



## The Viet Nam SME data 2005-15

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## 2

# The Vietnam SME Data, 2005–15

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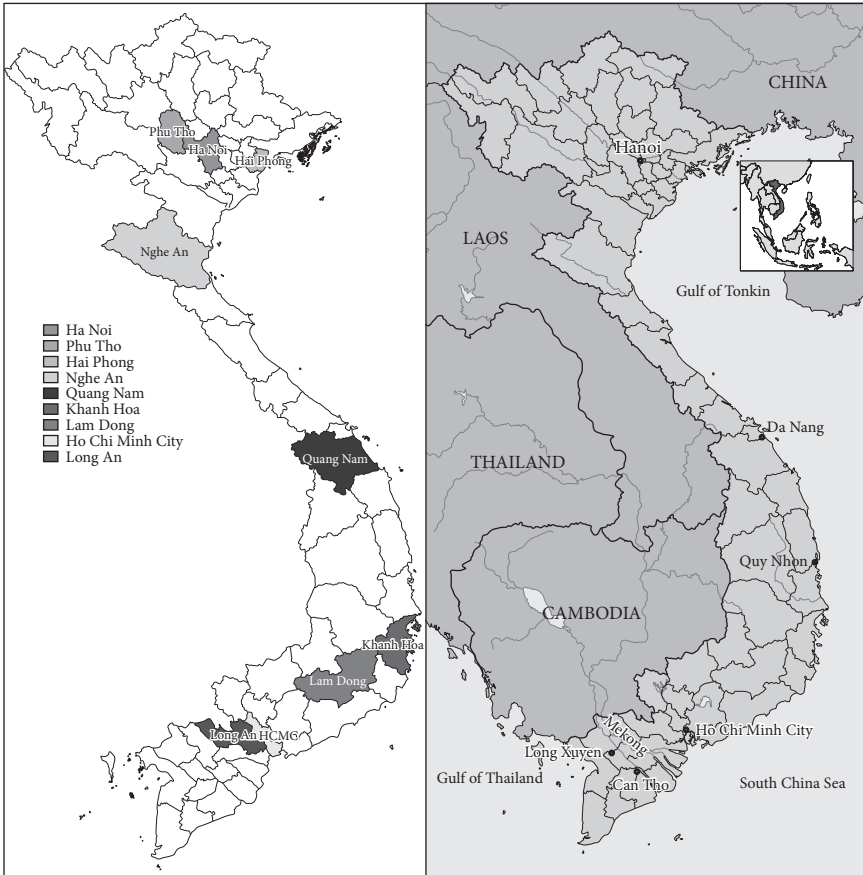
### 2.1 Delving into the Vietnam SME Data

This chapter sheds light on the Vietnam SME database. It covers six survey rounds during the period 2005–15 and represents the basis for the analytical work in all subsequent chapters. We start by outlining the overall purpose behind collecting the SME data and continue to describe the data, including sample design, firm and owner characteristics and attrition. Section 2.2 compares the SME data with the characteristics of Vietnam’s overall enterprise population as provided by the General Statistics Office of Vietnam (GSO) to evaluate the representativeness of the former.

#### 2.1.1 Purpose

Since the initiation of the Doi Moi reforms in 1986, it is widely believed that SMEs have critical characteristics that contribute to Vietnam’s economic and social development. Specifically, SMEs represent a source of growth, savings, employment creation, and increased competition. Despite their vast potential, general knowledge on their characteristics, as well as the opportunities and constraints they were facing was lacking at the beginning of the twenty-first century. Accordingly, it was difficult for researchers to formulate evidence-based policy recommendations and for the government to assist this sector. This led the Institute of Labour Science and Social Affairs (ILSSA) of the Ministry of Labour, Invalids and Social Affairs (MOLISA) jointly with the Central Institute of Economic Management (CIEM) to implement a representative survey of non-state manufacturing enterprises in 2005. Technical collaboration came forward from the Development Economics Research Group (DERG) at the Department of Economics at the University of Copenhagen and funding was provided by Danida (CIEM 2007). The chosen firms were located in ten different provinces,<sup>1</sup> as shown in Figure 2.1: Ha Noi, Phu

<sup>1</sup> In 2009, Ha Tay province became part of Ha Noi such that Ha Tay does not appear as a separate province in Figure 2.1. In our dataset, we maintain Ha Tay as a separate province because it facilitates the comparability with previous years.



**Figure 2.1** Location of the sampled provinces and map of Vietnam

Source: igismap.com for Vietnam shapefile used for the left-hand map created in Stata by the authors, and Tarp (2017: 28) for the right-hand map.

Tho, Ha Tay, Hai Phong, Nghe An, Quang Nam, Khanh Hoa, Lam Dong, Ho Chi Minh City, and Long An. Subsequently, five more survey rounds took place biannually until 2015, supported from 2011 by UNU-WIDER. The overall aim was to follow the same enterprises over time to understand their long-term development and to analyse the business environment in which they operate (Brandt et al. 2016; Rand et al. 2014, 2008; Rand and Tarp 2012, 2010).

### 2.1.2 Sample Design

In Vietnam, non-state manufacturing enterprises register as private, collective, partnerships, limited liability or joint stock companies with foreign capital.

Accordingly, the sampling frame we aimed for does not include state-owned or FDI enterprises. The population frame of non-state manufacturing enterprises originated from two datasets from GSO and additional on-site screening of firms by the enumerators. First, the 2002 Establishment Census (GSO 2004), from which the number of non-state registered household business establishments that do not satisfy the conditions stated in the Enterprise Law was taken. Second, the Industrial Survey (GSO 2007), from which the number of enterprises formally registered under the Enterprise Law, was obtained. Our ten provinces jointly covered 30 per cent of the country's overall non-state manufacturing population in 2005. As we wanted to ensure representativeness at the province level for formal/registered non-state manufacturing firms, we aimed at estimating the sample size for the smallest group (in this case Lam Dong) and subsequently determine the sample sizes for the remaining provinces. For reasons of implementation, the survey had to be limited to a select number of districts within each province. Thus, firm selection took place in a two-step sampling procedure. In the first step, districts within each province were selected using probability proportional to size (PPS) sampling. The number of selected districts in each province is proportional to the number of districts in each province. In the second step, firms within a selected district were randomly selected from the population list of formal/registered non-state and household manufacturing firms (including 164,468 firms), as shown in Table 2.1.

During the pilot surveys, it became clear that we could only collect information on informal manufacturing firms through snowballing techniques. Accordingly,

**Table 2.1** Vietnam's non-state and household manufacturing: population by province in 2005

Province	Householdenterprises	Non-stateenterprises	Total
Ha Noi	16,588	2,429	19,017
Phu Tho	17,042	127	17,169
Ha Tay*	23,890	201	24,091
Hai Phong	12,811	363	13,174
Nghe An	22,695	237	22,932
Quang Nam	10,509	111	10,620
Khanh Hoa*	5,603	256	5,859
Lam Dong	5,268	160	5,428
HCMC	34,241	3,682	37,923
Long An	8,050	205	8,255
Total	156,697	7,771	164,468

*Notes:* Includes only non-state manufacturing enterprises. Figures for Ha Tay have been downward adjusted and Khanh Hoa upwards adjusted after a series of consultations with both central and local government officials.

*Source:* The Real Situation of Enterprises (GSO 2005) and Results of Establishment Census of Vietnam (GSO 2004).

within each district, we selected firms not represented in the ‘formal’ sampling frame, yet visually present for interview (on-site identification). Within each district, we asked the enumerators to find as many additional informal firms as possible within each chosen site (block enumeration). The results of this stratified 2-step sampling approach and resulting number of informal firms are in Table 2.2, where we for each survey year have reported data by province and by legal status.<sup>2</sup> Analysts can calculate the corresponding sampling weights for formal/registered firms based on the information provided in Table 2.1.

Over the years, the survey team re-interviewed surviving firms in a tracer survey. Questionnaires are comparable across all survey rounds, and we randomly replaced exit firms using two criteria. First, holding a constant level of household enterprises from the 2002 Establishment Census (GSO, 2004). Second, the updated population of firms registered under the Enterprises Law in the years in which the surveys took place. We note that our data do not necessarily correspond exactly with what was happening in Vietnam’s overall SME population during 2005–15 (for more details see Section 2.2.2). However, our data is unique in the sense that it follows the same SMEs (both formal and informal) and their employees over time.

### 2.1.3 Characteristics of the Sample

The core variables used in subsequent chapters are firm size (number of employees), location, sector, ownership, and formality status. Appendix Tables A2.1 and A2.2 provide additional details on the characteristics of the firms followed over a decade. We measure firm size based on the number of employees and classify firms in three size categories following World Bank suggestions: Micro enterprises are composed of fewer than ten employees, while small-sized firms have between 10 and 49 workers and medium companies from 50 up to 300 employees.<sup>3</sup> Due to our focus on SMEs, we exclude large enterprises with more than 300 workers. In our sample, the average number of workers per firm decreased from 19 in 2005 to 16 in 2015. In 2005, 63 per cent of the sample’s enterprises were micro sized, 29 per cent small and 8 per cent medium sized. These shares changed to 70, 23, and 7 per cent in 2015, respectively. Figure 2.2 breaks these numbers down by legal status. In 2005, the share of firms that were of micro size and informal (36 per cent) was higher than the share of formal micro enterprises (27 per cent). In 2015, many informal firms had formalized such that more micro enterprises were formal (60 per cent) than informal (10 per cent) in our sample.

More than half of the sampled firms are household enterprises. This implies that the 2000 Vietnam enterprise law does not recognize them. The share of

<sup>2</sup> An enterprise is legally formal when it has a tax code.

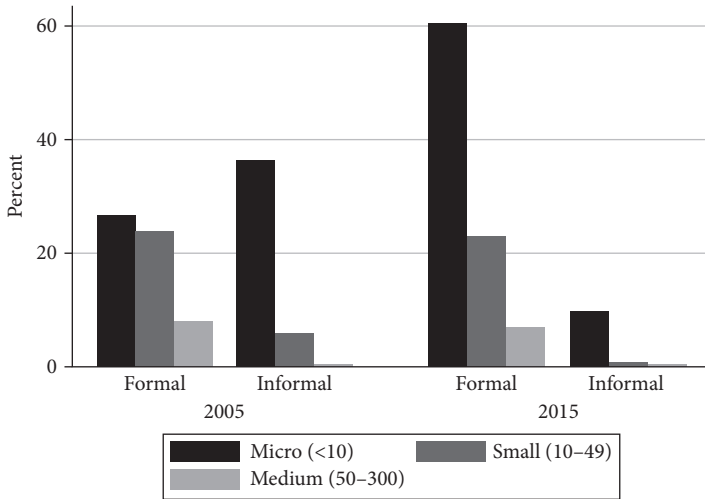
<sup>3</sup> There were no large firms in the initial sample, but some have become large over time.

**Table 2.2** Number of interviewed enterprises by year: province and formality status

	2005		2007		2009		2011		2013		2015	
	F	Inf	F	Inf	F	Inf	F	Inf	F	Inf	F	Inf
Ha Noi	222	75	226	54	236	48	239	36	228	55	275	18
Phu Tho	32	245	49	194	74	185	79	174	76	180	197	55
Ha Tay*	114	281	99	283	106	271	139	206	174	171	305	62
Hai Phong	137	64	121	74	148	62	175	29	156	26	195	23
Nghe An	109	279	99	250	145	209	166	181	162	173	272	66
Quang Nam	81	91	79	76	101	57	107	54	112	55	156	10
Khanh Hoa	98	4	84	2	92	3	96	1	89	1	90	7
Lam Dong	68	21	75	7	57	13	70	11	74	14	86	4
HCMC	652	43	589	20	599	19	566	8	600	12	642	9
Long An	82	47	90	36	100	27	106	18	108	27	122	9
Sample size	1,595	1,151	1,511	996	1,658	894	1,743	718	1,799	714	2,340	263

Note: \*In 2009, Ha Tay province became part of Ha Noi. However, in this dataset Ha Tay is maintained as a separate province because it facilitates the comparability with previous years.

Source: Authors' calculations based on SME data.



**Figure 2.2** SME sample by firm size and formality status

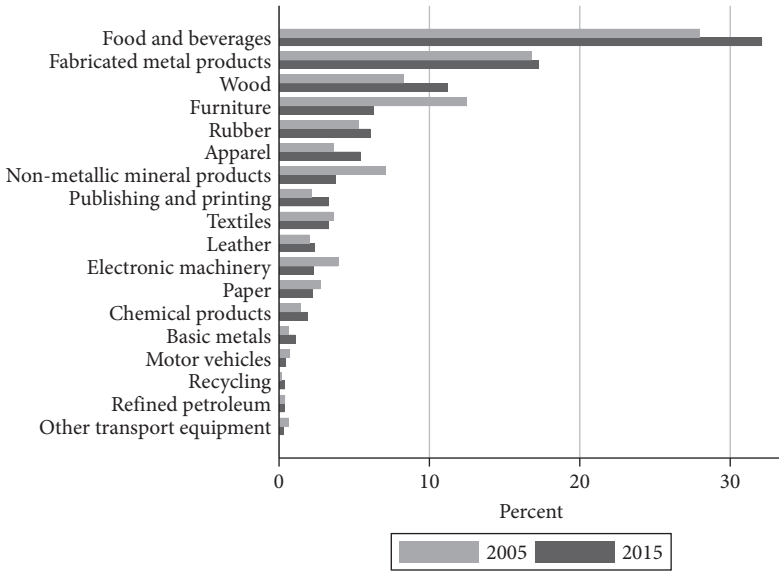
*Source:* Authors' calculations based on SME data.

limited liability companies in the sample increased from 16 to 24 per cent and the percentage of joint stock companies without state capital grew from 2 to 4 per cent during the 2005–15 period. During the same period, sole proprietorships decreased from 10 to 6 per cent, while partnerships, collectives and cooperatives jointly shrank from 4 to 2 per cent. As can be seen from Figure 2.2, the formality rate increased sharply from 57 per cent in 2005 to almost 90 per cent in 2015; and around 40 per cent of the sampled businesses maintained written accounts over the whole period.

Figure 2.3 illustrates the composition of the sample's manufacturing industries based on standard ISIC-codes in 2005 and 2015, respectively. Food and beverages represent the biggest industry, as 30 per cent of the firms belong to it. Fabricated metal products (17 per cent), wood (11 per cent), furniture (8 per cent), rubber (5 per cent), and non-metallic mineral products (5 per cent) follow suit. Each of the remaining industries includes less than 5 per cent of the enterprises. The composition of industries has changed over time in that there are relatively more enterprises in the food and beverages, fabricated metal, wood and apparel industries, and fewer in furniture, non-metallic mineral products, textiles, and electronic machinery.

#### 2.1.4 Sample Attrition

Attrition related to firms closing operations, refusing to participate in the survey, changing their location or not found by the enumerator, often raise analytical



**Figure 2.3** SME sample by manufacturing industries

*Source:* Authors’ calculations based on SME data.

concerns. However, as the survey design allowed us to follow exiting firms (or the previous owners of closed down firms) we can for most years conclude that the majority of firms not found were in deed ‘real’ closures and not attrition due to refusal to participate or mobility related reasons. As presented in Table 2.3, we interviewed 2,746 enterprises in 2005. In 2015, only 982 of these same enterprises remained active. The recoded attrition rate varies by survey year and lies between 15 to 21 per cent, whereas the ten-year attrition rate is 64 per cent. This gives an annual ‘death’ rate between 9 and 10 per cent.

Table 2.3 compares the characteristics of the attrited enterprises with the non-attrited firms to establish whether any particular features supported the non-attrited ones in keeping their business running for such a long period. The table first examines whether there exists a difference in firm size between attrited and non-attrited businesses. It appears that attrited firms were significantly larger than non-attrited ones in the three survey rounds: 2007, 2009, and 2013. It therefore seems, at least in some years, that larger SMEs may have faced more challenges to survive than smaller ones. Regarding the location of the attrited and non-attrited enterprises, we look at the share of firms that operated in the two biggest cities, Ha Noi and Ho Chi Minh. The firms that did not survive in the first three survey rounds were significantly more likely to be located in these two cities than the firms that kept operating. This could be due to more competition in the country’s largest cities such that it is more difficult for businesses to survive there than in other parts/cities of the country.



**Table 2.3** Extent of attrition and comparison of enterprises by attrition status

	Sample size	Number attrited between $t-1$ and $t$	Mean: attrited	Mean: non-attrited	Difference (t-test)
<i>Firm size</i>					
2005	2,746				
2005-7 panel	2,182	564	25	18	***
2005-7-9 panel	1,787	395	29	15	***
2005-7-9-11 panel	1,415	372	17	15	
2005-7-9-11-13 panel	1,159	256	18	14	*
2005-7-9-11-13-15 panel	982	177	13	14	
<i>Firms in Ha Noi and HCMC (%)</i>					
2005	2,746				
2005-7 panel	2,182	564	46	34	***
2005-7-9 panel	1,787	395	44	31	***
2005-7-9-11 panel	1,415	372	43	28	***
2005-7-9-11-13 panel	1,159	256	30	28	
2005-7-9-11-13-15 panel	982	177	30	27	
<i>Firms in five biggest industries (%)</i>					
2005	2,746				
2005-7 panel	2,182	564	66	72	***
2005-7-9 panel	1,787	395	64	73	***
2005-7-9-11 panel	1,415	372	67	75	***
2005-7-9-11-13 panel	1,159	256	69	76	***
2005-7-9-11-13-15 panel	982	177	75	76	
<i>HH enterprises share (%)</i>					
2005	2,746				
2005-7 panel	2,182	564	62	69	***
2005-7-9 panel	1,787	395	62	71	***
2005-7-9-11 panel	1,415	372	69	71	
2005-7-9-11-13 panel	1,159	256	64	73	***
2005-7-9-11-13-15 panel	982	177	67	74	*
<i>Informal firms (no tax cod, %e)</i>					
2005	2,746				
2005-7 panel	2,182	564	34	35	
2005-7-9 panel	1,787	395	34	35	
2005-7-9-11 panel	1,415	372	38	34	
2005-7-9-11-13 panel	1,159	256	34	35	
2005-7-9-11-13-15 panel	982	177	41	33	*

Note: <sup>1</sup>Food and beverages, fabricated metal products, wood, furniture, rubber.

Source: Authors' calculations based on SME data.

Concerning household enterprises, the samples were statistically different in 2005, 2007, 2013 and 2015. Specifically, the share of household firms was higher in the non-attrited than in the attrited sample. This is consistent with the trends observed for firm size: attrited enterprises were generally larger than non-attrited enterprises and larger firms are less likely to be household enterprises. However,

**Table 2.4** Comparison of balanced and unbalanced panel by firm size, location, sector, and ownership type

	2005		2007		2009		2011		2013		2015	
<i>Frequencies</i>												
Full sample	2,746		2,507		2,552		2,461		2,493		2,603	
New entrants	1,764		325		521		451		464		502	
Incumbent firms not new entrants	0		1,200		1,049		1,028		1,047		1,119	
Balanced panel	982		982		982		982		982		982	
<i>Firm Size</i>												
Full sample	19.19	53.74	19.19	49.97	18.77	18.77	15.97	62.55	15.19	32.65	15.61	37.09
New entrants	21.70	64.06	18.58	35.69	19.37	19.37	16.52	32.59	16.69	34.57	17.04	40.13
Incumbent firms not new entrants	-	-	21.87	63.86	17.60	17.60	16.21	39.64	16.15	29.79	16.80	41.65
Balanced panel	14.66	25.93	16.11	30.88	19.71	19.71	15.47	89.05	13.46	34.57	13.52	29.03
<i>Share of firms in Hanoi and HCMC</i>												
Full sample	36.13		35.46		35.34		34.50		35.90		36.27	
New entrants	40.99		48.92		45.11		45.23		43.75		42.03	
Incumbent firms not new entrants	-		38.42		37.94		36.58		40.40		41.47	
Balanced panel	27.39		27.39		27.39		27.39		27.39		27.39	
<i>Share of firms in five biggest sectors<sup>1</sup></i>												
Full sample	70.76		69.57		70.45		71.11		72.08		72.88	
New entrants	67.12		64.62		65.64		64.52		67.46		71.31	
Incumbent firms not new entrants	-		66.42		68.26		69.55		69.72		70.33	
Balanced panel	77.29		75.05		75.35		75.76		76.78		76.57	
<i>Share of household firms</i>												
Full sample	68.90		69.17		66.42		65.01		63.62		63.35	
New entrants	65.36		63.69		48.37		61.20		55.60		57.17	
Incumbent firms not new entrants	-		66.00		67.49		58.95		60.27		59.25	
Balanced panel	75.25		74.85		74.85		73.12		70.98		71.18	
<i>Share of informal firms (no tax code)</i>												
Full sample	41.92		39.73		35.03		29.18		28.64		10.10	
New entrants	38.95		32.92		27.83		26.39		31.68		40.24	
Incumbent firms not new entrants	-		38.67		35.37		27.14		25.98		2.41	
Balanced panel	47.25		43.28		38.49		32.59		30.04		3.46	

Note: <sup>1</sup>Food and beverages, fabricated metal products, wood, furniture, rubber.

Source: Authors' calculations based on SME data.

attrited firms are no more likely to be formal, i.e. to have a tax code, than businesses that survived in all survey rounds except for the last one in 2015. Here 61 per cent of the enterprises that did not survive were formal compared to 77 per cent in the non-attrited sample. In 2015, the share of informal firms was higher among the attrited than the non-attrited businesses, signalling that it may be more challenging now to operate an informal firm due to different initiatives of the government to formalize the Vietnamese economy. In sum, attrited SMEs in Vietnam are more likely to be larger, located in Ha Noi or Ho Chi Minh City, and to operate a household enterprise in ‘smaller’/less concentrated industries.

Table 2.4 compares the firms in the full sample, new entrants, incumbent firms, and those in the balanced panel by year. The 982 firms that survived the whole period of 2005–15 were, on average, smaller than new entrants and incumbent firms except for in 2009. Moreover, a smaller share of the balanced panel was located in the two biggest cities, Ha Noi and Ho Chi Minh, than new entrants and incumbent firms. Regarding the different manufacturing industries, the balanced panel had a higher share of enterprises operating in the five biggest industries than the other two groups, except for 2013 and 2015. This fits well the previous observations that enterprises that survived were, on average, smaller, less likely to be located in the two largest cities, and more likely to operate in one of the five largest industries. Further, the 982 survivors included a higher share of firms that were household enterprises and were more likely to be informal in most years. However, in 2015, almost none of the firms in the balanced panel were informal anymore, perhaps because the government succeeded in its formalization efforts. As we wanted to continue examining informal enterprises, the share of informal firms among the new entrants remained around 40 per cent, which is quite high.

### 2.1.5 SCOLI

Costs of living are likely to change at varying pace across both space and time. Thus, it is crucial to take into account spatial price variations. Therefore, the studies in this volume rely on a spatial cost of living index (SCOLI) which is interpreted as the minimum cost of buying a given level of utility at given prices in each of Vietnam’s provinces (Kakwani and Hill 2002).

## 2.2 Considering the Representativeness of the Vietnam SME Data

Tables A2.3 to A2.8 show that Vietnam’s enterprise population has been increasing at a steady pace over the ten years in focus here. It is therefore of interest to evaluate the representativeness of the SME data by comparing it to the country’s

total enterprise population as given by GSO.<sup>4</sup> While the GSO data contain information on all types of legal ownership, i.e. state-owned (SOE), non-state (NSOE), FDI and household (HH) enterprises,<sup>5</sup> as well as on all sectors, we focus in this volume on NSOE and HH enterprises from the manufacturing sector. Table A2.3 shows that in Vietnam, the overall enterprise population (SOE, NSOE, FDI, HH) increased from 2.7 million in 2005 to 5.1 million in 2015 (row 1), whereas the manufacturing enterprise population grew from around 680,000 to almost 900,000 in these ten years (row 5). Manufacturing NSOEs and manufacturing HHs increased from 17,000 and 660,000, respectively, to 56,000 and 800,000 in the same period (rows 6 and 7). The SME sample analysed in this book consisted of 0.4 per cent of Vietnam's total manufacturing enterprise population (SOE, NSOE, FDI, HH) in 2005 and 0.3 per cent in the subsequent years.

Our SME data stem as noted from 10 of Vietnam's 63 provinces, and they host approximately 55 per cent of the country's manufacturing NSOEs and around 25 per cent of its manufacturing households. In 2005, the SME sample covered around 10 per cent of the manufacturing NSOEs located in the selected provinces and 1 per cent of their manufacturing household firms. Due to the large growth-rate of the manufacturing sector, these shares decreased to 3 per cent for manufacturing NSOEs and 0.8 per cent for manufacturing households in 2015.

Tables A2.4 and A2.5 compare the GSO and SME firms by province, ownership type, and manufacturing sector. Ho Chi Minh City and Ha Noi are the two cities with the biggest populations of manufacturing NSOEs and HHs. In 2005, Ho Chi Minh City had 4,600 manufacturing NSOEs and 34,000 manufacturing households, which changed to 18,000 and 29,000 in 2015, respectively. In the same period, Ha Noi's non-state manufacturing enterprises grew from 2,400 to 11,000, while its manufacturing households grew strongly from 17,000 to 85,000. These two cities were also the ones with the highest numbers of firms interviewed in the SME survey rounds. Overall, the manufacturing enterprises in the SME data represented, depending on the year, between 7 and 2 per cent of Ho Chi Minh's manufacturing NSOEs, while the SME data on households covered around 1 per cent of the manufacturing households in this city. Lam Dong is one of the ten provinces where the enterprise population is smallest and increased most slowly over time. In 2015, the SME sample captured 7 per cent of Lam Dong's manufacturing NSOEs and 1 per cent of its manufacturing households.

GSO data show that 97 per cent of firms in Vietnam are household enterprises and their number almost doubled from 2.7 to 4.7 million in 2005–15 (row 4 in Table A2.3). In the SME data, more than 60 per cent of the interviewed firms are

<sup>4</sup> GSO provided the original dataset on enterprises, which we compared to our sample's enterprises, while the numbers for households are taken from GSO reports on non-farm individual establishments (GSO, 2015, 2014, 2010a, 2004).

<sup>5</sup> GSO uses the term 'non-farm individual business establishments', which is equivalent to 'household enterprises' in this book

household enterprises and these were about 0.3 per cent of all of Vietnam's manufacturing households in 2005 (see Table A2.6). Overall, the SME data captured 5 per cent of Vietnam's manufacturing non-state enterprises in 2005 and 2 per cent in 2015. These shares became smaller over time because the country's manufacturing enterprise population grew, while the sample size only changed slightly every year. Limited liability companies form the biggest subgroup of non-state manufacturing enterprises in Vietnam, followed by private enterprises in 2005 (6,000) and by joint stock companies without state capital in 2015 (9,000). In 2005, the country had almost 9,000 limited liability companies in the manufacturing sector, which increased to 30,000 in 2011 and 39,000 in 2015. In 2005, the SME data included 5 per cent of Vietnam's manufacturing limited liability companies and 2 per cent of the same in 2015. Vietnamese manufacturing cooperatives and partnerships increased only slightly from 1,000 to 1,500 in the ten-year period. In our SME sample, between 3 and 9 per cent of the interviewed firms are cooperatives or partnerships (see Table A2.6).

In terms of the manufacturing industries, Table A2.7 shows that in 2005, one-fifth of Vietnam's manufacturing NSOEs were in the food and beverages industry, followed by fabricated metal products (11 per cent), non-metallic mineral products (8 per cent), wood (8 per cent), and furniture (8 per cent). The first two also represented the two largest industries in the SME survey.<sup>6</sup> The third largest industry in the SME data, rubber and plastics, was overrepresented, as it ranks seventh in the population. In 2005, the share of interviewed SMEs in Vietnam's manufacturing NSOEs was 5 per cent. The SME sample held 14 per cent of Vietnam's NSOEs in the coke and refined petroleum industry, 9 per cent of the rubber industry, and 8 per cent of firms in the paper industry. These shares are relatively large due to, among other factors, the small size of these industries: only 14 NSOEs existed in the coke and refined petroleum industry.

In 2015, fabricated metal products (17 per cent in NSOE population), and food and beverages (14 per cent in NSOE population) remained the largest industries in both the manufacturing NSOE population and SME data (excluding households). Yet, they had swapped places. Wearing apparel was Vietnam's third biggest manufacturing industry (9 per cent) and followed suit as number four in the SME data. As in 2005, the rubber and plastic industry was overrepresented as number three in the SME data, while it was only the sixth largest among the manufacturing NSOEs (6 per cent) in Vietnam. Publishing and printing (8 per cent) rose to fourth place in the manufacturing NSOE population, while it was the sixth biggest in the SME survey. The fifth largest industry was the wood industry in both the population (8 per cent) and the SME survey (see Table A2.7).

<sup>6</sup> We do not have any information on household enterprises by manufacturing industry. Therefore, Table A2.7 only compares NSOE with SME-data, excluding households.

Table A2.8 compares Vietnam’s HH enterprises and SME HHs by year. We do not have sufficient information on the manufacturing industries of Vietnam’s HH enterprises such that we cannot compare Vietnam’s HH population with SME HHs by manufacturing industry.

### 2.3 Conclusion

Our SME data represent both the dynamics and evolution of registered formal non-state manufacturing firms in the ten selected provinces in Vietnam over the period 2005 to 2015. However, as reliable information on the characteristics of the enterprise population of the informal manufacturing does not exist, we cannot establish appropriate weights for this group of firms. Moreover, given that our sample of informal household businesses was identified at locations where several registered entities operate means that our sample of informal household businesses is unlikely to be strictly representative of informal SMEs in Vietnam. The informal firms we capture are in all likelihood more established and productive informal entities. Being able to follow firms over a ten-year period offers many advantages of analytical nature. At the same time, when referring to the informal firms, the reader must keep the above characteristic of the data in mind throughout the following chapters.

## Appendix

**Table A2.1** Firm, owner, and worker characteristics by year

	2005	2007	2009	2011	2013	2015
<i>Firm characteristics</i>						
Firm size (number of employees)	19.19	19.19	18.77	15.97	15.19	15.61
Firm age	11.53	13.53	14.63	13.45	15.53	16.54
Household	68.90	69.17	66.42	65.01	63.62	63.35
Private/sole proprietorship	10.16	7.70	7.84	7.92	8.10	6.34
Partnership/Collective/Cooperative	3.50	3.99	2.86	2.72	2.17	2.04
Limited liability company	15.70	17.35	19.51	20.52	21.86	23.86
Joint stock company (without state capital)	1.75	1.79	3.37	3.82	4.25	4.42
Food and beverages	27.93	27.72	29.19	30.39	31.09	32.12
Tobacco	0.00	0.32	0.12	0.00	0.00	0.04
Textiles	3.61	4.59	4.94	4.39	4.01	3.30
Apparel	3.64	4.19	4.23	4.96	4.89	5.42
Leather	2.00	2.07	1.88	1.99	2.13	2.34
Wood	8.27	11.89	12.03	10.28	10.19	11.18
Paper	2.73	2.75	2.74	2.72	2.97	2.23

Publishing and printing	2.18	2.35	2.94	2.44	2.61	3.30
Refined petroleum	0.40	0.00	0.39	0.28	0.32	0.35
Chemical products	1.40	1.83	1.57	1.58	2.09	1.92
Rubber	5.28	5.31	5.56	4.71	5.54	6.07
Non-metallic mineral products	7.10	6.02	5.29	4.79	4.13	3.76
Basic metals	0.62	1.12	1.37	1.46	1.08	1.08
Fabricated metal products	16.79	16.83	16.93	17.76	17.17	17.25
Electronic machinery	3.93	3.31	2.74	3.01	2.61	2.27
Motor vehicles	0.73	1.20	0.94	0.69	0.48	0.46
Other transport equipment	0.66	0.28	0.27	0.33	0.36	0.27
Furniture	12.49	7.82	6.74	7.96	8.10	6.26
Recycling	0.18	0.40	0.12	0.24	0.24	0.38
High-tech firms	17.81	12.60	10.70	11.99	11.55	9.26
Export firms	6.37	5.66	5.84	6.04	6.30	6.95
Internat. certification (Yes=1)	3.53	4.27	5.68	6.70	7.34	4.19
Urban	64.64	64.62	63.99	62.62	63.18	63.35
Formal credit access (Yes=1)	22.72	35.14	36.79	27.55	23.79	23.67
Credit constrained	25.27	24.05	26.61	28.02	30.84	20.73
Bookkeeping	36.53	35.54	40.60	38.60	38.79	38.99
Technology innovation (Yes=1 if introduction of new product or improvement of product or new process/ technology or all)	66.72	48.15	45.02	44.09	19.66	33.88
Formal (=have a BRC)	57.03	58.05	62.88	68.25	68.56	88.98
Observations	2,746	2,507	2,552	2,461	2,493	2,603

Source: Authors' calculations based on SME data.

**Table A2.2** Firm, owner, and worker characteristics by year

	2005	2007	2009	2011	2013	2015
<i>Financial information</i>						
Real revenue (VND)	6,271,785	5,020,016	5,048,084	9,892,408	4,429,981	8,217,846
Profit/revenue share	20.00	21.40	21.60	19.50	22.40	23.60
Assets/revenue share	1535.73	309.34	239.63	306.42	238.23	185.29
Debt/revenue share	12.60	12.60	12.70	10.40	9.70	9.30
Have debt (Yes=1)	57.48	53.06	58.05	48.72	49.22	35.51
<i>Owner characteristics</i>						
Age	44.67	45.31	45.71	45.76	46.18	46.44
Female owners	0.3063	0.3303	0.3413	0.3690	0.3995	0.4072
Primary or below	10.52	13.12	13.01	10.00	5.98	6.57
Lower secondary	32.08	31.95	28.72	28.40	24.59	20.94
Upper secondary or above	57.39	54.93	58.27	61.60	69.43	72.49
Member of Communist Party	8.85	7.38	7.09	9.43	9.23	7.26
<i>Workforce Characteristics</i>						
Manager	NA	25.69	26.82	29.20	31.96	35.04
Professional	NA	0.03	0.03	0.03	0.04	0.03
Production worker	NA	65.95	65.07	62.01	59.64	57.34
Female workers	35.63	36.99	37.62	36.98	38.54	38.16
Trade union in firm	9.25	9.65	8.54	8.37	9.55	12.45
Observations	2,746	2,507	2,552	2,461	2,493	2,603

Source: Authors' calculations based on SME data.

**Table A2.3** Overview: Vietnam's enterprise population

	2005	2007	2009	2011	2013	2015
<i>Vietnam's enterprise population</i>						
1	2,711,096	3,429,084	4,074,429	4,464,197	4,984,751	5,085,525
OVERALL ENTERPRISE POPULATION (= Enterprises (SOE, NSOE, FDI) & household (HH) enterprises) (2+4)						
2	91,755	129,379	205,689	339,217	359,866	414,186
Enterprises (SOE, NSOE, FDI)						
3	84,003	120,380	196,776	325,771	347,795	401,186
Non-state enterprises (NSOE)						
4	2,619,341	3,299,705	3,868,740	4,124,980	4,624,885	4,671,339
Household (HH) enterprises						
<i>Vietnam's manufacturing enterprise population</i>						
5	678,499	836,154	869,379	888,340	912,873	894,552
OVERALL MANUFACTURING ENTERPRISE POPULATION (SOE, NSOE, FDI, HH)						
6	16,958	22,342	33,893	47,027	50,322	55,966
Non-state manufacturing enterprises						
7	657,968	809,948	830,576	835,469	856,634	832,290
Manufacturing households						
<i>Manufacturing enterprise population in the 10 provinces of SME data</i>						
8	167,332	NA	245,496	252,301	250,408	249,111
OVERALL MANUFACTURING ENTERPRISE POPULATION (SOE, NSOE, FDI, HH)						
9	8,971	11,813	19,030	26,932	29,177	33,644
Non-state manufacturing enterprises						
10	156,697	NA	224,548	223,180	219,060	213,183
Manufacturing households						

*Note:* Since the SME data was collected in the year before the publishing year, we compare the SME data with the enterprise population of the previous year as well, e.g. the 2007 survey round is compared to Vietnam's enterprise population in 2006 because the SME data was collected in 2006; the 2015 survey round is compared to Vietnam's 2014 enterprise population because the SME data was collected in 2014.

*Source:* GSO data on enterprises from 2014, 2010, 2008, 2006, 2004; for households: GSO, 2015, 2014, 2010a, 2004.



**Table A2.4** Vietnam's non-state manufacturing enterprises and SME data by provinces

	2005			2007			2009		
	Vietnam's NSOE Population	SME Data	Share	Vietnam's NSOE Population	SME Data	Share	Vietnam's NSOE Population	SME Data	Share
Ha Noi	2,373	173	0.0729	2,966	161	0.0543	5,273	176	0.0334
Phu Tho	128	29	0.2266	174	21	0.1207	239	35	0.1464
Ha Tay	415	61	0.1470	NA	70	0.0000	NA	68	NA
Hai Phong	540	93	0.1722	670	103	0.1537	811	92	0.1134
Nghe An	148	90	0.6081	185	61	0.3297	381	75	0.1969
Quang Nam	101	21	0.2079	166	24	0.1446	272	36	0.1324
Khan Hoa	256	36	0.1406	363	30	0.0826	517	36	0.0696
Lam Dong	107	18	0.1682	164	17	0.1037	247	16	0.0648
HCMC	4,637	309	0.0666	6,721	257	0.0382	10,660	295	0.0277
Long An	266	24	0.0902	404	29	0.0718	630	28	0.0444
Total 10 provinces	8,971	854	0.0952	11,813	773	0.0654	19,030	857	0.0450
Other 53 provinces	7,987	0	0.0000	10,529	0	0.0000	14,863	0	0.000
Total Vietnam/Sample	16,958	854	0.0503	22,342	773	0.0346	33,893	857	0.0253
	2011			2013			2015		
	Vietnam's NSOE Population	SME Data	Share	Vietnam's NSOE Population	SME Data	Share	Vietnam's NSOE Population	SME Data	Share
Ha Noi	8,452	181	0.0214	9,501	163	0.0172	10,825	173	0.0160
Phu Tho	393	34	0.0865	450	33	0.0733	444	31	0.0698
Ha Tay	NA	61	0.0000	NA	71	0.0000	NA	64	NA
Hai Phong	1,095	100	0.0913	1,176	100	0.0850	1,147	111	0.0968

*Continued*

Table A2.4 Continued

	2011			2013			2015		
	Vietnam's NSOE Population	SME Data	Share	Vietnam's NSOE Population	SME Data	Share	Vietnam's NSOE Population	SME Data	Share
Nghe An	543	74	0.1363	571	85	0.1489	613	71	0.1158
Quang Nam	463	32	0.0000	482	42	0.0871	556	38	0.0683
Khan Hoa	521	35	0.0672	605	35	0.0579	588	40	0.0680
Lam Dong	284	20	0.0704	336	24	0.0714	386	28	0.0725
HCMC	14,288	289	0.0000	16,218	323	0.0199	17,988	364	0.0202
Long An	893	35	0.0392	1,117	31	0.0278	1,097	34	0.0310
Total 10 provinces	26,932	861	0.0320	30,456	907	0.0298	33,644	954	0.0284
Other 53 provinces	20,095	0	0.0000	23,891	0	0.0000	22,322	0	0.0000
Total	47,027	861	0.0183	53,867	907	0.0168	55,966	954	0.0170

Note: Since the SME data was collected in the year before the publishing year, we compare the SME data with the enterprise population of the previous year as well, e.g. the 2007 survey round is compared to Vietnam's enterprise population in 2006 because the SME data was collected in 2006; the 2015 survey round is compared to Vietnam's 2014 enterprise population because the SME data was collected in 2014.

Source: GSO data on enterprises from 2014, 2012, 2010, 2008, 2006, 2004; for households: GSO, 2015, 2014, 2010a, 2004; authors' calculations based on SME data.

**Table A2.5** Vietnam's manufacturing HH population and manufacturing households in SME data by province

	2005			2007			2009		
	Vietnam's Manufacturing HH Population	SME Data	Share	Vietnam's Manufacturing HH Population	SME Data	Share	Vietnam's Manufacturing HH Population	SME Data	Share
Ha Noi	16,588	124	0.0075	NA	119	NA	92,566	108	0.0012
Phu Tho	17,942	248	0.0146	NA	222	NA	20,238	224	0.0111
Ha Tay	23,890	334	0.0140	NA	312	NA	NA	309	NA
Hai Phong	12,811	108	0.0084	NA	92	NA	10,832	118	0.0109
Nghé An	22,695	298	0.0131	NA	288	NA	29,938	279	0.0093
Quang Nam	20,509	141	0.0069	NA	131	NA	14,124	122	0.0086
Khan Hoa	5,603	66	0.0118	NA	56	NA	6,408	59	0.0092
Lam Dong	5,268	71	0.0135	NA	65	NA	7,797	54	0.0069
HCMC	34,241	386	0.0112	NA	352	NA	32,285	323	0.0100
Long An	8,050	105	0.0130	NA	97	NA	10,370	99	0.0095
Total 10 provinces	156,697	1,892	0.0121	NA	1,734	NA	224,549	1,695	0.0075
Other 53 provinces	543,612	0	0	NA	0	0	606,028	0	0
Total	657,968	1,892	0.0029	NA	1,734	NA	830,576	1,695	0.0020

	2011			2013			2015		
	Vietnam's Manufacturing HH Population	SME Data	Share	Vietnam's Manufacturing HH Population	SME Data	Share	Vietnam's Manufacturing HH Population	SME Data	Share
Ha Noi	91,110	94	0.0010	90,262	120	0.0013	85,213	120	0.0014
Phu Tho	19,063	219	0.0115	20,071	223	0.0111	18,074	221	0.0122
Ha Tay	0	284	NA	0	274	NA	0	303	NA
Hai Phong	11,411	104	0.0091	11,108	82	0.0074	11,600	107	0.0092

*Continued*

Table A2.5 Continued

	2011			2013			2015		
	Vietnam's Manufacturing HH Population	SME Data	Share	Vietnam's Manufacturing HH Population	SME Data	Share	Vietnam's Manufacturing HH Population	SME Data	Share
Nghe An	29,966	273	0.0091	31,944	150	0.0047	31,626	267	0.0084
Quang Nam	14,846	129	0.0087	15,733	125	0.0079	15,955	128	0.0080
Khan Hoa	6,042	62	0.0103	5,895	55	0.0093	5,591	57	0.0102
Lam Dong	7,389	61	0.0083	7,563	64	0.0085	8,013	62	0.0077
HCMC	33,000	285	0.0086	28,905	289	0.0099	29,400	287	0.0098
Long An	10,353	89	0.0086	7,579	104	0.0137	7,711	97	0.0126
Total 10 provinces	223,180	1,600	0.0072	219,060	1,586	0.0072	213,183	1,649	0.0077
Other 53 provinces	612,289	0	0	637,574	0	0	619,107	0	0
Total	835,469	1,600	0.0019	856,634	1,586	0.0019	832,290	1,649	0.0198

Source: GSO, 2015, 2014, 2010a, 2010b, 2008, 2007, 2004; authors' calculations based on SME data; authors' calculations based on SME data.

**Table A2.6** Vietnam's manufacturing enterprise population and SME data by ownership type and year

	2005			2007			2009		
	Vietnam's SME Population	SME Data	Share	Vietnam's SME Population	SME Data	Share	Vietnam's SME Population	SME Data	Share
State-owned enterprises	1,247	0	0.0000	859	0	0.0000	948	0	0.0000
FDI enterprises	2,326	0	0.0000	3,005	0	0.0000	3,962	0	0.0000
Non-state enterprises	16,958	854	0.0504	22,342	773	0.0346	33,893	857	0.0253
Private	5,838	279	0.0478	6,770	193	0.0285	8,450	200	0.0237
Collectives & Cooperatives & Partnership	1,117	96	0.0859	981	100	0.1019	1,223	73	0.0597
Limited Liability	8,621	431	0.0500	12,059	435	0.0360	19,354	498	0.0257
Joint stock without state capital	1,094	49	0.0448	2,102	45	0.0214	4,290	86	0.0200
Joint stock with state capital	815	0	0.0000	1,337	0	0.0000	576	0	0.0000
Total	20,531	854	0.0416	22,342	773	0.0346	33,893	857	0.0253
Household enterprises	657,968	1,892	0.0029	809,948	1,734	0.0021	830,576	1,695	0.0000
Total	678,499	2,746	0.0040	832,290	2,507	0.0030	864,469	2,552	0.0030

	2011			2013			2015		
	Vietnam's SME Population	SME Data	Share	Vietnam's SME Population	SME Data	Share	Vietnam's SME Population	SME Data	Share
State-owned enterprises	653	0	0.0000	202	0	0.0000	190	0	0.0000
FDI enterprises	5,191	0	0.0000	5,715	0	0.0000	6,470	0	0.0000
Non-state enterprises	47,027	861	0.0183	50,322	907	0.0180	55,966	954	0.0170
Private	7,628	195	0.0256	7,395	202	0.0273	6,574	165	0.0251
Collectives & Cooperatives	1,287	67	0.0521	1,696	54	0.0318	1,584	53	0.0334

*Continued*

**Table A2.6** *Continued*

	2011			2013			2015		
	Vietnam's SME Population	SME Data	Share	Vietnam's SME Population	SME Data	Share	Vietnam's SME Population	SME Data	Share
Limited Liability	29,997	505	0.0168	33,008	545	0.0165	38,518	621	0.0161
Joint stock without state capital	7,570	94	0.0124	8,223	106	0.0129	9,290	115	0.0124
Joint stock with state capital	545	0	0.0000	NA	0	0.0000	NA	0	0.0000
Total	47,027	861	0.0183	56,239	907	0.0161	62,626	954	0.0152
Household enterprises	835,469	1,600	0.0019	856,634	1,586	0.0019	832,290	1,649	0.0020
Total	882,496	2,461	0.0028	912,873	2,493	0.0027	894,916	2,603	0.0029

*Note:* Since the SME data was collected in the year before the publishing year, we compare the SME data with the enterprise population of the previous year as well, e.g. the 2007 survey round is compared to Vietnam's enterprise population in 2006 because the SME data was collected in 2006; the 2015 survey round is compared to Vietnam's 2014 enterprise population because the SME data was collected in 2014.

*Source:* GSO data on enterprises from 2014, 2012, 2010, 2008, 2006, 2004; for households: GSO, 2015, 2014, 2010a, 2004; authors' calculations based on SME data.

**Table A2.7** Vietnam's NSOEs and SME data by manufacturing sector and year

	2005			2007			2009		
	Vietnam's Population	SME Data	Share of interviewed SMEs in Population	Vietnam's SME Population	SME Data	Share of interviewed SMEs in Population	Vietnam's SME Population	SME Data	Share of interviewed SMEs in Population
Manufacturing Total	16,958	854	0.0504	22,342	773	0.0346	33,893	857	0.0253
Food and beverages	4,018	138	0.0343	4,916	125	0.0254	6,529	131	0.0201
Tobacco	6	0	0.0000	4	2	0.5000	6	2	0.3333
Textiles	646	33	0.0511	914	46	0.0503	1,259	53	0.0421
Wearing apparel	1,156	53	0.0458	1,544	58	0.0376	2,668	62	0.0232
Leather	315	10	0.0317	398	13	0.0327	611	14	0.0229
Wood	1,356	64	0.0472	1,747	66	0.0378	2,984	71	0.0238
Paper and paper products	726	57	0.0785	976	48	0.0492	1,532	57	0.0372
Publishing, printing etc.	882	34	0.0385	1,547	38	0.0246	2,192	53	0.0242
Coke and refined petroleum	14	2	0.1429	26	0	0.0000	52	3	0.0577
Chemicals and chemical products	665	27	0.0406	934	23	0.0246	1,387	28	0.0201
Rubber and plastic	946	88	0.0930	1,307	82	0.0627	1,908	96	0.0503
Non-metallic mineral products	1,366	42	0.0307	1,644	34	0.0207	2,330	43	0.0185
Basic metals	278	11	0.0396	402	15	0.0373	663	16	0.0241
Fabricated metal products	1,869	129	0.0690	2,665	106	0.0398	4,397	121	0.0275
Machinery and equipment	860	54	0.0628	1,094	45	0.0411	1,641	41	0.0250
Motor vehicles and trailers	217	13	0.0599	152	11	0.0724	258	16	0.0620
Other transport equipment	320	11	0.0344	401	6	0.0150	575	4	0.0070
Furniture	1,284	87	0.0678	1,608	54	0.0336	2,803	45	0.0161
Recycling	34	1	0.0294	63	1	0.0159	98	1	0.0102
Other manufacturing	0	0	0.0000	0	0	0.0000	0	0	0.0000

*Continued*

Table A2.7 Continued

	2011			2013			2015		
	Vietnam's SME Population	SME Data	Share of interviewed SMEs in Population	Vietnam's SME Population	SME Data	Share	Vietnam's SME Population	SME Data	Share of interviewed SMEs in Population
Manufacturing Total	47,027	861	0.0183	53,867	907	0.0168	55,966	954	0.0170
Food and beverages	7,115	138	0.0194	7,570	144	0.0190	8,033	138	0.0172
Tobacco	6	0	0.0000	9	0	0.0000	7	0	0.0000
Textiles	1,872	43	0.0230	2,181	35	0.0160	2,259	36	0.0159
Wearing apparel	4,023	66	0.0164	4,879	71	0.0146	4,970	81	0.0163
Leather	991	16	0.0000	1,299	18	0.0000	1,185	23	0.0194
Wood	4,082	54	0.0132	3,965	70	0.0177	4,346	76	0.0175
Paper and paper products	1,756	56	0.0319	1,947	62	0.0318	1,988	48	0.0241
Publishing, printing etc.	3,392	40	0.0000	4,097	47	0.0000	4,747	70	0.0147
Coke and refined petroleum	79	2	0.0253	91	2	0.0220	91	3	0.0330
Chemicals and chemical products	2,014	30	0.0149	2,586	37	0.0143	2,777	36	0.0130
Rubber and plastic	2,908	76	0.0000	3,545	94	0.0000	3,560	100	0.0281
Non-metallic mineral products	3,454	51	0.0148	3,567	46	0.0129	3,685	45	0.0122
Basic metals	861	20	0.0232	985	15	0.0152	922	13	0.0141
Fabricated metal products	7,741	139	0.0180	8,876	145	0.0163	9,488	167	0.0176
Machinery and equipment	2,261	50	0.0000	3,024	48	0.0000	2,715	45	0.0166
Motor vehicles and trailers	178	13	0.0730	349	8	0.0229	206	7	0.0340
Other transport equipment	424	5	0.0118	520	5	0.0096	420	4	0.0095
Furniture	2,942	61	0.0207	3,199	59	0.0184	3,220	47	0.0146
Recycling	NA	1	0.0000	0	1	0.0000	0	5	0.0000
Other manufacturing	927	0	0.0000	1,178	0	0.0000	1,347	0	0.0000

Note: Since the SME data was collected in the year before the publishing year, we compare the SME data with the enterprise population of the previous year as well, e.g. the 2007 survey round is compared to Vietnam's enterprise population in 2006 because the SME data was collected in 2006; the 2015 survey round is compared to Vietnam's 2014 enterprise population because the SME data was collected in 2014.

Source: GSO data on enterprises from 2014, 2012, 2010, 2008, 2006, 2004; authors' calculations based on SME data.



**Table A2.8** Vietnam's HH enterprises and SME households by year

	2005			2007			2009		
	Vietnam's HH Enterprise Population	SMEData	Share	Vietnam's HH Enterprise Population	SMEData	Share	Vietnam's HH Enterprise Population	SMEData	Share
Manufacturing HHs	700,309	1,892	0.0027	NA	1,734	NA	830,576	2,552	0.0031
Total HHs	2,619,341	1,892	0.0007	3,299,705	1,734	0.0005	3,868,740	2,552	0.0007
	2011			2013			2015		
	Vietnam's HH Enterprise Population	SMEData	Share	Vietnam's HH Enterprise Population	SMEData	Share	Vietnam's HH Enterprise Population	SMEData	Share
Manufacturing HHs	835,469	1,600	0.0019	856,634	1,586	0.0019	832,290	1,649	0.0020
Total HHs	4,124,980	1,600	0.0004	4,624,885	1,586	0.0003	4,671,339	1,649	0.0004

Source: GSO, 2015, 2014, 2010a, 2010b, 2008, 2007, 2004; authors' calculations based on SME data

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