The Size Structure of Manufacturing Enterprises in Vietnam

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I Introduction

Vietnam's economic transformation since the period of reforms, or *doi moi* (renovation), initiated in the mid 1980s, is quite remarkable. There have been dramatic changes in virtually all facets of social and economic life. Economic policies and institutions have evolved from those of a centrally planned economy towards those of a market - based economy. A short - list of some of the most important reforms includes: domestic price liberalisation for most agricultural products, liberalisation of the trade regime culminating in WTO accession in 2007, encouragement of foreign direct investment, on - going legal reform aimed to strengthen property rights and contracts, etc.

In terms of economic performance, growth averaged around 8% throughout much the 1990s and over 7% since 2000. The consequences for poverty reduction have been even more impressive. According to household survey data, poverty incidence has fallen from around 58% in 1993 to around 19.5% in 2004 (VASS, 2006). Most social indicators have seen quite rapid improvement as well, including child mortality which has fallen dramatically (Social Watch, 2008). Overall, Vietnam's record with respect to both growth and equity has been impressive, despite concerns about rising inequality (discussed below).

In light of the commitment to equity and growth in Vietnam, it is surprising that limited attention has been devoted to the question of the size structure of enterprises in terms of employment[1]. As argued in this volume and elsewhere, there are reasons to believe that size structure has important implication for the nature of the growth process. Mazumdar (2003), for example, has argued that size structure of enterprises bears on the efficiency of the production process, the spatial distribution and employment intensity of growth and by implication, the distribution of income or consumption.

[1] The only published work uncovered, which analyses the overall size distribution, is JDR (2006, pp. 15 - 17).

In the context of Vietnam, the size structure of enterprises has bearing on at least three issues of major concern to policy makers: employment, internal migration and income distribution. Employment has been a long-standing preoccupation of policymakers given the sizeable annual number of new entrants into the labour force and the potential for unrest associated with urban unemployment (Dapice, 2006). The size distribution of firms is often closely related to the labour intensity of production and, in the aggregate, employment elasticities of growth.

Internal migration, in particular to large urban areas, is a sensitive issue given the illegal status of many migrants. Still, it appears to be a quite sizeable phenomenon (JDRP, 2007, pp, 22-24) and an important source of income for the poor (VASS, 38-42). It is likely to increase in importance over time, in the absence of policy measures which aim to promote a more spatially balanced pattern of industrialisation.

Income distribution remains a central concern of policy makers in the context of Vietnam's rapid economic growth. The prospect of large and increasing gaps in living standards between population groups is a potential source of social unrest and anathema to the ideological predilections of senior decision-makers. As discussed further in Section 8, the relationship between economic growth and distributional trends is highly salient politically.

The present chapter reviews the size distribution of enterprises in manufacturing and discusses certain of the factors which underlie it. The structure is as follows: i) Section 2 provides overall context by presenting a number of stylised facts about Vietnam's economy; ii) Section 3 reviews the size distribution of manufacturing firms with respect to employment, number of firms and productivity; iii) Sections 4-7 present explanations for the size distribution drawing on historical factors, factor-price distortions, productivity catch-up, globalisation, ownership types, categories of manufacturing and export-orientation; iv) Section 8 reviews data on levels, trends and sources of inequality in Vietnam since *doi moi*. Section 9 concludes.

There is one preliminary point to note. The analysis in this chapter does not include the household sector, i.e. household enterprises. As discussed in Section 3, this excludes most of the bottom end of the distribution and leads to a number of different conclusions than found elsewhere in the literature (JDR, 2006). Nevertheless, this exclusion allows for comparability with the other chapters in this volume and is in keeping with the broader literature (Mazumdar, 2003).

2. Stylised Facts about Vietnam's Economy

Section 2 provides context for the subsequent analysis which focuses mainly on the manufacturing sector. It begins with a comparative assessment of the relative importance of consumption, investment and exports in Vietnam and elsewhere in Asia. Next, the sectoral composition of GDP and employment is reviewed, with a view to illuminate the structural transformation of Vietnam's economy. It then analyses the importance of the state sector over time, an issue taken up in subsequent sections. Finally, the composition of industry and manufacturing is examined to give a sense of their importance to both value-added and employment in Vietnam.

Table 1 and Table 2 present data on the composition of GDP and sources of GDP growth. There are four salient features of Vietnam's experience which are important to note: i) unlike China, consumption represents a significant share of GDP and of GDP growth since 2000, equally or exceeding the Asian average; ii) similar to China and India, investment has played a very significant role in recent years, contributing over half of GDP growth since 2000 and standing well in excess of the Asian country average; iii) exports have been central to Vietnam's growth strategy, accounting for around three quarters of GDP in 2008, though net exports have been consistently negative; iv) employment/GDP growth elasticities have exceeded those of China by a wide margin, which is reflected in the importance of consumption in Vietnam's GDP, though they are lower than the Asian country average. As suggested below, the high levels of exports, and rapid export growth, may have contributed to Vietnam's sluggish employment growth. In summary, Vietnam represents a hybrid model which incorporates the high investment and export growth of the Chinese model along with high levels of consumption and moderate employment growth found elsewhere in Asia.

Table 1 GDP Decomposition, Select Asian Countries (in percent)

	1995			2000				2008			
	C [a]	I	Net X	C [a]	I	X	Net X	C [a]	I	X	Net X
Vietnam	81.3	27.2	-9.1	73.4	30.5	55	-3.7	74.7	44.1	76.8	-20.8
China	58.2	40.3	1.6	62.3	35.3	20.8	2.4	48.6	43.5	33	7.9
India	77.4	24.6	-1.5	77.1	25.9	13.2	-1.9	67	36.2	24	-4.3
All*	76.6	25.9	-7.6	74.8	25	45.4	-1.4	67.7	23.6	45.4	2.9

[a] Total Consumption (Private + Government)
* Unweighted median of Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Korea, Malaysia, Pakistan, Phillipines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam.
Source: Prasad (2009), Tables 1 and 3.

Table 2 GDP and Employment Growth, Vietnam and Select Asian Countries, 2000-08

	GDP Growth	Share of GDP Growth C	I	Net X	Employment Growth Rate	Employment/ GDP Growth Elasticities
Vietnam	7.5	0.71	0.57	-0.32	2.3	0.31
China	10.2	0.40	0.49	0.11	0.9	0.09
India	7.2	0.57	0.50	-0.04	1.9	0.26
All*	5.2	0.71	0.27	0.08	1.9	0.37

* Unweighted median of Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Korea, Malaysia, Pakistan, Phillipines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam.
Source: Calculated from Prasad (2009), Table 2.

Table 3 presents data on the structural transformation of Vietnam's economy. There has been a progressive decline in the economic importance of agriculture which accelerated markedly after *doi moi*. The share of agriculture in GDP fell from around 39% to 27% between 1990 and 1995 and subsequently dropped to 21% in 2005. The economic share of industry almost doubled from 23% to 41% between 1990 and 2005, while that of services stayed relatively constant over this time period. The Vietnamese experience follows the so-called South-East Asian pattern of structural transformation whereby industrialization has played a very significant role in the process of economic growth (Ocampo and Vos, 2008, Ch. 2).

Table 3 Sectoral Composition of GDP 1985-2005

Year	Agriculture, Forestry and Fishing	Industry	Services
1985	40.17	27.35	32.48
1990	38.74	22.67	38.59
1995	27.18	28.76	44.06
2000	24.53	36.73	38.74
2005	20.97	41.02	38.01

Source: GSO Statistical Yearbooks

The importance of industry in Vietnam's economy raises questions about the nature of the process of industrialisation, and in particular the employment intensity of industrial growth. As shown in Table 4, employment growth reveals a different pattern than that of sectoral growth. The employment share of industry increased from around 11 to 18% between 1990 and 2005 while that of services grew from 16 to 25%. In addition, more than half of total employment was accounted for by agriculture, forestry and fishing in 2005. The relatively slow absorption of labour in industry coupled with the fact that a large pool of agricultural labour will likely move out of primary production in time, accentuates the importance of firm size in the process of industrialisation.

Table 4 Sectoral Composition of Employment 1985-2005

Year	Agriculture, forestry and fishing	Industry	Services
1985	72.92	13.95	13.12
1990	73.02	10.98	16.00
1995	71.25	11.14	17.61
2000	65.09	12.89	22.02
2005	57.10	17.84	25.06

Source: GSO Statistical Yearbooks

A second key structural change in Vietnam's economy has been associated with the role of the state in economic life. As discussed above, this is not surprising given the transition from a command to a market-based economy. What is somewhat surprising, as shown in Table 5, is that the state share of GDP actually increased since 1990 and still stood at around 38% in 2005. The state share of employment fell between 1985 and 2005 as did the state share of industrial output. The latter fell quite precipitously between 1995 and 2005 from 50 to 25%. Section 4 reviews these trends in greater detail.

Table 5 State Share of GDP, Employment and Industrial Output, 1985-2005

Year	GDP	Employment	Industrial Output
1985	35.74	14.86	57
1990	32.50	11.28	59
1995	40.18	8.83	50
2000	38.52	9.31	34
2005	38.40	9.50	25

Source: GSO Statistical Yearbooks

Table 6 presents data on the importance of manufacturing within industry. It accounts for around 60 percent of the value of industrial output and 90 percent of employment in industry. This latter point, coupled with the emphasis on employment in the present analysis, provide a rationale for the exclusive focus on manufacturing.

Table 6 GDP and Employment Composition of Industry, (%)
1995-2005

	GDP			Employment		
	1995	2000	2005	1995	2000	2005
Mining	22	31	31	6	7	6
Manufacturing	69	59	60	90	91	91
Electricity, Gas and Water	9	10	10	4	2	3

Source: GSO Statistical Yearbooks

To provide context for the analysis below, Table 7 shows the output and employment composition of the manufacturing sector. In terms of their contribution to output, Food, Beverages and Cigarettes, Metal Manufacturing, Machinery and Transportation are as the most important sub-sectors, with the former accounting for over one quarter of manufacturing GDP in 2005. With respect to employment, the most important sub-sectors are Leather Products (18%), Garments (16%), Food, Beverages and Cigarettes (14.5%) and Manufacturing of Wood and Wood Products (11.9%). It is worth noting that Textiles, Garments and Leather Products are the major export industries in the Vietnamese economy, accounting for 22% of total export turnover in 2008 (GSO, Statistical Yearbook, 2008).

Table 7 Output and Employment Composition of Manufacturing, (%), 1995-2005

	Output			Employment	
	1995	2000	2005	2000	2005
Food, Beverages and Cigarettes	37.21	33.55	26.68	18.0	14.5
Textiles	7.42	5.84	4.81	8.1	6.3
Garments	3.54	4.32	4.81	14.0	16.3
Leather Products	4.29	5.46	5.17	19.1	18.0
Manufacturing of Wood & Products from Wood	6.46	5.21	7.45	8.2	11.9
Paper Products and Publishing/Printing	4.15	3.81	3.85	3.8	3.6
Coal and Chemicals	6.52	6.86	6.97	3.7	3.0
Rubber and Plastics	2.73	3.94	4.69	3.2	3.6
Non-metal manufacturing	11.05	8.13	6.61	8.2	7.3
Metal manufacturing	6.92	7.24	10.1	4.6	5.6
Machinery	5.68	8.26	10.34	6.0	6.0
Transportation Equipment	4.03	7.24	8.89	3.1	4.0

Source: GSO Statistical Yearbooks, Authors' Calculation based on Enterprise Censuses

3. Size Structure of Manufacturing Enterprises in Vietnam

Following a preliminary discussion of data sources, this section presents data on the size distribution of manufacturing firms in terms of employment, number of firms and productivity. It highlights a number of salient features from these data which subsequent sections attempt to explain.

3.1 Data Sources

There are three main databases with detailed information on, and wide coverage of, enterprises in Vietnam. First, the Vietnam Living Standard Surveys (VLSS) of 1993 and 1998 and subsequent Vietnam Household Living Standard Surveys (VHLSS) of 2002, 2004 and 2006. These survey instruments contained modules on household enterprises and have been used to analyse their various features[2]. These data will not be used in the present analysis given its focus on the non-household sector. It should be made clear though, that the vast majority of firms in Vietnam are household enterprises which tend to be very small. As mentioned above, their exclusion from the analysis has the effect of leaving out the bottom end of the combined distribution of household and non-household enterprises.

A second data source is comprised of four surveys of Small and Medium Enterprises conducted in Vietnam in 1991, 1997, 2003 and 2005 by the Institute of Labour Sciences and Social Affairs (ILSSA) and

[2] See, for example, Vijverberg and Haughton (2004).

the Stockholm School of Economics (SSE)[3]. The first three of these surveys were not national in scope and were restricted to firms with less than one hundred employees. Accordingly, they do not provide information on the overall size distribution of enterprises.

The final data source, which will be relied on heavily, is the Enterprise Census, conducted annually since 2000 by the General Statistical Office of Vietnam (GSO, 2008). There are a number of definitional issues with respect to this database which should be made clear.

First, the definition of 'enterprise' used in the census is "an economic unit that independently keeps a business account and acquires its own legal status." Accordingly, it excludes registered enterprises which have not begun operations, enterprises which have been disbanded, economic units which do not keep business accounts such as branches, etc. This definition will differ from those firms officially registered with the government, as per the Enterprise Law, as this latter also includes firms which are not yet operational.

Second, a distinction is maintained between state, non-state and Foreign Direct-Invested (FDI) enterprises. State enterprises comprise enterprises with 100% of state capital, including limited liability companies, as well as stock companies with public shares greater than 50%. Domestic non-state enterprises are enterprises set up by domestic capital, with public shares of less than 50%, including: i) cooperatives; ii) private companies; iii) private limited liability companies; iv) private stock companies; v) stock companies with a less that 50% public share of registered capital. FDI enterprises are firms with 100% of capital invested by foreigners as well as joint ventures.

One final point is relevant to note about the census data. In principle, these data have panel features which allow for an analysis of the trajectories of individual firms over time. In practice, the panel aspect of the data has yet to be fully exploited because of uncertainty regarding firm-level identifiers across rounds of the census. Accordingly, only cross-sectional and year-on-year trend data are presented.

[3] Results of the second and third surveys were published in Ronnås and Ramamurthy (2001) and Kokko and Sjöholm (2006), respectively.

3.2 Size Distribution and Employment

Table 8 presents data on the distribution of employment by firm size group in manufacturing between 2000 and 2006. There are a number of interesting features of this distribution.

First, there is a pronounced skew in favour of firms with 500 or more employees. Such firms account for almost 60% of total employment. By comparative standards, the skew is extremely large, in excess of that found elsewhere in Asia (Mazumdar, 2003). For example, the share of employment generated by firms with 500 or more employees in three countries characterised by large enterprises, Korea (1986), Thailand (1989) and Malaysia (1981) was 35%, 37% and 30%, respectively.

Second, the bottom end of the distribution, i.e. firms with between 5 and 9 employees, is extremely small, accounting for around 1% of employment. The relevant figures for Korea, Thailand and Malaysia are between 3 and 5%. It should be noted, that all of these comparisons exclude the household sector, which accounts for most small enterprises. From the point of view of non-household firms, Vietnam is characterised by a 'missing low end' along with an 'undersized middle'.

Third, despite significant changes in the legal and policy climate since 2000, there is little change in the *overall* structure of the distribution. The main size categories which lost relative share are in the middle, namely the 100-199 and 200-499 groupings, which declined by 10% and 13%, respectively. The main category which gained is the 10-49 grouping which increased by around 24%, though from a very low level.

Table 8 Percentage Distribution of Employment by Size Group in Manufacturing

Size group	2000	2001	2002	2003	2004	2005
5 – 9	0.95	0.88	0.95	0.92	0.95	1.08
10 – 49	5.69	5.91	6.14	6.05	6.50	7.04
50 – 99	5.55	5.44	5.59	5.34	5.53	5.85
100 – 199	9.40	9.01	9.28	8.59	8.48	8.64
200 – 499	20.00	19.23	19.66	18.23	17.70	17.48
500 & over	58.40	59.54	58.37	60.87	60.84	59.91

Source: Vietnam Enterprise Censuses 2000-2005

3.3 Size Distribution and Firms

A first step in understanding the reasons behind the size distribution of firms with respect to employment is to review the size distribution of firms. Table 9 and Table 10 present data on the percentage and frequency distributions of firms by firm size category, respectively. Two points are particularly germane.

First, there was a significant expansion of the total number of manufacturing firms, which more than doubled between 2000 and 2005.

Second, consistent with the above data, the biggest expansion involved smaller firms with less than 100 employees, in particular those with between 10-49 employees. This size category expanded by over 150%. The growth rate of firms in the middle of the distribution, i.e. between 100 and 500 employees, was slower. The share of biggest firms declined marginally.

Table 9 Percentage Distribution of Firms by Firm Size Group in Manufacturing

Size group	2000	2001	2002	2003	2004	2005
5 – 9	21.56	19.81	20.78	20.52	20.25	21.86
10 – 49	39.17	41.15	41.18	41.81	43.62	44.17
50 – 99	12.24	12.20	12.10	12.04	11.95	11.65
100 – 199	10.25	10.10	9.96	9.55	9.08	8.58
200 – 499	9.89	9.59	9.38	9.03	8.45	7.78
500 & over	6.89	7.16	6.59	7.04	6.65	5.96

Source: Vietnam Enterprise Censuses 2000-2005

Table 10 Frequency Distribution of Firms by Firm Size Group in Manufacturing

	2000	2001	2002	2003	2004	2005	Growth Rate
5 – 9	2047	2164	2755	3130	3695	4636	126
10 – 49	3719	4494	5459	6377	7960	9367	152
50 – 99	1162	1332	1604	1837	2180	2471	113
100 – 199	973	1103	1320	1456	1657	1819	87
200 – 499	939	1047	1244	1378	1541	1651	76
500 & over	654	782	874	1074	1214	1264	93
Total	9494	10922	13256	15252	18247	21208	123

Source: Vietnam Enterprise Censuses 2000-2005

3.4 Size Distribution and Productivity

Table 11 presents estimates of labour productivity, value-added per worker, for the different size groups of firms in 2003 and 2005, the only two years in the dataset for which such information exists. One preliminary point concerns the labour productivity estimates. We have used two methods to calculate value-added, heretofore labelled 'actual' and 'calibrated' value added. The first approach relies on the detailed cost modules in the questionnaire to calculate the value of intermediate inputs which are then subtracted from total revenue. An outlier correction algorithm has been applied to these data as the cost structure in a number of observations seems quite unrealistic, resulting in large negative value-added estimates for certain size categories of firms. The second approach takes the difference between total revenue and profits declared by firms to calculate total costs. It then uses the ratio between intermediate costs and total costs, found in the cost section of the questionnaire, to estimate intermediate costs. In light of the apparent anomalies in the cost data in the questionnaires, it is probable that estimates of calibrated value-added are more reliable than actual value-added. In Table 11, we present results of both. Additional information on these methods is found in Appendix A.

There are two important points about the data in Table 11. First, labour productivity differences between extreme size groups are smaller than in other countries with a similar skew in favour of larger firms. For example labour productivity differences between the smallest and largest firms in Korea were 0.3:1 (Mazumdar, 2003). Second, according to the data, labour productivity is highest among firms in the middle of the distribution. The finding holds in both 2003 and 2005 and is robust to the method of value-added estimation. It is interesting to note that these are the same size groups which have grown more slowly than the others, as shown in Table 10 above. Together, these points suggest that *overall*, the size distribution of firms may not be driven primarily by efficiency-related considerations relating, say, to economies of scale.

Table 11 Value-Added per Worker by Size Group in Manufacturing, 2003 and 2005

	2003				2005			
	Calibrated Value-Added		Actual Value-Added*		Calibrated Value-Added		Actual Value-Added*	
	Million VND/ worker	Index Value (500+=100)	Million VND/ worker	Index Value (500+=100)	Million VND/ worker	Index Value (500+=100)	Million VND/ worker	Index Value (500+=100)
5 – 9	31.9	50.3	25.4	54.2	39.38	58	27.8	34.1
10 – 49	44.2	69.7	31.8	67.8	67.97	64	55.9	68.6
50 – 99	61.7	97.3	41.6	88.8	106.78	80	74.9	91.8
100 - 199	76.7	120.9	50.2	107.1	133.71	131	87.0	106.6
200 - 499	83.3	131.4	55.0	117.5	101.80	112	91.0	111.6
500 & over	63.4	100.0	46.9	100.0	90.87	100	81.6	100.0

* Outlier Corrected

Source: Vietnam Enterprise Census 2005

A more complete account of the relationship between productivity and firm size would require information on the productivity of capital in addition to total factor productivity (TFP). The main difficulty, in the present case, concerns the validity of the capital measure, i.e. total firm assets. The Enterprise Census questionnaire asked respondents for the value of current and fixed assets but did not include a detailed breakdown of actual assets (to which a value could be imputed). Accordingly, there are anomalies in the data which raise questions about their validity. We discuss these issues at greater length in Appendix B.

The concerns about the capital measure become greater if attempting to estimate the relative importance of capital in output, as in a production function. Accordingly, we rely here on a number of more basic indicators of the productivity of capital. Table 12 presents data on capital/labour (K/L) ratios by size group, to determine whether there is an association between the higher labour productivity and capital intensity. The key finding is that K/L ratios are indeed higher in small to mid-size firms (50-499 workers) across all time periods. In general, an inverted U pattern appears whereby capital intensity rises until the mid-size categories, then falls. The 50-99 size category has trended downwards over time, with no discernable trend evident for the 100-499 category. This finding suggests that the higher levels of labour productivity for SMEs are due to their higher levels of capital-intensity.

Table 12 Capital/Labour (K/L) Ratios by Size Group in Manufacturing, 2000-2006 (Million VND)

Size group	2000		2001		2002		2003		2004		2005		2006	
	K/L	Index Value	K/L	Index Value	K/L	Index Value	K/L	Index Value	K/L	Index Value	K/L	Index Value	K/L	Index Value
5-9	87	56	114	73	128	79	141	84	153	82	172	83	237	101
10-49	111	72	125	80	146	91	145	87	164	88	173	83	206	88
50 – 99	185	119	189	121	182	113	189	113	196	105	223	107	241	102
100 – 199	191	123	200	128	209	129	210	125	228	123	276	132	288	122
200 – 499	177	114	191	122	192	119	202	120	229	123	240	115	263	112
500 & over	155	100	156	100	161	100	168	100	186	100	208	100	235	100

Source: Authors' calculation based on GSO enterprises censuses 2000-2006

Table 13 and Table 14 present data on capital/output ratios (K/Y) for the years in which value-added figures are available, and compare them with the other economic ratios discussed above. There are a number of interesting results. First, unlike labour productivity and capital intensity, which follow an inverted U pattern, K/Y declines monotonically over both time periods. In general, it is hard to discern any systematic relationship between the K/Y values and the other economic indicators. Second, K/Y levels are extremely high by comparative standards, which may suggest a reporting error problem as discussed above. Third, the levels, and range, of the values of the K/Y ratio increase quite dramatically across size groups between 2003 and 2005. Fourth, if these data are taken at face value, they suggest that *overall*, differences in the productivity of capital across size groups of firms cannot account for the slow growth in the number of SME

Table 13 Comparison of Economic Ratios, 2003

	K/Y	Index	K/L	Index	Y/L	Index
5 – 9 (1)	6.76	216	141	84	31.9	50
10 – 49 (2)	6.28	201	145	86	44.2	70
50 – 99 (3)	5.4	173	189	113	61.7	97
100 – 199 (4)	4.28	137	210	125	76.7	121
200 – 499 (5)	3.89	124	202	120	83.3	131
500 & over (6)	3.13	100	168	100	63.4	100

Table 14 Comparison Economic Ratios, 2005

	K/Y	Index	K/L	Index	Y/L	Index
5 – 9 (1)	9.13	257	172	83	39	58
10 – 49 (2)	8.30	234	173	83	68	64
50 – 99 (3)	5.60	158	223	107	107	80
100 – 199 (4)	5.03	142	276	132	134	131
200 – 499 (5)	4.29	121	240	115	102	112
500 & over (6)	3.55	100	208	100	91	100

3.5 Summary

In Vietnam, the majority of employment in manufacturing is generated by very large firms. Firms with less than one hundred employees are the fastest growing category of enterprises, while those between 100 and 499 are the slowest. These latter happen to be the firms with the highest labour productivity, due in part to their higher capital-intensivity. These findings raise two key questions:

i) what is the reason for the pronounced skew in favour of very large firms in terms of total employment?

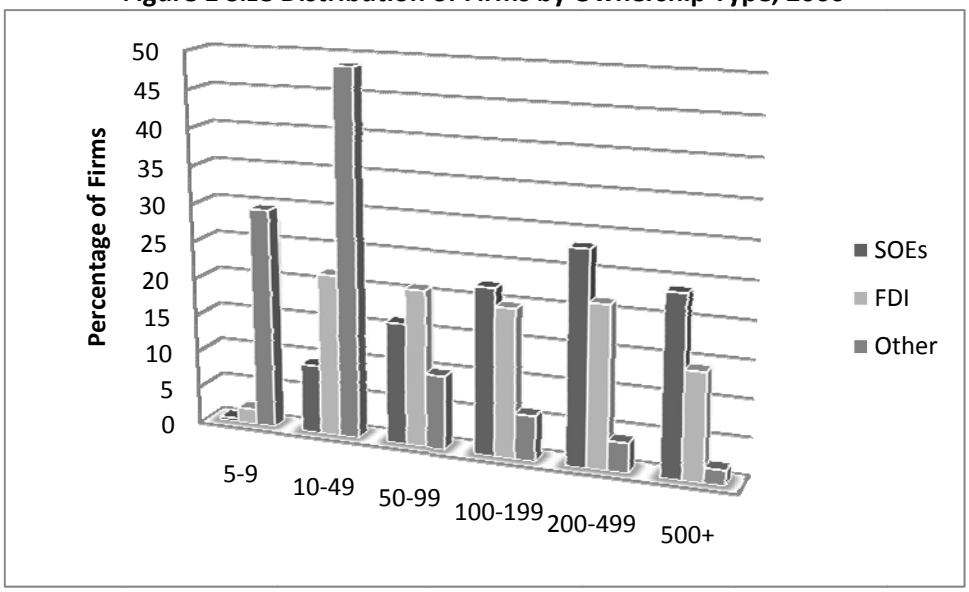
ii) why have mid-sized enterprises not grown at a faster pace, given that they appear to have the highest labour productivity?

The sections which follow present a number of explanations for these apparent anomalies.

4. Historical/Policy Context

The evolution of industrial policy, and the orgranisation of industrial production, prior and subsequent to *doi moi* provide a *prima facie* explanation of the skew in favour of large enterprises and the slow growth of medium-sized firms in manufacturing. There are two main issues. The first concerns the emphasis on State Owned Enterprises (SOEs), and subsequently on Foreign Direct-Invested (FDI) Firms, which have tended to be more capital intensive (Mekong Economics, 2002,, p. 6), and larger than domestic non-state enterprises, as evidenced by Figure 1.

Figure 1 Size Distribution of Firms by Ownership Type, 2000



Source: GSO, Vietnam Enterprise Survey, 2000.

The second aspect concerns the quite complex development trajectory of the non-state sector with implications for the current situation of private sector enterprises. The present discussion provides broad historical context about these issues with emphasis on the changing policy environment.

The reform process in Vietnam is often associated with the Sixth Party Congress in 1986 at which time the term *doi moi* was introduced. In fact, the demarcation point of reforms is the subject of considerable debate. We distinguish three periods: i) Early Reforms: 1979-1989; ii) SOE-Directed Industrialisation and FDI Promotion - the 1990s; iii) Private Sector Promotion?: Post -2003. While these headings do not do justice to the range of events occurring during these time periods, they capture, nevertheless, essential features which are important for the present purposes.

4.1 Early Reforms: 1979-1989

It has been plausibly argued that the process of economic reform in Vietnam was initially a bottom-up process characterized by spontaneous acts of 'fence breaking' (*pha rao*) in response to economic difficulties (Fforde and de Vylder, 1996, p. 12). In this respect, a pivotal period is 1979-80, when a severe worsening of economic conditions was precipitated by: i) a fall in low-price inputs due to cuts in foreign aid from China and the West; ii) a poor rice harvest due to bad weather and resistance to collectivization in the Mekong Delta and iii) Vietnam's invasion of Cambodia and the subsequent conflict with China. Greater 'experimentation' with market forces ensued, involving agriculture and industry.

From 1979, the non-state sector, comprising cooperatives, private businesses, individual businesses and joint state-private companies, was afforded the freedom to: i) buy and sell inputs; ii) borrow foreign exchange; iii) contract and do business outside their place of registration; iv) negotiate better prices for products and inputs (Ibid, p. 196). In practice, many of these measures were never implemented and the non-state sector tended to face an unfavourable, and at times, hostile environment. Nevertheless, the role of the non-state sector in the economy was not negligible. According to some estimates, the non-state sector accounted for as much as 45% of industrial production by 1985 (Phong, 2004, p. 41), a figure close to that in Table 5. In retail trade and services, its contribution was even larger (Ibid).[4]

Following the 6th Party Congress, a number of decrees were promulgated in support of the private sector. Notably, the Decree of March 1988 - *On Policies Toward the Individual Economy, Private Industrial Production and Business* – which affirmed the state's guarantee of the "rights to property, inheritance, and income of units and individuals in these sectors" (Fforde and Vylder, 1996, p. 155) Furthermore, one of six targets agreed by the Fourth Plenum of the Communist of Party of December 1987, affirmed the commitment to "create work for the millions of workers who do not have stable employment by … absorbing labor into small-scale industry[5] in both the towns and the cities …" (Ibid, p. 150).

In summary, this initial period of reform was characterized by official pronouncements in support of the non-state sector and its increasing importance to the economy. Vietnam's industry, however, was still dominated by the state sector which tended to be larger and more capital intensive.

4.2 SOE-led Industrialisation and FDI Promotion - the 1990s

A striking feature of most of the 1990s was the continuing importance of the state sector in the economy. As shown in Table 5, the state share of GDP increased from 32.5% in 1990 to 38.5% in 2000. The state share of industrial output remained at or above 50% until the latter years of the decade, when the effects of rapid inflows of FDI became apparent (see below).

[4] Interestingly, Phong (2004) argues that private sector activities in both production and exchange persisted throughout the Socialist era, especially in the South.

[5] It should be noted that official usage of the term 'small-scale' referred to the non-state sector.

Fforde (2007, Ch 8) has argued that the crisis of 1989-1991, when aid from the Soviet Union plummeted, had dramatic consequences for the future roles of SOEs and the private sector. Until the crisis, a series of reforms had been undertaken which afforded state enterprises greater autonomy in terms of planning decisions and use of profits. This process was reversed in the aftermath of the crisis, as SOE revenue became increasingly important to secure a tax base and for other less transparent purposes. One effect of this process of recentralization of authority was to undermine the growth of the non-state sector. According to Fforde (2007, pp. 204-205):

> One outcome of the loss of Soviet-bloc aid as well as the processes that reduced SOE autonomy and shifted commercial property rights back up [within the state] and outside SOEs, was thus naturally that these mechanisms became both less valuable and less feasible [for the non-state sector] ... it is here one must look for some of the reasons why a private sector took so long to develop through the 1990s.

A number of other factors contributed to the centrality of SOEs in the industrialization process until the latter years of the decade (van Arcadie and Mellon, 2003, p. 119). First, there was an increase in the relative importance of a number of industries in which the state sector dominated, including power, building materials and telecommunications. Second, the influx of FDI and ODA bolstered SOEs in water supply, power, construction and construction materials. Finally, in lighter industries such as garments, SOEs gained preferential access to export quotas, which served to perpetuate their dominance. In general terms, the less than favourable attitude towards the domestic private sector by authorities may have contributed to the so-called 'tall poppy syndrome', whereby "private companies in Vietnam are reluctant to grow relatively large for fear of attracting too much negative attention from authorities and regulators." (Steer and Tausig, 2002, p. 9)

It is true that over the course of the 1990s, three rounds of SOE reforms were enacted focusing on: reorganizing and strengthening production in SOES; modifying the legal framework and ownership structure of SOEs (to joint-stock companies) and; speeding up the equitisation process and allowing for the transfer, sale, contracting and lease of SOEs (Mekong Economics, 2002, p. 18). The reforms contributed to a significant reduction in the number of state enterprises from around 12,297 to 5,500 in 1997 (van Arcadie and Mellon, 2003, p. 126-127). An accompanying downsizing of employment within SOEs ensued in the early 1990s, from over 2 million to around 1.7 million employees. They also had the effect of increasing SOE size. The percentage of state enterprises with over 500 employees increased from 20% in 1994 to 26% in 2000 (Mekong Economics, 2002, p. 8). As mentioned above, reforms in the

1990s did not significantly reduce the relative importance of SOEs to the economy until the latter years of the decade as the implementation record remained patchy (Van Tiem and Van Thanh, 1999).

The second major development in the 1990s was the influx of Foreign Direct Investment (FDI) which expanded rapidly throughout the decade. A number of policy measures were enacted to promote foreign investment, most notably the Foreign Investment Law in 1987. As shown in Table 12, the FDI share of total industrial output increased from less than 10% in 1990 to around one-third in 2000, reflecting a very high rate of growth. In fact, in the mid- 1990s, Vietnam was the top recipient of FDI per GDP of all developing and transition countries (JDR, 2006, p. 12).

Table 15 FDI and Industrial Production, 1990-2000

Year	Share of Total Industrial Output	Growth Rate
1990	9	-
1995	13	185
2000	36	175

Source: Van Arcadie and Mallon (2004, p. 199)

In summary, until the latter years of the 1990s, large, capital-intensive SOEs retained a major influence on the economy, and in industry, in particular. The decision to embark on an SOE-directed process of industrialization came at the expense of an emerging private sector, which lost ground. In addition, foreign invested firms, which tend also to be larger in size, increased dramatically. All of these factors contributed to the skew in favour of large enterprises and the slow growth of medium-sized firms which have persisted since 2000.

4.3 Private Sector Promotion: Post -2000

The post-2000 period has been characterized by two key trends. First, the process of SOE reform has gathered steam. Second, efforts to promote the domestic private sector have accelerated with a number of palpable effects.

The three rounds of SOE reform undertaken in the 1990s paved the way for an accelerated pace of reform. The process of equitisation is of particular note, in this regard. The pace sped up from around 100 SOEs in 1998 to close to 500 per year in the mid 2000s (JDR, 2006, p. 10). Recently, Vietcombank, one of the 6 largest state-owned banks, has been equitised. Given that SOE creation effectively ended in

2001, the number of state-owned-enterprises, and the employment share of SOEs, have steadily declined since this period. Table 16 and Table 17 show these trends, respectively, in the manufacturing sector.

Table 16 Number of Manufacturing Firms by Type of Ownership, 2000-2005

	2000	2001	2002	2003	2004	2005
SOEs	1436	1664	1409	1313	1243	1079
FDIs	1229	1447	1621	1943	2264	2584
Domestic Non-State	6829	7811	10226	11996	14740	17545

Source: Vietnam Enterprise Census

Table 17 Employment Shares of Manufacturing Firms by Type of Ownership, 2000-2005

	2000	2001	2002	2003	2004	2005
SOEs	44	43	36	32	28	22
FDIs	26	26	27	30	32	35
Other Domestic Non-State	30	30	37	38	40	43
	100	100	100	100	100	100

Source: Vietnam Enterprise Census

The promotion of the private sector gained symbolic and substantive support through the passage of the Enterprise Law of 2000. As Van Arcadie and Mellon (2003, p. 172) state "While the trust of earlier business legislation was that private enterprises might be permitted if they complied with government controls, the Enterprise Law codifies mechanisms to protect the rights of citizens to establish and operate private businesses." The key effects of the Enterprise law were to simplify the procedures for formal registration of businesses and reduce the associated time and financial costs. Other important effects were to: lessen uncertainty about the legal status of various activities, reducing the scope for corruption and petty harassment; clarify mechanisms for investor protection; consolidate and unify the fragmented regulatory framework, adding consistency and clarity, etc. (Ibid, p. 165). An immediate effect of the Law was a spike in the number of new businesses registered, though debate persists about the share of these which are actually 'new' or simply 'newly registered' pre-existing firms (JDR 2006, pp 6-7).

Other important policy developments include the 2001-10 Socio-Economic Development Strategy (SEDP) endorsed at the Ninth Party Congress in 2001 and the resolution of the Fifth Party Plenum in

2002. The SEDP laid out the commitment of equal treatment of enterprises regardless of their ownership type and emphasized the importance of SMEs for employment generation and poverty reduction. The 2002 resolution stressed the importance of the private sector to the economy as a source of employment creation, growth and public revenue. This resolution provided general support for measures aimed at improving the enabling environment for private sector growth and detailed specific reform priorities including: reducing barriers to entry for new businesses, amending land laws to allow private sector firms to use land use rights as collateral, facilitating access to finance of the private sector, etc. (van Arcadie and Mellon, 2003, p. 164). The increasing importance of the private sector is evidenced by data in Table 5 which show that the non-state share of industrial output increased from around two-thirds to three-quarters of total output between 2000 and 2005.

One further policy initiative of note is the SME Five Year Plan 2006-2010, approved in October 2006 by prime ministerial decision 236. The document reflects high level commitment to SME promotion, recognising both the importance of SMEs for pro-poor growth as well as obstacles to SME development. Key measures in the plan address such issues as: business registration procedures, commercial transaction legislation, accounting and financial reporting, tax regulations, land policy, access to finance, competitiveness, etc. Unfortunately, it is too early to gauge the effect of this program on SME development as the size distribution data presented above runs only until 2005.

5. Factor-Price and Factor-Access Issues

As discussed elsewhere in this volume (Japan Chapter, etc.), it is often maintained that factor-price ratios are a key determinant of the size distribution of enterprises in a given industry. Specifically, differences in the relative price of capital and labour across size categories of firms may lead to the adoption of different technologies and production techniques. In Vietnam, this argument has particular force when applied to the price of, and access to, capital. An additional factor to consider is the differential access to land across size and ownership categories of enterprises.

It should be noted that in Vietnam, it is unlikely that labour market imperfections are a major contributor to firm size differentials between categories of enterprises. Specifically, there are a number of reasons to doubt that wage premiums in the state sector account for the size distribution of firms by ownership type shown in Figure 1. First, econometric evidence does not show a large enough public sector premium to account for the very marked skew in the size distribution of SOES. The 1990s data

suggest that public and private sectors have similar wage rates, though the former offers a 20% premium for total compensation due to the greater number of hours worked (Bales and Rama, 2001). While public sector wages increased after 2000, the share of large SOEs fell precipitously during this same period (see Section 7). Second, and more importantly, some data suggest that SOEs are overstaffed by around 50% relative to the private sector (Belser and Rama, 2001), despite the significant downsizing of the 1990s. As such, it seems unlikely that higher public sector compensation levels triggered a process of capital for labour substitution with the effect of increasing firm size. Third, in general terms, labour markets in Vietnam function quite well. Minimum wage rates do not tend to be binding constraints on hiring. Further, remuneration gaps according to gender, geography and registration status of the enterprise have narrowed significantly over time (VDR 2006, 89).[6]

5.1 Capital

There is considerable evidence in Vietnam of capital market segmentation between SOEs and privately owned firms and between firms of different sizes. While access to capital by the private sector has improved steadily over time, lack of credit remains a major impediment to the growth of privately owned, smaller enterprises. It is among the most frequently cited constraints on expansion by firm managers and owners.

Prior to reforms, the banking sector served the primary function of allotting credit to state institutions to facilitate the attainment of their production quotas specified in the plan (van Arcadie and Mallon, 2004). Lending was not based on commercial criteria nor were the respective roles of central and commercial banking distinguished. In the early years of *doi moi*, the formal structures of a modern banking system began to appear with the introduction of a two-tier banking system, the issuance of guidelines requiring the four State-owned Commercial Banks (SOCBs) to operate according to commercial criteria, the emergence of a number of Joint stock Banks (JSBs), etc. In practice, the banking system faced numerous political and technical challenges, resulting in a significant proportion of non-performing loans and continued lending to state-owned enterprises on the basis of administrative directives.

Despite these difficulties, progress has been made in the allocation of credit between the state and non-state sectors. Table 18 presents data from 1990 to 2007 on the allocation of credit to state and non-

[6] The one major exception concerns significant urban wage premium which may reflect may urban residency registration for formal sector jobs (VDR, 2006, 89)

state enterprises in Vietnam by State Owned Commercial Banks (SOCBs) and other banks (mainly joint stock and joint venture banks and foreign banks). Total credit allotted to State Enterprises has fallen significantly from 90% to around 30% as the private sector's share has increased to around 70%. Likewise, the share of credit extended by the State Owned Commercial Banks has fallen from around 80% to around 60%. These changes in the allocation of lending have occurred together with rapid and significant financial deepening whereby total credit has expanded to over 60% of GDP from much lower levels (JDR, 2006, Ch. 5).

Table 18 Allocation of Credit, 1990-2007 (Percentages)

	1990	1995	2000	2005	2007
Total Credit					
State Enterprises	90	56.9	44.9	32.8	31.4
Other Sectors	10	43.1	55.1	67.2	68.6
Of Which:					
SOCB[a]		79.6	73.3	69	61.9
State Enterprises		49.3	39.4	28.4	24.7
Other Sectors		30.3	34	40.4	37.4
Other Banks[b]		20.4	26.7	31	38.1
State Enterprises		7.6	5.6	4.2	6.7
Other Sectors		12.8	21.1	26.8	31.4

[a] Four Large State-Owned Commercial Banks
[b] Mainly Joint Stock and Joint Venture Banks and Foreign Banks
Source: van Arcadie and Mallon (2004, p. 100) IMF (1999, 2003, 2007).

It should be noted that these data may be misleading insofar as they don't take into account other sources of finance provided to SOEs. Hakkala and Kokko (2007, pp. 18-19) maintain that SOEs have had increasing access, in recent years, to a number of less than fully transparent sources of credit including the Development Assistance Fund (DAF), provincial development funds, the Social Insurance Fund (SIF) and government guaranteed bond issues. They argue that DAF-based finance has now become quite significant and the SIF is likely to expand dramatically in years to come. An illustration of the potential importance of government bonds concerns the state shipbuilding firm, Vinashin, which was reported allotted all of a US$ 750 million bond floated in 2005 (Dapice, 2006).

Other data, as well, suggest that capital market segmentation persists. *Prima facie* evidence for segmentation is provided when contrasting the source of loans between SOEs and private firms. Drawing on survey data of around 750 private and state-owned enterprises in Vietnam, Tenev et. al. (2003) found significant differences in borrowing patterns between state and non-state enterprises. The latter were more likely to borrow from family friends, money lenders and private joint stock banks. State enterprises rely much more extensively on SOCBs and to a lesser extent investment funds. The authors conclude that: "firms face a segmented financial market with differential access to and preferences for various sources of loan financing among SOEs and private firms" (Ibid, pp. 61-62).

Lack of access to credit remains an important constraint on growth for many private firms, in particular many private SMEs. When enterprise survey respondents are asked about the main obstacles to growth, it is striking the lack of credit invariably figures prominently in their responses. One example involves the aforementioned surveys of SMEs conducted by the Institute of Labour Sciences and Social Affairs (ILSSA) and the Stockholm School of. In these surveys, shortage of capital was the main problem identified, cited by between 50-60% of respondents. Interestingly, these figures did not decline over time (Kokko and Sjöholm, 2006, p.172). In the above mentioned survey by Tenev et. al. (2003, p. 5), around half of private enterprises cited access to financing as a 'major' or 'severe' obstacle. Other surveys have come to similar results (Riedel 1997, 15; Steer and Taussig, 2002, p. 32; Webster and Taussig, 1999).

The twin facts of increasing expansion of credit to the non-state sector, and persistent concerns among private sector firms about the lack of credit, direct attention to the issue of size. These twin observation would be consistent with a disproportionate allocation of credit to (a smaller number of) larger firms. It has been argued that both very large and very small firms have privileged access to credit at the expenses of small and medium-sized firms (JDR 2006, p.59). There are a number of empirical results in the literature which are consistent with this interpretation.

Econometric results suggest that size is a significant determinant of credit access. Tenev et. al (2003, pp 62, 75) regressed a number of variables including size, profitability and possession of land-use rights on access to bank financing (the share of bank loans in total financing). For private enterprises, size is significant at the 1% confidence level, though interestingly not for SOEs.[7] Similarly, Nguyen and Ramachandran (2006, pp. 205-207), found size to be significant and positive in their econometric

[7] For SOEs, none of the variables were significant, which supports the previous point about capital market segmentation.

estimates of the debt ratio of SMEs in Vietnam. The finding is robust to changes in model specification. Accordingly, they conclude that: “firm’s size has a strong influence on the way it finances its operations. Relatively larger firms will use more debt … smaller firms will finance their operations more through their own equity.”

In summary, the operation of capital markets contributes to an explanation of the size structure of enterprises in Vietnam. Despite significant financial deepening over time, capital market segmentation remains a reality facing enterprises of different ownership types and sizes in Vietnam. Lack of access to capital ‘matters’, in that it is perceived to be a big constraint on growth for many private firms and in particular, for medium-sized enterprises.

5.2 Land

Access to land is a second obstacle to private sector growth with disproportionate effects on small and medium-sized firms, though of lesser importance than access to capital. Vietnam has undertaken quite far-reaching reforms in the legal status and administration of land over its transition period. The biggest issue, from the point of view of private SMEs, concerns formal tenure over, or access to, urban or peri-urban land for commercial purposes. Lack of official tenure had implications for credit access and long-term investment decisions, whereas lack of access is a constraint on expansion.

The legal status of land changed markedly in 1988 with Resolution 10 on the “Renewal of Economic Management in Agriculture” whereby land use rights were allotted to farm household for periods of 15-40 years. The watershed Land Law of 1993, as well as revisions in 1998 and 2004, introduced a number of important changes, most importantly the right to exchange, transfer, lease, inherit and mortgage land use rights (Akram-Lodhi, 2005, p. 110-112). Progress in issuing land use rights via so-called ‘Red Books’ has made considerable headway in rural areas, though less so in urban areas (JDR 2006, 73-74).

There are three main mechanisms by which firms can access land for commercial purchases: direct allocation from government, usually People’s Committees, transfer from holders of Certificates of Land Use Rights (CLURs) and auctions, though this latter mechanism is quite recent and has not been widely used to date. The first mechanism is mainly restricted to larger firms, in particular SOEs, and uncommon for SMEs (Ibid, 75).

The second mechanism has limited effectiveness due to the limited allotment of CLURs, especially in urban and peri-urban areas. Accordingly, some estimate that 70% of transactions involving land use rights take place informally and involve businesses leasing directly from SOEs and households (Tenev et. al. 68). Survey data reveal a non-negligible and statistically significant difference in the possession of CLURs by private firms and SOEs, 62% vs 70% respectively. For those who do engage in the informal market for land rights however, administrative penalties can be levied by authorities (Harvie 2008, p. 210). Further, security of tenure is less than optimal, with negative implications for longer term investment decisions

The limited effectiveness of these transfer mechanisms, combined with the historical legacy of a command economy, result in a quite skewed distribution of available land in favour of SOEs. According to data from the World Bank's Investment Climate Survey, SOEs possess on average five times the available land of non-state firms with more than 250 employees (JDR 2006, p. 79). The situation in Hanoi is particularly skewed. Over ninety five percent of land leased to enterprises is in the hands of SOEs (Ibid, 81).

There are two main implications of limited land access for SMEs. First, many are unable to use land as collateral for access to credit. This is a long standing problem which persists (Hill 2000, 293). The negative effects on access to finance are magnified by the heavy emphasis on physical collateral in bank lending decisions to the private sector (Malesky and Taussig, 2008). The issues of security of land tenure and credit access are closely intertwined.

Second, firm growth is constrained. Survey data, drawing on perceptions of CEOs, suggest that the land constraint may be quite significant (Tenev et. al. 2003, pp. 69-70). Eighty two and thirty five percent of respondents, said they would expand plant size or diversify into new activities respectively, with improved land access. As discussed above, this problem more severely affects smaller and medium sized private firms.

6. Productivity Catch-Up and Globalisation: Explaining the Slow Growth of Medium-Size Firms

In addition to land and capital constraints, other factors have limited the growth of small and medium-sized enterprises in Vietnam. In the present section, we focus on two key factors: i) productivity catch-

up especially in the 1990s, which limited employment growth in enterprises, including SMEs; ii) impediments to the integration of manufacturing SMEs in global value chains.

The limited employment elasticities of growth in Vietnam throughout the 1990s, in particular for manufacturing, has received considerable attention in the literature. It has been estimated that every percentage point of GDP growth in the late 1990s increased employment by around 0.22%, a very low figure by South-East Asian standards (Thorburn, 2004, p. 133). A number of explanations have been offered for the relatively limited employment response, many relating to policy distortions affecting the economy.

A different explanation has been offered by Jenkins (2004) who argues that slow employment growth in industry is due to rapid productivity growth on the part of firms in Vietnam. Jenkins decomposes employment growth into four components: output growth, inter-industry shifts (structural change), productivity growth and the interaction between the latter two terms. His results, presented in Table 19, are striking, in that the effects of productivity change dwarf all others by a wide margin.[8] The explanation for the rapid productivity growth has to do with the imperative of increasing labour productivity to survive in increasingly competitive market conditions. These productivity gains were more the result of capital upgrading than of labour shedding, given that total employment increased by around 400,000 between 1990 and 1999, and that assets per worker increased markedly.

Table 19 Decomposition of Industrial Employment Growth

	1990-1994	1995-1999
Output Growth	1,484,943	1,665,246
Structural Change	-46,064	-252,260
Productivity Growth	-1,296,941	-1,123,185
Interaction	-39, 708	-1,172
Total Employment Change	102,229	288,628

Source: Jenkins (2004, Table 4, p. 200)

Unfortunately, these data are not disaggregated by firm size. As a consequence, it is impossible to know how these changes affected firms of different sizes. Nevertheless, the importance of productivity growth

[8] Jenkins also shows that the effects of productivity growth are much more important than changes in the ownership patterns due to the increase of employment in foreign-invested and domestic firms.

for firms with less than 100 employees comes our forcefully in the results of the ILSSA/SSE surveys on the 1990s. There were large increases in capital-intensity and labour productivity between 1991 and 1997 as shown in Table 20 for the four regions surveyed in both 1991 and 1997. In addition, employment elasticities for total employment were low varying between 0.17% and 0.24% in urban and rural areas respectively (Ronnås, 2001, p. 214).

Table 20 Growth rates of Productivity and Capital Intensity for SMEs, 1991-1997

	Urban			Rural
	Hanoi	Ho Chi Minh City	HaiPhong	Ha Tay
Value Added/Worker	67	44	29	98
Assets/Worker	142	37	28	175

Calculated from Hemlin (2001, Tables 2.1 and 2.3), ILSSA/SSE Database

These changes were due to very rapid upgrading by firms set up in the earlier period as well as by the entry of new, more capital-intensive firms. A critical determinant of the success of surviving firms was their ability to generate profits and accumulate capital at a very high rate. According to the authors, these competitive pressures account for the very high rates of productivity growth recorded: "the rapid changes in the overall economic environment exercise strong pressure on existing enterprises to develop or succumb to market forces and that, as a consequence of increasing market integration, the pressure to restructure, improve efficiency and productivity" (Ronnås, 1998, p. 42).

The second major issue concerns barriers to small and medium size firms as they attempt to integrate into global value chains. This has particular relevance for textiles, garments and footwear, which have all experienced rapid growth as merchandise exports. There are three main issues. First, what is the relationship between firm size and export orientation? Second, what are the factors limiting integration of SMEs in value chains at the present time. Third, what factors restrict the entry of firms into higher value-added activities.

As shown in Table 21, the percentage of exporting firms increases monotonically with firm size for the three years (2000, 2003, 2004) in which data on exports were collected. Two points are particularly relevant to note. First, there remains a significant gap between the percentage of SMEs and large-size firms which export, with the latter figure exceeding 70% in 2004. Second, the gap has been shrinking

over time both relatively and absolutely. Between 2000 and 2004, firms with between 100 and 499 workers have increased export-orientation more rapidly than any other size category of firms.

Table 21 Percentage of Exporting Firms by Firm Size Group in Manufacturing

Size groups	2000	2003	2004
5 – 9 (1)	2.1	3.23	3.82
10 – 49 (2)	9.76	11.76	12.31
50 – 99 (3)	27.62	29.67	32.39
100 – 199 (4)	30.52	40.52	44.36
200 – 499 (5)	42.81	49.6	58.6
500 & over (6)	63.46	53.54	71.83

Source: Vietnam Enterprise Censuses 2000-2005

The second set of factors mentioned above, attempt to explain the gap between the export-orientation of SMEs and large-size firms. Drawing on interviews with global buyers and firms, as well as secondary evidence, Nadvi and Thorburn (2004a, 2004b) argue that SMEs in Vietnam face a range of difficulties when attempting to insert themselves in international value chains. Pressures to meet international labour standards along with demands for higher quality product with shorter lead times have proved particularly difficult. In the case of labour standards, small-sized firms complained of difficulties in meeting health and safety regulations related to ventilation and working space. Fully compliance would require redesigned plant layouts or entirely new factory premises (Nadvi and Thorburn, 2004a, p. 259).

In a dynamic sense, increasing value-added in production is critical to the success of industrialisation. In the context of the garment industry, this involves the shift from Cut-Make-Trim (CMT) activities, for which firms are assigned a processing fee, to Free-on-Board (FOB) tasks, whereby firms provide the fabrics and charge a price for the final garment. Critical, here, is the ability to source high-quality fabric domestically or abroad, to take on large orders and to supply a diverse range of products. In their interviews, Nadvi and Thorburn (2004 b, p, 119) found a decided bias in favour of large SOEs for FOB-type tasks:

> Such firms are able to take on large orders, to manufacture a relatively diverse product range, and to easily meet demands on compliance with global standards, especially labour codes … small private firms often supply smaller regional traders [and]… are unable to access the higher quality and higher value chains.

Harvie (2008, p. 221) has suggested a number of additional factors constraining the access of SMEs to export markets. He argues that lack of understanding of foreign markets due to limited experience with trade have constituted major barriers to entry. The specific informational gaps relate to: "management accounting, technical requirements, marketing skills, import regulations, and consumer preferences." Lack of foreign language skills have served as additional barriers.

A related issue concerns technology. Insofar as the optimal technology mix differs by the size of firms, the lack of appropriate technology may be a serious handicap to SME growth (Lall, 2003). SMEs may be unable to invest in the development or adaptation of optimal technology given credit market failures, discussed above. In addition, public support for, or investment in, Research and Development, have tended not to favour SMEs in Vietnam. Accordingly, it has been remarked that there are no specific policies for SMEs related to technology, no SME-specific research institutions have been created and existing scientific, technology and training organizations are not strong enough to adequately meet SME needs (Harvie 2008, p. 213). Further, 2005 survey data from 100 garment/textile and chemical enterprises, reveal that most firms have no long-term investment plan for technological innovation despite the fact that most accepted the need for technological innovation to improve competitiveness (Hakkala, 2007, p. 27).

In summary, Section 6 has offered two partial explanations for the paradox, discussed in Section 3, of the slow growth of mid-size enterprises, between 100 and 500 employees, despite their apparently high levels of labour productivity. First, in the 1990s, employment growth in firms, including SMES, was limited by the process of productivity catch-up which involved the substitution of capital for labour in production. This limited the graduation of smaller firms into the mid-size categories. Second, specific barriers to entry in global value chains have limited the present-day growth of small and medium-sized firms and constrained their insertion into higher value-added activities. These findings should be placed in the broader context of a remaining but shrinking gap in the export-orientation of medium and large-size firms.

7. Ownership Type, Manufacturing Category and Exports: Explaining the Persistence of Large Firms

As discussed in Section 3, a key characteristic of the size distribution of manufacturing enterprises is the heavy skew in favour of large firms which remained constant from 2000-2005. The present section

examines three potential explanations for this skew, SOE-bias, economies of scale and export-orientation. It concludes that only the latter explanation is persuasive.

First, it is useful to revisit the data presented in Section 3 on the top-end of the size distribution, namely firms with five hundred or more employees. As shown in Table 22, between 2000 and 2005 the share of total employment for the biggest firms has stayed relatively constant at around 60% while their share of total firms has fallen from around 7 to 6%. In absolute terms, the number of large firms has roughly doubled over this time period.

Table 22 Characteristics of Firms with 500+ Employees

	2000	2001	2002	2003	2004	2005
Share of Employment	58.40	59.54	58.37	60.87	60.84	59.91
Share of Firms	6.89	7.16	6.59	7.04	6.65	5.96
Number of Firms	654	782	874	1074	1214	1264

Source: Vietnam Enterprise Censuses 2000-2005

Can SOE-bias explain the persistent skew in employment in favour of very large firms? To recall, it was argued in Section 5 that SOEs have historically been favoured in terms of access to capital and land. Data presented in Table 23 and Table 24 suggest, in fact, a quite precipitous decline in the relative importance of large SOEs. The SOE share of total employment for the largest firms has fallen from around a half to a quarter from 2000 to 2005. Likewise the number of large SOEs has stayed relatively constant while that of FDI and domestic non-state enterprises[9] has increased by 168 and 220 percent respectively. Virtually all of the doubling in the number of large manufacturing firms is attributable to growth in the non-state sector. In short, there has been quite a dramatic reconfiguration of the top end with SOEs losing relative share to both FDI and domestic non-state firms.

Table 23 Employment Shares of Firms with 500+ Employees by Type of Ownership

	2000	2001	2002	2003	2004	2005
SOEs	52	51	45	40	36	28
FDIs	28	29	30	34	39	44
Domestic Non-State	20	20	25	26	25	28
Total	100	100	100	100	100	100

Source: Vietnam Enterprise Censuses 2000-2005

[9] Recall from Section 2 that the domestic non-state firms include those whose with public shares up to 49%.

Table 24 Number of Firms with 500+ Employees by Type of Ownership

	2000	2001	2002	2003	2004	2005	Rate of Growth
SOEs	342	413	402	422	433	356	4
FDIs	175	202	229	323	410	469	168
Others	137	167	243	329	371	439	220
Total	654	782	874	1074	1214	1264	93

Source: Vietnam Enterprise Censuses 2000-2005

A second potential explanation concerns the dominance within manufacturing of industries with high fixed costs where economies of scale may be particularly important. In Vietnam, this involves capital-intensive industries such as Chemicals, Rubber and Plastic products and Transportation equipment. As shown in Table 25 and Table 26, however, manufacturing in large firms is dominated by Leather and Footwear, Garments and Food/ Beverages/Cigarettes. Over time, the biggest gains in relative shares of employment, and the highest growth rates of number of large firms, has occurred in Garments and Manufacturing of Wood and Wood Products. Overall, economies of scale do not seem to be the main factor explaining the skew in favour of large firms.

Table 25 Employment Shares for Firms with 500+ Employees by Category of Manufacturing

	2000	2001	2002	2003	2004	2005	Share Change
Food, Beverages, Cigarettes	17	16	17	15	14	14	-3
Textile	10	9	8	7	6	6	-4
Garment	16	16	17	20	20	20	4
Leather and Footwear	30	29	28	28	28	28	-3
Manufacturing of Wood & Wood Products	6	5	6	7	8	10	4
Paper Products and Publishing/Printing	1	1	1	1	1	1	0
Coal and Chemicals	2	3	3	2	2	2	0
Rubber and Plastics	2	2	2	2	3	2	0
Non-metal manufacturing	5	6	6	6	6	5	0
Metal manufacturing	3	3	3	3	3	3	0
Machinery	6	6	6	6	5	6	0
Transportation Equipment	2	2	3	3	3	3	2
Total	100	100	100	100	100	100	

Source: Vietnam Enterprise Censuses 2000-2005

Table 26 Number of Firms with 500+ Employees by Category of Manufacturing

	2000	2001	2002	2003	2004	2005	Rate of Growth
Food, Beverages, Cigarettes	135	158	173	193	208	217	61
Textile	57	67	69	68	74	77	35
Garment	112	135	161	227	267	277	147
Leather and Footwear	127	133	142	164	170	169	33
Manufacturing of Wood & Wood Products	51	60	71	100	127	152	198
Other	194	253	285	349	406	404	108
Total	654	782	874	1074	1214	1264	93

Source: Vietnam Enterprise Censuses 2000-2005

While economies of scale in manufacturing may not explain the skew in favour of large firms, it is important to examine whether labour productivity differences, for any number of reasons, may be driving the size distribution. In particular, is value-added per worker higher in the largest firms across the major sub-categories of manufacturing. To recall from Table 11, *overall* labour productivity levels appear higher in mid-size firms with between 100 and 499 employees than in firms with over 500 workers. Table 27 addresses this question, presenting calibrated value-added estimates for the major sub-categories of manufacturing.[10]

[10] Actual value-added data are not presented because the measurement errors problems discussed in Section 3.4, become more significant with the fewer observations within each sub-category of manufacturing.

The data present a more mixed picture than in Table 11. Large firms have the highest levels of labour productivity levels in Garments, which is consistent with the argument presented in the previous section about the product quality and diversity advantages of large exporting firms. Mid-size firms (100-499 workers) have high productivity in Leather and Footwear while firms with between 200-499 workers dominate in Food, Beverages and Cigarettes and Manufacturing of Wood and Wood Products. Smaller firms in Textiles appear to have the highest productivity levels. These data show that the relationship between productivity and firm size across sub-categories of manufacturing is varied. The core conclusion of Section 3.4 still holds, however, that the predominance of large firms is not due, in general, to their superior labour productivity.

Table 27 Calibrated Value-Added per Worker by Size Group and Category of Manufacturing, 2005

	Food, Beverages, Cigarettes		Textiles		Garments		Leather and Footwear		Manufacturing of Wood and Wood Products		Other	
	million dong/ worker	Index Value (500+ =100)	million dong/ worker	Index Value (500+ =100)	million dong/ worker	Index Value (500+ =100)	million dong/ worker	Index Value (500+ =100)	million dong/ worker	Index Value (500+ =100)	million dong/ worker	Index Value (500+ =100)
5 – 9	42.91	38.45	158.04	249.94	11.69	35.76	n/a	n/a	16.91	38.22	26.41	23.13
10 – 49	72.71	65.16	222.14	351.32	17.25	52.77	53.35	180.24	34.29	77.51	64.79	56.74
50 – 99	75.88	68.00	65.13	103.00	13.82	42.28	26.32	88.92	33.99	76.83	137.13	120.09
100 - 199	96.2	86.21	37.35	59.07	18.09	55.34	53.89	182.06	33.21	75.07	178.57	156.38
200 - 499	120.16	107.68	62.45	98.77	30.8	94.22	36.79	124.29	66.57	150.47	119.81	104.92
500 & over	111.59	100.00	63.23	100.00	32.69	100.00	29.6	100.00	44.24	100.00	114.19	100.00

Source: Vietnam Enterprise Censuses, 2005

The third explanation for the persistent skew is the corollary of issues discussed in Section 7. Specifically, the same forces which limit the entry of SMEs into export markets favour large firms. Table 28 and Table 29 present preliminary evidence in support of this position.[11] It is striking that all of the increase in the employment share of FDI and domestic non-state firms is due to the increasing employment share of exporting firms. For FDIs, the increasing employment export of exporting firms, 10.4%, equals that of all FDIs. For domestic non-state firms, the change in the employment share of exporting firms, 9.1%, actually exceeds the average of all domestic non-state firms, 5.8%. These findings are paralleled by the growth rates in the number of exporting FDI and domestic, non-state firms. For the latter, the rate of growth of large exporting firms is almost double that of all domestic, non-state firms.

[11] It should be noted that only the 2000, 2003 and 2004 rounds of the census contain identifiers of export status

Table 28 Employment Shares for Firms with 500+ Employees by Type of Ownership and Export Status, 2000-2004

	2000	2004	Share Change
SOEs	52.0	35.8	-16.2
of which exporting firms	*34.4*	*20.7*	*-13.7*
FDIs	28.4	38.8	10.4
of which exporting firms	*25.8*	*36.2*	*10.4*
Domestic Non-State	19.6	25.4	5.8
of which exporting firms	*11.5*	*20.6*	*9.1*

Source: Vietnam Enterprise Censuses

Table 29 Number of Firms with 500+ Employees by Type of Ownership and Export Status, 2000-2004

	2000	2004	Growth Rate
SOEs	342	433	26.6
of which exporting firms	*197*	*224*	*13.7*
FDIs	175	410	134.3
of which exporting firms	*153*	*372*	*143.1*
Domestic Non-State	137	371	170.8
of which exporting firms	*65*	*276*	*324.6*

Source: Vietnam Enterprise Censuses

This last point is significant given the widely held view that the large scale domestic private sector has been slow to development. For example the JDR (2006, p. i) maintains that "only a handful of domestic private firms have made it to the top." As shown below, the number of large domestic, non-state firms almost tripled from 137 to 371 while that of large domestic, non-state exporting firms more than quadrupled from 65 to 276. Part of the explanation may lie with the acceleration of the equitisation process, discussed is Section 4.3, whereby private domestic interests have increased their stake in formerly state-owned corporations. This cannot be the entire story, however, given the very rapid increase in the number of private firms and the fact that the absolute number of SOEs has not declined. Further, it is unlikely that the increasing tendency for FDI firms to partner with and domestic non-state ones could account for this trend, given that joint ventures fall under the FDI classification, not domestic non-state (see Section 3.1). Panel data could shed additional light on this question, though, as mentioned in Section 3.1, inconsistent firm-level identifiers have precluded exploiting the panel dimension of the census data at the present time.

Table 30 and Table 31 combine the main components of the analysis presented above. Specifically, they provide data on employment shares and number of firms by type of ownership, category of manufacturing and export status. These tables underscore the importance of exporting firms in the Garment industry, both FDI and domestic non-state, as a main driver of the changing composition of firms at the top end. Just under half of the 16% increase in the total employment share of FDI and domestic non-state firms is attributable to Garment industry exporting firms. Other big increases in relative employment shares are due to Leather and Footwear for FDIs and to Food, Beverages and Cigarettes for domestic non-state firms. It should be noted that because these data only extend to 2004, the importance of Manufacturing of Wood and Wood Products does not come out as forcefully as above.

While Section 6 offered a number of reasons for the failure of SMEs to *directly* access to export markets, the question remains as to why large exporting firms have not made greater use of subcontracting arrangements with smaller firms. As discussed elsewhere in this volume, the growth of SMEs in both Taiwan and Japan was facilitated by the expansion of just such subcontracting arrangements (Mazumdar, 200x, Chs. X and X). One explanation concerns geography, namely the proximity of manufacturing enterprises in South East Asia and China coupled with the significant distances between industrial hubs in the North and South of the country. Another reason, more generally, may relate to the increasing importance of transnational supply networks in global value chains. Whatever the reason, as the VDR (2006, p.36) remarks, "unlike other East Asian countries at an early stage of their industrialization, it would appear that Vietnam has not integrated well its exporters with its local producers."

Table 30 Employment Shares for Firms with 500+ Employees by Type of Ownership, Category of Manufacturing and Export Status

	2000	2004	Share Change
SOEs	52.0	35.8	-16.2
of which exporting firms	*34.4*	*20.7*	*-13.7*
Food, Beverages, Cigarettes	10.9	6.5	-4.4
of which exporting firms	*6.3*	*4.0*	*-2.3*
Textile	7.3	3.8	-3.5
of which exporting firms	*6.6*	*3.4*	*-3.2*
Garment	8.7	7.0	-1.7
of which exporting firms	*6.7*	*5.2*	*-1.5*
Leather and footwear	8.0	4.2	-3.8
of which exporting firms	*7.0*	*3.2*	*-3.8*
Manufacturing of wood & products from wood	1.1	0.6	-0.5
of which exporting firms	*0.9*	*0.4*	*-0.5*
Other	16.0	13.8	-2.2
of which exporting firms	*7.0*	*4.5*	*-2.5*
FDIs	28.4	38.8	10.4
of which exporting firms	*25.8*	*36.2*	*10.4*
Food, Beverages, Cigarettes	3.5	2.1	-1.4
of which exporting firms	*2.2*	*1.8*	*-0.4*
Textile	2.0	1.6	-0.4
of which exporting firms	*2.0*	*1.4*	*-0.6*
Garment	4.1	8.1	4.0
of which exporting firms	*3.3*	*8.0*	*4.7*
Leather and footwear	11.9	15.8	3.9
of which exporting firms	*11.9*	*14.7*	*2.8*
Manufacturing of wood & products from wood	0.4	0.2	-0.2
of which exporting firms	*0.4*	*0.2*	*-0.2*
Other	6.5	11.0	4.5
of which exporting firms	*6.1*	*10.0*	*3.9*
Domestic Non-State	19.6	25.4	5.8
of which exporting firms	*11.5*	*20.6*	*9.1*
Food, Beverages, Cigarettes	2.4	5.4	3.0
of which exporting firms	*0.7*	*4.4*	*3.7*
Textile	0.7	1.1	0.4
of which exporting firms	*0.4*	*0.9*	*0.5*
Garment	2.9	5.0	2.1
of which exporting firms	*1.5*	*4.1*	*2.6*
Leather and footwear	10.5	7.7	-2.8
of which exporting firms	*6.9*	*7.1*	*0.2*
Manufacturing of wood & products from wood	1.1	1.1	0.0
of which exporting firms	*0.4*	*0.7*	*0.3*
Other	2.0	5.0	3.0
of which exporting firms	*1.5*	*3.5*	*2.0*

Source: Vietnam Enterprise Censuses

Table 31 Number of Firms with 500+ Employees by Type of Ownership, Category of Manufacturing and Export Status

	2000	2004	Growth Rate
SOEs	342	433	26.6
of which exporting firms	197	224	13.7
Food, Beverages, Cigarettes	83	85	2.4
of which exporting firms	37	49	32.4
Textile	31	32	3.2
of which exporting firms	26	25	-3.8
Garment	51	62	21.6
of which exporting firms	37	44	18.9
Leather and footwear	40	35	-12.5
of which exporting firms	31	26	-16.1
Manufacturing of wood & products from wood	10	11	10.0
of which exporting firms	7	8	14.3
Other	127	208	63.8
of which exporting firms	59	72	22.0
FDIs	175	410	134.3
of which exporting firms	153	372	143.1
Food, Beverages, Cigarettes	29	38	31.0
of which exporting firms	20	31	55.0
Textile	19	25	31.6
of which exporting firms	19	21	10.5
Garment	35	118	237.1
of which exporting firms	28	116	314.3
Leather and footwear	38	75	97.4
of which exporting firms	37	68	83.8
Manufacturing of wood & products from wood	2	6	200.0
of which exporting firms	2	6	200.0
Other	52	148	184.6
of which exporting firms	47	130	176.6
Domestic Non-State	137	371	170.8
of which exporting firms	65	276	324.6
Food, Beverages, Cigarettes	23	85	269.6
of which exporting firms	6	66	1000.0
Textile	7	17	142.9
of which exporting firms	3	13	333.3
Garment	26	87	234.6
of which exporting firms	11	67	509.1
Leather and footwear	49	60	22.4
of which exporting firms	24	52	116.7
Manufacturing of wood & products from wood	10	21	110.0
of which exporting firms	4	13	225.0
Other	22	101	359.1
of which exporting firms	17	65	282.4

Source: Vietnam Enterprise Censuses

In summary, persistent SOE-bias does not explain the continuing dominance of large firms in Vietnam, given the precipitous decline of the state sector and associated ascendancy of FDI and domestic firms. Economies of scale due to high capital costs are unlikely to be the main driving force given the continuing dominance of Leather Products, Garments and Food/ Beverages/Cigarettes in manufacturing. The most plausible explanation concerns the biases in favour of large firms in export markets discussed in Section 6 which have both restricted entry of SMEs and perpetuated the dominant position of large firms.

8. Distribution

As discussed in the introduction, the size structure of manufacturing has potentially important implications for distributional patterns in the economy. Some of the transmission mechanisms linking the size structure and distributional outcomes include the nature of technology used in production, patterns of employment generation, productivity and wages (Berry 2010, 289), and, on the consumption side, the price and quality of consumption goods produced. The salience of these types of issues will only increase as Vietnam's economy shifts from primary to secondary and tertiary production.

The present section begins with an examination of average wages by size group in manufacturing to determine if the rightward skew in the distribution of firms is likely to have adverse consequences on equality. It then presents data on inequality levels and trends in Vietnam along with a preliminary assessment of their sources. A fuller treatment of the link between size structure and inequality, which would examine many other factors including general equilibrium effects, is beyond the scope of the present analysis.

Table 32 reviews the relationship between firm size and average wages. It should be stated that the size structure will 'matter' for inequality if larger firms, which dominate the firm size distribution, also have higher wage rates. In general terms, the Vietnamese data bear out this relationship. Average wages increase monotonically with size with the exception of the largest two size categories for the period 2000-2002. Since 2002, these exceptions have reversed, and the wage gap between the largest and second largest firm size category has increased. These data follow the standard pattern and suggest that the heavy rightward skew in the firm size distribution does matter for inequality in Vietnam.

Table 32 Average Wages by Size Group in Manufacturing (Index Value)

Size group	2000	2001	2002	2003	2004	2005	2006
5 - 9	54	60	60	67	68	70	68
10 - 49	64	70	70	73	74	73	73
50 - 99	87	91	86	87	87	86	84
100 - 199	93	97	95	92	94	93	94
200 - 499	100	105	101	99	97	96	94
500 & over	100	100	100	100	100	100	100

Source: Vietnam Enterprise Censuses

Table 33 presents a number of indicators of inequality, based on consumption expenditure data from the Vietnam Household Living Standard Surveys. The first three indicators are measures of relative inequality, sensitive to percentage changes in consumption between population groups. The latter provides information on the absolute gap in consumption expenditure between the top and bottom quantiles over time. There are a number of key findings[12].

Relative inequality, as measured by the Gini coefficient, has increased moderately since the 1990s but stayed relatively constant through the 2000s. In terms of levels, the Gini value of 0.36 reflects a moderate degree of inequality, which places Vietnam near the middle of the pack of Asian countries (ADB 2007, 3). If one focuses on the top and bottom deciles of the distribution, the average consumption of the former has increased from around 7.5 to 9.5 times that of the latter between 1993 and 2006. The consumption share of the bottom decile has dropped somewhat over this period from 3.51 to 2.90%. In general, these findings are consistent with the depiction in Section 2 of Vietnam's economy as a hybrid model which has not witnessed the dramatic spike in inequality as say, the People's Republic of China (PRC), but has seen a modest increase in relative inequality associated with sluggish employment growth and high investment shares of national income.

[12] The one major caveat about the VHLSS data concerns the underreporting of internal migrants. Comparison of data from the VHLSS 2004 and the population census of Ho Chi Minh City suggest that the former captured less than 4% of the 20% of residents with temporary registration status found in the latter (JDR 2008, p.24). If temporary migrants are disproportionately in the lower consumption brackets, the data will understate levels and changes in inequality (and likely, poverty).

If the focus is on absolute inequality, a different picture emerges. The absolute gap between the consumption expenditure of the top and bottom quintiles more than doubled in real terms between 1993 and 2004, from around 2000 VND to over 5000 VND. It is almost certain that this figure underestimates the true value given higher underreporting of consumption among the highest consumption/income groups. The size of the gap places Vietnam at the mid to high end of the Asian average when measured in $US PPP (ADB, 2007, 7).

Table 33 Levels and Trends of Consumption Inequality, 1993-2006

	1993	1998	2002	2004	2006
Gini	0.34	0.35	0.37	0.37	0.36
Decile Dispersion Ratio	7.66	8.58	9.42	9.91	9.57
Consumption Expenditure (CE) Share of Poorest Decile	3.51	3.33	3.17	2.91	2.90
Absolute CE Gap Quintiles 1&5, 1993 prices, '000VND	2194	3352	4107	4874	5149

Source: Authors' calculations VHLSS 1993-2006

To provide an indication of the contribution of manufacturing to inequality change in Vietnam, we present a decomposition of the Gini coefficient by source of income.[13] The Gini decomposition draws on earlier work of Lerman and Yizhaki (1985) who demonstrated that the Gini coefficient may be represented as:

$$G = \sum_{k=1}^{K} S_k G_k R_k$$

where S_k and G_k are income source *k*'s share of income and its Gini coefficient, respectively. R_k is the Gini correlation between income source *k* and the entire distribution. Intuitively, the decomposition states that the contribution of any income source to total inequality is a function of its: i) importance to total income; ii) internal distribution of income; ii) relationship to the overall distribution.

A useful feature of the decomposition is that it can be used to estimate the marginal effects on the Gini coefficient of a one percent change, *e*, in income source *k*, holding all else constant. It has been shown, (Stark, Taylor, Yitzhaki, 1986) that the partial derivative of the Gini, G, with respect to a percentage change in income, *e*, from source *k* equals:

[13] The Stata code used, and exposition of parts of the technique, draws on Lopez-Feldman (2006).

$$\frac{\partial G}{\partial e} = S_k(G_k R_k - G)$$

By rearranging, and expressing in percentage terms, we have:

$$\frac{\partial G/\partial e}{G} = \frac{S_k G_k R_k}{G} - S_k$$

whereby a percentage change in the total Gini, G, due to a percentage change in income, *e*, from source k, equals the contribution of source *k* ($S_k G_k R_k$) to total inequality, i.e. the Gini share, minus its share of total income (S_k). Alternatively, the relationship may be expressed as:

$$\frac{\partial G/\partial e}{G} = \frac{S_k G_k R_k}{G} - S_k = S_k(\eta_k - 1)$$

where

$$\eta_k = \frac{G_k R_k}{G}$$

which represents the Gini Income Elasticity (GIE), η_k, for source *k*. The key intuition is that the product $G_k * R_k$, or the Pseudo Gini coefficient, not the source Gini coefficient, provides the most critical information in the overall Gini coefficient decomposition. It is relevant to note also, that if the Pseudo Gini for source *k* exceeds the value of the overall Gini, such that η_k is greater than 1, then overall inequality will increase for any percentage increase in income source *k*.

Table 33 below presents results of the above exercise for three main categories of income: primary, manufacturing and other. The latter two are distinguished by strata (rural, urban). The "Other" category includes tertiary income plus three income sources which generally fall under secondary income: mining/oil/ gas, utilities and construction. Data is presented for two rounds of the VHLSS surveys which allowed this categorisation of income.[14]

There are a number of important results. First, urban-based manufacturing has the highest Pseudo Gini, and GIE, of all income sources in both years. As a consequence, it is a 'positive' contributor to inequality,

[14] The VLSS questionnaires in the 1990s did not include a question which would allow one to apportion income from "non-farm, non-sylviculture and non-aquaculture businesses" into secondary and tertiary income categories.

though its marginal contribution is modest (2-3%), given its low share of income. Second, rural-based manufacturing has a significantly smaller pseudo Gini and GIE in both years and was virtually inequality neutral with respect to marginal changes in 2006. Third, the pseudo Gini and GIE of both urban and rural manufacturing have decreased over time. Fourth, in both years the biggest marginal contributor to inequality is 'Other' urban income while primary income has the greatest equalising effect at the margin.

Table 34 Gini Decomposition by Sources of Income, 1993-2006

	2002							2006						
	Sk	Gk	Rk	Gk*Rk	GIE (η)	Gini Share	%Δ	Sk	Gk	Rk	Gk*Rk	GIE (η)	Gini Share	%Δ
Primary	0.32	0.61	0.37	0.23	0.56	0.18	-0.14	0.38	0.66	0.53	0.35	0.83	0.31	-0.17
Manufacturing (Urban)	0.02	0.99	0.74	0.73	1.83	0.04	0.02	0.06	0.96	0.68	0.65	1.55	0.09	0.03
Manufacturing (Rural)	0.04	0.96	0.49	0.47	1.18	0.04	0.01	0.06	0.91	0.44	0.40	0.95	0.06	-0.00
Other (Urban)	0.31	0.87	0.77	0.67	1.67	0.51	0.20	0.26	0.87	0.71	0.62	1.47	0.37	0.11
Other (Rural)	0.31	0.67	0.44	0.29	0.74	0.23	-0.08	0.24	0.71	0.44	0.31	0.74	0.17	-0.07
Total Income		0.40				100			0.42				100	

It should be noted, that the above results are based on household level data which include manufacturing income from small-size household enterprises. As mentioned in the introduction, these enterprises had been excluded from the analysis on the size distribution presented in this chapter. Accordingly, the effect of these larger enterprises on inequality will undoubtedly be greater than suggested by the aforementioned results.

9. Conclusion

Data from six rounds (2000-2005) of the enterprise census in Vietnam, reveal two striking features of the size distribution of enterprises with respect to employment. First, the distribution is heavily skewed in favour of firms with 500 or more employees. Such firms account for almost 60% of total employment. By comparative standards, the skew is extremely large, in excess of that found elsewhere in Asia. Second, firms with less than one hundred employees are the fastest growing category of enterprises, while those between 100 and 499 are the slowest. These latter happen to be the firms with the highest labour productivity. The preceding analysis has attempted to address two questions which these findings raise: i) what is the reason for the pronounced skew in favour of very large firms in terms of

total employment?; ii) why have mid-sized enterprises not grown at a faster pace, given that they appear to have the highest labour productivity?

The first set of explanations concern factor price distortions, specifically capital market segmentation and differential access to land. Evidence suggests that SOEs, which tend to be larger, have enjoyed preferential access to finance and that lack of credit remains a major impediment to the growth of privately owned, smaller enterprises. Limited access to land constrains SME growth directly, through its impact on the physical expansion of facilities, and indirectly, by limiting collateral for access to credit.

In addition to factor price distortions, two other explanations have been offered for the slow growth of SMEs. In the 1990s, employment growth in SMES was limited by the process of productivity catch-up which involved the substitution of capital for labour in production. This limited the graduation of smaller firms into the mid-size categories. Second, specific barriers to entry in global value chains have limited the present-day growth of small and medium-sized firms and constrained their insertion into higher value-added activities. These latter set of issues are also the primary explanation for the continued predominance of very large firms in the size distribution of employment since 2000, a phenomenon which is not persuasively explained by SOE-bias or by economies of scale in general.

The size structure of manufacturing has bearing on at least three policy-relevant issues in Vietnam: employment, internal migration and income distribution. In terms of the latter, Vietnam has witnessed a moderate increase in relative inequality since the period of reforms and a far greater increase in absolute inequality. The sectoral decomposition suggests that manufacturing, and in particular urban manufacturing, is a contributor to inequality, though its marginal effect is small due to its small income share. As Vietnam continues to industrialise, the importance of the distribution of manufacturing income in total income will only increase.

As discussed above, the issue of SME promotion has not been ignored by policy makers. The 2001-10 Socio-Economic Development Strategy (SEDP) emphasizes the importance of SMEs for employment generation and poverty reduction. Likewise, the SME Five Year Plan 2006-2010 approved in 2006 outlines a number of measures designed to facilitate SME development. The recognition of the imperative of SME growth is not surprising given the importance of manufacturing in Vietnam's economy as well as the necessity of improving the employment intensity of industrial growth in the

years ahead. It remains to be seen if policy measures such as those above will succeed in addressing some of the constraints to SME development outlined above.

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Appendix A –Productivity Calculations

Value added is calculated by taking total revenues less costs of intermediate goods. Calculation of total revenues is straightforward as the questionnaire has questions asking revenues from sales of products and services, revenues from financial activities, and revenues from other activities. Calculation of intermediate input costs raises concerns, however in that some cost items in questionnaire responses seem unrealistic (see below). When comparing total cost computed from the cost section with the total cost estimated by taking the total revenue less pre-tax profit[15] we see large discrepancies. Specifically, in only 655 of 8808 firms with cost information do the two estimates coincide. In 2278 firms, the former estimate is larger while the later is higher in 5875 cases. In the calibrated value added method, for those firms for which two estimates of total cost are different we need to calibrate the cost items. We assume firms report correctly the cost structure, in particular the relationship between intermediate and total costs. Therefore, we keep the cost structure unchanged and adjust cost items so that "new" total cost is equal to the total cost estimated by taking total revenues less pre-tax profit. We use the calibrated cost items to calculate intermediate input cost.

When using the actual cost method to calculate value added, an outlier correction has been applied to deal with anomalies in certain size categories of firms. Specifically, extremely high cost items in a number of enterprises in the 200-499 category lead to very large and negative value-added estimates. The procedure uses an iterative outlier detection algorithm suggested in Hadi (1992, 1994).

[15] According to accounting rules, pre-tax profit is the difference between total revenue and total cost.

Appendix B – Capital Measurement and Productivity Decomposition

Standard practice in productivity measurement is to estimate the contribution of factor inputs and total factor productivity to output using a production function. This type of exercise is subject to caveats due to the validity of the capital measure as discussed in Section 3.4. Further, there are a host of other issues concerning, *inter alia*, the functional form of the production function and econometric solutions to problems of simultaneity and selection bias (Nevo, 2009). There are a wide variety of approaches in the literature and results can be quite sensitive to the particular method used.

In order to provide a first-order approximation of how much of the difference in labour productivity is due to differences in capital intensity, we adopt a simpler technique. We assume that the production relationship can be represented in standard Cobb-Douglas form:

$$Y/L = A\,(K/L)^{\alpha} \text{ or} \quad (1)$$

$$\log y = \log A + \alpha \log k \text{ (lower case letters are variables divided by L)} \quad (2)$$

where Y/L and K/L are our measures of labour productivity and capital intensity and A, of total factor productivity. Capital intensity is weighted by alpha[16], which measures the elasticity of substitution between capital and labour in production, and under competitive conditions, provides an approximation of capital's share of real output.[17] Accordingly, K/L (weighted by alpha) can be interpreted as a measure of the marginal productivity of capital.

Because we are interested in the relative performance of difference size categories of firms in percentage terms, we present log differences of our Y/L and K/L measures between the smallest size group of firms (5-9 employees) and the others (G_1 … G_n). The results provide an approximation of how much of the difference in labour productivity is due to differences in capital productivity for different size groups. This can be represented as:

$$\log y_2 - \log y_1 = (\log A_2 - \log A_1) + (\alpha_1 \log k_1 - \alpha_2 \log k_2) \quad (3)$$

where firms in ascending order of size group are assigned subscripts 1 … n.

[16] Alpha values were estimated separately for each size group.

[17] In the first instance we assume no economies of scale in production, competitive capital and labour markets where factors are paid their marginal products, etc.

Table 35 and Table 36 present results of this exercise for 2003 and 2005, respectively. In these tables, Y/L (y) is the log of calibrated value-added per labour, α•K/L (k) our measure of capital productivity described above while k-y/y provides a measure of the percentage contribution of capital to output. The last three columns under the heading "Log Differences (G_n-G_1)," represent differences in y, k and k-y values (as defined in the table) between individual size categories of firms and the smallest firm size category (5-9 workers). The log difference of k-y represents the differences in the relative contribution of capital to output between the smallest size group and the rest.

There are a number of interesting findings. First, differences in capital account for a very large share of output for all size groups (k-y/y), ranging from 60 to 85%. As discussed above, this may be due to reporting error of the capital measure. Second, the importance of capital to output broadly follows an inverted U pattern, similar to measures of capital intensity shown in **Table 12**. Third, the relative importance of capital differences in explaining output differences for different size groups (k-y) follows the same inverted U pattern, which implies that marginal returns are higher for the more capital-intensive mid-size firms. These data suggest that the higher capital intensity of mid-size firms, and their higher marginal returns to capital, explain more of the differences in output than for other firm size categories. Once again, these results should be treated with caution in light of the caveats mentioned above.

Table 35 Productivity Decomposition by Size Group in Manufacturing, 2003

					Log Differences (G_n-G_1)		
Size Groups	ln Y/L (y)	lnA	αlnK/L (k)	k-y/y	y	k	k-y
5 – 9 (1)	3.46	0.71	2.47	0.71			
10 – 49 (2)	3.79	0.35	3.04	0.80	0.33	0.56	0.24
50 – 99 (3)	4.12	0.27	3.51	0.85	0.66	1.04	0.38
100 – 199 (4)	4.34	0.19	3.80	0.87	0.88	1.32	0.44
200 – 499 (5)	4.42	0.41	3.66	0.83	0.96	1.19	0.23
500 & over (6)	4.15	0.63	3.38	0.82	0.69	0.91	0.22

Table 36 Productivity Decomposition by Size Group in Manufacturing, 2005

Size Groups	ln Y/L (y)	lnA	αlnK/L (k)	k-y/y	Log Differences (G_n-G_1) y	k	k-y
5 – 9 (1)	3.67	0.98	2.21	0.60			
10 – 49 (2)	4.22	0.32	3.20	0.76	0.55	0.98	0.44
50 – 99 (3)	4.67	-0.02	3.95	0.85	1.00	1.73	0.74
100 – 199 (4)	4.90	0.26	4.05	0.83	1.22	1.83	0.61
200 – 499 (5)	4.62	0.40	3.84	0.83	0.95	1.62	0.67
500 & over (6)	4.51	0.65	3.52	0.78	0.84	1.31	0.47