.4340211	.056612	7.14	0.000	.2930637	.5149786
AGE	.0061662	.0085331	0.72	0.470	-.0105584	.0228907
EXP	-.0047791	.0079919	-0.22	0.824	-.0174428	.0138847
EDUs	.0420712	.2418804	-0.14	0.885	-.5091482	.4390057
FDIs	-.003916	.0164234	-0.36	0.719	-.0381053	.0262732
SOE	-.3703909	.776347	-0.10	0.917	-1.603003	1.440221
IND	-.5495968	.2519825	-2.02	0.044	-1.002474	-.0147201
REG	-.4436881	.2155378	0.07	0.012	-.4067583	.4381343
_cons	-2.313095	.2550256	-9.07	0.000	-2.812936	-1.813254

```
. logit RD lnL AGE EXP EDUs FDIs SOE IND REG
```

```
Iteration 0: log likelihood = -523.40156
Iteration 1: log likelihood = -482.26513
Iteration 2: log likelihood = -480.48897
Iteration 3: log likelihood = -480.47975
Iteration 4: log likelihood = -480.47975
```

```
Logistic regression      Number of obs   =      1050
                        LR chi2(8)                =       78.53
                        Prob > chi2                 =       0.0000
Log likelihood = -480.47975  Pseudo R2        =       0.0750
```

RD	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.3698075	.0573857	5.96	0.000	.2293336	.4542815
AGE	.0119449	.0086258	0.92	0.357	-.0089613	.0248511
EXP	.014359	.0081968	1.75	0.080	-.0017065	.0304244
EDUs	.7145313	.2713508	2.23	0.014	.0736935	1.137369
FDIs	-.0032401	.0163499	0.38	0.703	-.0258052	.0382852
SOE	-.0518852	.773282	-0.32	0.751	-1.76049	1.27072
IND	-.5308837	.2834555	-1.58	0.114	-1.003446	.1076788
REG	-.4337874	.2859363	-3.50	0.041	-1.560212	-.4393626
_cons	-2.909451	.2783481	-10.45	0.000	-3.455004	-2.363899

3. Evaluation of the relationship between foreign participation and the peculiarities of managing firms by using binary logistic regression, 2009 (Model 1).

```
. logit HR lnL AGE EXP EDUs FDI SOE IND REG
```

```
Iteration 0: log likelihood = -521.60059
Iteration 1: log likelihood = -453.99509
Iteration 2: log likelihood = -453.80532
Iteration 3: log likelihood = -453.80526
Iteration 4: log likelihood = -453.80526
```

```
Logistic regression      Number of obs      =      995
                        LR chi2(7)                =      138.01
                        Prob > chi2                =      0.0000
Log likelihood = -453.80526      Pseudo R2          =      0.1320
```

HR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnL	.5361756	.0679724	7.77	0.000	.3949521 .6613992
AGE	.019231	.00824	2.58	0.210	.0050809 .0373811
EXP	-.0014381	.0087834	-0.28	0.781	-.0196532 .0147771
EDUs	-.0539707	.5470978	-0.17	0.862	-1.167263 .9773213
FDI	.0257499	.2208664	-0.13	0.900	-.4606401 .4051403
SOE	.4535025	.3202921	1.28	0.199	-.2162585 1.039263
IND	-.7082311	.0095345	0.87	0.382	-.0103571 .0270176
REG	-.2576504	.309918	-0.89	0.374	-.8830785 .3317778
_cons	-2.858116	.6125552	-4.67	0.000	-4.058702 -1.65753

```
. logit IC lnL AGE EXP EDUs FDI SOE IND REG
```

```
Iteration 0: log likelihood = -452.80058
Iteration 1: log likelihood = -349.73015
Iteration 2: log likelihood = -345.70256
Iteration 3: log likelihood = -345.66443
Iteration 4: log likelihood = -345.66442
```

```
Logistic regression      Number of obs      =      995
                        LR chi2(7)                =      215.23
                        Prob > chi2                =      0.0000
Log likelihood = -345.66442      Pseudo R2          =      0.2376
```

IC	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnL	.6687171	.0801436	8.32	0.000	.5096386 .8237957
AGE	.0253111	.0088753	2.96	0.003	.0089159 .0437064
EXP	.0039959	.0100942	0.30	0.767	-.0167884 .0227802
EDUs	-1.310177	.5882234	-2.22	0.026	-2.460074 -.1542802
FDI	.3639166	.2407273	1.44	0.150	-.1249002 .8187333
SOE	1.133008	.3306138	3.39	0.001	.4730171 1.768999
IND	.9238992	.0115598	1.88	0.000	-.0008766 .044437
REG	-.0750576	.3772273	-0.05	0.962	-.7574096 .7212944
_cons	-3.419274	.6638245	-5.15	0.000	-4.720346 -2.118202

4. Evaluation of the relationship between foreign participation and the peculiarities of managing firms by using binary logistic regression, 2009 (Model 2).

```
. logit HR lnL AGE EXP EDUs FDIs SOE IND REG
```

```
Iteration 0: log likelihood = -521.60059
Iteration 1: log likelihood = -453.65726
Iteration 2: log likelihood = -453.47056
Iteration 3: log likelihood = -453.4705
Iteration 4: log likelihood = -453.4705
```

```
Logistic regression                Number of obs   =      995
                                   LR chi2(7)       =     138.32
                                   Prob > chi2       =      0.0000
Log likelihood = -453.4705         Pseudo R2      =      0.0136
```

HR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.5521704	.0635827	8.26	0.000	.4005507	.6497902
AGE	.0191921	.0082108	2.58	0.010	.0050992	.0372851
EXP	-.0011193	.0087838	-0.24	0.809	-.0193353	.0150967
EDUs	-.038186	.5489965	-0.17	0.868	-1.167199	.9848273
FDIs	.0015212	.0141337	0.82	0.415	-.0161802	.0392227
SOE	.429938	.5878424	0.00	0.999	-1.151212	1.153088
IND	-.7178346	.0095657	0.92	0.356	-.009912	.027585
REG	-.2418949	.3104329	-0.90	0.367	-.8883323	.3285425
_cons	-2.85817	.6090739	-4.69	0.000	-4.051933	-1.664407

```
. logit IC lnL AGE EXP EDUs FDIs SOE IND REG
```

```
Iteration 0: log likelihood = -452.80058
Iteration 1: log likelihood = -350.07309
Iteration 2: log likelihood = -346.15089
Iteration 3: log likelihood = -346.11123
Iteration 4: log likelihood = -346.11122
```

```
Logistic regression                Number of obs   =      995
                                   LR chi2(7)       =     213.03
                                   Prob > chi2       =      0.0000
Log likelihood = -346.11122         Pseudo R2      =      0.2356
```

IC	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.7082167	.0760132	9.29	0.000	.5572336	.8551998
AGE	.024444	.0087079	2.81	0.105	.0073769	.0415112
EXP	.0043024	.0101287	0.33	0.744	-.0165495	.0231544
EDUs	-1.269197	.5898707	-2.15	0.132	-2.422099	-.1098486
FDIs	6.110385	.0140478	-1.07	0.284	-.0425718	.0124947
SOE	1.1141327	.6320006	2.65	0.308	.433572	2.910969
IND	.8821490	.011541	1.90	0.012	-.0007152	.0445245
REG	-3.552317	.3769467	-0.03	0.972	-.7519336	.7256702
_cons	-3.549768	.6615587	-5.37	0.000	-4.846399	-2.253137

. logit FT lnL AGE EXP EDUs FDI_s SOE IND REG

Iteration 0: log likelihood = -254.8959
 Iteration 1: log likelihood = -234.88119
 Iteration 2: log likelihood = -230.64766
 Iteration 3: log likelihood = -230.62367
 Iteration 4: log likelihood = -230.62367

Logistic regression

Number of obs = 995
 LR chi2(7) = 48.49
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.0952

Log likelihood = -230.62367

FT	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.4165241	.0876636	5.60	0.000	.3187065	.6623416
AGE	-.0062657	.0119791	-0.94	0.347	-.0347444	.012213
EXP	.0065756	.0133113	0.57	0.569	-.0185142	.0336653
EDUs	-7.759036	.6964956	-1.33	0.185	-2.28801	.4422028
FDI _s	.0076838	.0187775	-2.01	0.045	-.074487	-.0008805
SOE	.5166452	.6743061	2.41	0.216	.3048362	2.948068
IND	1.1039827	.0166926	2.43	0.115	.0079236	.0733572
REG	.1094914	.5593278	-0.85	0.397	-1.569754	.622771
_cons	-3.623156	.7966858	-4.55	0.000	-5.184632	-2.061681

. logit EX lnL AGE1 EXP EDUs FDI_s SOE IND REG

Iteration 0: log likelihood = -363.97642
 Iteration 1: log likelihood = -352.39334
 Iteration 2: log likelihood = -351.52048
 Iteration 3: log likelihood = -351.51305
 Iteration 4: log likelihood = -351.51305

Logistic regression

Number of obs = 995
 LR chi2(7) = 225.27
 Prob > chi2 = 0.0008
 Pseudo R2 = 0.2112

Log likelihood = -351.51305

EX	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnL	.8034983	.0691184	2.31	0.011	.0240287	.2949679
AGE	.0011877	.0085787	1.30	0.192	-.0056263	.0280017
EXP	.0096643	.0105562	-1.39	0.165	-.035354	.0060254
EDUs	-1.234862	.7958262	0.88	0.377	-.8569044	2.262677
FDI _s	.0115009	.0146119	2.22	0.000	.0038621	.0611396
SOE	-.5091596	.6999257	-1.63	0.102	-2.515425	.2282335
IND	1.965369	.0097619	-1.73	0.000	-.0360615	.0022046
REG	.2298627	.479892	-2.03	0.102	-1.915434	-.0342917
_cons	-2.773852	.8502014	-3.26	0.001	-4.440216	-1.107488