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KẾT QUẢ ĐIỀU TRA DOANH NGHIỆP NHỎ VÀ VỪA NĂM 2011

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CHARACTERISTICS OF THE VIETNAMESE BUSINESS ENVIRONMENT

EVIDENCE FROM A SME SURVEY IN 2011

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CIEM, DoE, ILSSA and UNU-WIDER
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Table of Contents

List of Tables

List of Figures

Acronyms and Abbreviations

BRC	Business Registration Certificate
BSPS	Business Sector Programme Support
CIEM	Central Institute for Economic Management
CPI	Consumer Price Index
EC	Environmental Certificate
EIA	Environmental Impact Assessment
HCMC	Ho Chi Minh City
ILSSA	Institute for Labour Science and Social Affairs
ISIC	International Standard Industrial Classification
LURC	Land Use Right Certificate
GSO	General Statistics Office
HH	Household
LURC	Land Use Right Certificate
Mn	Million
MONRE	Ministry of Natural Resources and the Environment
MPI	Ministry of Planning and Investment
N	Number of Observations
OLS	Ordinary Least Squares
SD	Standard Deviation
SME	Small and Medium sized Enterprise
USD	United States Dollar
VHLSS	Vietnam Household Living Standards Survey
VND	Vietnamese Dong

Preface

This report represents the seventh time that the small and medium enterprise (SME) survey has been conducted. The results of previous survey rounds, and in particular those of 2005, 2007, and 2009 inspired the Central Institute for Economic Management (CIEM) of the Ministry of Planning and Investment (MPI), the Institute of Labour Science and Social Affairs (ILSSA) of the Ministry of Labour, Invalids and Social Affairs (MOLISA), the Department of Economics (DoE) of the University of Copenhagen, and UNU-WIDER together with the Royal Embassy of Denmark in Vietnam, to plan and carry out another survey in 2011. The survey on which the present report is based builds on these previous three rounds. The fieldwork behind this report consisted of in-depth interviews during the months of June, July and August of 2011 of around 2,500 small and medium sized non-state enterprises operating in the manufacturing sector. It was carried out in ten provinces, namely the cities of Hanoi, Hai Phong and Ho Chi Minh City (HCMC), and Ha Tay[1], Phu Tho, Nghe An, Quang Nam, Khanh Hoa, Lam Dong and Long An. The present report is based on enterprises who were also interviewed in 2005, 2007 and 2009. Subsequent studies will make use of the fact that a sample of approximately 2,500 SMEs is available, including a representative panel dating back to 2005.

The SME surveys were designed as collaborative research efforts with the objective of collecting and analyzing data representative of the private sector as a whole in Vietnam. This means that not only large or formally registered enterprises are interviewed. Rather, the SME thus focuses on building on the substantial database already being collected through other initiatives in Vietnam, with a specific focus on collecting data and gaining an understanding of the SME dynamics in Vietnam.

The present report provides an overview of key insights from the SME 2011 database, comparing as appropriate with data from 2009. It should be noted, however, that the report is by no means exhaustive of all of the data collected, and the reader is encouraged to refer to the questionnaires (available on-line) that were used in the collection of data to see the comprehensive set of issues addressed. Further in-depth studies of selected issues on the Vietnamese private sector economy, exploiting the database, are underway.

1 Ha Tay province was merged into Ha Noi at the start of 2009. However, in this report Ha Tay is maintained as a separate province such that results can be compared with previous years.

Acknowledgements

The team of authors behind the present report is grateful to the President of CIEM, Dr. Le Xuan Ba and the Director of ILSSA, Dr Nguyen Thi Lan Huong, who have guided our work from beginning to end, and ensured effective collaboration between all partners.

The core research team was led by Professor John Rand, who served as UNU-WIDER external project director. The team also included Ms Marie Skibsted and Ms Benedikte Bjerge from the DoE. Dr. Bui Van Dung and Mr. Nguyen Thanh Tam from CIEM were also part of the research team. Professor Finn Tarp coordinated and supervised the research effort through all its stages.

Our work would not have been possible without professional interaction, advice and encouragement from a large number of individuals and institutions. We would in particular like to highlight our thanks for the productive and stimulating collaboration with the survey and data teams from ILSSA. They were coordinated by Dr. Nguyen Thi Lan Huong and her staff including Mr. Le Ngu Binh, Ms. Le Huong Quynh, and Mr. Luu Quang Tuan. Without the tireless efforts of ILSSA in compiling the questionnaires, training enumerators, implementing the survey in the field and cleaning the data, all other work would have been in vain.

The study team would like to express appreciation for the time that the surveyed SMEs made available in 2011 during the interviews carried out as part of this study. It is hoped that the present report will prove useful in the search for policies geared towards improving their business operations and livelihoods.

Finally, while advice has been received from many colleagues and friends, the research team takes full responsibility for any remaining errors or shortcomings in interpretation. All the usual caveats apply.

1 Introduction

Small and medium enterprises (SMEs) continue to be central to the Vietnamese development process. Understanding the constraints facing small and medium enterprises (SMEs) and the potential of these firms therefore remains important, as the private sector in Vietnam continues to account for an increasing share of economic growth and employment. Post crisis policies have been developed to maintain the competitiveness of Vietnamese SMEs, and the tracer survey nature of the data collected, provides a unique opportunity for policy relevant research, which can provide deeper insights into the dynamics of the SME sector in Vietnam and improve the possibilities of supporting its further development in an effective manner. In this respect, the 2011 survey is especially important for an analysis of how persistent the impact of the international financial crisis has been on Vietnamese SMEs.

Based on direct questions on the perceived effects (by owners and managers) of the international crisis we see from Table 1.1 that 65.4 percent of the firms interviewed in 2009 reported that the international crisis had a negative effect on the firms doing business conditions. This number only declined to 61.7 percent in the 2011. Considering only the balanced panel does not change the result.

Table 1.1 Did the International Crisis Negatively Affect the Firms Doing Business Conditions?

		Obs.	Percent Yes
Full sample	2009	(2,508)	65.4
	2011	(2,449)	61.7
Balanced panel	2009	(1,999)	64.3
	2011	(1,999)	62.6

Table 1.1 suggests that almost the same share of firms have been affected by the 2008 international crisis. However, looking at a crisis transition matrix (Table 1.2) reveals that 53.8 percent of the firms answering “No” to having experienced doing business problems due to the 2008 international crisis in the 2009 survey, reported in 2011 to have been affected by the crisis. On the other hand, 32.5 percent of the firms

stating that the crisis had an effect on their doing business conditions in 2009, reported in the 2011 survey that the initial negative effects of the crisis is no longer affecting the firm significantly. Table 1.2 also shows that only 330 out of 1999 enterprises (16.5 percent) report in both surveys not to have been affected by the crisis.

Table 1.2 Crisis Transition Matrix

	Crisis No 2011	Crisis Yes 2011	Total	Percent
Crisis No 2009	330	384	714	(35.7)
	(46.2)	(53.8)	(100.0)	
Crisis Yes 2009	418	867	1285	(64.3)
	(32.5)	(67.5)	(100.0)	
Total	748	1251	1999	(100.0)
Percent	(37.4)	(62.6)	(100.0)	

Note: Percentage in parenthesis.

Table 1.3 shows that urban firms and enterprises in the south have been more exposed to the 2008 international crisis (as perceived by the owners and managers). Differences in perceptions between firms in the north and south are only observed in the 2011 survey. Moreover, household firms have been less exposed to the crisis than their more "formal" counterparts. Along the same dimension we do however see a slight decrease in the number of small and medium firms feeling affected by the crisis over time.

Table 1.3 International Crisis by Location and Firm Size

Year	2009	2011
All firms	64.3	62.6
Urban	69.8	73.8
Rural	60.6	54.9
South	64.5	70.5
North	64.2	57.4
Micro	56.9	56.3
Small	78.0	75.9
Medium	85.7	81.2

Note: Balanced panel (1,999 observations each year)

In 2009 around 12 percent of enterprises believed that the crisis created some opportunities for the firm, and it was especially more well-established larger firms that are able to reap the potential benefits. However, in 2011 (as reported in Table 1.4) only 5.6 percent of firms believe that the international crisis has brought positive incentives to firms doing business conditions.

Table 1.4 Recent International Crisis Brought Positive Opportunities for Doing Business

		Obs.	Percent Yes
Full sample	2009	(2,508)	11.8
	2011	(2,449)	5.6
Balanced panel	2009	(1,999)	12.2
	2011	(1,999)	5.6

Finally, the opportunity transition matrix in Table 1.5 reveals that only 17 out of 1999 firms consistently report that they believe that the international crisis have provided positive opportunities for the firm. As in 2009, these few firms feel that the positive effect comes through the availability of cheaper inputs, less competition and increases in government support.

Table 1.5 Opportunity Transition Matrix

	Opportunity No 2011	Opportunity Yes 2011	Total	Percent
Opportunity No 2009	1,662	94	1,756	(87.8)
	(94.6)	(5.4)	(100.0)	
Opportunity Yes 2009	226	17	243	(12.2)
	(93.0)	(7.0)	(100.0)	
Total	1,888	111	1,999	(100.0)
Percent	(94.4)	(5.6)	(100.0)	

Note: Percentage in parenthesis.

These results show that the majority of SMEs have the perception that the international crisis have had a significantly negatively impact on their doing business conditions. However, these conclusions are based on perceptions of the enterprises surveyed. And while one should not doubt the validity of their responses, analyzing whether these perceived effects of the international crisis are confirmed by in the firm dynamics patterns (survival/exit and growth) remains a central part of this report.

2 Data Description and Sampling

2.1 Sampling

The previous SME surveys in 2005, 2007 and 2009 included a comprehensive survey of between 2,500 and 2,800 enterprises in the same 10 provinces, where surviving firms were re-interviewed each survey year (tracer survey). The sampling procedure in 2009 followed that of 2005, 2007 and 2009. The population of non-state manufacturing enterprises in the 10 selected provinces is based on two data sources from the General Statistics Office of Vietnam (GSO): The Establishment Census from 2002 (GSO, 2004) and the Industrial Survey 2004-2006 (GSO, 2007). From the Establishment Census we obtain the number of individual business establishments that do not satisfy the conditions stated in the Enterprise Law of Vietnam. In the following we refer to this category of enterprises as household enterprises. We combine this information with data on enterprises formally registered under the Enterprise Law at the province level from the Industrial Survey. This provides us with additional information on private, collectives, partnerships, private limited enterprises and joint stock enterprises. Joint ventures have been excluded from the sampling framework due to the high nature of government and foreign involvement (often unclear) in such ownership structures.

Table 2.1 Overview of the "population" of non-state manufacturing enterprises

	Household establishment	Private/sole proprietorship	Partnership/ Collective/ Cooperative	Limited liability company	Joint stock company
Ha Noi	16,588	1,194	217	1,793	397
Phu Tho	17,042	65	12	97	22
Ha Tay*	23,890	100	18	150	33
Hai Phong	12,811	206	38	309	69
Nghe An	22,695	125	23	187	41
Quang Nam	10,509	51	9	76	17
Khanh Hoa*	5,603	119	22	178	39
Lam Dong	5,268	75	14	112	25
HCMC	34,241	2,052	374	3,080	683
Long An	8,050	83	15	124	27
Sample total	156,697	4,068	741	6,107	1,354

Source: The Real Situation of Enterprises (GSO, 2007) and Results of Establishment Census of Vietnam (GSO, 2004). Note: Includes only non-state manufacturing enterprises. Data for joint ventures are excluded. Figures for Ha Tay has been downwards adjusted and Khanh Hoa upwards adjusted after a series of consultations with both central and local government officials

The 2005 "population" of non-state manufacturing firms upon which the initial sample was drawn is depicted in Table 2.1. The selected provinces therefore cover around 30 percent of the manufacturing enterprises in Vietnam. However, as highlighted in the previous reports, we adjust GSO data for Khanh Hoa and Ha Tay. Checking the official data for Khanh Hoa with the GSO resulted in an upward adjustment in the number of registered household enterprises for the year 2002.[2] Moreover, in the official statistics, Ha Tay accounts for around 10 percent of total manufacturing enterprises in Vietnam. This does not seem plausible. We have therefore adjusted downward the number of household enterprises in Ha Tay by taking an average of the household manufacturing enterprises in the neighboring provinces of Ha Noi. This leads to a total of 23,890 household enterprises, which is used as the household enterprise "population" for Ha Tay.

The 2011 sample is drawn from the same population identified for the in 2005, 2007 and 2009 surveys (CIEM, 2007, 2009, 2011). However, the tracer survey feature of the data will to some extend capture legal structure changes as incumbent firms graduate to become formal entities. Moreover, exit firms were randomly replaced based on the following two criteria: (i) a constant level of household firms based on the information in GSO (2004) and (ii) the new 2011 population of firms registered under the Enterprise Law obtained from the GSO (not yet published).

2 Around 0.8 per cent of nationwide household manufacturing enterprises are located in Khanh Hoa according to the GSO. Given that the total number of household manufacturing enterprises is 700,309 in the economy, the total number of household manufacturing enterprises in Khanh Hoa has therefore been upward adjusted to a total of 5,603 household enterprises (from 4,777).

Table 2.2 Number of Enterprises Interviewed

	Interviewed in 2011	Interviewed in 2009
Ha Noi	270	279
Phu Tho	252	257
Ha Tay	340	371
Hai Phong	205	208
Nghe An	349	352
Quang Nam	158	151
Khanh Hoa	97	93
Lam Dong	78	67
HCMC	574	603
Long An	126	127
Total	2,449	2,508

Note: The balanced panel includes 1,999 firm observations each year.

It should be noted that the SME survey data includes both registered and non-registered (informal) household firms. These informal household firms (without a business registration license or tax code and not registered with District authorities) were also included in the surveys based on on-site identification. Thus, all of the informal firms included in the survey operate alongside officially registered enterprises. Including some firms not registered with the authorities is an important contribution and quite unique in Vietnam. Nevertheless, it is important to note that our sample of informal firms is not representative of the informal sector as a whole in Vietnam, since the sampling scheme of the SME survey is based on the GSO business censuses and surveys which cover only part of the informal sector.

The 2011 sampling strategy followed that of 2005, 2007 and 2009 (see CIEM, 2007, 2009 and 2011 for details). Table 2.2 shows that 2,449 enterprises were interviewed. Some enterprises report that they are not in manufacturing (4 in agriculture and 17 in services) even though official records have them listed as producers of manufacturing goods. For comparison, column 2 in Table 2.2 shows the number of enterprises interviewed in the 2009 survey in each province. Panel data information on 1,999 firms is available for analysis.

In all areas the samples were stratified by ownership forms to ensure the inclusion

of all non-state types of enterprises, including household, private, partnership/collective, limited liability companies and joint stock enterprises. Table 2.3 documents the number of non-state manufacturing enterprises interviewed in each ownership form category. Only 66 percent of the interviewed enterprises are household enterprises as compared to 90 percent in the firm population documented above. This means that non-household enterprises are over-represented in the survey.

Table 2.3 Number of Interviewed Enterprises by Province and Legal Structure

	Household enterprises	Private/sole proprietorship	Partnership/ Collective/ Cooperative	Limited liability company	Joint stock company	Total
Ha Noi	93	30	21	101	25	270
Phu Tho	218	7	5	17	5	252
Ha Tay	281	9	1	42	7	340
Hai Phong	104	20	18	41	22	205
Nghe An	274	18	5	33	19	349
Quang Nam	124	7	3	20	4	158
Khanh Hoa	61	15	1	19	1	97
Lam Dong	59	7	0	12	0	78
HCMC	285	62	11	204	12	574
Long An	90	21	1	14	0	126
Sample total	1,589	196	66	503	95	2,449

A number of characteristics are commonly associated with enterprise dynamics, in particular location, sector, legal ownership form, and firm size, all of which proxy for variations in market characteristics and/or enterprise organization. Tables 2.3 to 2.8 show different tabulations of typical determinants of enterprise dynamics.

Table 2.4 Number of Enterprises by Location and Sector

ISIC codes		Ha Noi	Phu Tho	Ha Tay	Hai Phong	Nghe An	Quang Nam	Khanh Hoa	Lam Dong	HCMC	Long An	Total	Per-cent
AGR	Agriculture	1	0	0	2	0	0	0	0	1	0	4	(0.2)
15	Food products and beverages	53	103	91	45	135	58	40	35	126	51	737	(30.1)
17	Textiles	7	7	53	5	2	0	0	3	26	1	104	(4.2)
18	Wearing apparel etc.	22	0	1	7	14	6	2	0	67	3	122	(5.0)
19	Tanning and dressing leather	5	0	3	11	0	6	2	2	18	2	49	(2.0)
20	Wood and wood products	5	39	101	9	47	15	9	3	11	10	249	(10.2)
21	Paper and paper products	11	10	0	6	3	0	5	0	31	0	66	(2.7)
22	Publishing, printing etc.	15	0	3	7	0	0	1	2	28	4	60	(2.4)
23	Refined petroleum etc.	1	1	0	1	1	0	0	0	1	2	7	(0.3)
24	Chemical products etc.	8	3	1	0	3	0	1	2	20	0	38	(1.6)
25	Rubber and plastic products	30	1	2	7	1	2	2	0	65	4	114	(4.7)
26	Non-metallic mineral products	9	13	15	13	22	8	5	4	15	12	116	(4.7)
27	Basic metals	12	0	1	8	5	1	2	1	3	2	35	(1.4)
28	Fabricated metal products	55	46	23	54	69	38	16	18	88	25	432	(17.6)
29-32	Machinery (incl. office + electrical)	13	1	6	5	4	3	1	0	37	4	74	(3.0)
34	Vehicles etc.	4	0	1	0	2	0	0	0	10	0	17	(0.7)
35	Transport equipment	1	0	1	3	0	0	0	0	3	0	8	(0.3)
36	Furniture etc.	17	28	36	17	38	19	10	6	19	4	194	(7.9)
37	Recycling	0	0	1	2	0	0	0	0	3	0	6	(0.2)
SER	Services	1	0	1	3	3	2	1	2	2	2	17	(0.7)
Total		270	252	340	205	349	158	97	78	574	126	2,449	(100.0)
Percent		(11.0)	(10.3)	(13.9)	(8.4)	(14.3)	(6.5)	(4.0)	(3.2)	(23.4)	(5.1)	(100.0)	

Note: Number of firms (group percentages in parenthesis).

Table 2.4 focuses on the location – sector split. Sector codes are based on the International Standard Industrial Classification (ISIC) codes. First, we see that the three largest sectors in terms of number of enterprises are Food Processing (ISIC 15), Fabricated Metal Products (ISIC 28) and Manufacturing of Wood Products (ISIC 20). These sectors were also the dominating ones in the 2009 SME survey. Moreover, this corresponds well with the observed sector distribution reported in GSO (2004, 2007).

Table 2.5 Number of Enterprises by Size and Location

	Micro	Small	Medium	Total	Percent
Ha Noi	131	113	26	270	(11.0)
	(48.5)	(41.9)	(9.6)	(100.0)	
Phu Tho	221	23	8	252	(10.3)
	(87.7)	(9.1)	(3.2)	(100.0)	
Ha Tay	234	99	7	340	(13.9)
	(68.8)	(29.1)	(2.1)	(100.0)	
Hai Phong	128	58	19	205	(8.4)
	(62.4)	(28.3)	(9.3)	(100.0)	
Nghe An	286	49	14	349	(14.3)
	(81.9)	(14.0)	(4.0)	(100.0)	
Quang Nam	135	18	5	158	(6.5)
	(85.4)	(11.4)	(3.2)	(100.0)	
Khanh Hoa	66	23	8	97	(4.0)
	(68.0)	(23.7)	(8.2)	(100.0)	
Lam Dong	63	11	4	78	(3.2)
	(80.8)	(14.1)	(5.1)	(100.0)	
HCMC	320	204	50	574	(23.4)
	(55.7)	(35.5)	(8.7)	(100.0)	
Long An	104	19	3	126	(5.1)
	(82.5)	(15.1)	(2.4)	(100.0)	
Total	1688	617	144	2,449	(100.0)
Percent	(68.9)	(25.2)	(5.9)	(100.0)	

Note: Figures in number of firms and for each location the share of firms in each size category (group percentages in parenthesis). Micro: 1-9 employees; Small: 10-49 employees; Medium; 50-299 employees; Large: 300 employees and above (World Bank definition).

Table 2.5 documents the location-size tabulation.[3] We see that two-third of the sample is in the micro firm category with 1-9 employees. Moreover, enterprises in larger urban areas (Ha Noi and HCMC) have a smaller share of micro enterprises than rural provinces.

Table 2.6 shows, as mentioned earlier, that 67 percent of enterprises in our sample are categorized as Household Enterprises. An above average percentage of firms in the Food Processing category are registered as household establishments (82 percent). The same can be said for firms in Wood Processing (ISIC 20) and Recycling (ISIC 37). On the contrary, firms in Wearing Apparel (ISIC 18), Paper (ISIC 21), Publishing and Printing (ISIC 22), Chemicals (ISIC 24), Rubber (ISIC 25), Basic Metals (ISIC 27) and all machinery categories (ISIC 29-35) are more often found in the category of small and medium firms.

According to Table 2.7, some 63 percent of medium firms are registered as Limited Liability Companies, as compared to 44 and 8 percent in small and micro firms, respectively. Moreover, 84 percent of all micro firms are household establishments, which is worth noting when discussing the possible growth contribution effects of a general transition from informal firm structures (most often household establishments) to more formal entities (see Rand and Torm (2012) and Rand and Tarp (2012) for further discussion of this issue). Only 33 percent of the Joint Stock firms are found in the medium firm category, and almost 14 percent with this legal structure are found in the micro category.

3 Our definition of a micro, small, medium and large scale enterprise follows current World Bank and Vietnamese Government definitions. The World Bank SME Department operates with three groups of small and medium-sized enterprises: micro-, small-, and medium-scale enterprises. Micro-enterprises have up to 10 employees, small-scale enterprises up to 50 employees, and medium-sized enterprises up to 300 employees. These definitions are broadly accepted by the Vietnamese Government (see Government decree no. 90/2001/CP-ND on "Supporting for Development of Small and Medium Enterprises"). Our size categories are based on the number of full-time, part-time and casual workers.

Table 2.6: Number of Enterprises by Ownership Form and Sector

ISIC		Household establishment	Private/sole proprietorship	Partnership/ Collective/ Cooperative	Limited liability company	Joint stock company	Total	Percent
AGR	Agriculture	1	0	1	0	2	4	(0.2)
15	Food products and beverages	601	37	4	80	15	737	(30.1)
17	Textiles	62	5	1	32	4	104	(4.2)
18	Wearing apparel etc.	56	9	3	47	7	122	(5.0)
19	Tanning and dressing leather	33	3	1	9	3	49	(2.0)
20	Wood and wood products	196	18	8	22	5	249	(10.2)
21	Paper and paper products	11	14	2	34	5	66	(2.7)
22	Publishing, printing etc.	20	11	2	25	2	60	(2.4)
23	Refined petroleum etc.	5	1	0	1	0	7	(0.3)
24	Chemical products etc.	9	4	4	18	3	38	(1.6)
25	Rubber and plastic products	40	13	10	46	5	114	(4.7)
26	Non-metallic mineral products	67	10	9	20	10	116	(4.7)
27	Basic metals	16	9	2	7	1	35	(1.4)
28	Fabricated metal products	296	36	11	76	13	432	(17.6)
29-32	Machinery (incl. office + electrical)	24	5	0	40	5	74	(3.0)
34	Vehicles etc.	4	2	1	10	0	17	(0.7)
35	Transport equipment	3	2	1	1	1	8	(0.3)
36	Furniture etc.	134	15	5	29	11	194	(7.9)
37	Recycling	5	0	0	0	1	6	(0.2)
SER	Services	6	2	1	6	2	17	(0.7)
Total		1,589	196	66	503	95	2,449	(100.0)
Percent		(64.9)	(8.0)	(2.7)	(20.5)	(3.9)	(100.0)	

Note: Number of firms (group percentages in parenthesis).

Table 2.7 Number of Enterprises by Legal Ownership and Size

	Micro	Small	Medium	Total	Percent
Household establishment	1,426	162	1	1,589	(64.9)
Private/sole proprietorship	92	91	13	196	(8.0)
Partnership/Collective/ Cooperative	18	40	8	66	(2.7)
Limited liability company	139	273	91	503	(20.5)
Joint stock company	13	51	31	95	(3.9)
Total	1,688	617	144	2,449	(100.0)
Percent	(68.9)	(25.2)	(5.9)	(100.0)	

Finally, Table 2.8 shows that in terms of enterprise size, there is large variation across sectors. In the Food Processing sector, for example, around 84 percent of the enterprises are micro enterprises, whereas only 29 percent of enterprises in Paper Product sector (ISIC 21) are micro enterprises. Over 50 percent of firms in chemicals (ISIC 24) are found in the small category.

Table 2.8 Number of Enterprises by Sector and Size

ISIC		Micro	Small	Medium	Total	Percent
AGR	Agriculture	3	0	1	4	(0.2)
15	Food products and beverages	616	96	25	737	(30.1)
17	Textiles	56	40	8	104	(4.2)
18	Wearing apparel etc.	62	41	19	122	(5.0)
19	Tanning and dressing leather	32	10	7	49	(2.0)
20	Wood and wood products	188	57	4	249	(10.2)
21	Paper and paper products	19	32	15	66	(2.7)
22	Publishing, printing etc.	37	22	1	60	(2.4)
23	Refined petroleum etc.	6	1	0	7	(0.3)
24	Chemical products etc.	14	22	2	38	(1.6)
25	Rubber and plastic products	50	53	11	114	(4.7)
26	Non-metallic mineral products	63	40	13	116	(4.7)
27	Basic metals	17	15	3	35	(1.4)
28	Fabricated metal products	342	78	12	432	(17.6)
29-32	Machinery (incl office + electrical)	29	36	9	74	(3.0)
34	Vehicles etc.	5	9	3	17	(0.7)
35	Transport equipment	5	2	1	8	(0.3)
36	Furniture etc.	129	56	9	194	(7.9)
37	Recycling	4	2	0	6	(0.2)
SER	Services	11	5	1	17	(0.7)
Total		1,688	617	144	2,449	(100.0)
Percent		(68.9)	(25.2)	(5.9)	(100.0)	

Note: Figures in number of firm (group percentages in parenthesis).

2.2. Implementation

For reasons of implementation, the survey was confined to specific areas in each province/city. Subsequently, the sample was drawn randomly from a list of enterprises based on the "population" of non-state manufacturing firms outlined in Table 2.1, where the stratified sampling procedure was used to ensure the inclusion of an adequate number of enterprises in each province with different ownership forms. In cases of mismatch of official household firm records, on-site identification of formal and informal household

firms substituted for the pre-selected household firms. This enabled the inclusion of non-registered household entities operating alongside formal enterprises.

A training course of the enumerators was held prior to the implementation of the survey in the spring of 2011. This provided an occasion to identify and clear out remaining ambiguities and possible sources of misinterpretation. As enumerators had considerable prior experience, the training course in effect took the form of a joint discussion and yielded much valuable feedback.

The enterprise survey was carried out by ten survey teams. The interviewers included researchers from ILSSA, staff from different departments of MOLISA and ten representatives from DOLISA. Each team was composed of one team leader (supervisor) and several interviewers. The number of interviewers in each team depended on the size of the sample in each area. The actual survey was undertaken in two stages. In the first stage, enumerators went to the survey areas to identify the repeat enterprises and to obtain the complete list of enterprises from the local authorities. In some cases enterprises had changed location or owner since the last survey in 2009, and determining whether the enterprises were still in existence often involved considerable work. Based on these visits, updated lists of the repeat enterprises were prepared and random samples of the new enterprises were drawn. The second stage of the survey was launched in the autumn of 2011 and lasted for three months. In this stage, implementation of the survey questionnaire was carried out through personal visits and direct interviews. Initial checking and cleaning of the data was undertaken in the field. Following data entry, a second round of data cleaning was undertaken and the 2011 data were merged with data files from the 2009 to check consistency.

2.3 Links to Previous Surveys

In Table 2.9 we document the survival rate of the previously surveyed firms. Some 1,999 enterprises were tracked down and accepted to participate in survey, leaving 355 enterprises as confirmed exit enterprises. Some 154 enterprises (30 percent of potential exits) were lost during the sampling or when approached declined to answer the questionnaire. They are therefore excluded in both the 2009 and 2011 data. Using this information, an annual survival rate between 2009 and 2011 of 92.2 percent is derived, representing a small increase from the figure of 91.6 percent observed between 2007

and 2009, a level comparable to the 9 to 10 percent average exit rate cited by Liedholm and Mead (1999) for a number of developing countries.

Table 2.9 Survival Overview

		2009	2011
Surveyed in 2009	Survivors	2,354 (2,508)	1,999
	Exit confirmed		355
Survival rate			84.9
Annual survival rate			92.2
New entrants			450
Total surveyed in 2011			2,449

Note: We had difficulties tracking down (previous) owners of closed enterprises. Some enterprises could not be found or owners declined to answer the questionnaire. A total of 70 percent (355 out of 509) are confirmed exits.

In the following sections, we concentrate on the 2011 survey. However, in some cases we link the information back to the 2009 survey in order to follow enterprise development.

3 Enterprise Growth and Dynamics

Given that the international crisis and the business environment appear to have worsened from the enterprise point of view, it is interesting to explore the factors driving dynamic changes in the SME sector and its component parts. We therefore turn attention to enterprise dynamics, focusing in particular on: (i) employment growth and (ii) firm exit.

3.1 Employment Growth

Table 3.1 documents the mean and median estimates of the number of full-time regular employees in 2009 and 2011 respectively, by firm size. Moreover, the table also documents the share of firms decreasing or increasing the number of full-time employees between 2009 and 2011. First, the total number of full-time workers employed by the 1,999 SMEs declined from 28,174 in 2009 to 26,414 in 2011, corresponding to a decrease in total employment of 6.2 percent over the 2 year period. This decline is also reflected in the decline in the average number of employees from 14.1 in 2009 to 13.2 in 2011. It is especially the amount of small and medium enterprises reducing the number of full-time employees that drives the decline (even though the reported mean employment for medium firms increased between 2009 and 2011). Approximately 60 percent of the small and medium firms reduced their permanent workforce.

Table 3.1 Mean Employment Statistics by Firm Size

		2009		2011		Change from 2009 to 2011		
		Balanced		Balanced		Share of firms decreasing/ increasing employment		
		Mean	Median	Mean	Median	Decrease	Constant	Increase
All	All	14.1	5.0	13.2	5.0	42.4	27,2	30,5
		(1,999)		(1,999)		(847)	(543)	(609)
Size	Micro	4.0	3.0	3.8	3.0	33.6	35,8	30,6
		(1,344)		(1,388)		(452)	(481)	(411)
	Small	20.1	17.0	19.7	17.0	59.8	10,9	29,3
		(522)		(489)		(312)	(57)	(153)
	Medium	93.0	80.0	94.3	73.0	62.4	3,8	33,8
		(133)		(122)		(83)	(5)	(45)

Note: Number of full-time regular employees. (Observations in parenthesis). The 1,999 firms in the balanced panel employed 28,174 full-time regular workers in 2009 as compared to 26,414 in 2011 (equal to a 6.2 percent decrease in total employment over the 2 year period considered).

Table 3.1 highlights that individual firm sizes change significantly over time. Another way to illustrate the dynamics of enterprises is to look at employment transition matrices, a tool often used to evaluate economic mobility. Table 3.2 gives employment transitions for micro-, small- and medium enterprises from 2009 to 2011. The data presented indicate quite clearly that micro enterprises with 1 to 9 employees have tended to stay small, with some 93 percent of the enterprises in this category in 2009 remaining there in 2011. Moreover, as in 2009 those enterprises which did increase in size graduated to the small category only. Looking at the "small" and "medium" enterprise categories, there is a strong support for the conclusion reached above that these firms have a tendency to move downwards in the size distribution over time. Employment transition figures are in general quite similar to those reported in CIEM (2009) for the 2007-2009 period, although a larger share of firms declined in employment size within the larger firm categories.

Table 3.2 Employment Transition Matrix

	Micro 11	Small 11	Medium 11	Total	Percent
Micro 09	1,255	86	3	1,344	(67.2)
	(93.4)	(6.4)	(0.2)	(100.0)	
Small 09	131	362	29	522	(26.1)
	(25.1)	(69.3)	(5.6)	(100.0)	
Medium 09	2	41	90	133	(6.7)
	(1.5)	(30.8)	(67.7)	(100.0)	
Total	1,388	489	122	1,999	(100.0)
Percent	(69.4)	(24.5)	(6.1)	(100.0)	

Note: Percentage in parenthesis.

Table 3.3 shows average annual employment growth rates (defined as the square root of the number of full-time regular employees in 2011 divided by that in 2009) by province, legal ownership form and firm size. First, we see that the mean employment growth rate is on average zero per year between 2009 and 2011, which is a significant difference from the positive rates observed between 2005 - 2007 and 2007 – 2009 (see CIEM 2007 and 2009 for details). Second, employment generation in private manufacturing differs across provinces. Especially SMEs in the areas of Ha Noi, Nghe An, HCMC and Long An seem to have downward adjusted the number of full-time workers in their enterprises. Contrary the SMEs sampled in Hai Phong and Ha Tay (Ha Noi) have on average expanded their workforce.

On average, household enterprises experienced growth comparable to the sample average. Both sole proprietorships and limited liability firms experienced a drop in average employment, with a yearly negative growth rate of on average 1.1 percent in the 2009-2011 period. Contrary to this, partnerships and joint stock companies on average expanded employment in the same period. There is also an indication of the inverse relationship between firm size and employment growth in the data. Micro firms grew on average by 3.3 percent (significantly less growth than in in 2005-2007 and 2007-2009) as compared to -5.7 and -10.5 percent in small and medium enterprises, respectively. All in all, these figures suggest that the international crisis is having employment effects on especially small and medium SMEs in the 10 provinces considered. Compared with the results of the last report (CIEM, 2011) this suggests that the negative employment effects of the crisis have taken some time to materialize.

Table 3.3 Employment Growth by Province, Legal Structure and Size

		Obs	Mean	SD	Median
All	All	1,999	1.000	0.318	1.000
Province	Ha Noi	210	0.954	0.263	0.960
	Phu Tho	214	0.994	0.228	1.000
	Ha Tay	306	1.055	0.385	1.000
	Hai Phong	169	1.051	0.378	1.000
	Nghe An	304	0.968	0.260	1.000
	Quang Nam	128	1.008	0.277	1.000
	Khanh Hoa	88	1.016	0.202	1.000
	Lam Dong	43	1.029	0.334	1.000
	HCMC	431	0.988	0.380	0.939
	Long An	106	0.977	0.218	1.000
Legal	Household establishment	1,356	1.001	0.290	1.000
	Private/sole proprietorship	148	0.986	0.293	1.000
	Partnership/ Collective/ Cooperative	58	1.084	0.557	1.000
	Limited liability company	376	0.985	0.362	0.962
	Joint stock company	61	1.047	0.374	1.000
Size	Micro	1,344	1.033	0.327	1.000
	Small	522	0.943	0.294	0.913
	Medium	133	0.895	0.260	0.939

Note: The mean yearly growth rate (unweighted) is defined as "(regular full-time employment 2011/regular full-time employment 2009)^½"

Table 3.4 shows employment growth summary statistics by sector. Growth rates vary between sectors. Especially manufacturing of leather (ISIC 19) is expanding significantly in terms of employees. Shrinking sectors between 2009 and 2011 are especially textiles (ISIC 17) and rubber (ISIC 25) with an average employment decline of 3.8 and 4.3 percent, respectively.

Table 3.4 Employment Growth by Sector

		Obs	Mean	SD	Median
15	Food products and beverages	602	1.002	0.305	1.000
17	Textiles	94	0.962	0.336	1.000
18	Wearing apparel etc.	64	0.977	0.346	0.923
19	Tanning and dressing leather	39	1.162	0.541	1.000
20	Wood and wood products	249	1.028	0.398	1.000
21	Paper and paper products	50	0.969	0.271	0.966
22	Publishing, printing etc.	50	0.962	0.238	0.974
24	Chemical products etc.	32	0.970	0.307	1.000
25	Rubber and plastic products	106	0.957	0.298	0.956
26	Non-metallic mineral products	102	0.997	0.351	1.000
27	Basic metals	30	1.062	0.328	1.000
28	Fabricated metal products	351	0.984	0.263	1.000
29-32	Machinery (incl. office + electrical)	56	1.030	0.249	1.000
34	Vehicles etc.	17	1.003	0.220	0.961
36	Furniture etc.	139	1.019	0.299	1.000

Note: See Table 3.3 for details. We excluded sectors with under 10 observations.

Table 3.5 combines the information from the two previous tables by showing Ordinary Least Squares (OLS) estimates where all the traditional determinants of enterprise dynamics are included. In column 1, we do not include sector controls, whereas column 2 includes 19 sector dummies in the specification.

Table 3.5 Employment Growth Determinants

		Without sector controls		With sector controls	
		Coefficient	*t*-stats	Coefficient	*t*-stats
Firm size	Small	-0.169***	(-6.81)	-0.180***	(-7.18)
	Medium	-0.253***	(-6.83)	-0.268***	(-7.06)
Location	Ha Noi	-0.044*	(-1.67)	-0.040	(-1.49)
	Phu Tho	-0.020	(-0.82)	-0.021	(-0.77)
	Ha Tay	0.060**	(2.14)	0.059*	(1.92)
	Hai Phong	0.023	(0.69)	0.015	(0.42)
	Nghe An	-0.051**	(-2.07)	-0.056**	(-2.04)
	Quang Nam	-0.022	(-0.71)	-0.039	(-1.13)
	Khanh Hoa	0.003	(0.09)	-0.005	(-0.17)
	Lam Dong	0.012	(0.22)	0.002	(0.04)
	Long An	-0.045	(-1.59)	-0.050	(-1.61)
Ownership	Private/sole proprietorship	0.089***	(3.24)	0.096***	(3.33)
	Partnership/Collective/ Cooperative	0.210***	(2.78)	0.218***	(2.90)
	Limited liability company	0.121***	(4.04)	0.130***	(3.99)
	Joint stock company	0.206***	(4.10)	0.206***	(4.07)
Sector dummies included		No		Yes	
Observation		1,999		1,999	
R-squared		0.06		0.08	

Note: OLS - Dependent variable: Annual employee growth. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Micro, HCMC, Household firm, Food processing (ISIC 15).

First, Table 3.5 shows that the traditional inverse relationship between employment growth and size is statistically well-determined in both estimations. We see that controlling for location, legal structure and sector, micro firms have experienced 18 and 27 percent higher annual growth in full-time regular workers than their small and medium counterparts. Second, Ha Tay stands out in terms of employment generation. As compared with HCMC, Ha Tay had 6 percent higher annual employment growth. Third, as in the previous survey, household firms contribute less to the employment generation in private manufacturing.[4] However, we see that the traditional determinants explain only 4 to 6 percent of the variation in employment growth rates. In the following

4 Note however that firm size and legal structure are highly correlated and excluding size controls (not reported) results in insignificant coefficient estimates on all legal structure indicators.

sections we therefore seek additional indications and explanations for the observed development and dynamics of Vietnamese manufacturing enterprises.

3.2 Firm Exit

We continue by analyzing how these same traditional determinants affect firm exit probabilities. Table 3.6 shows exit probabilities by location, legal ownership and firm size categories. Of the 2,508 firms observed in 2009, approximately 20 percent had closed their business by 2011. This translates to the yearly exit rate of 9.7 percent, which is somewhat higher than observed between 2007 and 2009. However, it should be noted that these exit percentages are not based on confirmed exit data. As shown in Chapter 2, relying on confirmed exits only reduces the annual exit rate to 7.8 percent. Urban centers like Ha Noi and HCMC experienced above average exit rates, but also firms in Lam Dong had a higher than average exit probability. On the other hand, especially firms in Khanh Hoa exhibit low exit probabilities. This is generally a confirmation of the firm exit probabilities observed in previous surveys.

Table 3.6 Exit Probabilities by Location, Legal Ownership and Size

		Obs.	Mean	SD
All	All	2,508	0.203	0.402
Province	Ha Noi	279	0.247	0.432
	Phu Tho	257	0.167	0.374
	Ha Tay	371	0.175	0.381
	Hai Phong	208	0.188	0.391
	Nghe An	352	0.136	0.344
	Quang Nam	151	0.152	0.361
	Khanh Hoa	93	0.054	0.227
	Lam Dong	67	0.358	0.483
	HCMC	603	0.285	0.452
	Long An	127	0.165	0.373
Legal	Household establishment	1,672	0.189	0.392
	Private/sole proprietorship	197	0.249	0.433
	Partnership/ Collective/ Cooperative	71	0.183	0.390
	Limited liability company	486	0.226	0.419
	Joint stock company	82	0.256	0.439
Size	Micro	1,682	0.201	0.401
	Small	664	0.214	0.410
	Medium	162	0.179	0.385

Note: Mean estimates of exit probability (unweighted).

Looking at legal status we see that household firms and partnerships are less likely to exit than other legal ownership types. Moreover, looking at firm size we observe that medium firms are less likely to exit than their micro and small counterparts.

Table 3.7 documents some variation in exit probabilities by sector. Not considering sectors with few observations, firms in apparel (ISIC 18) manufacturing have a higher exit risk, whereas firms engaged in basic metals (ISIC 27) have been less likely to exit. All of these results are captured in the first column of Table 3.8, showing the results of a probit estimation for determining exit characteristics in Vietnamese manufacturing using the correlates of location, ownership form, sector and size.

Table 3.7 Exit Probabilities by Sector

		Obs	Mean	SD
All		2,508	0.203	0.402
15	Food products and beverages	732	0.178	0.382
16	Tobacco	3	0.333	0.577
17	Textiles	122	0.230	0.422
18	Wearing apparel etc.	103	0.379	0.487
19	Tanning and dressing leather	47	0.170	0.380
20	Wood and wood products	301	0.173	0.379
21	Paper and paper products	69	0.275	0.450
22	Publishing, printing etc.	74	0.324	0.471
23	Refined petroleum etc.	10	0.200	0.422
24	Chemical products etc.	40	0.200	0.405
25	Rubber and plastic products	138	0.232	0.424
26	Non-metallic mineral products	135	0.244	0.431
27	Basic metals	35	0.143	0.355
28	Fabricated metal products	428	0.180	0.385
29-32	Machinery (incl office + electrical)	70	0.200	0.403
34	Vehicles etc.	24	0.292	0.464
35	Transport equipment	7	0.000	0.000
36	Furniture etc.	167	0.168	0.375
37	Recycling	3	0.667	0.577

Note: Mean estimates of exit probability (unweighted).

First, we find the usual negative relationship between firm size and probability of exit. Small and medium firms are 5 to 10 percent less likely to exit than their micro counterparts. Second, there is a higher probability that exit firms are found in larger urban areas (Ha Noi and HCMC), where the competitive pressure is higher. However, exit probabilities are also relatively high in Lam Dong. Third, sole proprietorships and joint stock firms are more likely to exit (controlling for size). Finally (not reported), as compared to the base sector (food processing), exits are more likely to be found in the apparel (ISIC 18) and non-metallic mineral products (ISIC 26) sectors, when controlling for size, location and legal structure. However, note again that these traditional determinants explain only around four percent of the variation in exit probabilities.

One of the crisis coping strategies of firms observed in 2009, was a significant increase in the number of temporary closures (temporarily closed for at least a year in the period 2007 to 2009). Almost 400 firms reported in 2009 that they temporarily closed down due to the crisis. This number was significantly reduced in 2011 (only 17 firms in total), and is now down to the level observed before the crisis. However, what happened to the firms closing temporarily? Are they still operating or have they shut? Table 3.9 shows that the probability of exit is significantly higher among firms that were temporarily closed in between 2007 and 2009. These firms are predominately micro and small firms.

Table 3.8 Exit Determinants

		Exit (without sector)		Exit (with sector)	
		Marginal effects	*t*-stat	Marginal effects	*t*-stat
Firm Size	Small	-0.043**	-1.98	-0.055**	-2.46
	Medium	-0.084**	-2.46	-0.097***	-2.92
Location	Ha Noi	-0.035	-1.32	-0.027	-1.00
	Phu Tho	-0.095***	-3.58	-0.089***	-3.21
	Ha Tay	-0.089***	-3.75	-0.083***	-3.17
	Hai Phong	-0.082***	-2.89	-0.073**	-2.46
	Nghe An	-0.125***	-5.36	-0.117***	-4.71
	Quang Nam	-0.108***	-3.48	-0.097***	-2.94
	Khanh Hoa	-0.178***	-4.98	-0.171***	-4.61
	Lam Dong	0.055	1.12	0.073	1.43
	Long An	-0.097***	-2.90	-0.084**	-2.38
Ownership	Private/sole proprietorship	0.067**	1.96	0.059*	1.70
	Partnership/Collective/ Cooperative	0.015	0.28	0.005	0.09
	Limited liability company	0.043	1.62	0.036	1.33
	Joint stock company	0.133**	2.38	0.133**	2.35
Sector dummies included		No		Yes	
Observation		2,508		2,508	
Pseudo R-squared		0.03		0.04	

Note: Probit, marginal effects. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: HCMC, Household firm, Food processing (ISIC 15).

However, previously temporarily closed firms which survived for the 2011 interview have significantly higher employment growth than firms operating throughout the international crisis. Firms temporarily closed but surviving experienced five percent higher employment growth between 2009 and 2011 compared to firms operating throughout the international crisis (not reported).

Table 3.9 Temporary Closure in 2009 and Exit in 2011

		Exit 2011	
		No	Yes
Temporary closed in 2009	No	1,324	290
		(0.820)	(0.180)
	Yes	272	118
		(0.697)	(0.303)

4 Bureaucracy, Informality, and Informal Payments

Business informality, regulation, taxation and corruption are fundamental in any discussion of private sector development and the business environment in developing countries. High formal sector entry costs, high regulatory compliance costs and punitive tax rates can push enterprises to operate informally, foregoing legal recognition in order to reduce operating costs. The ability of enterprises to reduce or avoid these costs also relates to the corruptibility of public officials. Corruption may also exist due to predatory public officials working to extract private rents for fictitious infractions or questionable interpretations of the rules. The issues of informality bureaucracy, taxation, and corruption have potentially differing impacts on heterogeneous enterprises, in particular in terms of enterprise legal structure.

4.1 Informality, Growth and Exit

Defining informality is a problem in itself. In this chapter we consider one definition of formality: (i) firms with an ECN or (ii) firms with both a BRC and a tax code are labeled as formal. Table 4.1 documents the summary statistics of our definition in both 2009 and 2011.

Table 4.1 Formality Summary Statistics

	2009		2011	
Formal (Total)	64.5	(1,618)	70.3	(1,722)
Formal (Balanced)	63.5	(1,270)	69.6	(1,392)

Note: Formal definition: Firm has an ECN or a business registration license and a tax code.

According to our definition, 70 percent of our sample is formal in 2011. All firms not registered are household enterprises. This figure is an increase from the recorded 64 percent in 2009.

Table 4.2 shows the formality dynamics using a traditional transition matrix. First, 21.8 percent of the informal firms in 2009 had obtained an official license by 2011. Moreover, only 2.9 percent of formal firms registered in 2009 no longer had a formal license in 2011. These figures indicate that registration procedures (and knowledge hereof) have been significantly improved since the last survey.

Table 4.2 Formality Transition Matrices

ECN or BRC + Tax code

	Informal 11	Formal 11	Total	Percent
Informal 09	570	159	729	(36.5)
	(78.2)	(21.8)	(100.0)	
Formal 09	37	1,233	1,270	(63.5)
	(2.9)	(97.1)	(100.0)	
Total	607	1,392	1,999	(100.0)
Percent	(30.4)	(69.6)	(100.0)	

Note: Percentage in parenthesis.

We now examine how formality is associated with firm growth and exit.[5] Table 4.3 shows the results, with our measure of formality included as explanatory variable. First, we find a positive and significant coefficient estimate in the growth equation, suggesting that becoming formal is associated with higher employment growth rates, in accordance with results obtained in Rand and Torm (2012). However, in both exit probits we are not able to find a statistically significant relationship between firm exit and formality.

Table 4.3 Firm Dynamics and Formality

		Firm Growth		Firm Exit	
		1	2	3	4
Firm Size	log (number of employees)	-0.075***	-0.092***	0.002	-0.012
		(9.96)	(10.11)	(0.20)	(1.28)
Registration	Formal = 1	0.066***	0.087***	0.032	-0,015
		(3.81)	(4.32)	(1.59)	(0.61)
Location dummies included		No	Yes	No	Yes
Sector dummies included		No	Yes	No	Yes
Observation		1,999	1,999	2,508	2,508
Pseudo R-squared		0.05	0.08	0.00	0.04

Note: OLS and probit, marginal effects. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Micro, HCMC, Food processing (ISIC 15).

5 A more detailed analysis using the 2007 and 2009 data on the effects of informality (and the change from informal to formal) can be found in Rand and Torm (2012).

4.2 Taxes and Informal Costs

According to the World Bank's "Doing Business" survey, the Investment Climate Assessment survey and the Vietnamese Provincial Competitiveness Index, the ease of doing business in Vietnam significantly improved over the past years. However, concerns remain regarding informal charges facing firms as well as the administrative burden in paying taxes. This final sub-section follows up on last surveys overview of the burden of taxes and informal payments facing Vietnamese manufacturing enterprises, to see if improvements have occurred.

Table 4.4 looks at the evolution in the net profits share of gross profits to get an indication of the amount of taxes paid from 2009 to 2011. From the table we can conclude that household enterprises do not contribute significantly to the tax base. The net to gross profit share is around 92 percent in both 2009 and 2011, and between 11 and 15 percent of household enterprises paid zero taxes (net to gross profit share equal to one). It should be noted that most of the non-tax paying firms are informal household enterprises as in 2009.

Table 4.4 Net-to-Gross Profit Share

	Net Profits/Gross Profits Share		Share paying zero taxes	
	2009	2011	2009	2011
Total	0.833	0.842	0.102	0.075
Household establishment	0.914	0.922	0.152	0.111
Private/sole proprietorship	0.669	0.736	0.000	0.000
Partnership/Collective/ Cooperative	0.732	0.691	0.000	0.017
Limited liability company	0.652	0.668	0.000	0.000
Joint stock company	0.666	0.631	0.000	0.000

Informality and taxation are potentially closely related to bribery and corruption, and they are prominent components of the business environment in a country. We therefore focus on informal payments which, from the enterprise's point of view, are treated as a regular component of operating costs. Informal payments may be offered in exchange for a given service delivered by a government official. We therefore examine this issue in the form of the following questions: (i) how many enterprises provide informal payments, (ii) why are these payments made, and (iii) how have these

payments changed over time? Table 4.5 shows that 34 percent of enterprises made informal payments in 2009, increasing to 38 percent in 2011. This means that the number of enterprises paying bribes have been increasing since 2007. It can also be noted that it is primarily formal firms that pay bribes. This is also confirmed in the more detailed study by Rand and Tarp (2012) showing that the "bribes to hide" hypothesis is not confirmed using Vietnamese data. Moreover, even in the balanced panel we see the same trends as in the overall sample, indicating that incumbents are not less likely to face the increasing pressure for delivering informal payments "to get things done".

Table 4.5 How Many Enterprises Pay Bribes?

	All		Balanced	
	2009	2011	2009	2011
Firms paying bribes	861	937	664	743
	(34.3)	(38.3)	(33.2)	(37.2)
Formal	738	823	575	658
	(45.6)	(47.8)	(45.3)	(47.3)
Informal	123	114	89	85
	(13.8)	(15.7)	(12.2)	(14.0)

Note: Percentage in parenthesis.

Table 4.6 shows the bribe transition matrix, which documents that several of the firms not paying bribes in 2009 paid an informal fee in 2011 (31.3 percent). Similarly, over 50 percent of the firms paying an informal fee in 2009 did not provide a bribe in 2011. Only 335 out of 1999 firms paid a bribe both in 2009 and 2011.

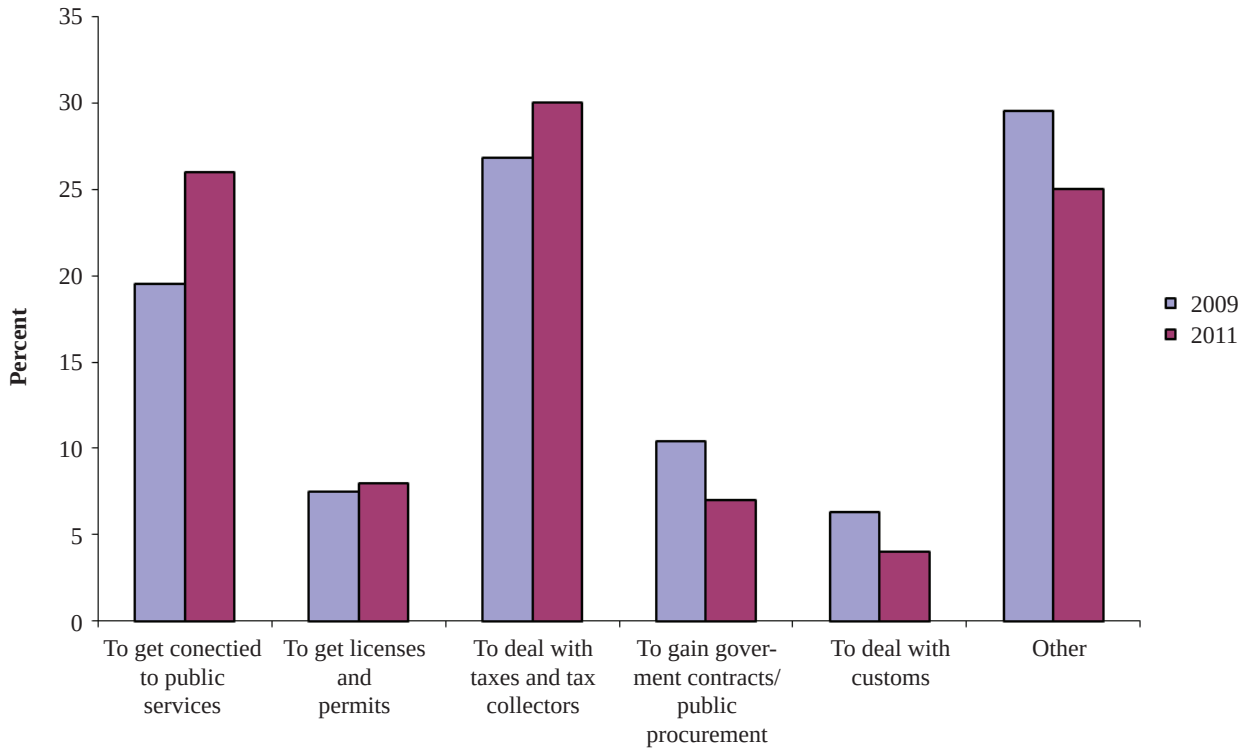
Table 4.6 How Many Enterprises Pay Bribes?

	No bribe 11	Yes bribe 11	Total	Percent
No bribe 09	917	418	1335	(66.8)
	(68.7)	(31.3)	(100.0)	
Yes bribe 09	339	325	664	(33.2)
	(51.1)	(48.9)	(100.0)	
Total	1256	743	1999	(100.0)
Percent	(62.8)	(37.2)	(100.0)	

Note: Percentage in parenthesis.

Figure 4.1 shows that 30 percent of firms made informal payments to deal with tax collectors in 2011, up from 26 percent in 2009. Around 26 percent pay informally to become connected to public services (up from 20 percent in 2009).

Figure 4.1 What is the Bribe Payment Used For?



Finally, turning to the question of which manufacturing enterprises pay bribes, Table 4.7 lists the results obtained from running a pooled probit using the usual determinants previously described and both indictor variables for registration. Columns 1 and 2 use the full dataset, whereas columns 3 and 4 report results for the balanced panel. Column 5 reports the fixed effects results (linear probability model).

Table 4.7 Bribe Determinants: The Usual Suspects

	All		All		Balanced		Balanced		FE	
	Coef	*t*-stats	Coef	*t*-stats	Coef	*t*-stats	Coef	*t*-stats	Coef	*t*-stats
Firm Size ln(number of employees)	0.097***	(13.33)	0.093***	(11.99)	0.105***	(13.01)	0.103***	(12.00)	0.069***	(2.80)
Registration (Registered = 1)	0.222***	(12.76)	0.232***	(11.76)	0.228***	(11.90)	0.237***	(10.99)	0.104**	(2.29)
Location dummies	No		Yes		No		Yes		..	
Sector dummies	No		Yes		No		Yes		..	
Observation	4,957		4,957		3,998		3,998		3,998 (1,999)	
Pseudo R-squared	0.11		0.12		0.13		0.14		..	

Note: Pooled probit + Fixed effects (LPM). Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: HCMC, Food processing (ISIC 15).

First, larger enterprises have around 10 percent higher probability of paying bribes than their micro counterparts. Second, being a registered enterprise is positively and significantly correlated with paying bribes, confirming the results in Rand and Tarp (2012). Registered firms are 22-23 percent more likely to be bribe payers than their informal counterparts. Finally, firms in the South are less likely to pay bribes than firms with similar characteristics in the North (not reported in the table).

Finally Table 4.8 looks at the association between bribes and firm dynamics (employment growth and firm exit). Firms paying bribes are not expanding their workforce more than non-paying firms. Moreover, the results suggests that bribe paying firms are (3 percent) more likely to exit.

Table 4.8 Bribe Determinants: The Usual Suspects

	Employment growth				Exit			
	Coef	t-stat	Coef	t-stat	Coef	t-stat	Coef	t-stat
Firm size (log number of employees)	-0.077***	(-9.81)	-0.089***	(-9.80)	-0.002	(-0.24)	-0.014	(-1.54)
Registered (Yes=1)	0.064***	(3.57)	0.069***	(3.46)	0.027	(1.33)	-0.030	(-1.23)
Bribe paying firm (Yes=1)	0.014	(0.82)	0.014	(0.81)	0.033*	(1.72)	0.035*	(1.83)
Urban (Yes=1)			0.038**	(2.02)			0.086***	(4.34)
South (Yes=1)			-0.022	(-1.36)			0.044**	(2.33)
Sector dummies	No		Yes		No		Yes	
Observation	1,999		1,999		2,508		2,508	
Pseudo R-squared	0.05		0.07		0.00		0.03	

Note: OLS and Probit. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15).

5 Diversification, Innovation and Labor Productivity

This section examines the characteristics of production and technology as well as labor productivity for SME's in 2011 and compare the results to 2009. As such this chapter is comparable to the work done in CIEM (2011).

5.1 Diversification and Innovation

A firm is defined as a diversifying enterprise if it produces more than one 4-digit ISIC product. Product diversification is expected to make enterprises less vulnerable to shocks, thereby increasing the probability of survival. Diversification may, however, come at the cost of lower short-run productivity. Table 5.1 demonstrates the average degree of diversification by firm size and location. In 2009, some 15 percent of the enterprises produced more than one product (4-digit ISIC). However, this number decreased to 11 percent in 2011. Overall, the numbers suggest that the average Vietnamese enterprise is relatively specialized. Larger enterprises are more likely to produce more than one product, indicating that specialization decreases as enterprise size increases. Less diversification in micro enterprises may reflect less competition in their line of activity or a lack of capacity to produce more than one good. Rural enterprises as well as firms in the North are more likely to diversify.

Table 5.1 Diversification and Innovation Rates (percent)

	Diversification (More than one 4-digit ISIC)		Innovation 1 (New product development)		Innovation 2 (Improvement of existing product)	
	2009	2011	2009	2011	2009	2011
All	14.6	11.1	2.7	4.2	41.4	38.2
Micro	12.1	10.3	1.9	3.7	33.0	32.6
Small	18.5	11.2	3.6	4.9	58.3	49.1
Medium	24.1	20.8	7.4	8.3	59.9	56.9
Urban	13.1	9.3	3.4	5.3	49.3	46.5
Rural	15.7	12.4	2.2	3.4	35.4	32.0
South	11.5	8.3	3.7	3.5	44.8	42.6
North	16.7	13.1	2.0	4.8	39.0	35.0

Note: Numbers in percentages

It has also been suggested that the level of innovation should be considered as a potential driving force of enterprise dynamics. An enterprise is said to be innovative if it started production of a new product (at the 4-digit ISIC level) during the last two years

(innovation 1) or if it made significant improvements of existing products (innovation 2). From Table 5.1 we see that the proportion of enterprises introducing a new product is fairly low although increasing from 2009 to 2011. Larger firms are more likely to introduce a new product line, and firms in urban areas are more innovative than enterprises in the rural provinces. It should be mentioned that proportion of firms in the North introducing a new product line went from 2 percent in 2009 to 4.8 percent in 2011, whereas innovation rates in the South have remained constant in the same period.

The proportion of enterprises improving existing products has declined from 41 percent to 38 percent between 2009 and 2011. Especially firms in the "small" group are driving this observed decline. Again urban and enterprises in the south are more likely to improve existing products than enterprises located in rural northern areas.

Table 5.2 Diversification and Innovation, by Sector

		Diversification		Innovation (new product development)		Innovation (improvement of existing product)	
ISIC (4-digit)		2009	2011	2009	2011	2009	2011
15	Food and beverages	0.073	0.061	0.013	0.023	0.228	0.239
20	Wood products	0.256	0.147	0.024	0.027	0.446	0.304
25	Rubber products	0.142	0.126	0.047	0.039	0.604	0.495
26	Non-metallic mineral products	0.157	0.137	0.029	0.049	0.441	0.304
28	Fabricated metal products	0.185	0.136	0.026	0.065	0.536	0.462
36	Furniture	0.223	0.152	0.043	0.076	0.561	0.601

Note: Only Sectors with more than 100 observations per year included

Table 5.2 looks at diversification and innovation rates by selected sectors. Firms in food and beverages (ISIC 15) are less likely to diversify and innovate than firms in other sectors. Moreover, firms in furniture (ISIC 36) are more likely to both diversify and innovate.

Table 5.3 looks at the diversification and innovation transition matrices for the balanced panel. First, we see that only 7.4 percent of the firm not diversifying in 2009 changed less specialized production profil in 2011. However, confirming the tendency to move towards specialization is confirmed by 64.2 percent of the firms diversifying in

2009 specialized on one 4-digit ISIC product in 2011.

Second, new product innovation by the same firm seldom happen every second year. Only five firms introduced a new product in both 2009 and 2011. Moreover, 93 percent of the firms did not introduce a new product during the 4 years considered.

Third, a lot of dynamics is observed in the second innovation measure; improvement to existing products. Only 40 percent (800 out of 1,998) of firms have not improved existing product during the four years under consideration. Moreover, 31 percent of the firms not improving existing products in 2009 made changes to product lines during 2011.

Results of pooled probit estimations for describing diversification and innovation characteristics using firm size, location, ownership type and sector are reported with robust t-statistics in Table 5.4.

Table 5.3 Diversification and Innovation Transition Matrices

Diversification

	No 2011	Yes 2011	Total	Percent
No 2009	1,566	126	1,692	(85.0)
	(92.6)	(7.4)	(100.0)	
Yes 2009	192	107	299	(15.0)
	(64.2)	(35.8)	(100.0)	
Total	1,758	233	1,991	(100.0)
Percent	(88.3)	(11.7)	(100.0)	

Innovation 1

	No 2011	Yes 2011	Total	Percent
No 2009	1854	95	1949	(97.5)
	(95.1)	(4.9)	(100.0)	
Yes 2009	44	5	49	(2.5)
	(89.8)	(10.2)	(100.0)	
Total	1898	100	1998	(100.0)
Percent	(95.0)	(5.0)	(100.0)	

Innovation 2

	No 2011	Yes 2011	Total	Percent
No 2009	800	356	1156	(57.9)
	(69.2)	(30.8)	(100.0)	
Yes 2009	452	390	842	(42.1)
	(53.7)	(46.3)	(100.0)	
Total	1252	746	1998	(100.0)
Percent	(62.7)	(37.3)	(100.0)	

First, the size-effect reported in Table 5.1 is confirmed, and larger enterprises are shown to diversify and innovate more than smaller enterprises. Second, household firms are less likely to diversify, whereas the negative coefficient estimate is only well-determined for innovation 2. Third, urban firms diversify less but are more likely to improve existing products than their rural counterparts. The same conclusion is reached comparing firms in the South and North. One possible explanation for the observed difference in specialization depending on firm location may be that competition is fiercer in the southern urban areas (HCMC) relative to the other provinces in the sample. This result confirms the findings in CIEM (2011). Finally, the time dummies included confirm that firms are diversifying and improving product less frequently in 2011 than in 2009, whereas the positive and significant time dummy suggests that there has been a slight increase from 2009 to 2011 in the probability of introducing new product lines (controlling for firm size, legal structure, location and sector).

Table 5.4 Diversification and Innovation Characteristics

	Diversification		Innovation 1		Innovation 2	
	Coef	t-stat	Coef	t-stat	Coef	t-stat
Firm size (log number of employees)	0.013**	(2.03)	0.006*	(1.85)	0.093***	(9.32)
Household firm (Yes=1)	-0.074***	(-4.69)	-0.013	(-1.61)	-0.040*	(-1.70)
Urban (Yes=1)	-0.050***	(-4.04)	0.006	(0.95)	0.046**	(2.38)
South (Yes=1)	-0.037***	(-3.37)	0.004	(0.74)	0.044***	(2.56)
Year dummy	-0.033***	(-3.18)	0.022***	(4.23)	-0.045***	(-2.78)
Sector dummies	Yes		Yes		Yes	
Observation	3,980		3,980		3,980	
Pseudo R-squared	0.06		0.07		0.10	

Note: Probit, marginal effects. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15).

Table 5.5 looks at the relationship between diversification, innovation and firm dynamics (employment growth and firm exit). Focusing on the top part of the table first reveals that only Innovation 2 of the three variables introduced above is positive and well-determined in the employment growth equation. Firms improving existing products experienced 3 percent higher employment growth than non-innovating firms between 2009 and 2011. Second, the lower part of the table shows that firms improving existing products (Innovation 2) were 4.1 percent less likely to exit. The diversification and Innovation 1 indicators were not well-determined in any of the firm dynamics specifications.

Table 5.5 Diversification, Innovation and Firm Dynamics

	Employment growth (OLS)					
	Coef	t-stat	Coef	t-stat	Coef	t-stat
Diversification	-0.029	(-1.63)				
Innovation 1			0.054	(1.28)		
Innovation 2					0.029**	(2.04)
Firm size (log number of employees)	-0.123***	(-11.00)	-0.123***	(-11.01)	-0.125***	(-11.22)
Household firm (Yes=1)	-0.195***	(-7.05)	-0.191***	(-6.99)	-0.190***	(-6.95)
Urban (Yes=1)	0.039**	(2.16)	0.041**	(2.24)	0.040**	(2.20)
South (Yes=1)	0.002	(0.11)	0.002	(0.12)	0.002	(0.16)
Sector dummies	Yes		Yes		Yes	
Observation	1,992		1,992		1,992	
R-squared	0.10		0.10		0.10	
	Exit (Probit)					
	Coef	t-stat	Coef	t-stat	Coef	t-stat
Diversification	-0.020	(-0.86)				
Innovation 1			0.058	(1.14)		
Innovation 2					-0.041**	(-2.36)
Firm size (log number of employees)	-0.023**	(-2.30)	-0.024**	(-2.39)	-0.020*	(-1.91)
Household firm (Yes=1)	-0.035	(-1.46)	-0.032	(-1.33)	-0.034	(-1.41)
Urban (Yes=1)	0.082***	(4.20)	0.083***	(4.25)	0.085***	(4.36)
South (Yes=1)	0.033*	(1.91)	0.033*	(1.95)	0.034**	(2.02)
Sector dummies	Yes		Yes		Yes	
Observation	2,501		2,501		2,501	
Pseudo R-squared	0.03		0.03		0.03	

Note: OLS and Probit estimates, marginal effects. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15).

5.2 Labor Productivity Characteristics

As in last year's report (for comparability), this sub-section focuses on two different measures of labor productivity: (1) Real revenue per full-time employee and (2) Real value added per full-time employee. This analysis is performed on 1,927 enterprises, all included in both years. Table 5.6 shows the two labor productivity measures by firm size and location. The average real revenue per full-time employee was 73.0 million VND in 2011, whereas real value added per full-time employee was 20.0 million VND.

Both figures reflect a significant real labor productivity growth between 2009 and 2011. The observed labor productivity growth is mainly driven by micro and small firms. Moreover, firms in the North have significantly improved output per worker between 2009 and 2011, such that average output related labor productivity has reached the level of comparable firms in the South.

Table 5.6 Labor Productivity by Firm Size and Location

	Labor Productivity 1			Labor Productivity 2		
	2009	2011	Growth	2009	2011	Growth
All	64.0	73.0	1.7 [1.2]	15.8	20.1	1.7 [1.2]
Micro	51.6	64.1	1.8	12.5	17.4	1.8
Small	82.9	89.6	1.6	21.3	25.3	1.6
Medium	116.5	108.9	1.3	27.8	29.4	1.3
Urban	81.0	90.6	1.8	21.5	25.7	1.6
Rural	52.4	61.0	1.7	11.9	16.2	1.8
South	71.1	73.9	1.5	17.6	22.6	1.6
North	59.3	72.5	1.9	14.6	18.4	1.8

Note: Million real VND. Mean labor productivity (LP) growth is defined as "(LP 2011/LP 2009). Median LP growth in brackets.

Table 5.7 shows labor productivity numbers by sector. First, the average real revenue and value added per full-time employee is relatively high in the rubber sector (ISIC 25) with 116 (revenue) and 28 (value added) million VND per employee in 2011. However, the rubber sector is the sector improving labor productivity the least (among the 6 largest sectors) between 2009 and 2011. Median labor productivity growth rates are above one in all sectors again highlighting significant overall improvements in labor productivity among Vietnamese SMEs. However, the variation across firms is large indicated by that around 40 percent of the firms experienced negative labor productivity growth between 2009 and 2011.

Table 5.7 Labor Productivity by Sector

ISIC (4-digit)		LP 1 2009	LP 1 2011	LP 2 2009	LP 2 2011	LP 1 Growth	LP 2 Growth
15	Food and beverages	60.9	73.8	13.6	18.0	1.81	1.86
20	Wood products	47.6	55.3	12.1	15.4	1.79	1.65
25	Rubber products	117.0	115.9	26.5	28.1	1.36	1.29
26	Non-metallic mineral products	59.5	54.3	14.8	18.5	1.43	1.72
28	Fabricated metal products	59.8	71.3	15.4	19.4	1.65	1.57
36	Furniture	61.3	61.3	15.4	19.5	1.59	1.61
Share of firms with negative LP growth (LP growth<1)						0.40	0.37

Note: Only Sectors with more than 100 observations per year included.

Finally, results of OLS estimations outlining the relationship between labor productivity growth (2009 to 2011) and a set of standard variables (2009 levels) (location, ownership form, sector and firm size) and indicator variables for diversification and innovation are shown in Table 5.8. In addition we control for the 2009 labor productivity level. Robust standard errors are reported next to the estimation results.

Table 5.8 Labor Productivity Characteristics

	Labor Productivity Growth (2009 to 2011)			
	dln(LP1)		dln(LP2)	
	Coef	t-stat	Coef	t-stat
Labor productivity level (log)	-0.536***	(-21.90)	-0.629***	(-22.96)
Firm size (log number of employees)	0.116***	(5.37)	0.129***	(6.72)
Diversification (Yes=1)	0.004	(0.09)	-0.038	(-0.90)
Innovation 1 (Yes=1)	-0.014	(-0.16)	-0.042	(-0.45)
Innovation 2 (Yes=1)	-0.007	(-0.18)	0.056*	(1.81)
Household firm (Yes=1)	0.036	(0.69)	0.008	(0.18)
Urban (Yes=1)	0.137***	(3.47)	0.146***	(4.03)
South (Yes=1)	-0.077**	(-2.32)	0.023	(0.78)
Sector dummies	Yes		Yes	
Observation	1,920		1,920	
Pseudo R-squared	0.29		0.31	

Note: OLS. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15).

We observe the usual decreasing returns pattern, i.e. a highly significant coefficient estimate on the 2009 productivity level, indicating that firms with a high initial labor productivity experience lower growth in labor productivity over time. Second, labor productivity increases with firm size, independent of the measurement of labor productivity, confirming the result found in Table 5.6. Third, improvements to existing products is positively associated with "value added" labor productivity growth, meaning that enterprises are likely to increase value added per employee by incorporating changes to existing product lines. Fourth, enterprises located in urban areas experience higher labor productive growth than enterprises located in rural provinces. Lastly, firms in the South seem to have experienced lower revenue per employee growth than their northern counterparts (controlling for size, legal structure, sector etc.).

6 Investment and Access to Finance

Constraints in credit markets have for a long time been cited (by firms) as the most serious obstacles for future growth of SMEs in Vietnam. This section therefore considers investment characteristics of the firm and the credit constraints they are facing in Vietnam. In order to examine investment dynamics and credit constraint development over time much of the analysis is performed using the balanced panel dataset (2009 and 2011).

6.1 Investments

Table 6.1 shows the percentage of enterprises that made investments since the last survey, depending on firm size, legal structure and location. In 2009, 61 percent of the 2,508 enterprises made new investments compared to 56 percent in 2011. The probability of investing increases by enterprise size, although around 50% of micro enterprises made investments in 2011. More non-HH enterprises make investments and firms located in rural and Northern provinces invested more frequently than enterprises in urban and Southern areas.

Table 6.1 New Investments

	2009		2011	
	Obs.	Share	Obs.	Share
All	2,508	0.609	2,446	0.562
Micro	1,682	0.536	1,686	0.498
Small	664	0.735	616	0.674
Medium	162	0.846	144	0.833
Household firm	1,672	0.544	1,587	0.505
Non-HH firm	836	0.738	859	0.667
Urban	1,090	0.536	1,048	0.529
Rural	1,418	0.665	1,398	0.587
South	1,041	0.508	1,032	0.453
North	1,467	0.680	1,414	0.641

Note: Three observations missing in 2011 due to misreporting.

Table 6.2 looks at the investment persistence among Vietnamese SMEs. Only 444 firms out of 1997 enterprise did not make new investments the past 4 years. At the same time over 40 percent made new investments in both 2009 and 2011. And finally, 42 percent of the firms not investing in 2009 made investments in 2011. All in all, it is

safe to conclude that the majority of SMEs are investing over a five year time horizon.

Table 6.3 looks at the association between the probability to invest and the group of traditional firm controls. Throughout the Table the time dummy is negative and well-determined independent of sample (full or balanced) or estimator (Pooled probit or fixed effects linear probability model) choice, confirming the general reduction in the share of firms making new investments in 2011 as compared to 2009.

Table 6.2 Investment Persistence (Investment Transition Matrix)

Investment Transition Matrix

	No 2011	Yes 2011	Total	Percent
No 2009	444	319	763	(38.2)
	(58.2)	(41.8)	(100.0)	
Yes 2009	426	808	1,234	(61.8)
	(34.5)	(65.5)	(100.0)	
Total	870	1,127	1,997	(100.0)
Percent	(43.6)	(56.4)	(100.0)	

Moreover, Table 6.3 shows that larger firms have a higher probability of making new investments than their smaller counterparts (controlling for legal structure, location and sector). The estimate is reduced to half when controlling for unobserved firm characteristics, but the estimate remains well-determined. Household firms are less likely to make new investments than their more “formal” counterparts, and somewhat surprisingly southern urban firms tend to have a significant lower probability of investing than comparable northern and rural firms.

Table 6.3 Investment Characteristics

	All		Balanced		FE	
	Coef	t-stat	Coef	t-stat	Coef	t-stat
Firm size (log number of employees)	0.150***	(15.33)	0.157***	(14.18)	0.077***	(3.26)
Household firm (Yes=1)	-0.048**	(-2.28)	-0.050**	(-2.07)		
Urban (Yes=1)	-0.193***	(-10.92)	-0.195***	(-9.72)		
South (Yes=1)	-0.200***	(-12.92)	-0.183***	(-10.54)		
Year dummy	-0.042***	(-2.88)	-0.050***	(-3.05)	-0.047***	(-3.45)
Sector dummies	Yes		Yes		Yes	
Observation	4,954		3,994		3,994	
Pseudo R-squared	0.12		0.12		0.07	

Note: Probit + Fixed Effects (Linear Probability Model). Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15).

Figure 6.1 shows how new investments are financed. The average amount of the investment financed by retained earnings went up from 2009 to 2011. On average, 44 percent of new investments during the last two years are financed by retained earnings. By contrast, the share financed by own capital was 35 percent in the 2009 survey (only balanced panel considered). The share of investments financed using formal credit went down from 52 to 47 percent between 2009 and 2011. The share of investments financed through informal sources (for example friends and family without interest payments) also decreased from 13 percent in 2009 to 9 percent in 2011. Informal financing therefore continues to play a smaller part of the aggregate external financing requirements of SMEs (declining informal financing share since 2005).

Figure 6.1 How Was the Investment Financed?

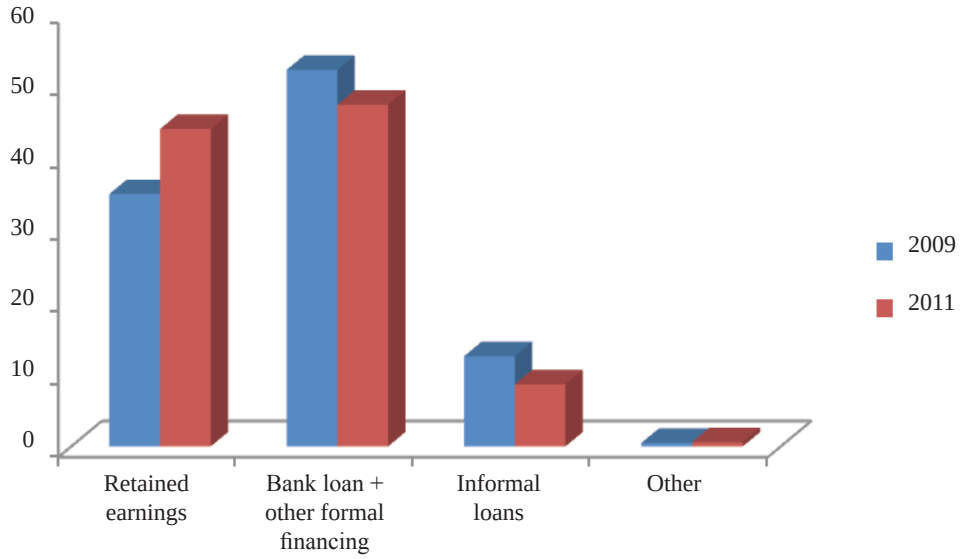


Table 6.4 considers the full 2011 sample of investors, which result in a small increase (as compared to the balanced panel in Figure 6.1) in the average share of investments financed by retained earnings. Moreover, micro firms are more likely to finance investments using retained earnings or informal financing. Urban firms also use retained earnings and informal financing more frequently to finance investments.

Table 6.4 Investment financing, by firm size and location

	Retained Earnings Percent	Formal loans Percent	Informal loans Percent
All	45.3	46.3	8.4
Micro	49.5	40.6	9.9
Small	38.9	54.1	7.0
Medium	38.3	59.2	2.5
Household firm	49.5	41.8	8.7
Non-HH firm	39.5	52.6	8.0
Urban	51.0	38.4	10.6
Rural	41.4	51.7	6.9
South	50.0	44.4	5.6
North	42.9	47.3	9.8

Note: Full 2011 sample. 1,349 firm observations. Formal financial loans are calculated as the residual.

6.2 Credit

As in previous SME surveys (CIEM, 2007, 2009, 2011), it should be noted that the debt share of Vietnamese enterprises is very low, maybe due to liquidity constraints and restrictions in the access to finance (Rand, 2007). However, the low debt to asset share of Vietnamese SMEs is in-line with the result that a large part of investments are financed through retained earnings.

The number of enterprises that applied and obtained formal bank loans or other forms of credit during the last 2 years, is shown in Table 6.5 for both the full and the balanced sample. In 2011, some 29 percent (37 percent in 2009), applied for a formal loan, and 28 percent (20 percent in 2009) had problems getting the loan. These results are independent of we focus on the full or the balanced sample.

Table 6.5 Access to Credit

	2011 – Full		2011 - Balanced	
	Yes	No	Yes	No
Enterprise applied for formal loan	(719)	(1,729)	(597)	(1,401)
	29.4	70.6	29.9	70.1
	Yes	No	Yes	No
Problems getting loan	200	(519)	(168)	(429)
	27.8	72.2	28.1	72.9

Note: Full and balanced 2011 sample. Numbers in parenthesis are number of observations.

Several enterprises that did not apply for formal credit may still be credit constrained. However, Figure 6.2 reports why these enterprises did not apply for loans and 57 percent of the enterprises did not apply for formal loan because they felt that they did not need one. These firms cannot be classified as credit constrained firms. Therefore, out of the non-applicant group (1,729 firms) only 43 percent may potentially be classified as constrained. Including this group as credit constrained means that 752 enterprises has limited access to credit, corresponding to 31 percent of the sample. Adding rationed firms (the 200 firms having problems obtaining loans) means that 39 percent of firms are rationed or constrained, which is around the level observed in previous years.

Figure 6.2 Why Don't Enterprises Apply for Loans?

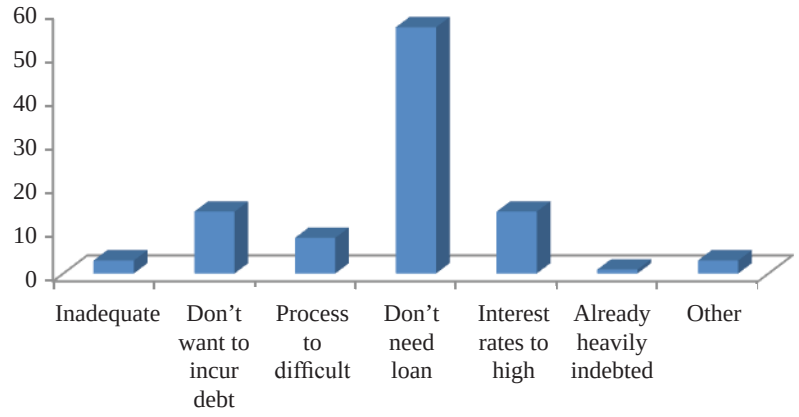


Table 6.6 looks at the relationship between obtaining formal credit and informal financing. First, we see that twice as many firms obtain informal loans as compared to formal ones. Comparing this fact with the result in Table 6.4 (informal loans only finance 8 to 9 percent of total investments) shows that informal loans are small but a frequent part of Vietnamese SMEs financing scheme. Second, 560 firms out of 2449 have both informal and formal loans and 59 percent of the firms not having formal credit access use informal loans.

Table 6.6 Informal Loans and Credit Constraints

		Formal loan			
		Yes	No	Total	Percent
Informal loan	Yes	560	1,024	1,584	(64.7)
		(35.4)	(64.6)	(100.0)	
	No	159	705	864	(35.3)
		(18.4)	(81.6)	(100.0)	
	Total	719	1,729	2,448	(100.0)
	Percent	(29.4)	(70.6)	(100.0)	

Table 6.7 looks at formal and informal credit characteristics. In the top part of the table we look at the full sample whereas the bottom part exclude firms without credit demand. First, larger firms are more likely to obtain credit, formal as well as informal. However, it should be noted that firm size is not an important determinant of obtaining access to informal finance when firms without credit demand are excluded from the sample.

Table 6.7 Credit Access Characteristics

	Formal Credit		Informal Credit		Credit (Formal+Informal)	
	Coef	t-stat	Coef	t-stat	Coef	t-stat
Firm size (log number of employees)	0.141***	(12.09)	0.071***	(5.41)	0.105***	(8.10)
Household firm (Yes=1)	-0.039	(-1.45)	-0.110***	(-3.88)	-0.083***	(-3.13)
Urban (Yes=1)	-0.213***	(-9.41)	-0.113***	(-4.76)	-0.182***	(-8.03)
South (Yes=1)	-0.094***	(-4.70)	-0.125***	(-6.00)	-0.135***	(-6.86)
Sector dummies	Yes		Yes		Yes	
Observation	2,448		2,448		2,448	
Pseudo R-squared	0.13		0.06		0.10	

Excluding Firms without Credit Demand

	Formal Credit		Informal Credit		Credit (Formal+Informal)	
	Coef	t-stat	Coef	t-stat	Coef	t-stat
Firm size (log number of employees)	0.144***	(10.34)	0.002	(0.18)	0.027***	(3.07)
Household firm (Yes=1)	-0.038	(-1.18)	-0.109***	(-4.28)	-0.071***	(-3.72)
Urban (Yes=1)	-0.223***	(-8.22)	-0.020	(-0.94)	-0.079***	(-4.93)
South (Yes=1)	-0.085***	(-3.55)	-0.057***	(-3.02)	-0.055***	(-3.81)
Sector dummies	Yes		Yes		Yes	
Observation	1,958		1,958		1,958	
Pseudo R-squared	0.10		0.03		0.07	

Note: Probit, marginal effects. Robust standard errors. *, **, *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15).

Household firms are less likely to obtain informal credit, which means that more formal entities also rely on informal sources of financing investments. Moreover, firms in urban areas and in the south are less likely to access credit, although the urban dummy is not well determined in the informal credit specification excluding firms without credit demand. Urban firms are however over 20 percent less likely to obtain formal credit

than their rural counterparts and Southern firms 9 percent less likely than the Northern firms independent of the sample chosen. As in previous surveys, smaller SMEs in HCMC tend to rely more on retained earnings to finance investments than comparable firms in other provinces. This may be due to the lack of credit available to smaller firms in HCMC, but could also be a result of returns to assets generally being higher in the HCMC area making investments using retained profits more feasible.

7 Employment

This chapter analyzes the structure of the labor market in the Vietnamese SME manufacturing sector based on a matched employer-employee data set. The chapter will consider various aspects of the labor market including workforce composition, occupation composition, hiring methods, trade unions, social benefits, education and training of the workforce in addition to wage level and wage determinants. Relying on both data from small and medium sized firms as well as data collected among employees in these firms it is possible to get additional knowledge and make the analysis more insightful.

7.1 Workforce Structure and Stability

Table 7.1 reveals that the average share of regular workers (both fulltime and part time) in Vietnamese SMEs has increased from 2009 to 2011 while the share of casual workers has decreased (balanced panel). This pattern holds across all size and location categories. This trend stands in contrast to what was observed between 2007 and 2009. Furthermore, the change from 2009 to 2011 is not driven by new firms in the manufacturing sector since the results are based on the balanced panel. This could indicate a recovery from the global economic crisis and generally more optimism. Often, when the economy is stable and the confidence in the future is high firms tend to hire more regular workers and less casual workers.

The share of women in the workforce has declined slightly between 2009 and 2011 mostly driven by a decline in the share of women in micro and small firms while the share of women in medium sized firms is almost constant between 2009 and 2011. The proportion of unpaid workers has increased slightly from 2009 to 2011 in all categories with the highest increase in urban regions and in the south (around 2 percent). In rural areas the fraction of unpaid workers accounts for 50 percent which is not surprising since many of the employees in these firms are likely to be household members. The results are consistent within the unbalanced panel.

Table 7.1 Labor Force Composition (percent of total workforce)

	All		Micro		Small		Medium		Urban		Rural		South		North	
	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011
Regular	91.3	95.7	92.2	96.4	88.7	93.7	92.3	95.3	91.4	96.0	91.2	95.4	93.5	97.7	89.8	94.3
Fulltime	87.7	89.1	87.3	88.2	87.9	90.7	91.8	93.1	89.7	91.6	86.4	87.4	90.7	93.2	85.7	86.4
Women	37.1	36.5	35.0	34.6	41.0	40.4	42.4	43.1	36.3	37.1	37.6	36.1	35.4	34.4	38.2	38.0
Unpaid	37.3	38.4	53.5	53.7	5.2	4.7	0.2	0.1	19.8	21.6	49.5	50.0	29.3	31.1	42.7	43.2
No. Of obs.	1,958	1,958	1,315	1,358	513	480	130	120	800	800	1,158	1,158	782	782	1,176	1,176

Note: Average, percentages of total workforce, balanced panel

Table 7.2 shows the labor force composition in percent of the total workforce. Production workers still constitute the vast majority of the total workforce. The share of production workers increases with firm size (both in 2009 and 2011) and is higher in the urban regions compared to rural regions. On average, between 2009 and 2011, firms saw a decrease in the share of production workers across almost all size and location categories (medium sized firms had a constant proportion of production workers). By contrast the proportion of managers rose slightly from 2009 to 2011. Medium sized firms seem to have the same workforce composition in 2009 and 2011.

Noteworthy is it that 70 percent of the workers (not reported) hired in informal firms were unpaid in 2011. [6] The share of unpaid workers in formal firms was only 25 percent. This observation is in accordance with the findings of Rand and Torm (2012a) who, based on the surveys from 2007 and 2009, finds that besides from being beneficial for firms, formalizing of firms is also beneficial for workers in terms of improved contract conditions.

Table 7.2 Labor Force Composition by Occupation (percent of total workforce)

	All		Micro		Small		Medium		Urban		Rural		South		North	
	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011
Manager	29.5	27.1	38.0	35.4	11.3	11.0	5.8	5.9	21.5	19.8	35.0	32.2	22.3	26.2	30.3	31.7
Professional	3.3	3.0	1.5	1.1	7.3	6.7	7.9	7.8	5.8	4.9	1.6	1.7	3.4	4.0	2.8	2.9
Office	1.7	1.5	0.6	0.5	3.7	3.3	5.1	4.2	3.1	2.7	0.7	0.6	2.0	2.2	1.1	1.3
Sales	2.7	2.1	2.2	1.4	4.0	3.7	3.6	3.3	3.8	3.6	2.0	1.1	3.4	4.2	1.3	1.7
Service	0.7	0.7	0.3	0.4	1.3	1.2	1.8	2.2	1.0	1.0	0.4	0.5	0.6	0.9	0.8	0.5
Production	61.9	65.3	57.3	61.1	71.8	73.6	75.3	75.8	64.6	67.4	60.1	63.8	67.8	62.2	63.6	61.7
Apprentice	0.2	0.3	0.1	0.2	0.5	0.4	0.5	0.8	0.2	0.5	0.2	0.1	0.5	0.3	0.1	0.2
No. of firms.	1,950	1,954	1,315	1,358	510	480	125	116	796	796	1,154	1,158	780	779	1,170	1,175

Note: Percentages of total workforce, balanced panel. 8 firms did not answer the question in 2009 and 4 firms did not answer in 2011.

6 Informal firms are understood as firms without either an Enterprise Code Number or a tax code.

The employee survey reveals that occupation shifts do occur and the dynamics are presented in Table 7.3. Of those workers who currently hold manager positions approximately 30 percent were production workers before, 21.5 percent did not work before and only 22 percent were managers in their previous job. This indicates that a manager position does not require specific experience. These findings also point towards the possibility of advancing in job functions. Nevertheless, it seems that production and professional workers are the ones with the highest tendency to stay in the same line of work when they change jobs.

Table 7.3 Occupation Transition Matrix

	Current job function					
Previous job	Manager	Professional	Office	Sales	Service	Production
Manager	35	0	0	1	0	2
%	22.2	0.0	0.0	0.8	0.0	0.2
Professional	21	70	9	5	2	6
%	13.3	51.9	7.6	3.8	3.9	0.7
Office	7	14	48	5	2	12
%	4.4	10.4	40.7	3.8	3.9	1.4
Sales	8	1	9	33	3	4
%	5.1	0.7	7.6	25.0	5.9	0.5
Service	5	0	4	11	19	22
%	3.2	0.0	3.4	8.3	37.3	2.5
Production	48	11	9	29	14	617
%	30.4	8.1	7.6	22.0	27.5	69.8
Did not work	34	39	39	48	11	221
%	21.5	28.9	33.1	36.4	21.6	25.0
Number of observations	158	135	118	132	51	884

Note: Based on the employee survey. Total number of observations is 1,478.

In terms of workforce stability Table 7.4 present the turnover figures for 2011 based on the entire sample. On average, almost the same amounts of jobs were created as abolish across all size and location categories in 2011. The share of workers hired in 2011 made up approximately 7 percent of the total workforce and almost an equal share of workers left the firms. Of the workers who left their firm approximately 2/3 left voluntary and only around 4 percent was fired.

Table 7.4 Stability of Workforce

	All	Micro	small	Medium	Urban	Rural	Formal	Informal	South	North
Share hired	6.8	5.7	9.0	10.3	7.3	6.4	8.2	3.3	8.7	5.3
Share left	7.0	6.0	9.4	9.1	7.8	6.5	8.3	4.0	8.4	6.0
of which										
Left voluntarily	66.8	66.8	67.5	64.8	60.8	73.6	67.1	63.3	69.5	63.8
Were fired	4.1	2.9	5.4	3.8	4.2	4.0	3.5	10.2	1.7	6.8
Retired	0.3	0.0	0.3	1.5	0.6	0.1	0.4	0.0	0.4	0.3
Illness	1.5	1.2	1.4	2.8	1.7	1.3	1.7	0.0	1.7	1.4
Died	0.1	0.0	0.0	0.3	0.1	0.0	0.1	0.0	0.1	0.0
Other reasons	27.2	29.1	25.4	26.7	32.6	21.0	27.3	26.6	26.8	27.7
No. of firms	2,427	1,674	612	141	1,038	1,389	1,718	709	1,404	1,023

Note: Unbalanced panel. Percent of total workforce.

These results are consistent across all size and location categories. Worth noting is that in 2011 informal firms had a substantially higher share of workers getting fired than formal firms. Also, firms located in the North had a relatively high share of employees getting fired compared to firms located in the South.

7.2 Education, Training, Workplace Conditions and Hiring Methods

To what extend the composition of the workforce is due to firm choice more than lack of suitable workers is worth some consideration. Table 7.5 reveals that around 17 percent of all firms had difficulties recruiting workers with the appropriate skill level in 2011 and 70 percent of these firms listed lack of workers with the required skill level as the main reason. Compared to 2009 the share of firms with recruiting difficulties is almost unchanged. Table 7.5 shows that recruiting difficulties increased substantial with firm size and are higher in urban areas. 42 percent of all medium sized firms and 11 percent of all micro firms report difficulties with recruiting workers with the appropriate skill level. More than 70 percent of small, medium sized and urban firms listed lack of skilled workers as the main reason for recruiting difficulties. This is in line with the fact that larger and urban firms generally employ more professional workers, as seen in Table 7.2. The results might indicate that skill levels of workers do not match firm demand. 16.6 percent of all firms find difficulties in recruiting workers as a result of insufficient wage offers and 10 percent listed unattractive working conditions as the main difficulty.

Compared to 2009 the situation is almost unchanged. Since the share of well-educated workers is relatively high, as see in Table 7.10, it seems that these recruiting difficulties might be due to lack of labor market information rather than an actual lack of skilled workers. This suggests that a strengthening of information systems would benefit both workers and firms and could help match worker skills and job functions.

Table 7.5 Hiring Difficulties

	All	Micro	Small	Medium	Urban	Rural
Difficulties with recruiting workers with required skills						
Yes	17.0	11.2	27.3	41.1	23.4	12.2
Did not recruit	43.2	53.6	22.5	9.2	34.4	49.7
Reason for recruitment difficulties						
Lack of skilled labor	69.9	66.3	72.5	74.1	75.7	61.5
Cannot provide sufficient wage offer	16.5	16.0	19.2	10.3	14.8	61.5
Working conditions not attractive	10.4	12.8	7.2	12.1	7.8	61.5
Other	3.2	4.8	1.2	3.4	1.6	61.5
No. of firms	2,426 (412)	1,673 (187)	612 (167)	141 (48)	1,038 (243)	1,388 (169)

Number of firms with recruiting difficulties in parentheses. 2011 survey.

Table 7.6 shows that the most common recruiting method is through informal contacts, which constitute more than 60 percent of all recruiting methods.[7] This pattern holds across all size and location categories (except for micro firms where it constitutes 58 percent). Particularly small firms use recommendations by friends as the main recruiting methods where 75 percent of hires are done informally. These results are consistent with findings from 2009 (not reported). Both rural and urban firms use to a large extent informal recruiting methods and urban firms hire more than 65 percent of the workers by informal methods. Noteworthy is that around one third of both rural and micro firms report "non-applicable". This might bias the results since it is most likely that workers hired in these firms are household members and then, by definition, hired informally. Hiring methods can have different implications including in terms of the wage setting. Larsen, Rand and Torm (2011) document, based on the 2007 survey, that workers hired by personal contacts or other forms of informal hiring methods receive a significant wage premium.

7 Recommended by friends/relatives or other workers and personal contacts are understood as informal recruiting methods.

Table 7.6 Recruitment Methods

	Recruitment Methods					
	All	Micro	Small	Medium	Urban	Rural
Newspaper advertisement	5.5	1.9	10.1	29.1	9.8	2.3
Labor exchange	2.6	2.2	3.9	2.1	2.9	2.4
Recommended by friends/relatives or other workers	39.1	33.6	54.2	37.6	42.1	36.8
Recommended/allocated by local authorities	1.3	1.0	1.8	2.8	2.0	0.7
Personal contacts	23.0	24.8	20.8	12.1	26.3	20.6
Through employment service centers	1.5	0.5	2.9	7.1	2.9	0.5
Other	2.0	1.4	3.1	5.0	1.6	2.3
Not Applicable	25.0	34.7	3.1	4.3	12.3	34.4
No. of firms	2,427	1,674	612	141	1,038	1,389

Note: 2011 survey

In Table 7.7 recruitment methods across sectors are considered. Firms producing *Food and Beverages* or manages *Wood* are less likely to use informal hiring methods compared to the other sectors shown in the table. The *Food and Beverages* and the *Wood* sector do, however, have a relatively large share of firms answering not applicable.

Sometimes owners/managers supervise their workers to ensure that these work hard enough. Table 7.8 shows that around 17 percent of all firms rely on some kind of supervision, either through foreman or workers supervising each other. Around 25 percent of all firms make incentives to work hard trough additional payment systems and 12 percent provide fridge benefits. It seems that there is not a considerable difference between male and female managers/owners with regards to supervision at the workplace.

Table 7.7 Recruitment Methods by Sector

	Food and Beverages	Wood	Rubber	Non-metallic mineral	Fabricated metal	Furniture, jew ect.
Newspaper advertisement	2.7	1.6	7.9	4.3	4.9	4.1
Labor exchange	1.9	1.2	3.5	2.6	2.3	3.1
Recommended by friends/ relatives or other workers	29.4	38.6	50.0	47.4	42.6	43.8
Recommended/allocated by local authorities	0.9	0.4	2.6	1.7	1.6	1.5
Personal contacts	18.2	25.3	23.7	30.2	28.0	26.8
Through employment service centers	0.7	0.4	3.5	2.6	1.9	
Other	1.8	2.4	5.3	3.4	1.6	1.0
Not Applicable	44.4	30.1	3.5	7.8	17.1	19.6
No. of firms	737	249	114	116	432	194

Note: 2011 survey

In Table 7.5 the majority of firms indicated trouble with finding workers with adequate skills. Intuitively this might result in more training at the workplace. However, Table 7.9 shows that only 8.4 percent of all firms provide training of new workers and only 6.8 percent of all firms provide training of existing workers. The share of firms providing training is increasing in firm size. This is not surprising since medium sized firms reported most difficulties in recruiting skilled labor.

Table 7.8 Measures to Ensure that Employees Work Hard Enough

	Do you rely on measures to ensure that your employees work hard enough									
	All	Micro	Small	Medium	Urban	Rural	South	North	Men	Women
Supervision through foreman	12.6	10.3	15.9	20.0	14.0	11.3	10.4	14.4	13.0	11.8
Employees supervise each other	4.5	4.7	4.5	2.9	4.6	4.5	4.1	4.9	4.1	5.3
Incentives through additional payment systems	24.7	22.7	27.9	30.0	26.6	22.9	29.4	20.8	24.1	25.6
Social ('fringe') benefits	12.1	11.4	11.9	19.3	14.1	10.3	18.1	7.1	11.0	14.0
Cultivating Trust/Loyalty/ Obligation	21.2	24.6	14.9	14.3	17.2	24.7	14.5	26.7	22.5	18.8
Management by quality of production	18.8	19.4	19.9	7.9	18.2	19.3	14.9	22.0	18.4	19.5
Time supervision	5.4	5.8	4.6	5.7	4.5	6.3	7.5	3.7	6.3	4.0
Threat of dismissal	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.3
Others	0.6	0.8	0.3	0.0	0.6	0.6	1.0	0.3	0.5	0.8
No. of firms	2115	1372	603	140	999	1116	954	1161	1335	780

Note: 2011 survey. 312 firms did not answer the question and were removed

The share of firms providing training for workers has changed slightly between 2009 and 2011 with around 7 percent in 2011 and 8.5 percent in 2009. However, there has been a substantial rise in the share of medium firms providing training for new workers between 2009 and 2011 with 28 percent in 2009 and 35 percent in 2011. The share of small firms providing training rose from 9.5 percent in 2009 to almost 15 percent in 2011. In contrast, there has been a drop in micro firms providing training of workers between 2009 and 2011 (numbers for 2009 are not reported). The rise in small and medium sized firms providing training for new workers might be caused by the need of better skilled workers or because firms are less resource constrained due to recovery after the global economic crisis. Firms located in urban regions are more likely to provide training to new workers compared to rural firms.[8]

8 Results based on unbalanced panel.

Table 7.9 Training of Workforce

	All	Micro	small	Medium	Urban	Rural	Food and Beverages	Wood	Rubber	Non-metallic mineral	Fabricated metal	Furniture, jew ect.
Provides training for new workers	8.4	2.3	14.9	35.5	11.0	5.8	5.3	6.5	10.6	4.6	5.2	7.7
Provides training for existing workers	6.8	3.1	12.4	20.6	10.0	4.1	2.9	6.5	6.1	7.9	4.7	5.0
No. of firms	2,029	1,285	603	141	1,033	996	584	205	114	114	402	180

Note: All firms that did not answer were removed. 2011 survey.

Table 7.9 also shows that the share of firms providing training of existing workers has increased between 2009 and 2011 with approximately 7 percent of all firms providing training for existing workers in 2011 compared to only 3 percent in 2009. Firms are more likely to provide training to new workers than to existing workers. This might be due to the fact that workers who have been in the same job for some time have gathered some experience and do not need training to fulfill their job requirements. The findings are based on the unbalanced panel but are consistent within the balanced panel. Finally, it seems that a relatively large share of rubber producing firms and firms making furniture provide training for new workers.

Turning to the educational level of the workforce, Table 7.10 reveals that almost 19 percent of the workers surveyed in the employee module have a university education with a notably higher share for women. Since the sample consist of workers hired in private SMEs the results are likely to be biased. It is most likely that well educated men are underrepresented in the sample because they are hired in other places (state-owned enterprises or others). In contrary, well educated women could be overrepresented since they are more likely to be excluded from high positions in state owned companies and, therefore, finds employment in private owned firms. Any inferences regarding educational attainment for workers should, therefore, be drawn bearing this in mind.

Table 7.10 Education Attainment

Highest level of education			
	Women	Men	Total
None (%)	0.6	0.8	0.7
	4	7	11
Primary school (%)	6.7	4.1	5.1
	41	35	76
Secondary school (%)	18.5	22.2	20.6
	114	191	305
High school (%)	30.8	36.0	33.8
	190	310	500
Technical certificate/Elementary worker (%)	2.1	2.4	2.3
	13	21	34
Technical worker without certificate (%)	7.5	13.0	10.7
	46	112	158
Technical worker/professional secondary (%)	8.1	7.9	8.0
	50	68	118
College/University/post-graduate (%)	25.6	13.7	18.7
	158	118	276
No. of obs.	616	862	1,478

Note: Numbers in bold. Employee survey.

7.3 Trade Unions

Only firms with 10 workers or more are obligated to have a local level trade union according to the enterprise law. This section will, therefore, focus on firms that are classified as small or medium sized because they employ more than 10 employees. Hence, all firms with less than 10 workers have been excluded from the sample that is considered in Table 7.11. Based on the unbalanced panel almost 26 percent of all firms had a local trade union in 2009 and 2011. The frequency of local trade unions various greatly by firm size, from 16 percent for small firms to 67 percent for medium sized firms. The share of medium sized firms having a trade union has increase slightly from 2009 to 2011 whereas the share of rural firms with a local level trade union has

decreased. It appears that firms headed by a male owner/manager are less likely to have a local level trade union compared to female owned firms. The share of male headed firms with local level trade unions has decreased between 2009 and 2011. In all other categories the share of firms with a trade union has been almost constant between 2009 and 2011. Table 7.11 also reveals that trade unions are more common in urban areas compared to rural areas. Finally, is seems that firms located in the south are more likely to have a local level trade union compared to firms located in the north.

Table 7.11 Share of Firms Having a Local Trade Union and Its Members

	Unbalanced Panel				Balanced Panel			
	Share of firms		Share of workers		Share of firms		Share of workers	
	2009	2011	2009	2011	2009	2011	2009	2011
All	25.8	25.8	81.0	77.3	27.7	26.3	81.2	77.9
Small	16.6	16.4	83.4	76.5	18.4	17.2	83.7	77.3
Medium	63.5	66.7	78.2	76.7	64.6	62.5	77.9	76.7
Urban	31.3	33.6	81.9	75.4	33.3	34.5	82.2	76.0
Rural	16.2	13.2	77.9	84.9	18.1	13.3	77.8	85.4
South	32.3	34.1	74.0	72.7	36.4	34.7	74.3	73.4
North	20.3	18.9	90.5	84.3	20.8	19.8	90.7	83.9
Male owner	23.3	21.2	79.7	82.8	25.4	22.0	78.4	85.0
Female owner	29.9	31.9	81.9	73.3	31.8	31.8	81.9	74.3
No. of obs.	811	751	211	202	642	598	180	164

Note: The results are based on a selected sample. All micro firms have been removed from the sample

When unions do exist the workforce participation is generally quite high with around 77 percent of workers being members in 2011. It is noteworthy that the average share of workers being members of a trade union is higher in firms located in the north compared to firms located in the south. A decrease in the average share of workers joining trade unions is observed between 2009 and 2011. This decrease is observed across all categories except rural and male owned firms. It is quite surprising that workers decreasingly become members of local level trade unions since this should be a way to get better working conditions, higher wages and be ensured social benefits. The decrease in workers becoming members might be caused by various reasons including lack of awareness about the benefits of union membership, a tendency to free-ride, or a

presumption of trade union inefficiency.[9]

More than 45 percent of the workers in the employee sample answered that the most important benefit of being a member of a trade union was securing of social benefits. 13.4 percent listed job security as the main benefit and 12.6 listed safety at the workplace as the most important benefit (not reported). Since more than 45 percent of workers in the employee sample replied that the most important benefit from being a trade union member was securing of social benefits it seems likely that union membership is positively associated with receiving social benefits.

Following Torm (2011) a simple Probit model is estimated illustrating the association between social benefits and trade union membership and Table 7.12 shows the results. It appears that being a trade union member is statistically significant and positively associated with receiving social benefits and the result are consistent both when controlling for employee and firm/employee characteristics (column 1 and 2). In column (1) only employee characteristics are included. Well educated workers, professionals and sales and service workers are more likely to receiving benefits relatively to production workers. However, well educated workers are often more likely to be union members, which might influence on the results. In addition it seems that workers hired by personal contacts are less likely to receive social benefits.

In column 2, a number of firm specific variables are included. This does change some of the results documented above. Once controlling for firm characteristics, occupation categories become insignificant and the significance of educational level falls. The inclusion of firm characteristics reveal that workers in larger firms are more likely to receive benefits whereas being hired through an informal contact is still negatively associated with social benefits. Male owners are negatively, however not statistically significant, associated with social benefits. This is in accordance with the findings in Figure 7.4 (to be addressed later). Finally, individuals working in larger firms, CCPs, joint stock companies, private firms, Limited liability companies, and in firms with a higher share of professional workers all have a higher probability of receiving benefits.

9 70 percent of firms had a collective labor agreement in 2011. However, only 214 firms answered the question.

Table 7.12 Workers Receiving Social Benefits

Probit estimation	(1)		(2)	
Member of a Trade Union (yes=1)	0.482***	(25.11)	0.375***	(10.57)
Gender of Worker (Male=1)	0.031	(1.00)	0.005	(0.13)
Age of Worker	-0.004	(-0.46)	-0.011	(-1.15)
Age squared/100	0.002	(0.15)	0.013	(1.03)
Manager	0.057	(1.18)	-0.029	(-0.52)
Professional	0.237***	(5.65)	0.059	(0.98)
Sales	0.123***	(2.61)	0.042	(0.73)
Service/Office	0.226***	(5.73)	0.091*	(1.74)
Secondary school and above (yes=1)	0.164***	(4.75)	0.060	(1.55)
Technical worker (yes=1)	0.069*	(1.75)	-0.082*	(-1.74)
Recruited by informal methods	-0.147***	(-4.82)	-0.145***	(-4.42)
Tax code (yes=1)			0.034	(0.64)
Gender of Owner (Male=1)			-0.024	(-0.71)
Firm size(log)			0.109***	(4.90)
Private/sole proprietorship			0.121**	(2.37)
CCP			0.264***	(4.12)
Limited liability			0.199***	(4.33)
Joint stock			0.235***	(4.75)
Professionals share of total workforce			0.585**	(2.27)
Share of total workforce which are women			-0.242***	(-2.94)
Owner has high education			0.123*	(1.94)
Number of observations	1,368		1,368	
Sector dummies	No		Yes	
Province dummies	No		Yes	

Note: Dependent variable: Dependent variable: Worker receives social benefits. Probit estimates, marginal effects reported. For education, occupation and legal status, the reference categories are secondary education and below, production worker and Household, respectively. *, **, *** denote significance at a 10 %, 5 %, and 1 % level, respectively. t-statistics based on robust standard errors are reported in parentheses.

The results in Table 7.12 compare union members in firms with a local level union with non-union members in both union and non-union firms. Hence, the results should be interpreted with caution since non-union members in non-union firms are not faced with the option of becoming union members. The results are, however, consistent with

the findings of Torm (2011). Torm (2011) also finds, based on the matched employer-employee panel data from 2007 and 2009, that membership of Vietnamese trade unions is linked with wage gains. In addition, she documents that within unionized firms, workers that are union members are more likely to receive social benefits than non-members.

Returning to Table 7.11 the findings based on the balanced panel reveal that the share of firms with a local level trade union has decreased between 2009 and 2011. The result from the balanced panel indicates that some firms have shifted from having a local level trade union in 2009 to not having one in 2011. The findings also showed that more firms are leaving local trade unions than firms getting local level trade unions. Table 7.13 reveals that 11.7 percent of firms in the balanced panel have shifted from having a local level trade union in 2009 to not having one in 2011. In contrast to this only 9.4 percent of the firms have shifted from not having a local level trade union in 2009 to having one in 2011. This pattern is observed across all location categories. Medium sized firms are, however, more likely to be unionized than to be de-unionized. This development is a potentially cause of concern since local level trade unions are important in terms of ensuring social benefits, job security and safety for the employees.

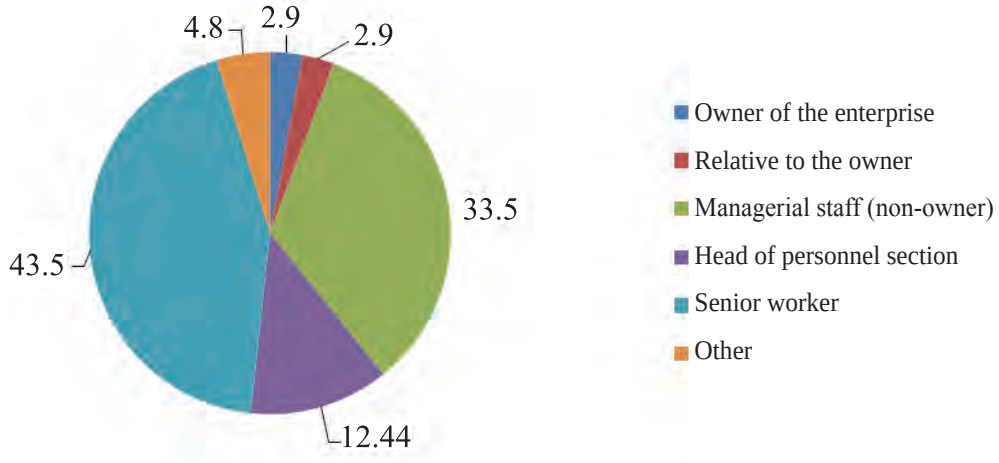
Table 7.13 Transition Firms (%)

	All	Small	Medium	Urban	Rural	South	North
De-unionized firms	11.7	11.2	16.0	13.2	9.2	15.1	9.2
Unionized firms	9.4	6.6	22.0	11.7	5.4	11.5	7.8
No. of firms	511	393	118	326	185	326	185

Note: Balanced panel. Since micro firms are excluded the number of observations is 1,240 firms.

There is a considerable difference between the 2009 and 2011 surveys as regards to who is chairman of the local trade unions. Figure 7.1 reveals that around 33.5 percent of the chairmen of local trade unions are managers. This is a decrease from 45 percent in 2009. In contrary around 44 percent of the trade unions are chaired by senior workers compared to only 32 percent in 2009. This change indicates a positive development towards local trade unions to play an important role in defending labor rights and ensuring social benefits, job security and safety in the workplace. These findings make it even more surprising that the share of workers who are trade union members has decreased since 2009.

Figure 7.1 Trade Union Chairman



7.4 Wage Setting, Social Benefits and Contracts

With regards to the wage level the average monthly nominal wage for the workers surveyed in the employee sample is 2800 thousand VND with an average wage for men of 2900 thousand VND and an average wage for women of 2700 thousand VND.[10] This wage gap is persistent across all job functions as shown in figure 7.2 and the wage difference is particularly high among professional workers. From Figure 7.2 it seems that a positive wage premium exists for all occupation categories compared to production workers.

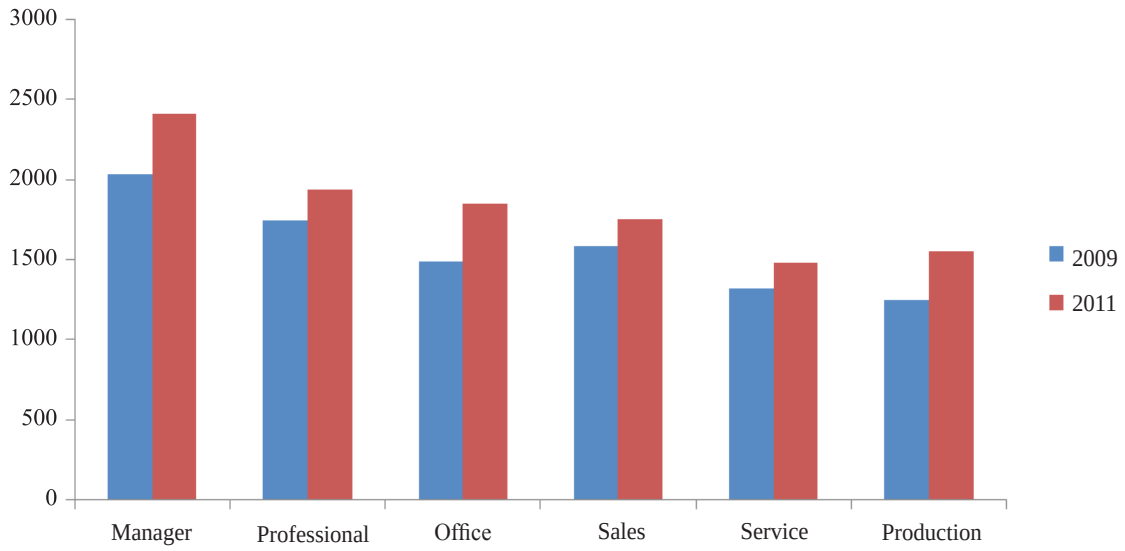
Figure 7.2 Average Monthly Wage (in 1,000 VND)

Note: Observations above the 99 % percentile have been removed to take account of outliers. Data is from the employee module.

10 Observations above the 99 % percentile have been removed to take account of outlier.

Figure 7.3 shows the average real monthly wage in 2009 and 2011 grouped by occupation. The average real monthly wage was just below 1685 thousand VND in 2011 and just above 1427 thousand VND in 2009. Hence, the real wage has increased by almost 18 percent during the considered two year period. This means that the real wage on average has increased by around 8 percent per annum between 2009 and 2011. The observed wage increase is comparable to China, a country with which Vietnam shares many features, and where the average annual salaries in the private sector rose by 6.6 percent in 2009 (ILO, 2010). Finally, the findings in Figure 7.3 indicate that the wage increase seems persistent across all occupation categories.

Figure 7.3 Average Monthly Real Wage (in 1,000 VND)



Note: Monthly real wage have been deflated using World Bank CPI (2005=100).

A simple wage regression based on both employee and firm characteristics with all the traditional wage determinants included is presented in Table 7.14. The table shows a significantly and positive wage premium for all occupation categories as compared to production workers and confirms the findings from Figure 7.2. Furthermore, these findings are in accordance with the findings of Larsen, Rand and Torm (2011). The indicators representing *High school and above* and *Technical worker* are significant at a 1 % level. Since secondary education and below is the reference category the positive coefficient on the education variables indicates that educational level is positively correlated with the wage level. This is in accordance with the findings of Hering & Poncet (2010). Based on data from 56 Chinese cities they show that years of schooling are positively correlated with the wage level. Furthermore, they also find that age of the

worker is positively associated with the wage level whereas age squared is negatively related to the wage level. Table 7.14 also reveals that on the job training is positively associated with the wage level. However, this might be because firms that provide on the job training also are more likely to provide higher wages. Finally, the results confirm the existence of a significant gender wage gap and confirm the findings in Figure 7.2. Furthermore, gender wage gaps are common particular in developing countries and the finding corresponds to various empirical studies (e.g. Liu, 2004; Hering & Poncet, 2010; Vu, 2012). This result might reflect discrimination against women in Vietnam.

Table 7.14 Wage Determinants

Dependent variable: ln(real wage)	(1)		(2)	
Gender of Worker (male=1)	0.110***	(4.66)	0.061**	(2.54)
Age of Worker	0.030**	(2.46)	0.023**	(2.33)
Age squared/100	-0.035**	(-2.29)	-0.027**	(-2.13)
Worker's number of years in firm	0.006	(1.08)	0.003	(0.47)
Years in firm squared/100	-0.027	(-1.12)	-0.019	(-0.83)
Manager	0.369***	(8.58)	0.317***	(7.34)
Professional	0.198***	(5.29)	0.147***	(3.91)
Sales	0.079**	(2.24)	0.053*	(1.66)
Service/Office	0.125***	(3.74)	0.089***	(2.78)
High school and above (yes=1)	0.180***	(4.60)	0.099**	(2.57)
Technical worker (yes=1)	0.186***	(4.14)	0.102**	(2.22)
On-the-job training (yes=1)	0.115***	(5.01)	0.058***	(2.73)
Recruited by informal methods (yes=1)	0.002	(0.06)	0.034	(1.33)
Tax code (yes=1)			-0.101**	(-1.98)
Gender of Owner (male=1)			0.092***	(3.38)
Firm size (log)			0.047***	(3.34)
Professionals share of total workforce			0.096	(0.48)
Share of total workforce which are women			-0.202***	(-3.51)
Exporting			-0.048	(-1.41)
R-squared	0.139		0.251	
Number of observations	1,119		1,119	
Sector dummies	No		Yes	
Legal structure dummies	No		Yes	
Province dummies	No		Yes	

Note: Dependent variable: Log real wage. Wages deflated using World bank CPI (2005=100). Estimation based on monthly wage. Only 1,121 workers reported months as the wage time unit. OLS estimates. For education and occupation, the reference categories are secondary education and below and production worker, respectively. *, **, *** denote significance at a 10 %, 5 %, and 1 % levels, respectively. Observations above the 99 % percentile have been removed. t-statistics based on robust standard errors are reported in parentheses.

In column 2, a number of firm specific variables are included. This does not change the basic results documented above, although the magnitude of coefficients fall for almost all variables. Firm size has a significant and positive association with wages, which is in line with the general finding that earnings tend to be positively related to firm size (e.g. Soderbom et al., 2005). Noteworthy is it that male owners seem be statistically significantly and positively related to the wage level. One possible explanation might be that male owners compensate for the lack of social benefits by providing higher wages. The results in Table 7.12 revealed that male owners are negatively associated with the prevalence of social benefits, however, not significantly. In addition, it appears that the share of women in the workforce is negatively associated with the wage level. Also, it seems that formality of firms is negatively related to the wage level. This is quite surprising but might arise because those workers with relative high potential informal sector return will self-select into that sector. It seems, however, surprising since Rand and Torm (2012b) show, based on the firm survey data from 2009 that average wages are higher in formal firms compared to informal firms. However, the study by Rand and Torm (2012b) is done only on firm level data. Finally, an indicator representing exporting firms is included in the regression. Beforehand one would expect that firms which are exporting are likely to provide a higher wage level to their workers (e.g. Bernard et al, 1995). From the results in Table 7.14 this does, however, not seem to be the case. This finding is in line with the findings of Vu (2012). Based on data from Vietnamese SMEs Vu (2012) finds that the expected exporter wage premium disappear when both firm and worker characteristics are added to the regression.

In terms of wage setting basis table 7.15 shows that the most common way to set the wages is through individual negotiations. Paying capacity of the enterprise and wage rates in other non-state enterprise constitute important wage determinants as well. In particular firms located in the North determine the wages based on wages in other non-state owned enterprises. Compared to 2009 considerable fewer firms are setting the wages through individual negotiations (from 52 percent in 2009 to 45 percent in 2011) whereas more firms are setting wages according to the paying capacity of the firm or wage rates in other non-state firms. This pattern is consistent across all size and location categories. Furthermore, Table 7.16 reveals some variation in the main wage determinants across sectors.

Table 7.15 Main Wage Determinants

	All	Micro	Small	Medium	Urban	Rural	South	North
Wage rates in other local non-state enterprises	18.2	17.6	18.0	24.1	13.5	23.1	11.4	24.4
Wage rates in local state enterprises	2.2	1.7	3.1	2.8	2.9	1.5	1.6	2.9
Set by authorities	4.6	1.9	7.4	13.5	7.0	2.1	7.1	2.2
Wage rates for employment in agriculture	2.0	2.6	1.0	1.4	0.6	3.3	1.8	2.1
Individual negotiations	44.8	48.3	42.0	29.1	42.4	47.3	43.7	45.8
Paying capacity of the enterprise	27.2	26.8	27.5	29.1	32.6	21.6	33.3	21.6
Other	1.0	1.1	1.0	0.0	0.9	1.1	1.1	0.9
No. of firms	1,882	1,131	610	141	956	926	900	982

Note: 2011 survey.

Table 7.16 Main Wage Determinants by sector

	Food and Beverages	Wood	Rubber	Non-metallic mineral	Fabricated metal	Furniture, jew ect.
Wage rates in other local non-state enterprises	17.3	17.9	14.5	28.6	17.8	20.4
Wage rates in local state enterprises	1.7	1.6	1.8	1.9	1.9	2.4
Set by authorities	4.1	2.2	10.0	4.8	4.0	
Wage rates for employment in agriculture	2.6	4.3		2.9	0.8	3.0
Individual negotiations	43.6	56.5	40.9	40.0	43.9	52.7
Paying capacity of the enterprise	29.7	16.8	30.9	20.0	31.1	20.4
Other	1.0	0.5	1.8	1.9	0.5	1.2
No. of firms	417	184	110	110	376	167

Note: 2011 survey.

With regards to social benefits the most commonly provided benefit is unpaid maternity leave with more than 50 percent of all firms providing this. The second most commonly provided benefit is compensating directly for accidents or professional

illness, as seen in Table 7.17. Compared with 2009 the share of firms providing social insurance and health insurance contributions has increased. The share of firms paying sick leave has decreased from 30 percent in 2009 to 28 percent in 2011. Except from sick leave all types of social benefits have increased since 2009 and, therefore, working conditions seem to improve with time. Table 7.17 also reveals that almost 17 percent of all firms pay contribution to unemployment insurance. Finally, Table 7.16 shows that firms located in the south are more likely to provide all types of social benefits compared to firms located in the north. This corresponds well with the observations in Table 7.11, which revealed that firms in the south are more likely to have a local level trade union compared to firms in the north.

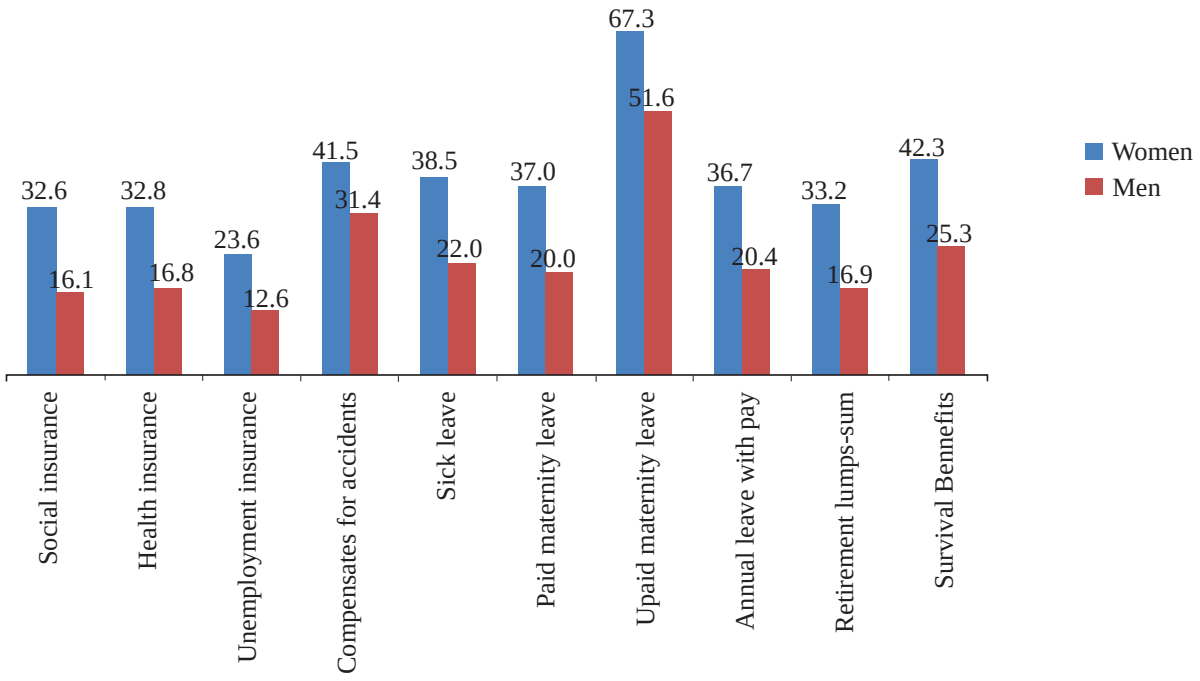
Table 7.17 Social Benefits (%)

	All	Micro	Small	Medium	Urban	Rural	South	North
Social insurance contribution	21.9	4.2	47.5	92.2	33.3	12.0	29.1	16.1
Health insurance contribution	22.5	4.3	49.2	92.2	33.5	12.9	30.1	16.3
Unemployment insurance	16.4	2.0	35.5	79.4	26.5	7.5	22.8	11.1
Compensates directly for accidents or professional illness	35.0	21.6	54.1	85.8	51.0	21.0	43.9	27.6
Sick leave	27.8	9.5	51.9	92.2	39.4	16.7	33.7	22.4
Paid maternity leave	26.2	6.7	49.8	93.6	36.6	15.8	31.6	21.1
Upaid maternity leave	57.2	44.2	74.2	97.2	79.9	35.1	67.1	48.0
Annual leave with pay	26.1	7.2	50.8	91.5	36.7	15.9	31.7	20.9
Retirement lump-sum	22.7	4.3	46.3	86.5	33.0	12.5	28.2	17.5
Survival Benefits	31.4	14.7	52.4	91.4	40.1	22.7	39.3	23.9

Note: The share of observations with missing information is quite common for these questions. The firms with missing information have been omitted in each category. 2011 survey.

The prevalence of social benefits also varies with gender of the owner/manager. Figure 7.4 shows that female owners/managers are more inclined to provide all kinds of social benefits compared to male managers/owners. These findings are in accordance with the findings of Rand and Tarp (2011) who concludes that women owned/managed SMEs are more likely than men owned/managed firms to provide employees with fridge benefits such as, for example, annual leave and health insurance.

Figure 7.4: Social Benefits, by Gender of Owner/Manager



Note: 2011 survey. Firms with missing observations have been excluded.

From Figure 7.5 it can be seen that the average share of regular full time workers with formal written contracts was 26.7 percent in 2011, on average. The average share of workers with formal written contracts differs greatly across firm size and location. On average, almost 90 percent of the workers in medium sized firms have formal written contracts compared to 10 percent of workers in micro firms. Figure 7.5 also shows that female owners/managers generally have a more formalized workforce and provide contracts to almost 35 percent of their workers. This is a considerable larger share than that of male owners/managers. Given that contracts are important in ensuring social benefits these findings correspond well with the results that female owners/managers are more likely to provide social benefits.

Figure 7.5: Formal Contracts, by Gender of owner/Manager

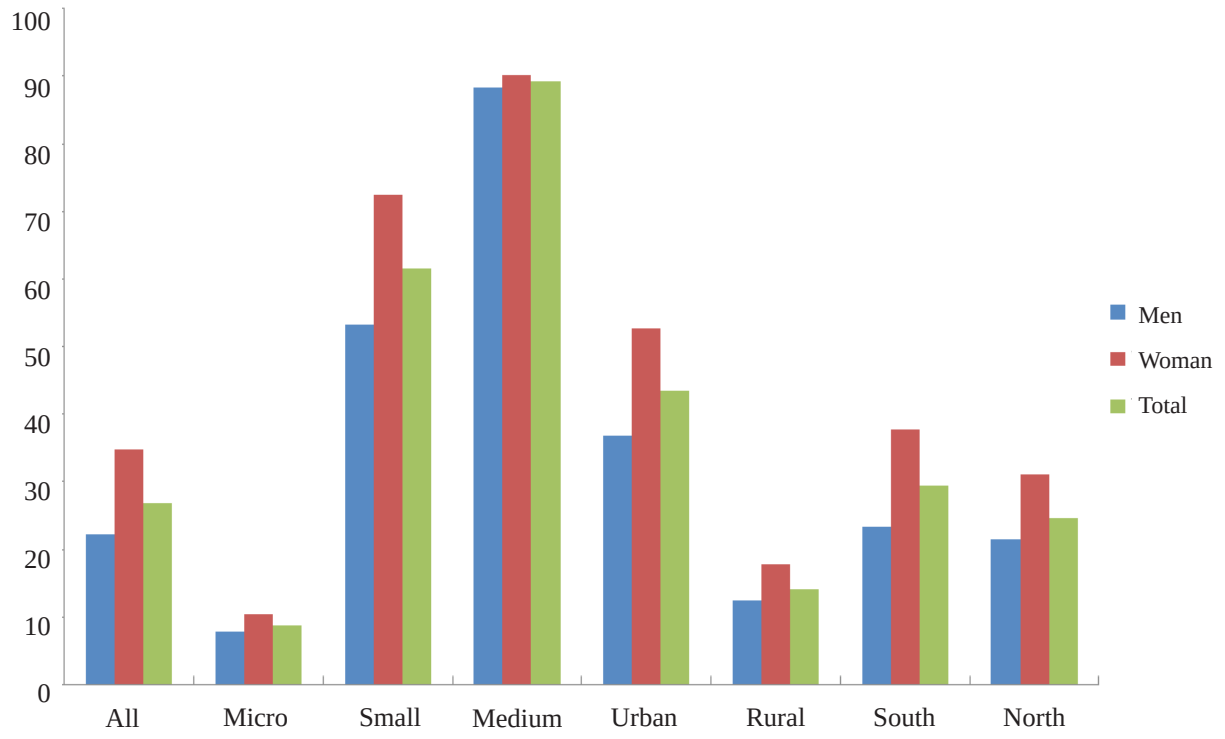


Figure 7.5 showed that only a part of the workforce is provided with formal written contracts and these have different duration. Table 7.18 reveals that, on average, more than 75 percent of these formal written contracts have duration longer than 12 month and that 37 percent of these contracts have indefinite term.

Table 7.18: Duration of Formal Contracts (percent of workers)

	All	Micro	Small	Medium	Urban	Rural
Indefinite term contract	37.2	35.2	36.2	41.9	36.0	40.2
Valid btw 12 and 36 months	38.6	39.5	39.8	34.1	40.6	33.4
Valid btw 3 and 12 months	20.7	21.5	20.4	20.7	20.3	21.7
Valid less than 3 months	3.6	3.7	3.6	3.3	3.1	4.7
No. of firms	547	109	325	113	396	151

Note: 2011 survey. The figures give the share of workers with contract with the specific duration

8 Firm Capabilities

This chapter explores factors associated with firm capabilities of Small and Medium sized Enterprises. Concretely, it aims at relating some characteristics of the owner/manager firm performance. This is done mainly on the basis of insight from the 2011 survey. However, the analysis does also rely on data collected in 2009 as well as the matched employer-employee data. Relying on the panel data set enables us to obtain a better impression of firm improvement between 2009 and 2011. The chapter is organized as followed: the first part provides an overview of the main characteristics of owners/managers and the remaining parts relate these capabilities to different measures of firm performance.

8.1 Owner Characteristics

Following Sutton (2004)[11], this chapter divides firm capabilities into revealed and underlying capabilities, where the former is understood as labor productivity and product quality and the latter consist of knowledge held by the individuals comprising the firm.[12] In the following pages these underlying capabilities are measured by the owners/managers work experience, education and gender.

Intuitively, a higher level of education of the owner/manager is expected to enhance firm capabilities and, thereby, to have a positive impact on firm performance. Higher formal education may provide the owner/manager with capacity to learn about new production processes and, thereby, increase owner's/manager's flexibility. Human capital is commonly measured as years of schooling or level of education. Empirical studies have shown how education is positively correlated with firm growth (e.g. Mengiste, 2006). The empirically evidence in terms of an educational effect is, however, ambiguous (Nichter and Goldmark, 2009). Nichter and Goldmark (2009) suggest that by recognizing a country-specific threshold of education the education effect becomes clearer - education above this threshold has a positive impact on firm growth. Hence, the first owner/manager capability considered here is education. In this chapter it is, however, expected that educational level of the manager/owner is positively associated with firm performance.

11 Informal note by John Sutton based on his Clarendon lecture of 2004.

12 Product quality defined as the buyer's willingness to pay for this specific product compared to a rival firm's product.

Previous work experience may also contribute to the owner/manager capabilities through the acquisition of skills and knowledge (learning-by-doing). Employees often acquire experience at their job. Hence, previous work status will increase the capabilities of the owner/manager. In addition, experience form previous work will expand the owners/managers social network and, thereby, indirectly impact firm performance. The case of social networks will be addressed later in this report. For these reasons this chapter investigates the relationship between the owner's/manager's previous work status and firm performance.

In terms of a gender effect on firm performance we expect male owners/managers to have a positive impact on firm performance and particularly on firm growth. This expectation is based partly on empirical studies and partly on limitations faced by female owners/managers in developing countries (see for instance Goedhuys & Sleuwaegen, 2000). For instance, often women in developing countries are faced with limited legal rights, restricted access to credit as well as having household obligations (The World Bank (IFC), 2012; Fletschner, 2009; Amin 2011). Such disadvantages of a female leader might lead to lower levels of efficiency and firm growth among female headed firms. Consequently, gender is the last of the owner's/manager's capability, which is related to firm performance in this chapter.

Table 8.1 documents the level of basic education of the owner/manager grouped by firm size and location. According to Table 8.1, 61.5 percent of all owners/managers had finished an upper secondary education in 2011 and 28.4 had finished a lower secondary education. These findings indicate a relatively high level of education in Vietnamese SMEs. The educational level has increased slightly between 2009 and 2011 with approximately 58 percent having an upper secondary education in 2009.

Table 8.1 Basic education and work experience of owner/manager by firm size and location

	All		Micro		Small		Medium		Urban		Rural		North		South	
Respondent basic education	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011
Not finished primary	3.9	1.5	5.0	2.0	1.8	0.7	0.6	0.0	3.2	1.4	4.4	1.6	2.4	0.9	5.9	2.3
Finished primary	9.2	8.6	11.7	10.8	5.1	4.2	0.0	0.7	7.4	5.5	10.6	10.9	6.6	6.3	12.9	11.7
Finished lower secondary	28.6	28.4	36.1	35.7	15.5	14.2	4.4	4.3	19.3	16.6	35.9	37.3	30.1	31.9	26.5	23.7
Finished upper secondary	58.3	61.5	47.2	51.6	77.6	80.9	95.0	95.0	70.1	76.5	49.1	50.3	60.9	60.9	54.7	62.3
Previous work status																
Wage employee in state firm	26.1	20.1	23.8	18.6	29.7	22.5	35.2	27.0	24.1	16.7	27.7	22.7	33.0	25.5	16.6	12.7
Wage employee in non-state firm	22.9	25.5	20.3	21.0	28.5	34.2	27.7	40.4	31.6	36.4	16.2	17.3	16.0	19.4	32.7	33.7
Self-employed in manufacturing	8.6	8.7	8.8	9.4	9.0	8.2	4.4	2.1	7.9	8.3	9.1	8.9	7.9	8.5	9.4	8.8
Self-employed in services	15.9	18.9	15.6	19.5	17.2	18.3	13.8	14.9	16.7	20.5	15.3	17.7	11.8	15.4	21.7	23.8
Own or collective farm	13.3	14.7	17.8	19.5	5.1	4.6	1.3	0.7	2.6	2.7	21.7	23.6	18.7	20.4	5.7	6.7
Other	13.1	12.2	13.7	11.9	10.6	12.3	17.6	14.9	17.2	15.4	9.9	9.8	12.6	10.7	13.8	14.3

Note: 2011 survey. Share of all owners/managers. The category *"Not finished primary"* constitutes of owners/managers with *"No education"* and *"Not finished primary"*.

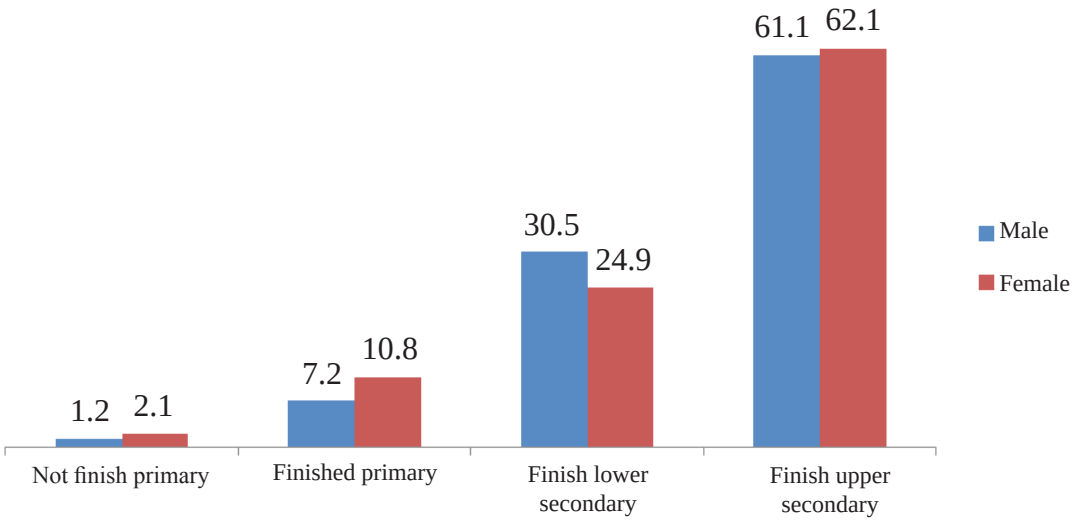
Table 8.1 also presents education in relation to firm size and location. The share of well-educated owners/managers, understood as an owner/manager with an upper secondary education, increases with firm size and well-educated owners/managers constitute the majority in both small and medium sized enterprises. The share of well-educated owners/managers is substantial larger in urban areas than in rural areas. In 2011 medium sized firms had no owners/managers with any education. These results are not that surprising since larger and urban firms more often apply high level technology

and thus needs more skilled managers/owners.

In terms of experience from previous work, Table 8.1 reveals that persons who were formerly "wage employed" constitute 45 percent of all owners/managers in 2011. The share of former wage employed increases with firm size and the pattern is consistent across years. In contrast, the share of owners/managers who previously worked in agriculture decreases with firm size and is almost zero in medium sized firms. Also, from Table 8.1 it appears that owners/managers in firms in the north part of Vietnam are more likely to have been former wage employee in state owned firms compared to owner/managers in the south part of Vietnam.

Figure 8.1 shows the basic level of education grouped by the gender of the owner/manager. 62.1 percent of female owners/managers had finished an upper secondary education in 2011, which is a slightly larger fraction than for male owners/managers. In contrast, 30.5 percent of male owners/managers had finished a lower secondary education compared to 24.9 percent of female owners/managers. From Figure 8.1 it seems as if the educational level of the owner/manager only slightly differs across gender. The difference is, however, noteworthy with regards to lower secondary education.

Figure 8.1 Basic Education of Owner/Manager by Gender (%)

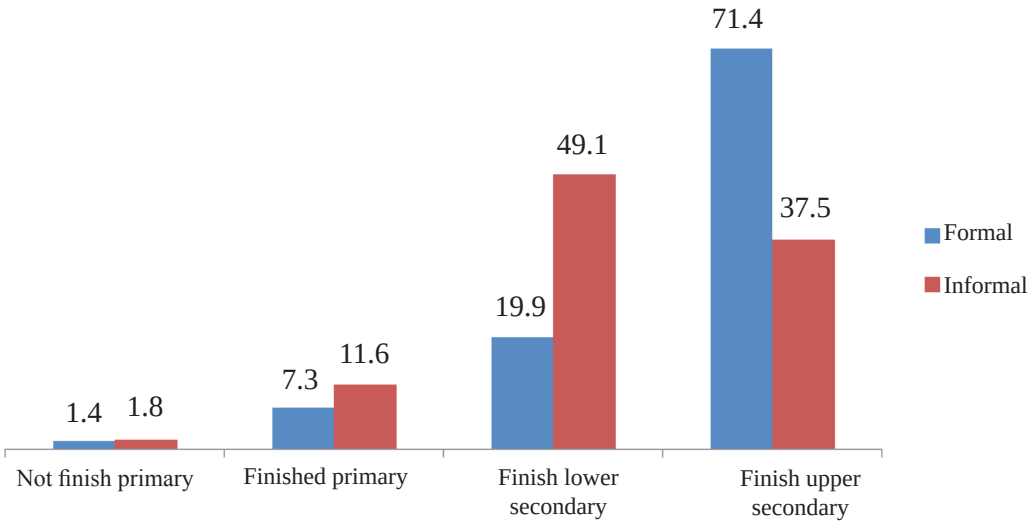


Note: 2011 survey.

Figure 8.2 shows basic level of educations grouped by formality/informality of enterprises. The share of owners/managers who have an upper secondary education is approximately 71 percent for formal firms and only 37.5 percent for informal firms. Figure 8.2 suggests that the educational level differs considerable between informal

and formal firms. This difference may be explained by the fact that informal firms are mostly micro firms and, therefore, are less likely to have well-educated owners/ managers as seen in Table 8.1.

Figure 8.2 Basic Education of Owner/Manager by Formal/Informal (%)



Note: Number of observations: 1,718 formal firms and 709 informal firms.

Basic education of the owner/manager across sectors is presented in Table 8.2. From this table it appears that rubber producing firms and firms producing fabricating metal products are more likely to have a well-educated owner/manager compared to the remaining firms. Across all sectors it seems that the educational level of the owner/ manager has increased between 2009 and 2011.

Table 8.2 Basic education of owner/manager by sector and household firm

	Food and Beverages		Wood		Rubber		Non-metallic mineral		Fabricated metal		Furniture, etc.		Household firm	
Respondent basic education	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011
Not finished primary	6.2	2.4	3.4	1.6	5.8		3.8		3.6	1.6	1.8		5.36	2.15
Finished primary	12.7	13.3	8.9	10.0	8.7	7.9	8.3	7.8	6.9	6.5	10.4	9.8	12.91	12.33
Finished lower secondary	35.3	37.3	39.9	35.7	10.1	13.2	32.6	28.4	25.7	23.4	37.2	33.0	38.25	40.33
Finished upper secondary	45.8	46.9	47.8	52.6	75.4	78.9	55.3	63.8	63.9	68.5	50.6	57.2	43.48	45.20

8.2 Firm Performance and Survival

In order to relate the owner's or manager's characteristics with the firm's performance, it is necessary to clarify how firm performance is measured, since this can be done in various ways. In the following, firm performance is measured by revenue growth, employment growth, and survival probability. In the previous section it was discussed why education, work experience and gender is important for firm performance. Furthermore, Nichter and Goldmark (2009) discuss key determinants associated with firm growth and emphasize the importance of education, work experience and gender. Based on this, this section relates those variables to firm growth and survival probability. We expect educational level and experience from previous work to be positively associated with firm growth and survival. In contrast, we expect a female owner/manager to be negatively associated with firm growth.

When investigating determinants of firm growth and survival probability we following Hansen et al. (2009). Hence, firm growth is measured as annual real revenue growth between 2009 and 2011 and we create an indicator taking the value one if the firm has survived between 2009 and 2011. OLS regression and Probit estimation is performed and the results are presented in Table 8.3. Standard determinants are included in all regressions (firm size, location, sector, legal ownership, formal status, and firm age). In addition firm size squared is included to capture diminishing returns to size, which are a common finding in growth equations. Dummies representing level of education, previous work experience and gender of owner/manager are included as the variables of interest.[13] Finally, an indicator representing innovative firms is included. Following Hansen et al (2009) firms are considered to be innovative if they have made significant improvements of existing products or started production of a new product since last surveyed.

The results in column (1) of Table 8.3 show that none of the aforementioned variables of interest enters insignificantly in the regressions. This seems quite surprising and stand in contrast to what was expected. The insignificance of the parameter estimate connected to the gender dummy stands in contrast to the results of Goedhuys & Sleuwaegen (2000). Furthermore, the results are in contrast to the results of Segal et al. (2009). Segal et al. (2009) conducts an analysis of natural food stores in the U.S. and show that both education and industry managerial experience of the founder are

13 The regressions are not adjusted for unconfirmed exits.

positively correlated with firm performance. Firm size and age are often negatively related to firm growth (Jovanovic, 1982; Hansen et al, 2009). Both firm size and firm age enters negatively and statistically significant in column (1) of Table 8.3 and confirms the expected inverse relationship.[14] Furthermore, the negative sign of the parameter estimate on firm size is in accordance with various empirical studies (e.g. Mengistae 2006; Hansen et al, 2009).

Table 8.3 also shows that estimated marginal effect from the Probit model estimating the probability that a randomly drawn firm survives between 2009 and 2011. Again, the dummies indicating educational level, former self-employed and male owner/manager enters insignificantly. This stands in contrast to the results of Mengistae (2006). Mengistae (2006) finds entrepreneurial human capital, measured as years of schooling, to be an important determinant of firm survival. Finally, introduction of a new product or the improvement of an existing product is positively and significantly associated with firm survival. This result is also in accordance with the findings of Hansen et al. (2009). However, this positive association might emerge due to the fact that firms which introduce or improve products are more capable to respond to market changes and, therefore, are more likely to survive.

The results from Table 8.3 showed that introduction and improvement of products is insignificantly related to revenue growth. Nichter and Goldmark (2009) suggest that poor in developing countries sometimes create survival-oriented firms rather than growth oriented firms due to lack of alternative employment opportunities. Since introduction and improvement of products are positively associated with survival in column (2) of Table 8.3 this might indicate that innovative behavior of Vietnamese SMEs is more survival-oriented than growth oriented. Hence, this might explain the insignificant (positive) association between innovations and firm growth observed in Column (1).

14 It should however be noted that larger firms (more than 300 employees) have been excluded from the sample.

Table 8.3 Capabilities, Firm Growth and Survival

	(1)		(2)	
Dependent variable:	Revenue growth		Survival	
Gender of owner/manager (male=1)	-0.049	(-1.60)	0.017	(0.96)
Experience from previous work (Former self-employed=1)	0.015	(0.47)	0.006	(0.32)
Education level (Finished upper secondary=1)	-0.017	(-0.55)	0.003	(0.15)
Firm size (log)	-0.095***	(-3.81)	0.029**	(2.33)
Firm size squared/100	0.000	(0.41)	-0.000*	(-1.79)
Firm age	-0.009**	(-2.08)	0.004	(1.36)
Firm age squared/100	0.020**	(2.46)	-0.003	(-0.53)
Introduced new product or improved existing (yes=1)	-0.007	(-0.24)	0.034**	(1.97)
Private/sole proprietorship	0.058	(0.97)	-0.051	(-1.31)
PCC	0.097	(0.97)	-0.021	(-0.38)
Limited liability company	0.121**	(2.02)	-0.024	(-0.78)
Joint Stock	0.233**	(2.29)	-0.107*	(-1.66)
Tax code (yes=1)	-0.029	(-0.79)	0.015	(0.56)
Sector dummies included	Yes		Yes	
Province dummies included	Yes		Yes	
Number of observations	1823		2454	

Notes: Dependent variable: Annual revenue growth in (1) and discrete indicator of survival in (2). OLS estimates and Probit estimation, marginal effects reported in (2). T-statistics based on robust standard errors in parentheses. *, **, *** denote significance at a 10%, 5%, and 1% level, respectively. Reference group for legal status is household firms. Constant included in all regressions. Balanced panel in (1) and unbalanced panel in (2). Independent variables are observed in 2009.

Table 8.4 shows OLS regressions made on employee growth between 2008 and 2010. The same variables as those included in Table 8.3 are included in the regressions in Table 8.4. Furthermore, based on the match employer-employee data, the average level of worker education is included in column (2) of Table 8.4. The inclusion of this variable reduces the sample to 449 firms. Hence, the sample is very small and inference should be done with caution. However, some interesting insight is achieved.

Firstly, the results in column (1) are considered. It appears that a higher educational level is positively associated with employee growth, however, only significantly at a 10% level. This result is in accordance with Mengistae (2006) who finds that firms run by entrepreneurs with greater schooling are more likely to survive and have higher

average growth rates. She conducts her analysis based on a data set of manufacturing firms in Ethiopia and measures a firm's growth rate as average annual employment growth between 1993 and 1995. In column (1) the impact of previous work experience on employee growth is insignificant. This is also in accordance with the results of Mengistae (2006). Also, firm size enters significantly and with the expected sign. Finally, joint stock companies, private firms, PCCs, and limited liability companies are all positively and significantly associated with employee growth compared to Household firms (reference category). This corresponds to findings from previous survey rounds.

Secondly, the results from column (2) in Table 8.4 are considered. Most interesting is the result emerging from the variable indicating the average level of worker education. This variable enters positively and significantly, which shows that average worker education is positively correlated with employee growth.

Table 8.4 Capabilities and Employee Growth

	(1)		(2)	
Dependent variable:	Employee growth		Employee growth	
Gender of owner/manager (male=1)	0.035	(0.64)	-0.006	(-0.11)
Experience from previous work (Former self-employed=1)	-0.006	(-0.11)	-0.082*	(-1.70)
Education level (Finished upper secondary=1)	0.083*	(1.79)	-0.007	(-0.13)
Firm size (log)	-0.410***	(-7.24)	-0.283***	(-5.77)
Firm size squared/100	0.002***	(4.07)	0.010	(0.71)
Firm age	-0.001	(-0.14)	0.002**	(2.54)
Firm age squared/100	-0.003	(-0.21)	-0.005	(-0.71)
Introduced new product or improved existing (yes=1)	0.059	(1.28)	0.039	(0.80)
Private/sole proprietorship	0.713***	(2.82)	0.225*	(1.76)
PCC	0.552***	(3.89)	0.448***	(3.48)
Limited liability company	0.758***	(5.02)	0.192**	(2.10)
Joint Stock	0.139***	(2.74)	0.090	(0.62)
Tax code (yes=1)	-0.169*	(-1.75)	0.081	(1.16)
Average worker education			0.069***	(2.86)
Sector dummies included	Yes		Yes	
Province dummies included	Yes		Yes	
Number of observations	1823		449	

Notes: Dependent variable: Growth in number of employees between 2009 and 2011. Independent variables are observed in 2009. OLS estimates. Balanced panel. T-statistics based on robust standard errors in parentheses. *, **, *** denote significance at a 10%, 5%, and 1% level, respectively. Reference group for legal status is household firm. Constant Included.

8.3 Investment, Innovation and Technology Adoption

The share of firms who made a new investment made up around 56 percent in 2011 and 60 percent in 2009 (not reported). Hence, the proportion of firms taking on a new investment has declined between the two years. This decline may indicate that firms are resource constrained in terms of credit. Table 8.5 gives the distribution of total investments for the different groups of educational level and previous work status of the owner/manager. An educational level-effect seems to exist, as the share of firms taking on a new investment is considerable higher for firms with a well-educated owner/manager. Noteworthy is that owners/managers who are former wage employees are considerably more inclined to take on new investments than firms with former self-employed as owner/managers. The majority of investments are made in equipment, land, buildings, and "others" whereas the share of investments in R&D and Human Capital is close to zero. This pattern holds across all levels of education and previous work categories.[15]

In terms of improving the quality of the produced products and the labor productivity of a firm, investments in R&D and Human Capital are expected to have a positive influence. Even though the share is small, it seems that owners/managers with either a lower or upper secondary education are more inclined to invest in R&D or Human Capital compared to owners/managers with no or a low level of education.

15 Brach, Newman, Rand and Tarp (2012) finds that a relatively small fraction of Vietnamese firms actively engage in R&D and that micro, small, and medium sized firms are statistically significant less likely to undertake R&D than large firms.

Table 8.5 New Investments (since last survey)

	New inv. (%)	Share of new investment in					
		Land	Buildings	Equipment	R&D	HC	Others
Total	56.1	2.69	8.67	26.51	0.36	0.24	61.24
Basic education							
Not finish primary education	48.6	0.00	8.06	32.15	0.00	0.00	59.79
Finish primary education	44.7	2.86	10.86	30.02	0.22	0.00	56.04
Finish lower secondary	49.0	2.46	8.60	26.54	0.74	0.06	61.60
Finish upper secondary	61.2	2.81	8.48	26.02	0.24	0.34	61.67
Previous work status							
Wage employee in state firm	63.5	2.75	9.70	30.39	0.63	0.41	55.43
Wage employee in non-state firm	63.0	2.53	7.27	28.02	0.30	0.32	61.41
Self-employed in manufacturing	56.2	2.74	10.73	23.87	0.00	0.03	61.48
Self-employed in services	51.9	2.18	9.48	19.71	0.32	0.24	68.06
Own or collective farm	49.9	3.01	8.45	28.84	0.00	0.08	59.63
Other	43.6	3.44	7.29	24.43	0.78	0.00	64.05

Note: As percent of total investment. Investments in other firms and Patents have been omitted since they constituted less than one percent. 2011 survey. HC=Human Capital.

Previously in this chapter, the indicator representing innovative firms was found to be significantly associated with survival in Table 8.2. Also, the level of innovation is often considered as important to firm growth and survival and is, therefore, highly related to firm performance (Deng et al, 2012). Hence, this chapter considers the relationship between innovative firms and the owner's/manager's capabilities.

Table 8.6 shows that share of firms that invested in new products in 2011. The share of firms which introduced at least one new product during the considered time period increased from 2.8 percent in 2009 to 4 percent in 2011. In contrast, the proportion of firms improving existing products has declined from 41.5 to 38.4 percent in 2011 (numbers for 2009 are not reported). These findings are based on the unbalanced panel but consistent with results from the balanced panel.

Table 8.6 Innovation and Owner's/Manager's Education and Experience

	Introduced new product	Improved existing products	Introduced new technology
Total	4.0	38.4	13.0
Education of respondent			
Not finished primary	2.7	24.3	13.5
Finished primary	3.4	27.4	7.2
Finished lower secondary	2.3	27.5	6.7
Finished upper secondary	4.9	45.3	16.7
Previous work status of respondent			
Wage employee in state enterprise	4.9	39.5	13.5
Wage employee in non-state enterprise	4.0	45.0	13.9
Self-employed in manufacturing	4.3	33.3	15.7
Self-employed in services	3.7	37.3	12.9
Own or collective farm	2.5	27.2	7.3
Other	4.4	41.6	15.2
Gender			
Male	3.7	37.6	12.0
Female	4.6	39.8	14.6
Number of observations	97	932	315

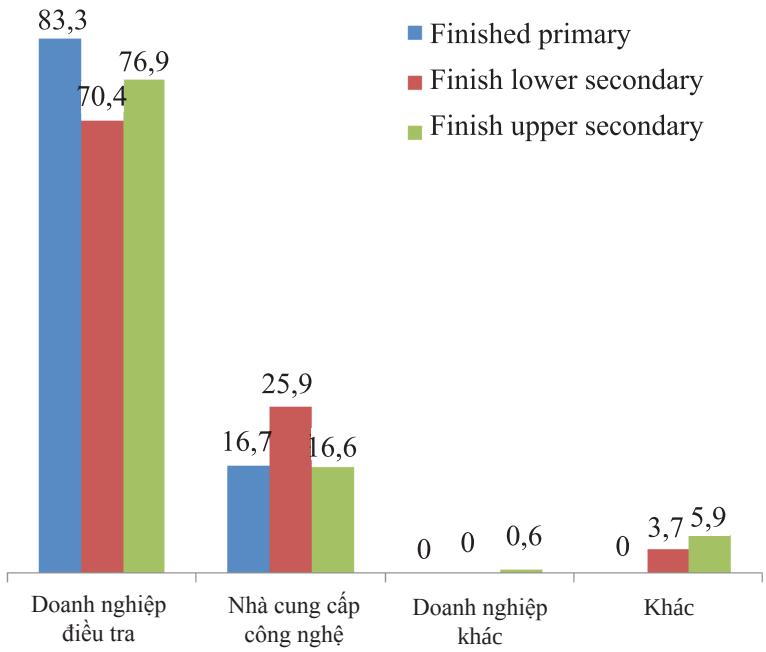
Note: 2011 survey.

Table 8.6 also relates innovation rates to education and previous work experience of the owner/manager. Well-educated owners/managers are more likely to introduce new products, and the share of well-educated owners/managers who introduced new products increased slightly from 3.6 percent in 2009 to 4.9 percent in 2011. This might be caused by well-educated owners/managers being more likely to be able to handle the new technology, which might be related to the introduction of a new product. It also appears that firms managed by former wage employees (both state and non-state) are more likely to improve an existing product compared to firms managed by former self-employed. With regards to the introduction of a new product former wage employees and former self-employed in manufacturing are more likely to do so compared to self-employed in services or agriculture.

It is common for employees to leave incumbent firms in order to establish new firms in the same line of business. This is referred to as spin-offs and these firms are often found to perform relatively well in terms of survival and growth (Hansen et al., 2009). Results from Table 8.6 indicate that spin-off firms (understood as firms with a former wage employee as owner/manager) are generally more innovative - especially in terms of improving existing products.

Table 8.6 also reveals that with regards to new production processes/technologies, some 13 percent of all firms introduced new production processes/technologies in 2011 compared to 14 percent in 2009. These findings are consistent independent of whether the balanced and unbalanced panel is considered. As with introduction and improvement of existing products, an education effect exists: well educated owners/managers are more likely to introduce new technology. Female owners/managers appear to be (slightly) more likely to be innovative or introduce new production processes compared to their male counterparts.

Figure 8.3 How Was the Adaption Carried Out



Note: Firms with manager/owner who did not finish primary education has been excluded since they constituted a share of 1.5 percent (3 firms). 2011 survey.

Out of the 315 firms who introduced a new technology in 2011, 65 percent (205

firms) had to carry out technical adaptation to the equipment. Figure 8.3 reports how this adaptation was carried out. The enterprise itself is most likely to carry out the adaptation independent of the educational level of the owner/manager. This may indicate that the technology introduced is at the same level as the technology in use. Adoption of more advanced technology would demand additional knowledge and might introduce further expenditures. Since the survey does not include any indicators of the level of technology introduced, it is difficult to determine to what extend the firms are upgraded by the new technology. However, introduction and adaptation of new technology *is* important in order to develop new products, improve the quality of already existing products, and enhance labor productivity. Labor productivity is addressed later in this chapter and it appears that introduction of new technology is positively associated with labor productivity.

8.4 Education Level of Workforce

Well-educated owners/managers might tend to hire well-educated employees. Based on the match employer-employee data (also used in chapter 5 in this report) it is possible to match the educational level of the owner/manager with the educational level of the employees. This is done in Table 8.7. From Table 8.7 it appear that well-educated owners/managers are in fact more likely to hire highly educated workers compared to their less-educated counterparts. In 2011 the share of workers with a College/University/ Post-graduate degree was 23.6 percent in firms with well-educated owners/managers compared to 4.8 percent in firms with less-educated owners/managers. Also, the share of workers with a primary education was 12.2 percent in firms with less-educated owners/ managers compared to 2.7 percent for firms with well-educated managers.

Table 8.7 Education of Workers by Owner/Manager Education

Education level of worker	Education level of owner/manager	
	Did not finished upper secondary	Finished upper secondary
None	0.5	0.9
Primary school	12.2	2.7
Secondary school	36.3	15.0
High school	27.9	35.9
Technical certificate/Elementary worker	0.3	3.1
Technical worker without certificate	14.6	9.5
Technical worker/professional secondary	3.4	9.5
College/University/post-graduate	4.8	23.6
Total Number of observations	377	1,046

Note: Based on the match employer-employee data. Share of total workforce in each category.

It seems reasonable to expect that education teaches the workers skills that make them more productive and that education increases the ability to learn from previous experience. Jones (2001) provides evidence that education is highly correlated with worker productivity in Ghanaian manufacturing and that workers with a high educational level are more productive. Based on this, findings in Table 8.7 might mean that highly educated owners/managers have an indirect positive impact on firm performance by the choice of workforce.

Table 8.8 Social Benefits by Owner/Manager Characteristics

	Social insurance	Health insurance	Unemployment insurance	Compensates for accidents
Finished upper secondary				
Yes	31.9	32.4	23.8	43.7
No	3.8	4.6	3.0	18.9
Previous work status				
Former self-employed	11.6	12.2	8.3	26.6
Former wage-employed	28.8	29.3	21.7	40.6

Note: 2011 survey. Missing observations have been deleted.

Table 8.8 shows the share of firms providing social benefits by owner's/manager's characteristics. From Table 8.8 it appears that well-educated owners/managers, besides

from being more inclined to hire highly educated workers, are more likely to provide social benefits. 32 percent of all owners/managers with an upper secondary education provided social insurance compared to only 4 percent of their less educated counterparts. The same tendency exists for former wage employed owners/managers compared to former self-employed owners/managers. Firms providing these kinds of social benefits could perhaps more easily attract highly educated workers and thereby increase the labor productivity of the firm.

8.5 Labor Productivity

Lastly this chapter considers labor productivity. In the following pages we consider the relationship between labor productivity and the owners/managers educational level, previously work experience and gender. Labor productivity will be measured in two different ways: (1) real revenue per full-time employee and (2) real value added per full-time employee.

According to Table 8.9, the firms with an owner/manager with upper secondary education have, on average, higher labor productivity than firms with an owner/manager with a lower educational level. Male headed firms appear to have lower real revenue per full-time employee and lower real value added per full-time employee compared to female headed firms. This is in contrast to the findings of Amin (2011) who states that labor productivity is higher for male than female-owned enterprises.[16] Firms with former self-employee as owner/manager seem, on average, to have lower labor productivity than firms with former wage employed as owner/manager.

16 These findings are, however, based on informal firms in South America.

Table 8.9 Labor Productivity by Owner/Manager Characteristics

	Observations	Measure 1	Measure 2
Total	2,298	87.23	24.40
Finished upper secondary			
Yes	1,414	95.15	26.85
No	884	74.56	20.49
Previous work status			
Former self employed	970	83.08	23.23
Former wage employed	1,328	90.26	25.26
Gender			
Male	1,462	84.10	23.69
Female	836	92.71	25.66
South	973	87.98	27.00
North	1,325	86.68	22.50

Note: 2011 survey.

Table 8.10 shows the results of a simple OLS estimation for determining labor productivity. All standard variables are included in the regression (firm size, location, sector and legal ownership). In addition dummies indicating: gender of the owner/manager, educational level, introduced new technology, and work experience of the owner/manager, are included. The results confirm to some extend what was expected based on Table 8.9.

With regards to measure (1) (real revenue per full-time employee) labor productivity decreases with firm size. The opposite was found in the 2009 survey. The dummy taking the value one if the owner/manager has finished an upper secondary education enters positively, however not significant, in column (1). In terms of measure (2) (real value added per full-time employee) we observe a positive and statistically significant (at a 10 % level) association between educational level of the owner/manager and labor productivity. The dummy for male owner/manager enters insignificant in both specifications.

Furthermore, the introduction of new technology is positively associated with labor productivity independent on how labor productivity is measured. This association might, however, be due to reverse causality, meaning that enterprises with a high level of labor productivity are more likely to introduce new technologies in the production.

In both models household businesses are significantly less productive than their private counterparts; expect from Private/Collective/Cooperative firms.[17] Finally, being formally registered (having a tax code) are positively associated with labor productivity. This may be explained by firms being formal are more willing to invest in their workers with a view to increase productivity. This is in line with the findings of Rand and Torm (2012a) who also found that becoming officially registered is beneficial for firms and leads to an increase in profit and investments. In addition, formal firms tend to hire more educated workers which may explain the positive impact on labor productivity.

Table 8.10 Labor Productivity Regression

Dependent variable: labor productivity (log)	(1)		(2)	
	Measure 1		Measure 2	
Gender of owner/manager (male=1)	-0.019	(-0.56)	0.002	(0.09)
Experience from previous work (Former wage employee=1)	-0.003	(-0.09)	0.011	(0.40)
Education level (Finished upper secondary=1)	0.057	(1.57)	0.059*	(1.96)
Firm size (log)	-0.126***	(-5.90)	-0.030*	(-1.66)
Firm age	-0.005**	(-2.57)	-0.005***	(-3.36)
Introduced new technology (yes=1)	0.204***	(4.13)	0.129***	(3.23)
Private/sole proprietorship	0.213***	(3.36)	0.218***	(4.08)
PCC	-0.064	(-0.51)	0.057	(0.64)
Limited liability company	0.383***	(6.87)	0.289***	(6.61)
Joint Stock	0.204**	(2.09)	0.207***	(2.92)
Tax code (yes=1)	0.333***	(7.20)	0.298***	(7.68)
Sector dummies included	Yes		Yes	
Province dummies included	Yes		Yes	
Number of observations	2,298		2,298	

Notes: OLS estimates. Dependent variable: log labor productivity. Labor productivity is measured by real revenue per full-time employee (1) and real value-added per full-time employee (2). Real revenue and real value-added are calculated using provincial GDP deflators. *, **, *** denote significance at a 10%, 5%, and 1% level, respectively. T-statistics based on robust standard errors in parentheses. Reference group for legal status is household firms. Constant included in all regressions. Estimations based on observations from 2011.

17 Results on the legal ownership status are consistent with the findings in the report of 2009.

9 Social Networks

This chapter covers various aspects of firm's social networks including the size of firm's business network, the composition and diversity of relations, and their effect on enterprise growth and innovativeness. The analysis is based primarily on the information provided in the social network part of the SME survey, while incorporating aspects of firm's innovativeness, membership in formal business associations and production requirements from suppliers and customers, which potentially relate to technology transfers.

In this chapter, social network capital are seen as an individual asset that benefits a single firm, where firms derive benefits from knowing others with whom they form networks of interconnected firms. This is in line with Granovetters work from 1995. Having an extensive social network is a valuable asset that can help entrepreneurs obtain access to information and new technologies which may lead to profitable business opportunities, as well as access to resources (e.g. credit). The literature points to the role of social networks in helping entrepreneurs overcome obstacles related to transaction costs (Kranton, 1996; McMillan and Woodruff, 1999), contract enforcement (Fafchamps, 1998), and regulation (Putman, 1993). Moreover, mutual trust, generated through long-term relationships with customers and suppliers, may make it easier for agents to renegotiate contractual obligations, and thereby provide flexibility in dealing with external shocks (Bigsten et al. 2000).

9.1 Composition of Firm's Business Network

Information has been collected on various dimensions of the firm's social network. Table 9.1 document firms network activity, measured as the number of people with whom the firm has regular contact. Regular contact are defined as a person with whom the firm interact or meet with at least every 3th months, and that are perceived by the firm to be useful for the operation of the business. In 2011, a firm on average has 36 people with whom it regularly interacts with. This compares to an average of 41 contacts in 2009. The number of contacts increases with the size of the firms, and urban-located enterprises are found to have regular contact with more people. Surprisingly, female owners have on average more people with whom they have regular contact, some 41 people compared to 33 people for their male counterparts.

Firms where asked to categorize their contacts into five categories, of which two is related to other entrepreneurs broadly defined as business people within the same

sector and business people in different sectors. The remaining three categories relate to agents not necessarily involved in business, including bank officials, politicians and civil servants, and others. Independent of size, firms is more likely to have regular contact with business people in a different sector than the one they operate in. Not surprisingly, urban-located enterprises are more likely to have regular contact with bank officials, politicians and civil servants. Not all micro firms have regular contact with bank officials, politicians and civil servants, while small and medium-sized enterprises on average have regular contact with 2 people in each category. The decrease in the total number of contacts from 2009 to 2011 is attributed to a decrease of business contacts in the same sector, different sectors and the category other.

Table 9.1 Number of people with whom the firm has regular contact

	Firm size			Gender		Location		Total	Total
	Micro	Small	Medium	Female	Male	Urban	Rural	2011	2009
Total number of contacts	30.36	48.39	50.36	41.29	33.02	50.89	24.92	36.07	40.89
	1,667	608	141	891	1,525	1,037	1,379	2,416	2,475
Mean number of contacts:									
Buss. contacts in same sector	5.73	10.11	9.38	7.78	6.61	10.03	4.80	7.04	11.00
Buss. contacts in different sector	19.75	29.46	30.59	26.09	20.92	31.28	16.47	22.83	20.15
Bank officials	0.77	1.75	2.19	1.31	0.98	1.36	0.91	1.10	1.33
Politicians and civil servants	0.98	1.75	1.91	1.33	1.17	1.64	0.92	1.23	1.89
Others	3.13	5.32	6.29	4.77	3.33	6.58	1.82	3.86	6.52
Percent of enterprises with at least one contact:									
Buss. contacts in same sector	0.93	0.94	0.96	0.94	0.93	0.94	0.92	0.93	0.95
Buss. contacts in different sector	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92
Bank officials	0.38	0.58	0.74	0.45	0.45	0.38	0.50	0.45	0.57
Politicians and civil servants	0.51	0.63	0.73	0.58	0.53	0.66	0.47	0.55	0.64
Others	0.89	0.91	0.94	0.91	0.89	0.94	0.84	0.90	0.63

Note: Percentage. Number of observations reported in bold. 11 and 19 missing observations on number of contacts in 2011 and 2009, respectively. All columns apart from the last report average statistics for 2011.

Table 9.1 also shows the percentage of enterprises with at least one contact in each category. An entrepreneur, who has contacts in many different groups has access to information of many different types and is therefore at an advantage over entrepreneurs with contacts in a few different groups (Burt, 1992). According to Table 9.1, larger enterprises are more likely to have contacts in different groups compared to smaller enterprises. In terms of the owner's gender, female entrepreneurs are slightly more diversified with respect to contacts compared to male entrepreneurs, and thus female owners may have an advantage over male owned firms as they are more likely to interact with people from different layers in society. Similarly, urban-located firms on average have a more diversified portfolio of contacts compared to their rural counterparts (urban firms, on average, have 3.6 different contacts compared to the rural firms that have 3.2 different types of contacts). Noteworthy, however, is that rural enterprises are more likely to interact with bank officials compared to their urban counterparts: 50 percent of the rural firm's regularly interact with bank officials compared to 38 percent of the urban located firms. Two explanations can be given: (1) rural enterprises are more likely to have a CLUR , and thus there they are less likely to be constrained due to lack of collateral, and (2) credit rationing is less severe in more remote areas, confirming that the Vietnamese government has tried to use State Owned Commercial Banks (SOCBs) to alleviate inequalities.

Table 9.2 show the average number of business contacts by the six largest sectors. Only rubber manufacturing firms have more contacts than the overall average across all sectors. Wood producers have the least number of contacts. They have half as many business contacts in different sectors compared to Food and beverages and Rubber producing firms.

Table 9.2 Average number of contacts by sector

ISIC(4-digit)		Buss. contacts in same sector	Buss. contacts in different sector	Bank officials	Politicians and civil servants	Others	Total
15	Food and beverages	5.18	25.22	0.70	0.92	3.04	35.06
20	Wood products	5.01	11.53	0.80	0.79	1.78	19.91
25	Rubber products	8.11	24.87	1.53	1.48	5.68	41.67
26	Non-metallic mineral products	6.37	19.65	1.78	1.70	3.81	33.30
28	Fabricated products	7.00	18.81	0.97	1.31	5.20	33.29
36	Furniture	5.34	16.08	1.15	1.19	2.74	26.50
All sectors (average)		7.04	22.83	1.10	1.23	3.86	36.07

Table 9.3 documents the development in firm's perception about the most important group of business contacts. Results are reported by firm size, gender and location. In both 2009 and 2011, business contacts in different sectors are perceived to be the most important. Noticeably, the share has increased by 20 percentage points from 65 percent in 2009 to 85 percent in 2011. The increase is mainly driven by a decline in the share of firms that think business contracts in the same sector are the most important group of contacts. Not surprisingly, medium sized firms find contacts to bank officials to be more important compared to their smaller counterparts.

Table 9.3 Most important group of business contacts

	Buss. contacts in same sector		Buss. contacts in different sector		Bank officials		Politicians and civil servants		Others	
	2009	2011	2009	2011	2009	2011	2009	2011	2009	2011
Total	25.52	11.53	64.51	84.45	4.41	2.47	0.46	0.35	5.11	1.19
	504	261	1,274	1,911	87	56	9	8	101	27
Micro	24.33	11.68	65.87	84.88	2.84	2.08	0.37	0.39	6.59	0.97
Small	27.73	11.84	62.5	82.33	7.03	3.6	0.59	0.34	2.15	1.89
Medium	29.13	8.63	58.27	88.49	10.24	2.16	0.79	0,0	1.57	0.72
Female	24.42	11.36	66.57	84.69	4.65	2.27	0,0	0.24	4.36	1.44
Male	26.11	11.63	63.4	84.3	4.27	2.59	0.7	0.42	5.52	1.05
Rural	23.88	10.82	64.41	85.36	3.88	2.86	0.44	0.56	7.4	0.4
Urban	27.74	12.43	64.64	83.3	5.12	1.99	0.48	0.1	2.02	2.19

Note: Percentage. Number of observations reported in bold. Missing variables in both years.

Table 9.4 reports the share of total contacts categorized as suppliers, customers, debtors, creditors and women. If in fact, entrepreneurs rely on their networks to reduce information asymmetries by facilitating flows of information about previous conduct, current circumstances and future interventions of their trading partners, debtors and creditors, the share of contacts in each category may give an indication of their importance or scarcity. Approximately 30 percent of the firms do not have regular contact with people categorized as debtors or creditors. This is likely to be explained by the observations that trade credit is less important in Vietnam compared to many African countries where trade credit is crucial for firm's ability to mitigate unforeseen shocks. Around 53 percent of the firms report that more than 50 percent of the total number of contacts is customers. Women constitute around 28 percent of the total number of contacts on average. The lower fraction of female contacts relative to males is likely to be due to the fact that women are still underrepresented in the business environment in Vietnam.

Table 9.4 Share of Contacts by Group

	Average	No contacts	Less than 10%	Between 10 and 24%	Between 25 and 49%	More than 50%
Suppliers	22.59	0.33	19.71	43.95	27.70	8.31
	2,357	10	473	1,032	653	189
Customers	49.89	4.59	1.26	9.98	31.66	52.51
	2,357	114	30	232	745	1,236
Debtors	12.37	29.50	29.48	24.14	12.82	4.07
	2,357	707	685	568	301	96
Creditors	12.37	29.50	29.48	24.14	12.82	4.07
	2,357	707	685	568	301	96
Women	28.32	7.76	10.55	34.28	29.14	18.26
	2,357	172	258	797	699	431

Note: Percentage. Number of observations in bold. 70 missing observations.

One of the reasons that firms form relationships with others is to economize on transactions costs, by lowering search and screening costs associated with finding new suppliers (Kranton, 1996), especially in environments where formal market regulating institutions are absent (McMillan and Woodruff, 1999). Table 9.3 shows that the vast majority of SMEs can freely select new suppliers in the market, and that 39 percent on

average identify suppliers through personal contacts. This compares to 50.5 percent of the enterprises that identify new suppliers based on own search process. Urban located and smaller firms rely more on personal contacts to identify suppliers. Male and female owned enterprises are equally dependent on personal contacts in their identification of new suppliers. While personal contacts are important in the identification process, personal knowledge of the supplier is relatively unimportant. Thus, less than 2 percent report that the main criteria for selecting suppliers are that the entrepreneur knows the supplier personally. Rather, the main criteria for selecting suppliers are competitive prices and quality standards with 51 and 34 percent, respectively.

Table 9.5 Selection of Suppliers

	All	Micro	Small	Medium	Female	Male	Rural	Urban
Freely selection of new suppliers	97.86	98.09	97.71	95.74	97.77	97.91	96.98	99.04
	2,375	1,674	612	141	895	1,532	1,389	1,038
How does enterprises identify suppliers								
- Personal contact	39.17	41.65	34.51	29.63	39.24	39.12	37.70	41.09
- Marketing efforts by suppliers	9.53	9.09	9.88	13.33	10.98	8.68	10.63	8.08
- Own search processes	50.46	48.72	54.10	55.56	48.28	51.74	51.08	49.66
Main criteria for selecting suppliers								
- Competitive price	50.80	50.95	51.17	47.41	50.40	51.04	46.64	56.23
- Quality standards	33.78	33.58	34.11	34.81	34.02	33.65	35.82	31.13
- Secure supply	10.01	10.15	9.70	9.63	10.54	9.70	11.42	8.17
- Know supplier personally	1.60	1.77	1.34	1.48	1.03	1.94	1.87	1.26

Note: Percentage. Number of observations in bold. 3 observations missing on how suppliers are identified, and 7 observations missing on the main criteria for selection.

9.2 Membership in Business Associations

While the main functioning of business association is to provide non-financial services and represent its member's common interests, by lobbying the government to provide the public good, one may also argue that associations may help firms shape professional and personal networks because associations offer exposure to new social contacts, and thus business opportunities.

Table 9.6 Membership in Formal Business Associations

		2009	2011
Member of a business associations	All	9.83	7.58
		245	184
	Micro	3.83	2.93
	Small	19.36	14.71
	Medium	33.33	31.91
	Rural	9.72	7.34
	Urban	9.97	7.90
Average number of memberships	All	1.30	1.36
		239	184
Pay membership fees	All	88.16	93.44
		216	171

Note: Percentage. Number of observations in bold.

Table 9.6 shows that the share of enterprises participating in business associations has decreased from almost 10 percent in 2009 to 7.6 percent in 2011. This decline is independent of firm size, however small and medium sized firms are significantly more likely to be members with 15 and 32 percent in 2011, respectively. Surprisingly, urban and rural located enterprises are equally likely to participate in business associations. It is not common to join more than one business association, and thus only 39 firms reports more than one membership. For the most important associations, some 93 percent paid membership fees in 2011 compared to 88 percent in 2009. While difficult to ascertain with the available data, the observed increase may help explain the observed decline in association membership.

Turning to the question of which manufacturing enterprises that joins a formal business association, Table 9.7 list the results from a pooled and a random effects probit model for 2009 and 2011. The usual determinants along with measures of network activity are included in both estimations. Network variables for the number of contacts in the same and different sector are constructed based on the following categorization: (1) less than 5 network partners, (2) more than 4 and less than 10 network partners, (3) more than 9 and less than 20 network partners, and (4) more than 20 network partners. Similar, the number of contacts with bank officials, politicians and civil servants are based on the following categorization: (1) no relations, (2) 1 business relation, (3)

2 business relations, and (4) at least 3 relations.[18] Contact diversity is defined as the number of categories, presented in Table 9.1, within which the firm have at least one contact.

Table 9.7 Determinants of Membership in Business Associations

		Pooled probit		RE probit	
		Coefficient	t-stat	Coefficient	t-stat
Networks	Buss. in same sector	-0.001	(-0.34)	-0.008	(-0.16)
	Buss. in different sector	-0.004	(-1.16)	-0.033	(-0.73)
	Bank officials	0.005	(1.42)	0.092*	(1.80)
	Politicians and civil servants	0.011***	(2.78)	0.129**	(2.41)
	Contact diversity	-0.002	(-0.40)	-0.023	(-0.35)
Firm charact.	Firm size (log)	0.038***	(9.10)	0.538***	(8.16)
	Firm age	0.001***	(3.97)	0.015***	(2.76)
	Household	-0.048***	(-3.82)	-0.637***	(-4.05)
	Urban	-0.036***	(-4.87)	-0.528***	(-3.89)
Owner's charact.	Owners educational level	0.018**	(2.14)	0.257*	(1.93)
	Owners experience	-0.009	(-1.29)	-0.110	(-1.02)
	Gender	0.005	(0.70)	0.048	(0.43)
Sector dummies		Yes		Yes	
Year dummy		Yes		Yes	
Observations		3,720		3,740	
Pseudo R-squared		0.227			
Likelihood-ratio test				77.44***	

Note: Column 1: Pooled probit regression using data from 2009 and 2011 only. Column 2: Random effects profit using data from 2009 and 2011. Dependent variable is membership of business association. Robust standard errors reported in parenthesis. *, ** and *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15).

Summarizing the results we find that only one of the five measures for social network capital is statistically significant in the pooled probit. Firms with regular contact to politicians and civil servants have a higher probability of being member of a business association. This effect remains and become larger when we correct for unobserved factors affecting membership probability. In addition, contacts with bank official become significant on a 10 percent level in the random effects probit model. The positive coefficient estimate indicates that regular interaction with bank officials

18 It should be noted that the different dimensions of network activity are correlate, but only imperfectly so. This should enable us to ascertain whether certain dimensions are more important than others.

increase the probability of membership. This may be driven by the fact that larger and more mature enterprises are less likely to be credit constrained. The weak evidence might suggest that firms do not join business associations to shape professional and personal networks, and thus members do not have a larger number of contacts compared with non-members.

Second, according to estimates from column (2), larger enterprises have more than 50 percent higher probability of being a member than their smaller counterparts. Third, older firms are more likely to be member of a business association. Fourth, urban located enterprises and households are less likely to participate in business associations compared to firms with different ownership structures located in rural areas. Finally, owners/managers with at least upper secondary education are significantly more likely to join a formal business association. [19]

Table 9.8: Advocacy Support from Business Associations

	2009		2011	
Received advocacy support	Yes	No	Yes	No
	56.73	37.14	62.84	37.16
	139	91	115	68
Quality of advocacy support				
- Good	48.92		41.74	
- Average	43.88		50.43	
- Insufficient	4.32		6.96	
- Not able to access	2.16		0.87	

Note: Percentage. Number of observations in bold.

The main function of business association is to provide non-financial services and represent the common interest of their members. Table 9.8 reports the number of firms that have received advocacy support from business associations provided they hold a membership. In 2011, some 115 firms corresponding to 63 percent of the members received advocacy support. This compares to 57 percent in 2009. Table 9.6 also lists the quality of the advocacy support. Some 42 percent of the firms in 2011 reported that the quality of the support was good, 50 percent that it was average and only 7 percent thought the advocacy support provided by the business association was insufficient.

19 Owners/managers educational level is included as a dummy variable taking the value one if the owner has a least finished upper secondary school level.

The quality of the advocacy support by firm size and gender are shown in Figure 9.1 below. In general, female owned enterprises seems to be more satisfied with the support provided compared to their male counterparts where the vast majority rate the quality as average. Larger firms are generally more satisfied with the quality of the advocacy support received compared to micro enterprises. More than 60 percent of the micro enterprises reports that the quality is average and only a small fraction are not able to access the support.

Figure 9.1 Quality of advocacy support

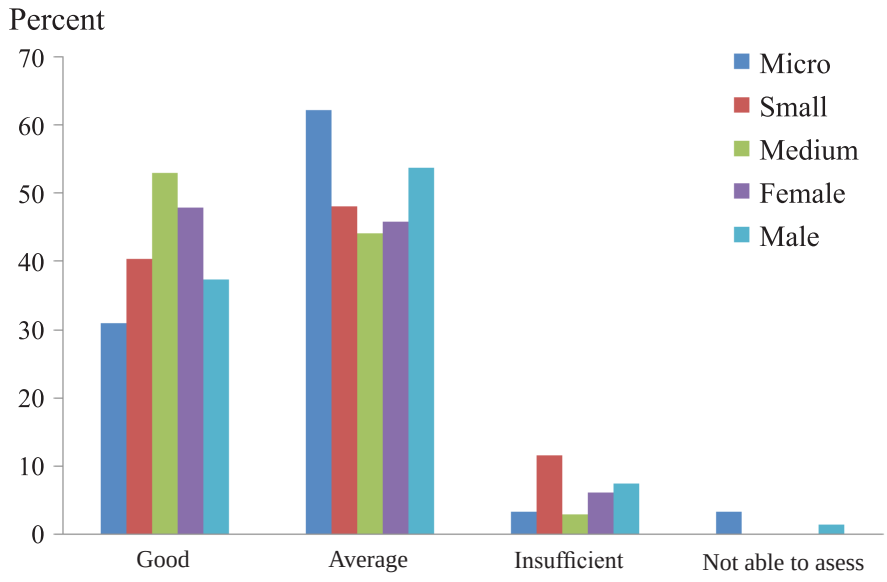


Table 9.9 documents the distribution of the firm's perceived and actual benefits from membership. The majority of firms (25 percent) report that the most important reason for joining were due to association's provision of services concerning communication of new policies and laws to firms. From column (2) on actual benefits received from being a member, some 42 percent state that they have received information on new policies and laws relevant to the firm. Around 19 percent of the membership firms report that private sector services such as trade fairs, and other reasons were the most important reason for joining a formal business association. Membership firms were also asked about the most needed advocacy service.

According to column (3) in Table 9.9, 24 percent state that the most important advocacy services needed is private sector services, whereas 20 percent report that they need provision of preferential loans. The later may indicate that firms joining business associations are more disadvantaged compared to non-members. Unfortunately, we are

not able to test this hypothesis using the present data, and these results should therefore be interpreted with caution.

Table 9.9 Perceived and actual benefits from membership

	Reasons for joining	Actual benefits received	Most needed advocacy service
Access to Land	1.64	2.61	7.27
Costs and time to start a business	8.20	6.09	3.03
Labor training	8.20	10.43	10.91
Time and costs of complying with regulations	5.46	2.61	2.42
Authorities' solving of problems facing businesses	4.37	2.61	3.64
Private sector services (trade fairs etc.)	19.13	12.17	24.24
Communication of new policies and laws to firms	24.59	41.74	10.30
Provision of preferential loans	5.46	7.83	20.00
Tax relief	3.28	2.61	8.48
Economic arbitration	0.55	2.61	1.21
Other	19.13	8.70	8.48
Observations	183	115	165

9.3 The role of relationships on firm performance and growth

Understanding the role of social networks in market exchange is crucial for policy, particularly for the design of institutions that support markets. To understand which functions these institutions must provide, it is useful to examine the role that relationships play in actual markets and the different channels through which they assists market exchange. To this effect, we now investigate whether well connected manufacturing SMEs in Vietnam perform better compared to less well-connected firms.

Table 9.10 present pooled OLS regression estimates of network activity on firm performance correcting for firm and owner characteristics, location, legal ownership structure and sector. Firm performance is measured as the logarithm to real value added. Value added is a measure of the value of the production less the indirect costs and value of raw materials. In column 1, network activity is measured as the total number of contacts, contract diversity and association membership. In column 2, the total number of contacts is divided into four categories: business contacts in the same sector, different sector, bank officials and politicians and civil servants. Association membership are

included as formal associations may be an effective place to establish working relations to new suppliers and clients, particularly given the reluctance of owners to change such relations, once established.

Table 9.10 Network activity on firm performance

		Coefficient	t-stat	Coefficient	t-stat
Networks	Total number of contacts (log)	0.029	(1.61)		
	Buss. in same sector			0.011	(0.90)
	Buss. in different sector			0.008	(0.81)
	Bank officials			0.048***	(4.17)
	Politicians and civil servants			0.007	(0.59)
	Contact diversity	0.024**	(2.23)	0.000	(0.00)
	Membership in association	0.059	(1.39)	0.052	(1.23)
Firm charact.	Firm size (log)	1.060***	(73.00)	1.053***	(72.21)
	Firm age	-0.005***	(-4.39)	-0.005***	(-4.44)
	Urban	0.372***	(15.08)	0.392***	(15.37)
Owner's charact.	Owners educational level	0.065***	(2.68)	0.061**	(2.50)
	Owners experience	-0.001	(-0.02)	0.000	(0.02)
Ownership	Private/sole proprietorship	0.236***	(5.32)	0.237***	(5.36)
	Partnership/Collective/ Coop.	-0.070	(-0.97)	-0.071	(-0.99)
	Limited liability company	-0.070	(7.97)	0.304***	(7.86)
	Joint stock company	0.310***	(2.11)	0.118*	(1.91)
Sector dummies		Yes		Yes	
Year dummy		Yes		Yes	
Observations		3,630		3,630	
Pseudo R-squared		0.826		0.827	

Note: Pooled OLS estimates on balanced panel. Dependent variable: Log to value added. *, ** and *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Households, Food processing (ISIC 15). Constant included in all regressions.

Summarizing the results we find the following. First, the total number of contacts is not found to be statistically significant, meaning that higher network activity does not increase firm performance. This result is in contrast to the results found by Fafchamps and Minten (2002), examining traders in Madagascar.[20] However, performance is found

20 This is also in contrast with the empirical results found by Barr (2000). She examines social capital in terms of

to be positively associated with the number of different contacts a firm have (e.g. higher network diversity). This is in line with Burt (1992) that emphasizes the importance of entrepreneurs to be better informed than their competitors through interaction with *different* contacts. The empirical results in column 2 show that contacts with bank officials are positively related to firm performance.

Second, firm size defined as the number of full-time employees is statistically significant and positively related to performance, while firm age is negatively associated with performance, indicating that performance increases as firms grow. Third, in terms of ownership characteristics (e.g. human capital), owners/managers with at least upper secondary education are likely to experience higher firm performance compared to owners/mangers with a lower educational level.[21] This seems intuitive given that better educated owners/managers are better equipped to maneuver through the difficult administrative procedures in for example the credit system and thereby in a better position to boost the economical outcome and growth of the firm. Fourth, Private/sole proprietorship, limited liability companies and joint stock companies experience higher firm performance compared to household enterprises. Finally, firms located in urban areas generally experience higher performance in terms of value added compared to the other rural located enterprises.

Table 9.11 presents OLS estimates of network activity on firm growth correcting for firm and owner characteristics, location, legal ownership structure and sector. Firm growth is measured in terms of full-time employees and annual real revenue. Enterprise network activity is tried captured through the inclusion of the total number contacts the firm has regular contact with, contact diversity, and membership of a business association.

entrepreneurial networks to determine Ghanaian manufacturing enterprise performance.

21 Owners/managers educational level is included as a dummy variable taking the value one if the owner has a least finished upper secondary school level.

Table 9.11 Network relations effect on firm growth

		Firm growth (size)		Revenue growth	
		Coefficient	t-stat	Coefficient	t-stat
Networks	Total number of contacts (log)	-0.034	(-0.92)	-0.041*	(-1.81)
	Contact diversity	0.063***	(3.31)	-0.017	(-1.08)
	Membership in association	0.152*	(1.80)	0.039	(0.81)
Firm charact.	Firm size (log)	-0.319***	(-7.31)	-0.092***	(-4.39)
	Firm age	-0.002	(-1.39)	0.000	(0.07)
	Household	-0.469***	(-4.23)	-0.102**	(-2.01)
	Urban	0.147**	(2.24)	0.056	(1.62)
Owner's charact.	Owners educational level	0.050	(1.21)	-0.015	(-0.47)
	Owners experience	0.033	(0.65)	0.033	(1.07)
	Gender	0.053	(0.96)	-0.036	(-1.13)
Sector dummies included		Yes		Yes	
Observations		1,910		1,818	
Pseudo R-squared		0.075		0.025	

Note: OLS estimates on balanced panel. *, ** and *** indicates significance at a 10%, 5% and 1% level, respectively. Base: Food processing (ISIC 15). Constant included in all regressions. Independent variables from 2009.

Summarizing the results we find the following. First, with regard to firm's network activity, there is a statistically significant and negative relationship between the total number of contacts and revenue growth, indicating that higher network activity depresses enterprise growth. As for firm performance, contact diversification increase firm growth measured as the number of full-time employees. Membership of a formal business association is positively related to firm's total sales, but only statistically significant on a 10 percent level. The positive association between membership and firm growth may indicate that the advocacy support provided by business associations is beneficial to SMEs in terms of increase growth.

Second, firm size defined as the number of full-time employees is statistically significant and negatively related to firm growth, and thus smaller firms tend to experience larger growth. Third, household firms are less likely to experience high growth rates compared to their (often) larger counterparts. Finally, in terms of employment growth, urban located firm growth more rapidly compared to rural located firms.

Table 9.12 Firm growth by type of network relations

		Firm growth (size)		Revenue growth	
		Coefficient	t-stat	Coefficient	t-stat
Networks	Buss. in same sector	0.006	(0.28)	-0.011	(-0.72)
	Buss. in different sector	-0.025	(-1.30)	-0.037***	(-2.60)
	Bank officials	-0.022	(-1.03)	0.005	(0.35)
	Politicians and civil servants	-0.013	(-0.49)	0.003	(0.18)
	Contact diversity	0.080***	(2.84)	-0.024	(-1.21)
	Membership in association	0.157*	(1.88)	0.038	(0.79)
Firm charact.	Firm size (log)	-0.318***	(-7.50)	-0.094***	(-4.46)
	Establishment year	-0.003	(-1.50)	-0.000	(-0.07)
	Household	-0.472***	(-4.19)	-0.100**	(-1.97)
	Urban	0.137**	(2.06)	0.055	(1.54)
Owner's charact.	Owners educational level	0.051	(1.23)	-0.015	(-0.47)
	Owners experience	0.029	(0.59)	0.030	(0.95)
	Gender	0.050	(0.89)	-0.038	(-1.19)
Sector dummies included		Yes		Yes	
Observations		1,910		1,818	
Pseudo R-squared		0.076		0.025	

Note: OLS estimates on balanced panel. *, ** and *** indicates significance at a 10%, 5% and 1% level, respectively.
Base: Food processing (ISIC 15). Constant included in all regressions. Independent variables from 2009.

Looking into the different types of network activity that affect the growth of the firm, Table 9.12 decomposes network activity into the number of contacts the firm have with people in the same sector, with people in different sectors, bank officials and politicians and civil servants. Summarizing the results, the new empirical evidence suggests that the observed network effect on revenue growth found in Table 9.10 is mainly driven by the number of contacts with business people in different sectors. In terms of the firm growth regression, the coefficient estimates on contact diversity and association members remains statistically significant, and likewise does the estimates related to firm characteristics.[22]

22 Generally speaking, whether these results can be trusted depends on the possibility of endogeneity bias. We try to minimize this bias by including dependent variables from 2009. Test of endogeneity using panel data or IV estimation is beyond the scope of this rapport. However, the empirical results presented here can be taken as strong preliminary indications for the importance of social network in markets characterized by high transaction costs and poor market institutions.

9.4 Diffusion of Information and Innovative Practices

Having established that firms social networks affects performance; we now investigate one of the channels through which the effect is likely to operate, namely diffusion of information and innovative practices. In line with the theory, the common underlying assumption in the literature on within country diffusion is that actors learn from each other about new technology and innovations (Fafchamps and Söderbom, 2011). One way to obtain information on new technologies, design and modes of production are through direct product and production requirements from customers and suppliers. Table 9.13 shows that 7.6 and 4.4 percent of the enterprises receive specific requirements on modes of production or product specification from customers and suppliers, respectively. The likelihood of receiving direct product requirements increases in firm size. Out of the enterprises that receive product requirements, more than 20 percent on average report that these requirements resulted in technology transfers. Hence, interaction with customers and suppliers may facilitate information flows in the form of technology transfers, potentially enhancing firm innovativeness and growth.

Table 9.13 Requirements from customers and suppliers

	All	Micro	Small	Medium
Requirements from customers	7.58	5.59	10.82	17.14
	183	93	66	24
Has requirements resulted in technology transfers?	20.77	18.28	24.24	20.83
	38	17	16	5
Requirements from suppliers	4.39	3.48	5.25	11.43
	106	58	32	16
Has requirements resulted in technology transfers?	22.64	20.69	21.88	31.25
	24	12	7	5

Note: Percentage. Number of observations in bold. 9 missing observations.

Unfortunately, information on the channels through which entrepreneurs acquire information on new technologies and innovation practices are very limited in the data. However, it can be argued that potential diffusion increase in the firms networking activity. The underlying idea is that business owners receive advice on technology upgrading and institutional innovations from their network partners, and thus a larger and more diverse network increase the probability that firm's learn the effective routines and competencies shared by other businesses, stimulating prosperity and growth.

Table 9.14 presents ordered probit regression estimates of networking activity on firm's innovativeness correcting for the usual firm and owner characteristics, including location, legal ownership structure and sector. The dependent variable for firm's innovative level is based on answers to the three questions: (1) Have the firm introduced a new product? (2) Have the firm improved existing products? and (3) Have the firm introduced a new technology? Depending on the number of categories within which an enterprise has innovated, a count variable between 0 and 3 is constructed and used as the dependent variable. Column (1) includes the total number of contacts, a proxy for contact diversity and a membership dummy, whereas column (2) decompose the total number of contacts into the aforementioned network categories (excluding the category 'others').

Table 9.14 Firm "Innovativeness"

		(1)		(2)	
		Coefficient	t-stat	Coefficient	t-stat
Networks	Total number of contacts (log)	0.188***	(4.99)		
	Buss. in same sector			0.010	(0.33)
	Buss. in different sector			0.020	(0.73)
	Bank officials			0.046	(1.46)
	Politicians and civil servants			0.087***	(2.70)
	Contact diversity	0.087***	(3.08)	0.045	(1.15)
	Business associations	0.077	(0.75)	0.070	(0.67)
Firm charact.	Firm size (log)	0.256***	(7.70)	0.253***	(7.44)
	Firm age	-0.000	(-0.02)	-0.001	(-0.14)
Owner's charact.	Owners educational level	0.222***	(3.77)	0.216***	(3.66)
	Owners experience	0.046	(1.00)	0.058	(1.09)
Location dummies		Yes		Yes	
Ownership dummies		Yes		Yes	
Sector dummies included		Yes		Yes	
Observations		2,416		2,416	
Pseudo R-squared		0.107		0.105	

Note: Ordered probit. Dependent variable is ****. Robust standard errors reported in parenthesis. *, ** and *** indicates significance at a 10%, 5% and 1% level, respectively. Base: HCMC, Household firm, food processing (ISIC 15).

Summarizing the results we find the following. First, as expected, network activity is positively associated with firm innovativeness. The total number of contacts and contact diversity has a positive and statistically significant effect on firm's level of innovation. Looking at column (2) contact diversity is no longer well-determined. The

positive coefficient estimate in column (1) on the total number of contacts seems to be driven by contact with bank officials as well as politicians and civil servants (column 2), which have a positive and well-defined impact on firm innovativeness. Second, firms size measured as the number of full-time employees are positively associated with innovativeness, suggesting that larger firms are more likely to innovate in multiple categories simultaneously. Third, owners/managers with at least upper secondary education are more likely innovate compared to firms owned by owner with a lower educational level.

In sum, the empirical analysis suggests that networks are important determinants of enterprises innovativeness and firm performance. Entrepreneurs with a larger and more diverse set of contacts are found to both perform better and grow faster. Further, the most important categories – both reported by the firms themselves and based on the empirical analysis – are social networks with business people in other sectors and bank officials. As contacts in the latter category increase in the size of the firm measured by the number of full-time employees, smaller enterprises may be constrained by their lack of contacts with bank officials. In this regard, it is likely that this type of social networks is too expensive or simply inaccessible for the smaller entrepreneurs, thereby providing unintended and unequal access to resources by micro enterprises. This is confirmed by the positive and statistically significant coefficient estimate on firm size in all the empirical analyses, except from the growth regressions.

10 Conclusion

We present below a summary of some of the most important findings from the data and report.

- Around 60 per cent of surveyed enterprises state that the international crisis still had a negative effect on their doing business conditions in 2011 and only 17 per cent of enterprises has not (at some point in time) felt the negative effects of the 2007/08 crisis (reported in either 2009 or 2011). Overall fewer firms in 2011 believe that the negative effects of the 2007/08 international crisis will be only temporary as compared to 2009.
- As in 2009, micro sized firms are less affected by the crisis than their larger counterparts. Moreover, while fewer firms felt affected by the 2007/08 international crises in the North in 2011 (57%) as compared to 2009 (65%), firms in the South sensed an increase in constraints between 2009 (64%) and 2011 (71%). The same trends are observed in the rural/urban split, with urban firms feeling more constrained by the international crisis in 2011 as compared to 2009 and rural firms feeling less constrained over the same period.
- The annual survival rate between 2009 and 2011 increased to 92.2 per cent from a figure of 91.6 per cent observed between 2007 and 2009. Urban centers like Ha Noi and HCMC experienced above average exit rates. Also Lam Dong showed above average exit rates. Moreover, firms in Apparel had an above average probability of exiting, which may point to some competitiveness concerns for this particular sector.
- Employment growth between 2009 and 2011 was especially pronounced in the old Ha Tay area, whereas firms in Nghe An saw decreases in average employment. Moreover, employment growth was particularly seen in leather production, whereas shrinking sectors in terms of employment were textiles and rubber.
- The business environment appears to have improved, although (as in 2009) few firms are facing no constraints. Access to credit remains (according to business owners) one of the most serious problems, although improvements are observed between 2009 and 2011. However, the formal debt share remains low in Vietnamese SMEs, even though access to formal loanable funds has increased.
- As in 2009, firms are increasingly moving into the formal sector. Over 20 per cent of the firms not formally registered in 2009, had obtained a business registration license (and a tax code) by 2011. Moreover, contrary to the findings in 2009, there is evidence of formalization having a positive employment growth effect. As such the government

should continue to pursue its current "formalization" policies. However, looking at survival probabilities there is no significant difference between registered and informal firms.

- More firms are making informal payments in 2011 than in 2009, and as in 2009 the results show that formality and increases in the probability of paying bribes go hand-in-hand. An analysis of the "purpose" of the informal payment increasingly goes to dealing with taxes and tax collectors as well as getting connected to public services/ utilities. Finally, the data highlight that firms paying bribes have a higher probability of exit, which provides the strong message to SMEs that "bribe payments will not keep you alive in the longer run", which is opposite to the general perception. An information campaign on the highly negative features of bribe payments may be necessary to reduce the informal payments pressure both from the demand and supply side of the problem.
- The average enterprise is relatively specialized and fewer firms diversified in 2011 as compared to 2009, and medium firms are more diversified than their micro counterparts. As such, product diversification does not seem to be a risk reduction tool of Vietnamese manufacturing SMEs. However, more firms developed a new product in 2011 as compared to 2009, whereas the number of firms improving existing products declined over time. Especially rural small firms are driving this decline. Results show that this latter decline could be a problem for future dynamics as innovation through the improvement of existing products is positively related to firm performance, and increasing policy focus should be given to the improvement of the innovative capacity of SMEs.
- Labor productivity has increased significantly between 2009 and 2011, and the increase is especially driven by micro and small enterprises. Urban located enterprises have a higher level of labor productivity compared to their rural counterparts. Especially the food and beverage sector has seen significant labor productivity increases between 2009 and 2011, but given that the median labor productivity growth rates are above one in all sectors highlight the significant overall improvements in labor productivity among Vietnamese SMEs. However, the variation across firms is large; 40 percent of the firms experienced negative labor productivity growth between 2009 and 2011. An increased policy focus should be given to this large pool of "bad performers", if Vietnam is to follow a sustained and inclusive employment growth path/pattern.
- The share of enterprises investing has declined since 2009, and it is especially smaller urban firms in the south that has contributed to this decline. The average amount of the

investment financed by retained earnings has increased as compared to 2009, and 8.4 percent of investments are financed by informal loans. Although the investment decline is small, investment policies could be designed to address the declining investment trend coupled with an increasing shift towards the use of informal credit sources among SMEs in the urban South.

- Around 39 percent of enterprises can be considered credit constrained. This number is similar to the observation in 2009. Twice as many firms obtain informal loans as compared to formal ones, and almost 90 percent of the constrained group (in formal credit markets) has access to loans from informal sources. Remembering that informal loans only finance 8 to 9 percent of total investments shows that informal loans are small but a frequent part of Vietnamese SMEs financing scheme. Household firms are less likely to obtain informal credit, which means that more formal (non-constrained) entities also rely on informal sources of financing investments. However, policies should reflect that informal credit sources cannot (and should not) assure a sustained investment led inclusive growth path for SMEs.
- Since 2009, there has been an increase in the labor force share of regular workers, and a corresponding decline in the proportion of casual workers. When the economy is stable and the confidence in the future is high firms tend to hire more regular workers and less casual workers. The data therefore indicate a recovery from the global economic crisis and generally more optimism.
- As in 2009, recruiting difficulties exist. Since the share of well-educated workers is relatively high, it seems that these recruiting difficulties may be due to lack of labor market information rather than an actual lack of skilled workers. This suggests that a strengthening of information systems would benefit both workers and firms and could help match worker skills and job functions.
- Higher education levels of the owner and manager is positively related to firm growth. Moreover, there is an indication of average level of worker education also being positively correlated with employee growth, as well as wages. However, it should be noted that average individual wages vary considerably by occupational category, and across all occupations wages are higher for men than for women. With regard to the empowerment of workers, those employed in larger firms benefit relatively more from firm gains through a higher wage. Finally, with the exception of the provision of sick leave payments, the provision of all types of benefits has increased since 2009, on

average. As such the data seem to confirm that the education and remuneration policies focusing on the empowerment of workers are starting to work, even for smaller SMEs.

- Understanding the role of social networks in market exchange is crucial for policy, particularly for the design of institutions that support markets. The analysis shows that networks are important determinants of enterprises innovativeness and firm performance. Entrepreneurs with a larger and more diverse set of contacts are found to both perform better and grow faster. As important network contacts are increasing in firm size, smaller SMEs are relatively less able to reap the network related benefits. It is likely that the beneficial types of social networks are too expensive or inaccessible for the smaller entrepreneurs, thereby providing unintended and unequal access to resources by micro enterprises. Policies aimed at ensuring an equal playing field also in relation to social network access may help ensure the governments pursuit for inclusive growth. The positive relationship between business association membership and firm growth may indicate that the advocacy support provided by business associations is beneficial to SMEs and improving and promoting access of the smaller segment of SMEs may provide beneficial overall externalities.

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