

# DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES IN INDONESIA

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## Abstract

*It has been recognized that small and medium enterprises (SMEs) play a vital role in economic development and income growth in many countries, as they have been the primary source of job or employment creation world-wide; not only in less developed countries (LDCs) but also in developed/industrialized countries. This paper is one part of an ongoing study on the performance of SMEs in Indonesia in comparison with other APEC economies. This paper consists of two parts. The first part deals with theories in explaining the relationship between different pattern of development of SMEs and different levels of economic development. The important question here is: whether SMEs will be out-competed by large enterprises (LEs) in the course of economic development, measured generally by the increase in income per capita. The second part presents and discusses recent data on development of SMEs in Indonesia. The evidence shows that SMEs in Indonesia are indeed very important. Their importance in the Indonesian economy is observable reflected by their relatively huge number of units. Totally, in all sectors of the economy, the number of SMEs is huge and it keeps growing; though there was a decline during the 1997 economic crisis. Their number of units is larger than that of LEs, and they contribute the bulk of units and employment in sectors such as agriculture, trade, manufacturing industry and transportation. This evidence rejects a general hypothesis that the economy the shares of GDP and economic activities will be dominated by LEs at the higher level of development.*

## **I. Role and Importance of SME**

From a worldwide perspective, it has been recognized that small and medium enterprises (SMEs) play a vital role in economic development and income growth in many countries, as they have been the primary source of job or employment creation world-wide; not only in less developed countries (LDCs) but also in developed/industrialized countries. In Piper's (1997) dissertation, for instance, it states that 12 million or about 63.2% of the total labor force in the United States (US) work in 350,000 firms employing less than 500 employees, which considered as SMEs. According to Aharoni (1994), SMEs make up more than 99% of all business entities and employ more than 80% of the total workforce in the US. In West European countries, for instance, Dutch, SMEs account for 95% or more of total business establishments (Bijmolt and Zwart, 1994).

In addition, SMEs also contribute significantly to development of industry and growth of export in many countries. In the US, these enterprises, often called the foundation enterprises, are the core of the US

industrial base (Piper, 1997). Based on experiences in the US and other developed countries, Thornburg (1993) said explicitly that SMEs are an important engine of economic growth and technological progress.

In LDCs SMEs are important because of their potential contributions to improvement of income distribution, employment creation, poverty reduction, industrial development, rural development, and growth of export revenues. It is widely suggested in the literature that the importance of SMEs in LDCs, especially in rural areas, is due to their characteristics, which include the following ones:

- 1) Their number is large and especially small enterprises (SEs) are scattered widely throughout the rural area and therefore may have a special "local" significance for the rural economy.
- 2) The SMEs are perceived as being populated largely by firms that have considerable employment growth potential. Given this characteristic, the development of SMEs can be included as an important element of policy to create employment and to generate income. This awareness may also explain the growing emphasis on the role of these enterprises in rural areas in LDCs. The agricultural sector has shown not to be able to absorb the increasing population in the rural areas. Unfortunately, rural non-farm activities together are not able to cope with the rural labor force explosion, neither the most employment creating parts like trade, services, transport and construction, nor the rural industries. As a result rural migration increased dramatically, causing high unemployment rates and its related socio-economic problems in the urban areas. Therefore, non-farm activities in rural areas, especially rural industries being a potentially quite dynamic part of the rural economy have often been looked at their potential to create rural employment.
- 3) Not only that, the majority of SMEs in LDCs are located in rural areas, they are mainly agriculturally based activities. Therefore, government's efforts to support the development of SMEs are also policies that indirectly support the development of agriculture in LDCs.
- 4) SMEs use technologies that are also in a general sense more "appropriate" (as compared to modern technologies usually used by large enterprises or LEs) to factor proportions and local conditions in LDCs, i.e. quite a few raw materials being locally available and scarcity of capital, including human capital.
- 5) Many SMEs may expand significantly, while the great majority of micro enterprises<sup>1</sup> tend to grow little and hence do not graduate from that size category. Therefore, SMEs are regarded as enterprises having the "seedbed LEs" function.
- 6) Although in general people in rural areas are poor, evidence shows the ability of poor villagers to save a small amount of capital and invest it; they are willing to take risks by doing so. In this respect, SMEs provide thus a good starting point for the mobilization of both the villagers' talents as entrepreneurs and their capital; while, at the same time, rural SMEs can function as an important sector providing an avenue for the testing and development of entrepreneurial ability.

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<sup>1</sup> Microenterprises are the smallest size categories of firms, mainly self-employment units, and they are most traditional within the group of SMEs. That is why in the literature as well as in many reports microenterprises are discussed/presented separately, not included in defining SMEs.

- 7) SMEs, or in particular SEs (and micro enterprises), are financed overwhelmingly by personal savings of the owners, supplemented by gifts or loans from relatives or from local informal moneylenders, traders, input suppliers, and payments in advance from consumers. In this regard, the SMEs must be seen, potentially, as an important instrument to allocate, in particular, rural savings optimally which would otherwise not be spent or used productively. In other words, if productive activities are not available locally (in the rural areas), rural or farm households having money surplus might keep or save their money without any interest revenue inside their home because in most rural areas there is a lack of banking system, or, use their extra money to buy unnecessary luxury consumption goods which is often considered by the villagers as a matter of prestige.
- 8) Although many types of goods produced by SMEs for the middle and high income groups of population, it is generally presumed in the literature that the primary market for the SMEs' products is overwhelmingly simple consumer goods, such as clothing, furniture and other articles from wood, footwear, household items made from bamboo and rattan, and metal products. These goods cater to the needs of local low income consumers. SMEs are also important for securing the basic needs goods for this group of the population. However, there are also many SMEs engaged in the production of simple tools, equipments, and machines for the demands of small farmers and small producers in the industrial, trade, construction, and transport sectors.
- 9) As part of their dynamism, SMEs often achieve rising productivity over time through both investment and technological change; although different countries within the group of LDCs may have different experiences with this, depending on various factors. The factors may include the level of economic development in general and that of related sectors in particular; accessibility to main important determinant factors of productivity in particular capital, technology and skilled manpower; and government policies that support development of production linkages between SMEs and LEs as well as with foreign direct investment (FDI).<sup>2</sup>
- 10) As often stated in the literature, one advantage of SMEs is their flexibility, relative to their larger competitors. Therefore, these enterprises are construed in Berry *et al.* (2001) as being especially important in industries or economies that face rapidly changing market conditions, such as the sharp macroeconomic downturns that have bedeviled many countries in Southeast Asia, including Indonesia, over the past few years.<sup>3</sup>

## II. Pattern of Development of SMEs: A Theoretical Consideration

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<sup>2</sup> In LDCs, LEs achieve productivity increases to a great part by borrowing from the shelf of technologies available in the world. Processes such as FDI, technology licensing, joint ventures, and access to engineering and other advances provide productivity increases for LEs. This is not evident for the majority of SMEs (Berry, *et al.*, 2001).

<sup>3</sup> . When the economic crisis hit the country in 1997, SMEs were found to have been weathering the crisis better than LEs, because their greater flexibility allows them to adjust production process during the crisis, though many have been hit hard too. Many argue that being less reliant on formal markets and formal credit, SME are able to respond more quickly and flexibly than their larger counterpart to sudden shocks (Berry, *et al.*, 2001).

The development of SMEs and changes over time in their e.g. employment share, output share and composition, market orientation and location are usually thought to be related to many factors, including the level of and changes in real income per capita and population density. In the framework of this chapter, the main question is whether or not there is a general or a systematic pattern of transformation of the employment in SMEs over time in the course of the development process. The purpose of this chapter is thus to discuss the pattern of development of SMEs within a broader theoretical framework. This theoretical framework provides further a basis for the empirical analysis in Section III and Section IV. The framework outlined in this chapter has been drawn from empirical as well as theoretical literature on the above issues.

## **II.1 Natural Development**

Economic development creates a natural place for development and growth of enterprises of all sizes of establishment, i.e. small, medium and large. The size of a business establishment depends on a variety of factors, of which two most important ones are market and technology (Panandiker, 1996). With respect to the first factor, if the market is small, only small-scale economic activities, and hence small size if establishments will be viable. The size of the market itself is determined by the level of real income per capita and population or the number of actual buyers in the market.

In the manufacturing industry, SMEs produce a variety of products which can be grouped into two categories, i.e. consumer goods or industrial goods. With regard to the first category of goods, SMEs can be manufacturers of final products sold in the market. They survive and grow in competition with large enterprises (LEs) manufacturing similar products. That is because SMEs differentiate their products, either by nature or acquire. So, with that they create a niche market for themselves. For instance, in many LDCs like Indonesia many SMEs are specialized in a variety of simple items made by hand such as handicrafts which are outside the competitive area of similar items but more sophisticated and produced with machines by LEs. In such circumstances the SMEs have a better chance to survive and hence to growth and develop further. While, SMEs will be priced out in the market if they try to compete with LEs for exactly the same product when the economic scale of output prescribes a large industry and it depends on modern technologies.

With regard to the second category of products, SMEs manufacture products for other manufacturers. They are often ancillaries to LEs. In recent years, the relationship between SMEs and LEs has become increasingly important because of the trend towards diverticalization (Richard, 1996). LEs, in order to remain competitive, increasingly focus on core competence and buy in other products and

services.<sup>4</sup>Through such production linkages in terms of e.g. subcontracting, the SMEs are exposed to the muscle power of the large ones which often lead to unpleasantness and problems for the small ones. The problems include that SMEs as the large industries' suppliers often have the difficulties to meet the tight schedules and product specifications, and the small suppliers face the risks when they enter into networks of LEs (Semlinger, 1993). This problem, which is mainly technical, management and organization in nature, is observed not only in European countries but it also applies in LDCs. Kaplinsky (1994), for instance, found in a number of countries that SMEs face the difficulties to deliver products just-in-time and with high standards of quality as required increasingly by large-scale industries (LSIs)..

With respect to technology, if the economic size dictated by technology is large, SMEs will be priced out in the market, because they cannot produce efficiently due to lack of economies of scale. For instance, in electronics industries, the state of the art of technology may indicate a large size, so LEs are viable. But, neither the market nor the technology is fixed for all time. They constantly change. In the last 5 to 10 years, the world has witnessed that innovations in technology, at least in some fields like bio, processing of materials, information, telecommunication, TV, satellite, fax, cellular, phones and pagers, computer and automation, are indeed rapid. Many LEs experienced serious problem in adapting themselves to that changing technologies and hence business environment in terms of making shifts in planned production and changes in planned investment and labor division (including the recruitment of new workers with certain high skills needed by new technology) and, so many of them are left behind. Many argue that in such circumstances the SMEs have a better chance of survival (Panandiker, 1996).

To sum up, the above discussion indicates that the size and its changes over time of an enterprise depends on a variety of considerations, two amongst them are the market and technology. This implies that the development of SMEs is affected by a complex interaction between demand-side factors (e.g. market) and supply-side factors (e.g. technology). Based on this framework of thinking, the theoretical analysis on development of SMEs should be approached from the supply-side and the demand-side of the industries or sectors where the SMEs operate in order to find out what are the main supply-side as well as demand-side determinant factors, the interactions between the factors, and significant effects of the individual as well as interacted factors on the development of SMEs.

## **II.2 Pattern of Change and Development**

In discussing industrial systems and the role of SMEs within the systems and their pattern of overall development in LDCs, attention is usually focused on seminal articles by Hoselitz (1959), Staley and Morse

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4. For more studies on this issue, see Hakansson and Johanson (1993), Kaplinsky (1994), and Semlinger (1993).

(1965), and Anderson (1982), among yet many others. Their works are often classified as the "classical" theories on SMEs development. While the "modern" theories on it which explicitly place emphasis on the importance of subcontracting networks and the economic benefits of agglomeration and clustering for the development of SMEs include the works of Berry and Mazumdar (1991) and Levy (1991) in the newly industrializing countries (NICs) like Taiwan and South Korea, and the flexible specialization literature.

## II.2.1 "Classical" Theories

### *Stanley and Morse's Thesis*

The literature on SMEs in LDCs focuses on manufacturing industry, and may be it can be said that the literature started with the 1965's article of Staley and Morse. In their substantial study, based on the experience of industrialized economies and LDCs they identified three categories of conditions for the predominance of SMEs: location, manufacturing process, and market or type of product. Factories processing a dispersed raw material (mainly rural industries) and products for local markets and with relatively high transport costs are two main important locational conditions. Separable manufacturing operations, craft or precision handwork, and simple assembly, mixing, or finishing operations are main important conditions for the predominance of SMEs with respect to manufacturing processes. While, the market conditions are in the forms of differentiated products with low scale economies and industries serving small markets. The significance of these influences may be different for SMEs in different sub-sectors. For instance, the industries serving small markets condition is regarded a particularly important determinant for the dominance of SMEs in the wood and furniture subsectors, because total demand for such products is usually limited as compared to other consumer goods. While, the condition of factories which process a dispersed raw material is considered as a significant explanation for the dominance of small-and medium-scale food industries in rural areas.

Amongst these conditions, Staley and Morse (1965) argued that particularly separable or specific manufacturing operations (e.g. SMEs produce certain components for LEs) and differentiated products having low scale economies are the most important explanatory factors for the presence of SMEs in LDCs.<sup>5</sup>

### *Stages of Development*

- Employment share

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<sup>5</sup> A number of authors used these categories of conditions in analyzing SMEs, such as Tambunan (1994) and van Dierman (1995).

Although the relationship between the size of business (e.g. manufacturing) establishments and the process of economic development has been explored by some authors through the analysis of historical stages of development, the theoretical literature on the issue of how SMEs would be influenced by increases in per capita real income (as a proxy of economic development) is still rather limited. The attention on this particular issue was given first by Hoselitz in his study (1959) on industrialization in Germany. His study indicates that in the "early" stage of development the manufacturing sector in the country was predominated by artisans or craftsmen and as the process proceeded many of them grew later on into large sized establishments of industry.

However, Hoselitz (1959) did not study explicitly the nature of the relationship between the increase of the level of industrialization and the structural change within the manufacturing sector. He emphasized more on the characteristic of low costs of production, which he concluded as the key to the success of SMEs. The low cost of production attributes mainly to the use of unpaid family workers.

Following Hoselitz's work, Parker (1979) and Anderson (1982) have developed general growth phase typologies based on the experience of the industrialized countries to explain changes in the size structure of industry by region and over time in LDCs. According to this approach, in the course of economic development, the composition of manufacturing activities, if classified according to scale, appears to pass through three phases. In phase one, at the "early" stage of industrial development which may be characteristic of predominantly agrarian economies, cottage and household industries (CHIs), i.e. non-factory or craft-based enterprises (this can be marked as the most traditional type of enterprises in manufacturing industry), are predominant in terms of their total number of production units and share in total manufacturing employment. This is a stage of industrialization in which a large number of CHIs (mainly in rural areas), coexist with a quite limited number of larger-scale (mainly foreign or state-owned firms located in urban areas or large cities). In this stage, CHIs are predominant in activities such as garment-making, smithy, footwear, handicrafts, masons, industries making simple building materials and various crop-processing industries. They closely related to agricultural production, as providers of rudimentary inputs to and of processing services for output from agriculture, and of the non-food needs of the rural population. In LDCs these subsectors are characterized by substantial ease of entry. Particularly for clothing, food and handicraft industries, initial capital requirements are very low and for the producers involved no need for high skills and special separated workshops to carry out those activities. Perhaps for this reason, such activities are undertaken largely by female and children, as a part-time job or secondary

source of family income, and most enterprises in these activities are self employment or one person units in which the owner undertakes all activity.<sup>6</sup>

In phase two, in more developed regions with higher incomes per capita than in regions in phase one, small-scale industries (SSIs) and medium-scale industries (MSIs) have been found to emerge and increase at a comparatively rapid rate, and act to displace CHIs in several subsectors of manufacturing. There is a number of factors which might explain the expansion of these industries in this particular stage of development. Steel (1979), for instance, emphasizes the importance of a growing cash market for the expansion of SSIs and MSIs (p.9): *Increased urbanization and expanding cash markets give rise to a shift from traditional household activities to complete specialization of the entrepreneur in small scale production and increased use of apprentice and hired labor.*<sup>7</sup>

In phase three, at the "later" stage of development, large-scale industries (LSIs) become predominant, displacing the remaining CHIs and also SSIs in some activities.<sup>8</sup> According to Anderson (1982) this phase is partly a product of phase two, since the recorded growth of output and employment in LSIs can be divided into (p.914): *a) the growth of once small firms through the size structure, and b) the expansion of already large domestic and foreign concerns.* However, the expansion of LSIs in this stage may also be caused, to a certain extent, by new large-scale entrants, which is not explicitly taken into account by Anderson.

In this final phase factors such as greater use of economies of scale with respect to plant, management, marketing and distribution (depending on types of products and flexibility in production), superior technical and management efficiency, better productive coordination and access to supporting infrastructure services and external finance, and concessionary finance along with investment incentives, tariff structures, and government subsidies are powerful causes and incentives for firms to grow larger. In practice it is often found that these factors are more favourable for large or modern industries than for small and traditional ones and so they may explain the eventual better performance of larger enterprises than small ones in advanced stages of industrialization.<sup>9</sup>

The empirical evidence on systematic pattern of structural change in industrial establishments, though still limited, is richer than the corresponding theoretical literature. Most of existing studies focus mainly on

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<sup>6</sup> See further, among others, Anderson and Leiserson (1980), Hansohm (1992), Liedholm and Chuta (1976), Page and Steel (1984), Rietveld (1989), Steel (1977), and Wickramanayake (1988).

<sup>7</sup> Anderson and Khambata (1981) also point out the importance of growing cash markets generated by the growth of agriculture or rural incomes for the high rates of growth of SSIs and larger sized establishments of industry.

<sup>8</sup> Similar hypothesis as in the theory of Anderson has also been forwarded or adhered to by others such as Little (1987), and Nanjundan (1989), stating that increasing levels of economic development inevitably will bring about a replacement of SSIs, especially the traditional ones, i.e. CHIs, by larger factories (LSIs).

<sup>9</sup> Schmitz (1982) states that for SSIs only those who can take advantage of some or all of these factors can grow or, at least, survive against heavy competition from larger industries.



development of SSIs on one hand versus that of MSIs and LSIs separately or put them together as medium- and large-scale industries (MLSIs) on the other hand. Studies from Snodgrass dan Biggs (1996) and Tambunan (1994) may provide a general picture about the relative importance of SSIs in different countries with different levels of development (income).<sup>10</sup> As shown in Table 1 and Table 2, the figures suggest that there is a systematic trend that in higher income countries the employment share of CHIs, which in these studies are classified as units with 1 to 9 workers, tends to be lower than in lower income countries.<sup>11</sup>

Table 1 Cross-sectional distribution of workers in the manufacturing industry by size of firm from 34 countries, 1985–1998

Income per capita (US\$)	Total Countries	Percentage of total employment *)			
		CHIs (1 – 4)	SSIs (5 – 19)	MSIs (20 – 99)	LSIs (100 +)
100 – 500	6	64	7	4	25
500 – 1,000	7	41	12	10	37
1,000 – 2,000	7	11	13	14	61
2,000 – 5,000	9	8	11	17	64
5,000 +	5	4	6	20	70

Note : \*) in bracket is number of workers

Source: adopted from Table 7 in Snodgrass and Biggs (1996).

Table 2 Data on the structure of manufacturing employment by size of establishment from selected cross-country studies

No.	Country	Year	Income per capita (\$US)	Percentage of total employment		
				CHIs (1 – 4)	MLSIs (5 – 99)	LSIs (100 +)
1.	El Salvador	1961	430	48.6	21.5	29.9
		1971	526	39.1	28.4	32.5
2.	Peru	1963	573	18.2	46.3	35.5
		1973	705	14.8	22.8	62.4
3.	Colombia	44/45	-	66.5	13.7	19.8
		1953	502	59.2	18.9	21.9
		1964	547	51.4	23.7	24.9
		1970	646	53.6	24.7	21.7
		1973	722	50.4	28.3	21.3
		1978	760	42.5	24.0	33.5
4.	Korea	1963	356	17.0	40.0	43.0
		1975	810	15.0	42.0	43.0
		1977	980	4.0	22.0	74.0
5.	Mexico	1960	540	18.7	26.9	54.4
		1970	900	22.6	19.6	57.8
		1975	1,000	11.2	26.4	62.4
6.	Taiwan	1940	-	25.3	74.7	0.0
		1954	519	18.0	36.0	46.0

<sup>10</sup> Though there are always some problems in making a comparison between countries due to differences in e.g. data collection procedure, classification of industrial establishments and period of coverage, official exchange rates, national accounting and demographic reporting system (with respect to gross national product/GNP or gross domestic product/GDP per capita) (Tambunan, 1994).

<sup>11</sup> In addition, see also other countries studies from Banerji (1978) and Liedholm and Parker (1989). The Banerji's study indicates that at a higher level of economic development the larger sized enterprises become more important than the smaller ones. The Liedholm and Parker's study shows that in some African countries total employment in SSIs, especially in the one person size category, has been increased overtime, though the increase was less rapidly than that in MLSIs, which tended to shift the relative balance of manufacturing employment from SSIs towards MLSIs.

		1961	603	15.0	34.0	51.0
		1971	1,180	3.0	33.0	64.0
7.	Panama	1961	732	19.4	39.1	41.5
		1971	1,225	4.4	36.3	59.3
8.	Costa Rica	1963	849	31.9	40.2	27.9
		1975	1,287	6.4	27.3	66.3
9.	Brazil	1959	-	8.6	26.0	65.4
		1970	901	7.0	27.3	65.7
		1975	1,306	5.6	28.8	65.6
10.	Argentina	1964	1,454	19.8	29.8	50.4
		1974	1,945	14.9	26.3	58.8
11.	Japan	1955	1,454	20.0	40.2	39.8
		1965	3,255	16.1	37.1	46.8
		1975	6,182	19.1	36.6	44.3
		1986	13,050	-	72.2	-
12.	Canada	1950	-	2.9	31.2	65.9
		1955	-	2.8	30.5	66.7
		1959	-	2.5	31.9	65.6
13.	USA	1947	-	1.1	23.9	75.0
		1967	7,450	1.1	22.3	76.6
14.	Philippines	1967	-	77.8	7.2	15.0
		1974	280	66.0	5.0	29.0
		1975	-	66.0	8.0	26.0
		1986	550	-	61.6	-
15.	Thailand	1978	530	58.0	11.0	31.0
		1984	840	-	49.8	-
16.	India	1971	110	42.0	20.0	38.0
		1988	340	54.4	29.8	15.8

Source: quoted from Table 8 in Snodgrass and Biggs (1966) and Table III.1 in Tambunan (1994).

Most of the presented data here are from industrial surveys or censuses. Unfortunately, they do not provide additional information on the extent to which the decrease in employment that is recorded in CHIs might be due to the expansion of these industries into SSIs or the increase in employment in MSIs might be due to the expansion of former SSIs; though it is generally expected that this transformation process, at least in some of the countries studied,<sup>12</sup> has taken place over time.<sup>13</sup>

Based on these data, there can be many possible patterns of change and development of individual or size groups of enterprises that may in reality have occurred and which are all consistent with the data shown. They may include: (i) many SSIs may have grown into MSIs and some CHIs into SSIs; (ii) there might be many new small factories and medium and large-scale entrants in the industry; and (iii) many CHIs die out.

- Output share

<sup>12</sup> The rate of the process may vary between countries, which is to a certain extent related to different stages of development or different speeds of transformation process.

<sup>13</sup> Moreover, industrial surveys or censuses usually publish data only on establishments, not on firms. Consequently, from these data it is not possible to distinguish between employment increases due to 1) small firms that have grown larger, 2) the branch expansion of already large firms, and 3) increases in the average size of existing large scale establishments (Anderson, 1982).

The output composition of SMEs in manufacturing industry also appears to shift with development. As income per capita increases, the activities of SMEs shift from "light" manufacturing with simple processing to intermediate and then to capital goods with more complicated processing ("heavy" manufacturing). In other words, the higher the income per capita, the lower the share of SMEs in light manufacturing and the higher their share in heavy manufacturing, especially in machine and transport equipment industries,<sup>14</sup> as a percentage of total employment in SMEs (Biggs and Oppenheim, 1986).<sup>15</sup> Not only between subsectors but also within a subsector of manufacturing shifts of SMEs with the process of development from units producing more "traditional" goods (types of activities done mainly by women and family members) to units making similar but more sophisticated or "modern" type of goods can be observed. In other words, in the course of development process the share of SMEs producing "traditional" goods as a percentage of total employment and units of SMEs in that particular manufacturing subsector declines (Liedholm and Parker, 1989).

In addition, in Biggs and Oppenheim (1986), there is evidence, which indicates that the sectoral shift or the shift from making traditional towards modern goods within a subsector of manufacturing is also accompanied by changes in size of industrial establishments viz. from CHIs to SSIs and from SSIs to larger scale industries.<sup>16</sup>

In the earlier studies of SSIs in LDCs, these industries, in particular CHIs, were commonly treated and in a way dismissed as tradition bound, low income and economically backward activities, offering few and probably decreasing opportunities for raising incomes.<sup>17</sup> But, Norcliffe and Freeman (1980), for instance, have found in Kenya that CHIs were actively engaged in a much wider range of activities, including various resource based and agro-processing activities, than only in traditional activities producing "inferior" goods, as often thought. This evidence may suggest that with economic development not all CHIs will disappear. Indeed in many LDCs a sizeable number of these industries is still surviving these days. Some of them remain small and traditional while some others did develop into larger factories.<sup>18</sup> An important factor that might explain why in many "more developed" developing countries many CHIs did survive and even grew larger

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<sup>14</sup> Light manufacturing includes: food processing, beverages, wood, furniture, paper, printing and publishing, non-metallic mineral products, textiles, clothing, footwear, construction, metal fabricated, and leather. Heavy manufacturing includes: rubber, chemical industries, petroleum, basic metal, machines and transport equipment.

<sup>15</sup> See also Chenery (1986) and Syrquin (1989) for studies and evidence of this "structural transformation" of production within the manufacturing sector in many countries.

<sup>16</sup> However, it is not clearly indicated in their study whether these sectoral shifts are causally related to rather than only accompanied by the shift in firm size.

<sup>17</sup> See for example Hymer and Resnick (1969) and Staley and Morse (1965).

<sup>18</sup> See for example Beesley and Hamilton (1984) and Page (1979).

despite heavy competition from larger industries and policies biased against them is a specific skill or specialization owned traditionally by the producers.<sup>19</sup>

- Different patterns of development between rural and urban SMEs

The pattern of the transformation process of SMEs in a country has been discussed above. Within a country, differences in the pattern of transition from SEs to MEs and then to LEs can also be apparent between urban and rural areas. The main causes of the differences can be related to differences in the level of development between rural and urban economies and in characteristics between rural and urban SMEs. As regards the differences in characteristics, a lot of studies shows that more "traditional" crafts (e.g. CHIs) such as black-smithy, weaving, and mat and pottery making are relatively more important in rural areas and they are characterized by a higher proportion of self-employment units, while SMEs, especially MEs, tend to predominate in urban areas. Apprentice and wage labor are relatively more important components of total employment in urban SMEs, while CHIs in rural areas rely more heavily on family labor. Furthermore, in rural areas, the larger share of manufacturing employment, particularly in CHIs, as compared to urban based SMEs, is highly seasonable: part-time non-farm activities that peak in the slack season in the farming activities.<sup>20</sup>

With respect to entrepreneurship, Liedholm (1973) argued that in rural areas small entrepreneurs have substantially different educational and occupational backgrounds than their counterparts in urban areas. People engaged in rural enterprises have a lower level of education than those in urban enterprises, even in the same size category (e.g. SMEs), and they in rural areas are mainly from farm households in contradistinction to those in urban areas. With regard to market orientation, some studies found that rural enterprises appeared to be less market oriented for both output and inputs than their urban counterparts.<sup>21</sup> Further, Chuta and Liedholm (1985) found in Sierra Leone that the growth rates of a number of establishments of and persons employed in SMEs were directly related to the size of the locality, indicating that the growth rate of SMEs in urban areas is higher than that in rural areas. An important reason given by Anderson (1982) for the relative growth of SMEs in urban areas, as compared to their rural counterparts which are declining or stagnating, is that the market in an urban area or a centre is larger than that in a rural area or centre due to e.g. a larger population (actual or potential buyers), higher real income per capita, and, more importantly, larger middle and high-income segments in the market, while

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<sup>19</sup> This is also indicated by Hoselitz's study (1959) on early industrialists in Germany who started out as artisans or craftsmen and grew later on into large sized establishments of industry.

<sup>20</sup> See for example Anderson (1982), Chuta and Liedholm (1985), Haggblade *et al* (1989), and Steel (1977).

<sup>21</sup> See for instance Steel (1977) and Chuta and Liedholm (1985).

all this may be faster expanding than in rural areas. This condition creates more opportunities for urban SMEs, as compared to their rural counterparts, to expand their output or to diversify their market; and for urban SMEs servicing the urban high-income segment they can also grow rapidly as urban demand from this income group increases.<sup>22</sup>

Moreover, intermediate demand from LEs is mainly concentrated in urban areas. This may thus give more opportunities for urban SMEs servicing this market segment (e.g. through subcontracting) to grow. In rural areas or isolated regions, on the other hand, local enterprises are engaged in the production of more traditional and low or negative income elasticity goods, for a small local market, in particular for rural low-income segments (Mazumdar, 1976). Byerlee (1973) gives his own reason to believe that such different patterns of change and development are really occurring. He states that the supply and demand pattern of rural enterprises is different from that of urban enterprises from the same size group. Both the demand for output and the supply side of the former industries are closely related to agricultural incomes and production, which are varying seasonally.<sup>23</sup>

To sum up, given the above differences in characteristics and environments, urban SMEs may face problems and opportunities to grow which are different than those faced by their rural counterparts, and, thus, it can be expected that economic development in terms of income increases and market demand changes affect rural and urban SMEs differently.

As by Hoselitz (1959), Anderson (1982) predicts that advantages of SMEs will diminish over time and that LEs will eventually predominate. But, the experience of major Western European countries which shows the re-emergence of SMEs (Sengenberger, *et al.*, 1990) the increasing importance of SMEs in Japan and NICs that are closely integrated with large scale industries through subcontracting networks and the growing body of literature on post-Fordist modes of production and flexible specialization, may suggest that the above theory is rejected.<sup>24</sup>

## II.2.2 "Modern" Theories

### *Thesis on flexible specialization*

In the 1980s a new issue of so-called "flexible specialisation" has emerged and since then many research or seminar papers and books on this have been published. This new issue came into being as a result of a long

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<sup>22</sup> Authors such as Anderson and Khambata (1981), Liedholm and Chuta (1976), Mazumdar (1976), Page and Steel (1984), and van Dijk (1978) argued that it is rather the urban SMEs than the rural ones who may have more opportunities to grow. In other words, in urban areas or cities SMEs may be growing while their rural counterparts are declining or stagnating.

<sup>23</sup> See e.g. Islam (1987), Saith (1991), and White (1976).

<sup>24</sup> See e.g. Acs and Audretsch (1990a, b), Jessop. (1992), Goodman and Bamford (1989), Piore and Sabel (1983, 1984), Pyke, *et al.* (1990), Schmitz (1995a,b), and Sengenberger *et al* (1990).

debate over how to interpret the new global pattern of production caused by globalisation forces and industrial restructuring. These have changed the way in which production and labour are organised. Some authors have argued that global production is undergoing a transformation from Fordist (or mass production) to non-fordist production.<sup>25</sup> Flexible specialisation is seen as one of its most distinctive features (Piore and Sabel, 1984).

The concept of flexible specialization has been closely associated with Piore and Sabel's (1984) seminal work on the "second industrial divide" in which they discussed the re-emergence of craft based regions in some countries in West Europe, i.e. Italy, Austria and Germany.<sup>26</sup> In examining the development of craft based regions in these countries, Piore and Sabel (1984) have argued that SMEs located in these regions have become the new dominant form of industrial organisation. These industries are characterized by high and multi-skilled workers, "flexible" machinery which embodies the latest technology and small batch production of a range of specialised products manufactured for the global market. There are four common organisational forms of flexible specialisation identified in Piore and Sabel's (1984) study:

- 1) flexible and specialisation: firms in the community can rapidly adapt their production techniques but remain specialised in the production of one type of good, for instance, garments;
- 2) limited entry: firms in the community form part of a bounded community from which outsiders are largely excluded;
- 3) high level of competitive innovation: there is continuous pressure on firms in the community to promote innovation in order to keep an edge on their competitor;
- 4) high level of co-operation: there exists limited competition among firms in the community over wages and working conditions, encouraging greater co-operation between them.

Since the publication of Piore and Sabel's (1984) book, not only these new characteristics and modes of industrial organisation have been widely discussed, but several authors have attempted to assess the relevance of the flexible specialisation paradigm in industrial districts dominated by SMEs in developed countries, and many others have also attempted to assess the implications for industry, in particular SMEs, in LDCs.<sup>27</sup>

The main argument of the flexible specialisation thesis is that SMEs can grow fast or even faster than LEs with the process of development. In these West European countries, but also in other developed

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<sup>25</sup> See for instance, Piore and Sabel (1983, 1984) and Scott (1988).

<sup>26</sup> In their interpretation, the first industrial divide occurred during the nineteenth century with the emergence of mass production, and the second industrial divide has occurred in the late twentieth century with the re-emergence of craft industries (Piore and Sabel, 1994).

<sup>27</sup> See discussions on and the empirical assessments of this concept in among others: Acs and Audretsch (1990 a,b), Pyke (1992, 1994), Pyke and Sengenberger (1991, 1992), van Dijk (1992, 1993), Sengenberger *et al* (1990), Storper (1990), Kiely (1994), Rasmussen, *et al.* (1992), and Suarez-Villa (1989).

economies like Japan, Sweden and United States, SMEs in some subsectors such as electronics and automotive have been found to be very significant as sources of invention, innovation and efficiency. They have been found to be capable to stand the competition with LEs, and even to improve their relative position these days in several instances.

In the literature on flexible specialisation it is cited explicitly that new technologies (the numerically controlled tools and the computer) promote the relative viability of SMEs and reduce scale economies and lead to smaller efficient plants and firms. Also the need to increase the ability of industry to meet rapid changes in demand (especially in the world market) promptly, cheaply and efficiently has created a new role of SMEs in developed economies. So, this "new role" of SMEs in the economy can be used as an argument against the proposition of Anderson, among others, that in the long-run the economy will be dominated by LEs in terms of employment and output.

#### *The economic benefits of agglomeration and clustering*

UNIDO (United Nation Industry and Development Organization) defines a cluster as a sectoral and geographical concentration of enterprises (Richard, 1996). In literature on cluster of SMEs based on empirical studies in a number of West European countries, it is stated that if the small and medium entrepreneurs cooperate in a cluster, their ability to increase the competitive edge and output growth and to develop their business will be much better than when they work individually. As Richard (1996) put it as follows: *The European experience seems to suggest that SMEs might not be at a disadvantage at all compared to large firms, as long as they were able to benefit from the advantages of clustering.* (page 4)

Through a co-operation of enterprises in a cluster, they may take advantages of external economies: presence of suppliers of raw materials, component, machineries and parts; presence of workers with sector-specific skills; and presence of workshops that make or service the machineries and production tools. A cluster will also attract many traders to buy the products and sell the same to distant markets, and makes it easier for the government, LEs and universities to provide services such as technical and management training, and general facilities such as a large machinery for raw material drying and processing into half-finished goods.

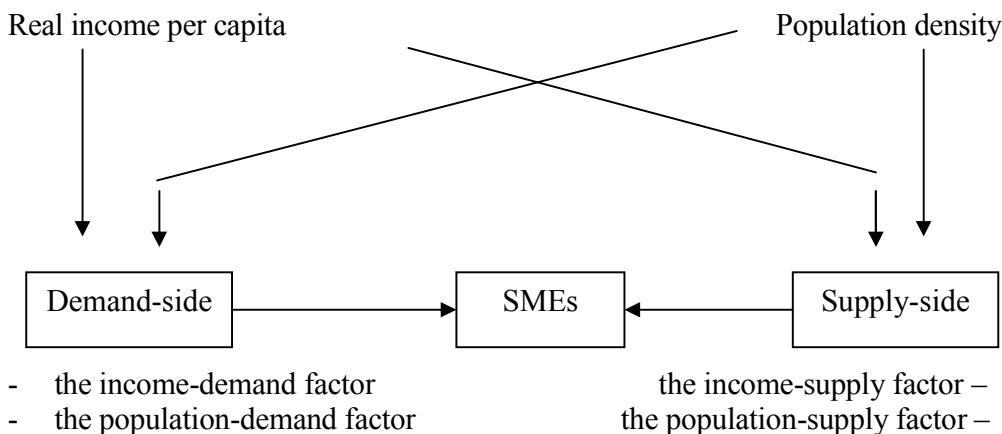
There is also a growing body of empirical studies on mostly rural SME clusters in many LDCs. But, not all of these studies have found the same evidence as that from the West European countries. Although they are located in clusters, they do not form strong interrelations among themselves in the clusters or with large firms in or outside the clusters based on groups of related products, and many clusters do not have service institutions or common facilities. There is also no evidence on continues and significant product and process

innovation and productivity growth, which are spurred by both competitive and cooperative relations between them; not as what is generally expected from forming a cluster according the literature on flexible specialization based on the West European experiences. These many poorly-performing SMEs clusters in LDCs may give an explanation to the fact that although rural areas in these countries are crowded by SMEs clusters, many of the clusters have not contributed powerfully to rural industrial development in the country.<sup>28</sup>

### II.3 Main factors affecting the pattern

In the literature on SMEs or rural industries in LDCs, among other factors, the level of real income per capita and population density are often cited as two important factors affecting the pattern or the nature of development and change of the industries. As illustrated in Figure 1, theoretically, these two explanatory variables affect the transformation process of SMEs through their direct effects simultaneously on the demand-side (output market) and the supply-side (labour market) of the enterprises. The demand-side and supply-side effects of changes of these two factors are reflected in the changes of market demand for the SMEs' goods and in the changes of labour supply to the enterprises, respectively.

Figure 1 Two factors and their effects on the transformation process of SMEs



#### II.3.1 The income-demand factor

<sup>28</sup> In addition to the literature given in footnote 26, see also Humphrey (1995a,b), Knorringa and Weijland (1993), Sandee (1995), Smyth (1990a), and Tambunan (1994).



- Changes of demand over time

Systematic changes in the level and pattern of demand for SMEs' goods as per capita income rises constitute an important demand factor often mentioned in the literature. With respect to final demand, as income increases the demand shifts gradually from food to non-food or manufactured goods (according to Engels' Law) or from simple (traditional) towards more sophisticated (modern) manufactured goods; or as stated in Biggs and Oppenheim (1986, p.1): *On the demand side, increases in per capita income result in a shift away from basic commodities towards products which require a more sophisticated organization of supply and division of labor.*

This structural shift in the final demand leads to the decrease in the market demand for "inferior" goods, which are mainly produced by CHIs, and the increase in the market demand for high income elasticity goods, produced mainly by LSIs and to a lesser extent SSIs and MSIs.<sup>29</sup> As regards intermediate demand, the higher the level of development or industrialization the more industrial demand exists for sophisticated intermediate and capital goods.<sup>30</sup>

All these changes in demand lead to the gradual changes in the manufacturing subsectoral composition of SMEs as well as to changes in the size distribution of enterprises, as also cited in Biggs and Oppenheim (1986, p.1): *Changes in the pattern of domestic demand affect the size distribution of firms principally through their influences on the sectoral composition of output. If demand shifts towards those goods which are most efficiently produced by large firms, then this will be reflected in the aggregate size structure of manufacturing activity.* In other words, as mentioned before, this kind of demand shifts in the course of income increases over time may affect enterprises such as CHIs producing inferior goods negatively. However, as generally argued in the literature on "flexible specialization", changes in the pattern of world demand in the 1980s, especially for consumption goods, in some cases have been more in favor of small, flexible and efficient plants.

From this debate between the "classical" literature on SMEs in LDCs and the literature on flexible specialization, heavily based on experience of SMEs in developed countries, which are very different in nature from those in many LDCs, it can be concluded that the effect of income increases, and hence demand changes or shifts, on SMEs can be positive or negative, depending especially on the characteristics of the change and how the SMEs adjust to it. The effect can be positive, as generally argued in the literature on flexible specialization, for smaller but more efficient plants, which can be characterized by three main

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<sup>29</sup> Biggs and Oppenheim (1986) also argue that the emergence of new products (often import) and new technologies with the process of development have made some traditional products and crafts obsolete.

<sup>30</sup> The patterns' studies of such as Chenery and Syrquin (1975), and Kuznets (1976), all provide a wealth of evidence to support this proposition. It can be said that there are also "inferior intermediate goods", which means that the higher the level of development the lesser industrial demand exists for these goods, for example, bamboo versus stone for buildings or houses.

features. Firstly, they employ highly skilled wage workers. Secondly, they are well-organized and managed and have records of their daily activities. Thirdly, they adopt a certain degree of labor division.

So, in comparison with most SMEs in LDCs, it can be argued that this modern or "western" type of SMEs has a high ability in meeting rapid changes in demand (market). In contrast, the effect can be negative, as seems to be generally suggested by the classical literature on SMEs in LDCs, especially for CHIs, which use mainly low skilled family workers without any kind of labor division and without support of a good management system. In terms of number of units and workers employed in them, SMEs in LDCs are still dominated by these traditional, craft-based enterprises, and the majority of them are concentrated in rural areas. Because of their "primitive" way of doing business, they may not be able to compete with modern enterprises or to meet rapid changes in demand or market (Saith, 1987).

- Demand for SMEs' goods in rural areas

Knowing that a vast majority of SMEs that consists of CHIs in LDCs are located in the rural areas, the effect of rural income increases over time on rural demand for rurally made goods is an important issue. It is often thought that in the course of rural development with the ensuing and encroachment of the urban culture and expenditure pattern and the improvement of infrastructure, which is usually accompanied with rural income increases, preferences of many rural people change in favor of goods with better quality produced by urban modern industries and from abroad (i.e. imported goods).<sup>31</sup> All this leads to the decrease of demand in rural areas for rural industries' goods. The entering of "urban goods" (including imported goods) into the rural markets, however, is not only related to the increase of rural income per capita, but also to the improvement of infrastructure in rural areas.

Anderson and Khambata (1981) try to explain this as follows. In conditions where agricultural output and rural incomes are rising the newly created markets, as a direct consequence of income, and hence demand, increases, for consumers and capital goods like machines, tools and equipments for agriculture are highly dispersed. In a rural area where infrastructure is poorly developed and transport services are badly organized, making it difficult to reach markets, the increase in local incomes and hence local demand induces a fragmented pattern of production in local industries. In a such condition rural industries are under the protection of extremely fragmented spatial markets.<sup>32</sup> When the infrastructure and transport facilities are improved, reducing the transport and marketing costs of many goods, not only the rural markets for those goods become broadened but it also permits an increasing degree of entry by urban based larger producers

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<sup>31</sup> See for example Gasper (1989), Saith (1987), and Weijland (1989).

<sup>32</sup> In addition, Staley and Morse (1965) also emphasize the importance of differentiated products having low scale economies and products servicing only small markets for the extent and growth of (rural) SSIs. A variety of tailoring and garments industries and especially foods and handicrafts industries belong to this category.

producing similar goods. In time and with continued development (including improvement in infrastructure and transport facilities) in the rural areas, the transport and marketing costs of goods from urban-based larger enterprises to the rural markets will decline to the point where local industries producing similar goods no longer have a cost advantage.

In other words, the improvement above will reduce all "natural" barriers for the urban-based industries goods to enter the rural markets (Anderson, 1982), and, with local income increases, traditional goods produced in rural areas will be replaced, gradually, by modern goods made in urban areas.<sup>33</sup>

However, the improvement of infrastructure and transport facilities in rural areas may also create new markets (in urban areas), and hence a new growth impulse, for rural industries. The improvement above makes it easier for rural producers to sell their products, either with the help of traders or by themselves, in nearby urban areas. The improvement pulls rural small and medium producers to expand their business or change their market location. Thus, it can be expected that enterprises in villages near to urban centers produce more goods for urban demand or have larger market area than their counterparts in more isolated villages.

So, this implies that the rural-urban economic integration does not always mean that all rural industries would be outcompeted and die. It depends especially on how rural industries can adjust quickly, for example, by changing or diversifying their product lines, increasing their products' quality, and shifting their marketing strategy, in response to a changing situation (i.e., newly appearing market opportunities).

This ability to adjust does not depend only or primarily on the abilities of the owners/producers, but also more "objective" and general characteristics of the establishments themselves play a role. According to Chuta and Liedholm (1979), based on their own observations, rural industries most likely to be economically viable, and thus having better opportunities to grow in the long-run with the process of rural development and economic integration between rural and urban areas, reflect four common patterns:

- 1) those that use hired and better qualified workers;
- 2) those located in larger settlements;
- 3) those that operate in workshops away from home;
- 4) those involved in product lines with better economic prospects such as tiles, furniture, baking, garments, and repair activities.<sup>34</sup>

The increases in rural income stem mainly from the output increases in agriculture. The rise in agricultural productivity (and hence income) creates more demand for non-agricultural goods, implying that the demand

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<sup>33</sup> See for example Ho (1980), Saith (1987), Uribe-Echevarria (1991a,b), and World Bank (1983).

<sup>34</sup> Liedholm and Chuta do not give further a theoretical explanation on this. But, we can say that these product lines have better economic prospects because they are also sold to middle or even to high income groups of consumers.

constraint for rural industries' products is partly linked to the income growth in the agricultural sector (Islam, 1987). It is often argued, however, that the increased demand comes more from the wealthier landowning classes than from the poor farm households. The poor households spend a larger share of their incremental income on food grains than do the rich households.<sup>35</sup> This implies that as far as consumption demand is concerned, not only the level but also the distribution of income in agriculture is important in determining the growth of demand for SMEs' goods. Further, the increase of rural demand for non-agricultural products can be either catered to by local SMEs or by urban based LEs or by foreign industries.<sup>36</sup> In this regard, the survival of rural SMEs depends much on whether their goods can compete or not with those produced by urban based LEs or imported goods.

Although data on the expenditure behavioral pattern of rural households in relation to the demand for rural industries' goods are scarce and in many cases not very accurate, several studies managed to identify goods produced by rural industries and they show that the rural income elasticity of demand for rurally-produced non-food products is greater than unity. So, this evidence suggests that not all "rural industries" produce "inferior" goods. However, some argued that the value of income elasticities of demand in rural areas for rural manufactured "non-inferior" goods tends to decline progressively, while those for construction, recreation, transportation and services, including education and health care, tend to increase if long term trends are considered and significant income increases take place.<sup>37</sup> Thus, there seems to be an indication that the rural consumption of manufactured products tend to increase less than demand for the above mentioned items as rural income grows.

To sum up, the survive of SMEs in the long-run, in the course of economic development, depends on two main factors:

- 1) demand increase for SME's goods;
- 2) their ability to keep their market share or to stand the competition with LEs and goods from abroad.

### **II.3.2 The income-supply factor**

Changes in the level of real income per capita also affect the pattern of employment changes in SMEs in an industry or a sector via the supply side of the enterprises that is through the labor market in terms of labor movement into or out of the enterprises from or into LEs or SMEs in other industries or sectors. The

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<sup>35</sup> See for example Mellor (1976) and Hazell and Roell (1983).

<sup>36</sup> See studies from Bell *et al.* (1982), and Mellor and Johnston (1984).

<sup>37</sup> See, for instance, Byerlee *et al.* (1983), Hazell and Roel (1983), Liedholm and Chuta (1976). The extended linear expenditure system is often used as a means to estimate the elasticity based on income and expenditure surveys data in the rural areas. Unfortunately, they do not made a clear distinction between goods produced by CHIs and those by SSIs within the "rurally-made goods".

labor movement between two units of production is to a great extent caused by the wage or income gap between the two units.

The association between the increase or level of income and the growth or level of employment in, for instance SSI, via the labor market can be positive or negative. As regards the positive relationship, if real income per worker in, for instance, agriculture is relatively high or increases, reflecting high labor productivity in agriculture which leads to labor surplus in the sector, the supply of labor or/and entrepreneurs from agriculture to SSIs is also high or increases. With high earnings per hour or per day in agriculture, farmers or agricultural laborers have more time or more capital to undertake other non-farm activities.

With respect to the negative relationship, if real income per worker in agriculture is relatively high or increases, reflecting better work opportunities in the sector, the supply of labor from agriculture into SSIs is low or decreases ("negative growth of labor supply").<sup>38</sup> In terms of differences in level, it is theoretically expected that in a region with high income per capita there are less people engaged in SSIs in the region than in a region with lower income per capita.

Especially CHIs in rural areas are perceived as being operated largely by poor people or households, e.g. small farmers and landless agricultural workers. The industries act as a means for them to survive. It is generally believed that the people engaged in CHIs are being "pushed" to undertake such activities, either as a primary source of their income because they could not find other better jobs or as a secondary source of their income, which they need desperately in order to increase their total income.<sup>39</sup> This suggests that in a poor region in terms of low level of real income per capita the employment share of CHIs is higher than in a rich region with higher level of per capita real income. For instance, a study of Weijland (1992) of rural industries in Indonesia shows that in the settled outer islands, where the people are less poor and labor productivity in agriculture is high, employment in rural CHIs is lower and they are less specialized, making less work days per month and providing less primary incomes than those in the densely populated centre provinces, where the people are much poorer and labor productivity in agriculture is lower. With this finding, she suggests that high supply of labor to CHIs is related to a very low average productivity of labor in agriculture, representing relatively worse earnings in the sector.

The negative association between the increase of income and the growth of employment in SSIs, generating negative growth of labor supply to SSIs, may suggest another important issue, that is a positive

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<sup>38</sup> Less supply of labor or entrepreneurs to SSIs or many people engaged in the SSIs move out from the industries to other sectors.

<sup>39</sup> See among others, Ho (1986), Islam (1987); and Saith (1991).

relationship between the employment growth in SSIs and the increase of number of unemployed or poor people:<sup>40</sup> the higher the rate of unemployment or the level of poverty the more supply of labor to SSIs.<sup>41</sup>

To sum up, from the above discussions, the relationship between changes in the level of income and changes in the employment or output share of SMEs can be hypothesized, theoretically, as follows. The increase of income affects the SMEs activities positively through the product market (positive demand-side effect)<sup>42</sup> and the labor market (positive supply-side effect)<sup>43</sup> or negatively via the labor market (negative supply-side effect)<sup>44</sup> and the product market (negative demand-side effect). In other words, as income increases, it creates both supply-side and demand-side effects and the "net" effect of it can be negative or positive. If, say, the negative supply-side effect (i.e. less supply of labor) is weaker than the positive demand-side effect (i.e. more demand) of the income increases then the net effect will be positive for the SSIs. In this regard, in terms of differences in level (not in changes), it can be expected, theoretically, that in a region with a high level of real income per capita demand for goods produced by SSIs (and hence production volume and employment in the industries) in the region is higher than that in a region with a lower level of per capita income.

### **II.3.3 The population-demand factor**

The level of rural demand for rurally made goods does not only depend on the level of real income per capita (and other factors), but, among other factors, it also depends on population density in the rural areas. In Weijland's (1991) model of rural industries in Indonesia, the population density is also taken as an important demand-side factor. It can be expected that in a highly populated region local demand for goods produced by SSIs in the region is higher than in a less populated one.

### **II.3.4 The population-supply factor**

The population density changes also affect the pattern of employment change in, for instance SSIs, through its effect on the supply of labor to the industries. Before, it is stated that the decline of relative average real income per worker in agriculture will "push" labor out of the sector into rural SSIs (or other non-farm activities). An important causation of low average real income or productivity of labor in agriculture is the high population density caused by high annual growth rates of population in the rural

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<sup>40</sup> It can be assumed that the level of poverty is negatively related to the level of income per capita, though poverty is also determined by the nature of income distribution in a given level of income per capita.

<sup>41</sup> The relationship between the level of income per capita or poverty and the supply of labor to SSIs is often related to "push-pull" factors.

<sup>42</sup> Which it induces more demand for the SMEs' goods and, thus, increases the production volume and hence employment in them.

<sup>43</sup> That is a positive growth of labor supply to SMEs.

<sup>44</sup> That is a negative growth of labor supply to SMEs.

areas. An overpopulated rural area creates an oversupply of labor in the agricultural sector which results in a downward pressure on earnings per worker in the sector. If annual labor absorbing capacities of agriculture, MLSIs, and other sectors are limited, high annual rates of population growth may lead to high annual rates of growth in the supply of labor force into SSIs or other "marginal" activities.

White (1976) made a distinction between demand and supply factors in explaining the magnitude of rural non-farm employment. This employment is determined by a complex interaction between these two blocks of factors. He states (p.97) that: *There are two quite different types of conditions under which rural labor might shift out of agriculture: a) when labor is 'pulled' or attracted out of agriculture into better non-agricultural opportunities (for example, in an expanding manufacturing or industrial sector); or b) when labor is 'pushed' or forced out of agriculture by declining employment opportunities, into relatively worse non-agricultural employment conditions (for example, into these marginal occupations whose capacity to absorb large quantities of labor is only achieved at the cost of extremely low, and possibly declining labor incomes).*

To sum up, the relationship between changes in the population density and changes in the employment share of SME, is positive through the product market (positive demand-effect) and the labour market (positive supply-side effect). At a given level of real income per capita, the increase of population density creates more demand for the SMEs' goods and increases the supply of labor to the SMEs. In terms of differences in level, it can be expected, theoretically, that in a region with a high level of population density demand for the SMEs' goods and the supply of labor to the industries are higher than those in a less populated region.

#### **II.4 The Phenomenon of "push" versus "pull" factors**

It is stated before that the relationship between changes in the employment share of, for instance SSIs, and changes in the level of real income per capita can also be negative, when the increase of income, reflecting better work opportunities in other sectors, leads to a "negative growth of labor supply" to SSIs. This suggests that SSIs activities, at least many of them, act merely as a "last resort" for the poor. Most people engaged in SSIs, particularly in CHIs, are from poor households. Because they have low education they could not find other better jobs. So, they undertake SSIs activities, either as a primary or secondary or as a temporary or permanent source of their income, mainly as a means for them to survive. SSIs are the most important rural non-farm activities in many LDCs.

As a World Bank's study in 1980 points out that the relative expansion of rural non-farm employment is susceptible to favorable or unfavorable interpretation. The question is: whether the growth of rural SSIs reflects an "involutionary" pattern of rural development, as increasingly impoverished rural or farm households try to maintain their minimum incomes through increased participation by household members

in non-farm activities or is it a result of an economic development or diversification of economic activities in the rural areas? An alternative question: is the increased involvement of rural people in SSIs, as Ho (1986a) stated, a symptom of distress or a sign of progress or development?

The most intractable component of rural poverty in LDCs is the indigence of the landless and near-landless labourers and the marginal farmers who have no or very little access to agricultural land. Many of them must undertake nonfarm activities, often under self-employment, in order to avoid unemployment and starvation. Saith (1991) states that (p.468): *Typically, rural households with inadequate access to land seek non-farm employment in the slack agricultural season. As such, non-farm employment tends to even out the sharp peaks and troughs of the monthly employment and income generation pattern of rural households.*

Islam (1983) argues that the increased involvement of rural poor farm households in nonfarm activities, especially in more densely populated agricultural areas where the number of poor households is likely to be relatively higher, is a sign of distress adaptation to growing poverty and landlessness, since these activities may be undertaken only as a "last resort".

### **III Recent Data on the Performance of SMEs in Indonesia**

#### **III.1 Definitions**

In Indonesia, many government agencies have their own definitions of SMEs. The Ministry of Industry and Trade (MoIT), the Ministry of Finance (MoF), the central bank (Bank Indonesia or BI), and the State Ministry of Co-operative and Small and Medium Enterprises (Menegkop & UKM) use monetary measurement units (assets and sales) for their definition on SMEs. For instance, according to the MoIT, SEs are those with assets (excluding land and buildings) less than 200 million rupiah; MEs from 200 million rupiah up to 5 billion rupiah; and more than 5 billion rupiah are LEs.

Whereas, the definition of SMEs adopted by the National Agency for Statistics (BPS) is based on number of workers. According to this definition, SEs are enterprises that employ 5 to 19 workers, regardless of other business indicators such as amount of initial investment and value of output or value added and disregarding whether or not they use power-driven machinery. Units of production or business entities using 0 to 4 workers are defined as micro enterprises, officially called as cottage or household enterprises (CHEs). This category of enterprises also includes self-employment units with no hired workers or helpers. Units with more than 19 workers are classified as medium and large enterprises (MLEs). In manufacturing industry, SEs, MEs, or SMEs, and LEs are called respectively small-scale industries (SSIs), medium-scale industries (MSIs), small-and medium-scale industries (SMIs), and large-scale industries (LSIs); whereas micro enterprises are called cottage and household industries (CHIs). The SSIs, in comparison with the CHIs, are often called modern small industries or small factories. A factory is a work-place where the production



process is carried out and it is separated from household premises. So, the concept "small factories" suggests that in manufacturing industry the SSIs are more mechanized than the CHIs. The former group uses more power-driven machinery, while in the latter group hand-work is predominant. The production process in the SSIs is better organized and managed than in the CHIs. The SSIs employ mainly wage-labour and there is extensive division of labour, while the CHIs use mostly non-paid family members (wife and children) and other relatives of the owners as workers without any division of labour.

In practice, it is, however, not always easy to see a clear boundary between the category of CHIs and that of SSIs in terms of having or not having factories (except the number of workers employed in them), employing family members or hired workers, well or badly organized business (production process), etc. Indeed, in very traditional industries, such as artisan activities, the production unit is the family and the place of production is the house. This really means that people engaged are working in the living room, and products are stored inside the house, such as in bedrooms or kitchens. But, traditional industries do not always mean small production units or CHIs with 1 to 4 workers. There are many rural industries with, on average, 10 to 20 workers without factories and using not any machine. Similarly, CHIs, as defined by BPS, do not always mean production units without factories or workshops. For example, there are many rice mill industries in rural Java with 3 to 4 workers, on average, which have big factories and use large and modern mill machines. In fact the number of employees is a simplifying but statistically quite convenient indicator for identifying SSIs and CHIs, which may give rise to such problems mentioned above.

### **III.2 New Attitude towards SMEs**

In Indonesia, SMEs as a group has historically been main player in domestic economic activities, especially as a large provider of employment opportunities, and hence a generator of primary or secondary source of income for many households. For low income or poor farm households in rural areas, SEs, i.e. units of under 20 workers, in non-farm activities are especially important. These enterprises have also been playing as an important engine for the development of local economies and communities. But, as compared to many other countries, especially developed economies, SMEs in Indonesia have not been proved to have contributed significantly their value added to the country's economy. Instead, they have been more important as the locus of most employment than of gross domestic product (GDP) growth in Indonesia.

In the last few years, the Indonesian government has recognized the importance of having modern SMEs as an important element in creating a sophisticated economy, especially through their role in developing inter-industry linkages, or as supporting industries producing components and parts for LEs either, via market mechanisms or subcontracting systems or other form of production linkages. In

developed countries, it is the role of SMEs to act as suppliers to industries producing final goods, therefore creating a permanent, vibrant and inter-linked industrial base. Indonesia has suffered from the lack of a sophisticated domestic supplier network, which would have allowed intermediate inputs, components, and parts to be produced locally instead of being imported (Banerjee, 2002).<sup>45</sup>

Also recently, the SMEs as a group in the country has been recognized to have another important role to play, namely as an important engine for development and growth of exports of non-oil and gas, particularly in manufacture. This stems from evidence showing that the most successful cases of SMEs development in East and Southeast Asian countries like South Korea, Taiwan, Hong Kong, and Singapore, have been directly related to trade and the adoption of export-oriented strategies. The experience of these countries indicate that SMEs can compete effectively in both domestic and international.

Last, but not least, SMEs could also play a powerful role in energizing agriculture through the development of high competitive agricultural-based (*agro*) industry. Agricultural-based production is a clear area where the country has enormous room for development, simply because Indonesia is a large agrarian economy owning a huge variety of agricultural commodities. Unfortunately, until now this country's potential has not yet been exploited very well, as compared to its regional and international counterparts. Even, in the last few years Indonesia has become an important importing country for many agricultural commodities including rice and a variety of vegetables and fruits.<sup>46</sup>

### **III.3 Performance of SMEs**

#### **III.3.1 Number of Units and Workers Employed**

The importance of SMEs for the Indonesian economy is observable reflected by their relatively huge number of units. Indeed, a significant feature of the Indonesian economy is the domination by this category of enterprises, in particular SEs. Totally, in all sectors of the economy, the number of SMEs is huge and it keeps growing; though there was a decline during the 1997 economic crisis. Their number of units is larger than that of LEs. Especially SEs are found in all over the country, in urban as well as rural areas.

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<sup>45</sup> In the literature on the 1997 economic crisis in Southeast Asia, an extremely high level of the country's import dependency, especially LEs, is often argued as an important factor that has brought Indonesia into the crisis. The high level of import dependency in manufacturing industry has been the result of a combination of rapid development of domestic downstream industries producing final consumption goods, mainly through assembling methods of production, on one hand, and, on the other hand, underdevelopment of domestic supporting industries during the new order regime. Therefore, since the crisis, the Indonesian has been trying through various programs to develop domestic supporting, in which the SMEs can take an important part in it.

<sup>46</sup> As shown in some tables in this chapter, SMEs, or SEs in particular are concentrated in the agricultural sector, and in manufacturing industry the majority of SMEs are industries processing agricultural commodities, such as food and beverages and tobacco. Indeed, one important traditional characteristic of SMEs in Indonesia is that they are mainly agricultural-based activities.

Such entities contribute the bulk of units and employment in sectors such as agriculture, trade, manufacturing industry and transportation.

SEs' continuing role as the locus of most impolument in Indonesia is reflected in the fact that in 1997, SEs contributed more than 39.7 million units, or constituted about 99.8% of all business units in that year, and there were an estimated more than 40 million units in 2001 (Table 3). In 1998, as the economic crisis has had a devastating impact on almost all economic sectors in the country, many companies in all size categories went bankrupt.. Based on data from Menegkop & UKM, there was an estimated almost 3 million SEs were out of business, and the number of MEs and LEs declined by respectively 14.2% and 12.7%. In 2000, there were about 38.99 million units of SEs with average annual sales of less than Rp.1 billion rupiah per unit, or accounted for about 99.85% of total number of enterprises in Indonesia. In the same year, there were 55,061 units of MEs, with annual sales of more than Rp. 1 billion but less than Rp. 50 billion, or accounted for 0.14% of all firms. In 2001, the total number of SEs was predicted to increase to more than 40 million units, whereas MEs to about 57.7 thousand units.

Table 3. Total Enterprises by Size Category: 1997-2002

Size Category	1997	1998	1999	2000	2001*
Σ SEs	39,704,661	36,761,689	37,804,536	38,985,072	40,137,773
Σ Mes	60,449	51,889	51,798	55,061	57,743
Σ LEs	2,097	1,831	1,832	1,946	2,095
Total	39,767,207	36,815,409	37,858,166	39,042,079	40,197,611

Note: \* = official prediction

Source: Menegkop & UKM (2001)

The number of SMEs varies not only by sector but also between SEs and MEs in individual sectors as well. The majority of SEs was found in agriculture, including fishery, livestock and estate (see Table I in Appendix); whereas, their medium counterparts concentrated in trade, hotel and restaurant and in manufacturing industry. In 1997, about 22,511,588 units of SE were found in agriculture, and increased in 1998 to 23,097,871 units, or grew by 2.6%, as compared to MEs with an estimated growth of 1.2%. The increased units of SME in agriculture during the crisis period was generally assumed to have closely linked to the “boom” experienced by many farmers, especially in estates, as a positive effect of the rupiah depreciation against the US dollar. The depreciation had improved their price competitiveness, and so their exports went up. Thus, the crisis was for many farmers as a “blessing in disguise”.

Apparently, this experience was different from that faced by many SEs in manufacturing industry during the same year. In this sector, the number of SEs declined from 2,817,379 units in 1997 to 2,104,856 units in 1998. With more than 22.5 million units, SEs represented about 56.61%, as compared to MEs with only 0.004%, from total units of all size categories in agriculture. In 1998, the share of SEs in agriculture went up to 62.74%, whereas in manufacturing industry downed to 5.72% from 7.09% in 1997.

The distribution of SEs by sector as described above may indicate that this size category of entities, as compared to MEs as well as LEs, in Indonesia have more comparative advantages in agricultural production than in other sectors. But this apparent concentration of SEs in agriculture may also reflect the fact that they are not so strong yet in manufacturing production, especially those require more skill, modern technology, a huge of capital, and advanced knowledge..

It does not mean, however, that not so many SEs in manufacturing industry. Data from the MoIT show that in terms of number of units, the sector is predominated by SSIs (Table 4). Their number increased from about 2.1 million units in 1998 to almost 2.9 million in 2001. During that period, SSIs grew on average 11.1% per year, higher than the annual growth rates of their larger counterparts, i.e. MSIs and LSIs with respectively 6.24% and 6.45%.

Table 4 Total Number of Enterprises in Manufacturing Industry by Size: 1998-2001 (000 units)

Classification	1998	1999	2000	2001	Annual Growth rate (%)
Industry	2,115.03	2,536.89	2,725.38	2,886.58	11.10
SSIs	2,104.86	2,526.16	2,713.86	2,874.38	11.12
MSIs	9.54	10.06	10.81	11.44	6.24
LSIs	0.63	0.67	0.71	0.76	6.45

Source: MoIT (2002)

SMEs in Indonesia are especially very important for employment creation. This argument is based on the empirical fact that this group of enterprises employed more people than LEs did. They are expected to continue to provide many new employment opportunities through the establishment of new businesses and the entry into new markets, including export markets. In 2000, there were more than 66 million people worked in SEs, or accounted for about 99,44% of total number of employees; an increase of 12,04%, or about 7,2 million people than in 1999 (Table 5). As a comparison, in 1999 there were about 7,1 million people found in MEs, and increased by 6,4%, or almost 460 thousand people to 7,5 million people in 2000 (Table 6).

Table 5 Total Number of Workers in SEs by Sector, 1997-2000 (persons)

Sector	Year				Growth (%), 1997-1998	Average growth (%), 1998-2000
	1997	1998	1999	2000		
Agriculture (1)	29,277,201 (44.63)*	23,579,182 (43.12)	31,839,125 (47.46)	32,305,488 (43.22)	-19.5	17.1
Mining (2)	352,280 (0.54)	247,408 (0.45)	295,681 (0.44)	433,403 (0.58)	-29.8	32.4
Manufacture (3)	6,390,888 (9.74)	4,986,156 (9.12)	4,883,012 (10.26)	10,527,811 (14.08)	-22.0	45.3
Electricity, gas & clean air supply (4)	64,204 (0.10)	41,571 (0.08)	5,614 (0.01)	91,149 (0.12)	-35.2	48.1
Construction (5)	673,308 (1.03)	397,653 (0.73)	334,252 (0.50)	643,742 (0.86)	-40.9	27.2
Trade, hotel & restaurant (6)	14,351,830 (21.88)	13,380,010 (24.47)	15,551,379 (23.18)	16,975,428 (22.71)	-6.8	12.6

Transport & communication (7)	2,410,042 (3.67)	1,932,265 (3.53)	2,110,848 (3.15)	2,333,671 (3.12)	-19.8	9.9
Finance, rent & service (8)	447,579 (0.68)	145,917 (0.27)	69,698 (0.10)	241,194 (0.32)	-67.4	28.6
Services (9)	3,515,356 (5.36)	2,631,800 (4.81)	2,557,113 (3.81)	3,276,004 (4.38)	-25.1	11.6
Total	57,482,688	47,341,962	59,646,722	66,827,890	-17.6	18.8
Total workers**	65,601,591	54,678,066	67,082,448	74,746,551	-16.7	16.9

Note: \*) as a percentage of total workers in all enterprises (including MEs and LEs); \*\*) in all enterprises (i.e. SMEs and LEs)  
Source: Menegkop & UKM (2001).

Table 6 Total Number of Workers in MEs by Sector, 1997-2000 (persons)

Sector	Year				Growth (%), 1997-1998	Average growth (%), 1998-2000
	1997	1998	1999	2000		
1	614,188 (0.94)*	644,927 (1.18)	684,748 (1.02)	730,752 (0.98)	5.0	6.5
2	115,662 (0.18)	127,332 (0.23)	125,152 (0.19)	124,764 (0.17)	10.0	-1.0
3	3,676,277 (5.60)	3,343,371 (6.11)	3,418,840 (5.10)	3,664,110 (4.90)	-9.1	4.7
4	70,411 (0.11)	71,239 (0.13)	77,087 (0.11)	83,579 (0.11)	1.1	8.3
5	338,907 (0.52)	307,933 (0.56)	302,907 (0.45)	342,118 (0.46)	-9.2	5.4
6	1,712,591 (2.61)	1,403,468 (2.57)	1,397,429 (2.08)	1,461,131 (1.95)	-18.1	2.0
7	252,337 (0.38)	214,159 (0.39)	212,627 (0.32)	237,063 (0.32)	-15.1	5.2
8	242,408 (0.37)	177,855 (0.33)	163,502 (0.24)	172,397 (0.23)	-26.6	-1.6
9	703,487 (1.07)	681,327 (1.25)	693,323 (1.03)	719,174 (0.96)	-3.2	2.7
Total	7,726,268	6,971,611	7,075,615	7,535,088	-9.8	4.0
Total workers**	65,601,591	54,678,066	67,082,448	74,746,551	-16.7	16.9

Note and source: see Table 5

Apparently, the greater parts of employment in all sectors of the economy were found in SE, with agriculture as the largest one; whereas employment in MEs was concentrated in electricity, gas, and water supply, construction, and manufacture (Table 7). Once again, this distribution of employment by size groups of enterprises confirms, as indicated earlier by the distribution of units, that SEs are more specialized in agriculture and MEs in secondary sectors.

Table 7 Distribution of Workers in SEs, MEs and LEs by Sector, 1997 and 2000 (%)

Sector	1997				2000				Average growth (%), 1997-2000		
	SE	ME	LE	Total	SE	ME	LE	Total	SE	ME	LE
1	98.0	2.01	0.13	100.0	97.7	2.2	0.1	100.0	3.3	6.0	-1.9
2	73.5	24.1	2.4	100.0	75.9	21.9	2.2	100.0	7.2	2.6	2.5
3	62.0	35.7	2.4	100.0	72.9	25.4	1.7	100.0	18.1	-0.1	-0.1
4	45.1	49.5	5.4	100.0	49.6	45.5	5.0	100.0	12.4	5.9	6.1
5	66.04	33.2	0.7	100.0	64.8	34.4	0.75	100.0	-1.5	0.3	0.1
6	89.2	10.6	0.2	100.0	91.9	7.9	0.2	100.0	5.8	-5.2	-5.2
7	90.1	9.4	0.5	100.0	90.4	9.2	0.4	100.0	-1.1	-2.1	-2.0
8	63.8	34.5	1.7	100.0	57.2	40.9	2.0	100.0	-0.2	-10.7	-10.7
9	82.8	16.6	0.6	100.0	81.5	17.9	0.7	100.0	-2.3	0.7	0.8

Source: Menegkop & UKM (2001).

One interesting fact from Table 7 is that during that period under review, which includes the crisis episode (1997-1998), SEs as also MEs have experienced some losses in employment in some sectors, while gained in others. The lost was attributable to the fact that many enterprises hit adversely by the crisis had to stop their business activities or to cut off their volumes of production, and as a direct consequence of that, many workers were out of jobs. Whereas, the gain was most probably due to firms which have benefited from the crisis: those who were in export activities of agricultural commodities or produced simple manufactured goods that used much less imported inputs.

The growth of employment in SMEs results from both the net creation of new enterprises and the employment growth of existing enterprises. Though existing data from BPS do not permit a disaggregation between these two sources of employment growth in SMEs, there is some information provided by Steel (1993), which suggests that birth of new enterprises is important. His study shows that over the period 1975-90 there was considerable graduation from MEs into LEs. Whereas in 1990 almost 64% of total employment in MEs and LEs as a group was located in enterprises with 500 or more workers, in 1975 there was only around 29%. As he focused only on MEs and LEs, no information from his study that can answer the question whether the growth of employment in SEs or MEs was resulted from new enterprises in particular size categories or more workers employed in existing enterprises.

Other evidence on the growth trajectories of enterprises comes from a study by Berry and Levy (1999), based on a sample of 33 rattan furniture producing and exporting firms in Jakarta and Surabaya conducted in 1992. Nearly half of the 33 firms interviewed started in 1988 or 1989; while the rest entered either in the 1970s or in 1991. Size at start-up varied widely: 7 sample firms began with 10 or fewer workers; 1 with over 500. Mean initial size of the firms with 10 or less workers was 6 persons, and the current size mean by date of sample in 1992 was 237. On average, the 33 sample firms began their business with 136 workers and had 377 people employed in 1992, by which time the average firm age was about 10 years.

### **III.3.2 GDP Contribution and Productivity**

The importance of SMEs in Indonesia in terms of GDP contribution is always less than their role as the source of employment. Data from Menekop & UKM show that in real terms, GDP of SEs in 1997 was 38% (Table 8). In 1998, when the crisis reached its worst level with the economic growth of minus 13%, output contribution of SE to the formation of real GDP rose slightly to almost 41%; though in nominal value it declined. In 1999, the share increased to about 41.3%, and after that in 2000 it declined again slightly to 40.4%. During the crisis period (1997-1998), the growth rate of total SEs' output was minus 19.3%, and after

the crisis (1998-2000), they performed much better, though the average growth rate per year was still negative of about 2.5%. The largest GDP contribution of SEs was found in agriculture, not in manufacturing industry. Again, as shown before by other indicators, this is reflected in the fact that these enterprises traditionally are strong in agricultural production; not yet in industrial production as their counterparts in other APEC economies like Japan, South Korea, and Taiwan.

Table 8 GDP of SEs by Sector (at Constant Price), 1997-2000( billionRp)

Sector	Year				Growth (%), 1997-1998	Average growth (%), 1998-2000
	1997	1998	1999	2000		
1	2,968,621.2	2,741,112.0	2,932,167.1	2,632,570.6	-7.7	-2.0
2	256,153.8	108,013.7	116,284.2	108,261.6	-57.8	0.1
3	921,933.5	795,641.2	698,737.6	675,131.2	-13.7	-7.9
4	2,232.0	1,283.7	1,393.2	1,234.6	-42.5	-1.9
5	414,571.0	431,046.6	401,820.5	391,190.1	4.0	-4.7
6	2,813,468.4	2,099,544.2	2,309,015.1	2,030,210.3	-25.4	-1.7
7	541,337.5	338,046.8	428,819.0	389,936.3	-37.6	7.4
8	334,868.0	224,110.5	213,999.2	199,719.3	-33.1	-5.6
9	729,917.7	509,596.1	529,943.1	458,498.6	-30.2	-5.2
Output SE	8,983,102.6	7,248,394.7	7,632,179.0	6,886,752.6	-19.3	-2.5
% *	38.0	40.9	41.3	40.4		
Total G DP	23,664,119.1	17,725,462.2	18,470,792.1	17,031,708.0	-25.1	-2.0

Note: \* = of total GDP

Source: Menegkop & UKM (2001).

Total output of MEs, on the other hand, as a percentage of GDP in real value was about 16.3% in 2000, fell from 19.3% in 1997 (Table 9). During the crisis period (1997-1998), their output also experienced a negative growth with almost 35%. This may suggest that MEs were the most adversely affected enterprises by the crisis than their smaller counterparts; although the effect varied among sectors. Most probably as one explanation is that the level of import dependency of MEs was much higher than that of SEs, as the latter group of enterprises used mostly local inputs. After the crisis (1998-2000), the condition of MEs also improved, though the average growth rate per year was still negatif and higher than that of SEs.

The largest GDP contribution of MEs was generated from manufacturing industry. Although the value declined significantly during the period under review, i.e. from almost Rp 1,300 trillion in 1997 to Rp 566 trillion in 2000, it was still the dominant sector of the MEs' GDP contribution. This difference in the GDP structure between SEs and MEs provides a clear indication that the latter enterprises are more specialized in producing industrial goods than the former ones.

Table 9 GDP of MEs by Sector (at Constant Price), 1997-2000 (billionRp)

Sector	Year				Growth (%), 1997-1998	Average growth (%), 1998-2000
	1997	1998	1999	2000		
1	642,932.6	579,315.0	552,889.7	488,543.9	-9.9	-8.2
2	151,576.1	86,023.6	81,198.4	76,179.8	-43.3	-5.9
3	1,288,874.7	699,867.5	614,369.4	566,424.9	-45.7	-10.0
4	24,245.6	17,091.2	18,137.4	17,196.3	-29.5	0.3

5	472,102.6	247,372.5	304,181.9	287,316.7	-47.6	7.8
6	781,257.6	538,369.8	599,166.1	551,218.2	-31.1	1.2
7	359,767.9	234,017.9	290,247.1	275,914.1	-35.0	8.6
8	817,188.1	579,853.6	456,888.0	420,095.1	-29.0	-14.9
9	138,743.7	80,940.4	108,941.2	96,344.9	-41.7	9.1
Output ME	4,676,688.9	3,063,851.4	3,026,019.1	2,779,233.8	-34.5	-4.8
%*	19.8	17.3	16.4	16.3		
Total GDP	23,664,119.1	17,725,462.2	18,470,792.1	17,031,708	-25.1	-2.0

Note and Source: see Table 8

With respect to LEs, on average, their GDP contribution during the same period was not so much different though higher than that of SEs (Table 10). In 2000, their output contributed about 43% to the formation of the country's GDP in real terms; increased very slightly from around 42% in 1997. During the crisis period (1997-1998), output of LEs also experienced a higher negative growth than that of SEs, but after the crisis (1998-2000), the improvement of production process in LEs was much better as compared to that in both SEs and MEs, as LEs experienced a significant decline in their recession towards almost zero growth rate.

As generally expected, the largest GDP contribution of LEs was from manufacturing industry and followed by mining. Although the output in these two sectors fell during the period under review, they still dominated the total output or GDP contribution of LEs. An important part of total LEs in these two sector is formed by big multinational companies; even since the independence of Indonesia, the production in the country's mining sector has been dominating by foreign companies. That is the fact that these FDI-based companies played an important role not only for output growth in LEs but also as an important source of sustained rapid economic growth of Indonesia during the Soeharto regime (the pre-crisis period).

Table 10 GDP of LEs by Sector (at Constant Price), 1997-2000 (billionRp)

Sector	Year				Growth (%), 1997-1998	Average growth (%), 1998-2000
	1997	1998	1999	2000		
1	196,501.5	142,930.2	112,679.3	90,981.1	-27.3	-20.2
2	1,686,945.9	2,168,718.4	1,661,041.9	1,592,273.5	28.6	-14.3
3	4,129,501.4	2,913,149.0	3,386,164.6	3,122,488.0	-29.5	3.5
4	268,804.2	191,226.7	201,059.9	195,900.2	-28.9	1.2
5	873,116.6	366,687.4	505,395.0	431,252.5	-58.0	8.5
6	159,513.3	83,465.0	121,659.5	125,118.4	-47.7	22.4
7	551,511.0	302,751.1	371,201.2	363,218.8	-45.1	9.5
8	897,327.3	466,005.2	496,933.3	447,216.9	48.1	-2.0
9	1,241,106.0	779,283.3	956,459.4	997,272.3	-37.2	13.1
Output LE	10,004,327.4	7,414,216.3	7,812,594.1	7,365,721.6	-25.9	-0.3
%*	42.3	41.8	42.3	43.3		
Total GDP	23,664,119.1	17,725,462.2	18,470,792.1	17,031,708.0	-25.1	-2.0

Note and source: see Table 8

The summary of the above three tables provides a more clear picture about the performance of enterprises by size and sector in terms of GDP contribution in Indonesia (Table 11). It is obvious that SEs have specialization in production of agricultural commodities (farm activities) and in trade, hotel and restaurant.



Their GDP shares in these two sectors are always above 50%. MEs, on the other hand, have no sectors in which they dominated, as their output contribution to GDP on average per sector are always under 50%; although in some sector their output/GDP ratios are higher than that of SEs. Whereas, LEs have more sectors than SEs as their output concentration, namely as mining, manufacturing industry, electricity, gas and clean water supply, and services.

Table 11 GDP Distribution of SEs, MEs and LEs by Sector, 1997, 1998 and 2000 (%)

Sector	1997				1998				2000			
	SE	ME	LE	Total	SE	ME	LE	Total	SE	ME	L:E	Total
1	78	17	5	100	79	17	4	100	82	15	3	100
2	12	7	81	100	5	4	91	100	6	4	90	100
3	15	20	65	100	18	16	66	100	15	13	72	100
4	1	8	91	100	1	8	91	100	1	8	91	100
5	24	27	49	100	41	24	35	100	35	26	39	100
6	75	21	4	100	77	20	3	100	75	20	5	100
7	37	25	38	100	39	27	34	100	38	27	35	100
8	16	40	44	100	18	46	36	100	19	39	42	100
9	35	7	58	100	37	6	57	100	30	6	64	100

Source: see Table III.6.

Recently, in 2004 BPS issued a report that provides new data on distribution of GDP by size group of enterprises for the period 2000-2003, which indicate that SMEs performed relatively better than their larger counterparts. As illustrated in Figure 2 and Figure 3, GDP share of SEs during that period increased from 39.7% in 2000 to about 41% in 2003. Whereas, the role of MEs in the formation of the country's GDP was relative stable in around 15%, and that of LEs fell from about 45.5% to 43%.

Figure 2 Distribution of GDP by Size Group of Enterprises: 2000 (%)

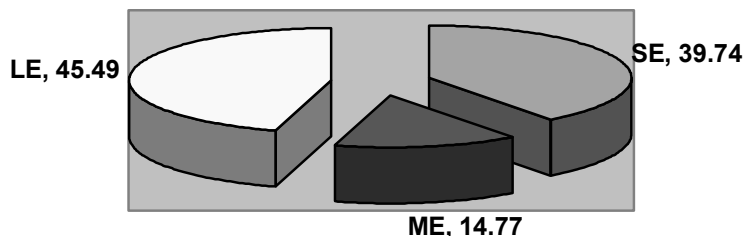
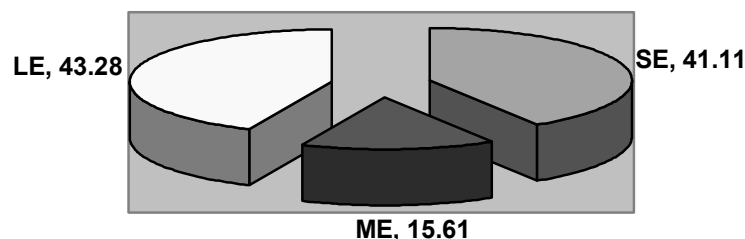


Figure 3 Distribution of GDP by Size Group of Enterprises: 2003 (%)



Source: BPS (2004).

The report also gives some information about GDP contributions of different size groups of enterprises by sector, which shows that SEs still keep their advantages in local resource-based and labor intensive sectors, such as agriculture and trade, hotels, and restaurants (Table 12). Their GDP contributions on average from these two sectors during that period under review were more than 75%. The GDP contribution of MEs was concentrated in various tertiary sector, with the biggest share found in finance, rent and service sector. Whereas, the share of GDP contribution of LEs was found heavily in mining, manufacturing industry and electricity, gas and clean water supply sectors.

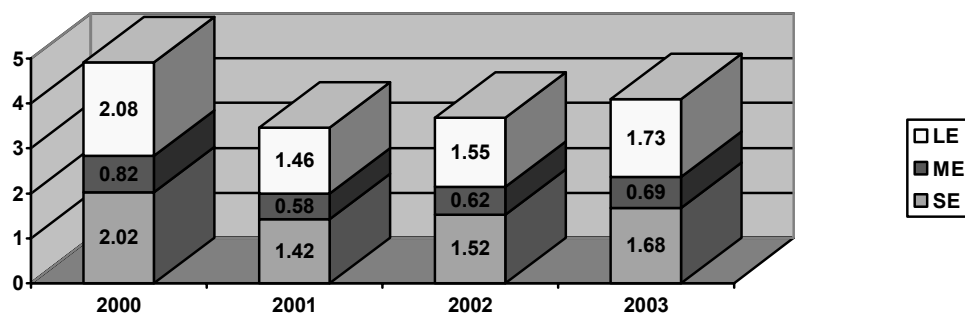
Table 12 Structure of GDP by size and sector: 2000-2003 (%)

Sector	SE	ME	LE	Total
1	85.74	9.09	5.17	100.0
2	6.73	2.96	90.30	100.0
3	15.14	12.98	71.89	100.0
4	0.52	6.80	92.68	100.0
5	43.88	22.57	33.55	100.0
6	75.60	20.81	3.59	100.0
7	36.69	26.64	36.67	100.0
8	16.80	46.47	36.73	100.0
9	35.59	7.16	57.25	100.0
GDP	40.55	15.22	44.24	100.0
GDP without oil & gas	46.22	17.19	36.60	100.0

Source: BPS (2004).

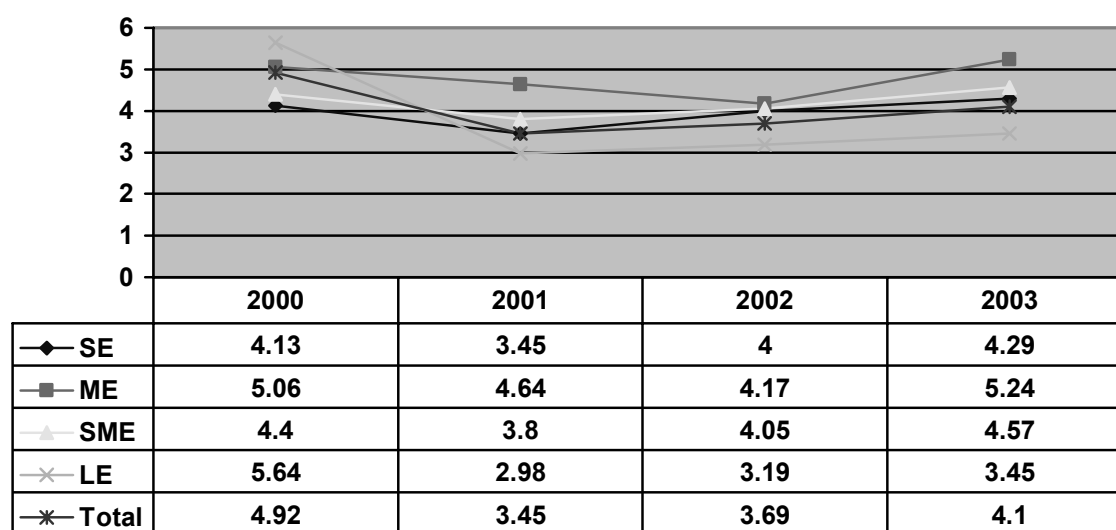
One interesting evidence from this report is that the SMEs' output contribution to the annual growth rate of the country's GDP was higher than that of their larger counterparts. As shown in Figure 4, on average, the GDP growth share of SMEs was above 2%; whereas that of LEs was under 2%. Within SMEs, SEs appeared as more important than MEs, as the GDP growth share of the first group of enterprises was higher than that of the latter one. This was inspite the fact that annual output growth in SEs was lower than that in MEs. As plotted in Figure 5, in 2000 the growth rate of output in SEs noted around 4%, lower some points in comparison with about 5.1% and 4.4% in respectively MEs and LEs. In 2001, the growth rates in all size groups of enterprises declined, and then went up again in 2002 onwards, with the lowest rates found in SEs.

Figure 4 Contribution to GDP Growth by Size Group of Enterprises, 2000-2003 (%)



Source: BPS (2004)

Figure 5 Rates of Output Growth by Size Group of Enterprises: 2000-2003 (%)



Source: BPS (2004)

The greater GDP contribution of SMEs does not mean, however, that productivity, either partial, e.g. labor productivity (defined as value added per worker), or total of all factors used (i.e. total factor productivity -TFP) in these enterprises is higher than that in LEs.<sup>47</sup> The difference is most likely to be caused by their huge number of enterprises rather than by their better performance in productivity than LEs. Given the fact that SMEs lack of capital, technology and skilled manpower, it is hard for these enterprises to achieve increasing return to scale in their production process.<sup>48</sup> The labor productivity gap between SMEs and LEs is one of the largest observed among LDCs.<sup>49</sup>

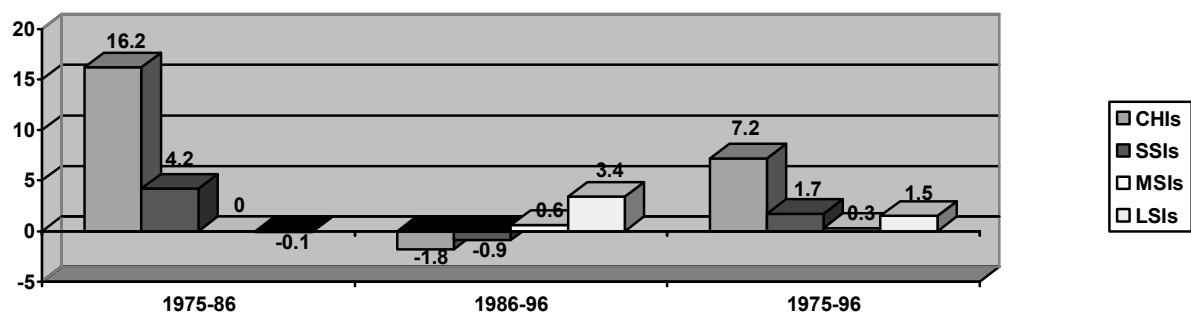
<sup>47</sup> Labor productivity rather than TFP is often used in analyzing productivity growth in SMEs, as the ratio is a useful indicator of a sort of progress, since enterprises that cannot raise it will not be able to remain competitive as wages rise. The difference between TFP and labor productivity is that the former measures the relative efficiency of SMEs and its advance over time, whereas the latter does not. Unfortunately, the TFP measure is more difficult to operational due to problems in the measurement of fixed and human capital.

<sup>48</sup> In the literature on modern economic growth models, technology embodied in machines and skills of workers are two most important determinant factors of productivity that often mentioned. In the literature on SMEs in LDCs, lack of these two factors, plus others such as

In Indonesia there is a number of studies which provide ample evidence that labor productivity is much greater in LEs, which the result that, though SMEs had higher percentage of employment than LEs had, they generated percentage of total value added less than LEs did. For instance, based on data census on manufacturing sector for 1975-1996 from BPS, estimates from Rice and Abdullah (2000) show that in 1975 value added per worker (1990 Rp'000) in CHIs was 132 and increased to 572 in 1996, and that of SSIs increased from 959 to 1,371 for the same period. Whereas, that from MSIs and LSIs rose respectively from 4,088 and 9,055 in 1975 to 9,055 and 12,495 in 1996.

By using the same data census, estimates from Berry *et al.* (2001) show that the labour productivity gap between SMEs as a group and LEs has remained substantial. The ratio was 9.4 in 1975 and 9.1 in 1996. Over the entire period (1975-96), labor productivity appears to have grown most for CHIs, with more modest (and quite similar) estimates for SSIs, MSIs and LSIs. <sup>50</sup>But, their estimates suggest continued growth in labor productivity among LSIs, while a possible slowdown for smaller sized of production units (Figure 6) .<sup>51</sup>

Figure 6 Annual Average Growth Rate of Labor Productivity in Manufacturing Industry by Size Category of Firm, 1975-1996 (%)



Source: Berry, *et al.* (2001)

### III.3.3 Value Added Contribution

As discussed before, MEs and SEs are different with respect to sectors of specialization: in terms of value added contribution, SEs are not so strong yet as MEs in manufacturing industry (although in terms of total number of units, SEs are the biggest size group of enterprises in the sector). There is, however, one similarity between the two in manufacturing industry, namely they both are concentrated in the same

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traditional way of organizing business; poor management; and adopted inappropriate method of production are often argued as the main factors behind the low level of productivity in these enterprises.

<sup>49</sup> See among others Liedholm and Mead (1999), and Berry and Mazumdar (1991).

<sup>50</sup> As explained in Berry *et al.* (2001), labor productivity figures are difficult to interpret for the household establishments that make the bulk of the CHIs group, because effective hours worked (rather than numbers of workers) in these enterprises tend to be quite variable, and extremely hard to measure. According to them, it is probably that productivity per hour worked increased less than the observed value added per worker, but nonetheless rose considerably.

<sup>51</sup> See other studies on labor productivity gap between SMEs and LEs in Indonesia from e.g. Hill (1997, 2001), and Timmer (1999).

groups of industries. Based on their output contribution to total value added of manufacturing industry by sub-sector, Table 13 and Table 14 indicate that the two groups of enterprises are engaged mainly in manufacturing low technology-based goods that requires little skill and capital.

Although the degree varied between SSIs and MSIs, the larger part of their value added contributed from food, beverages and cigarettes, textile and garments, leather products and wood products industries. This finding may also suggest that the role of SSIs and MSIs, or together as a group SMIs as important domestic suppliers (i.e. as supporting industries) of inputs to LSIs is very weak. This does not come as a surprise. Various earlier studies provide ample evidence that supports that finding. For instance, Thee (1997), Sato (1998) and Tambunan (1999) found that production linkages through subcontracting systems between SMIs and LSIs in automotive, electrical and machinery industries were not yet so strong as in other APEC economies such as Japan, Korea and Taiwan..

Table 13 Value Added of SSIs by Sub-sector of Manufacturing Industry (current price):  
1997-2001(Rp. billion)

	Year					Annual growth rate (%)
	1997	1998	1999	2000	2001	
Non-oil/gas manufacturing	24 507.7	38 554.5	42 729.7	48 323.5	55 691.1	0.23
Food, beverages & tobacco	12 355.3	22 910.7	25 199.2	25 931.3	29 470.2	0.24
Textiles, garments & leather	3 452.7	3 769.7	3 995.5	4 506.5	5 429.0	0.12
Wood & wood products	1 474.1	2 517.8	2 671.4	2 840.8	2 592.8	0.15
Paper, printing & publications	950.5	1 173.7	1 375.9	1 583.2	1 776.6	0.17
Chemicals	3 544.1	4 673.9	5 522.5	7 973.7	9 460.3	0.28
Non-metallic mineral products	1 543.2	2 026.3	2 152.0	3 102.7	3 795.9	0.25
Basic iron & steel products	8.7	11.1	13.1	14.9	23.3	0.28
Fabricated metals & machinery	873.5	1 120.9	1 415.0	1 995.5	2 675.6	0.32
Other manufacturing	305.6	350.5	385.3	375.9	467.4	0.11

Source: Menegkop & UKM (2001)

Table 14 Value Added of MSIs by Sub-sector of Manufacturing Industry (current price):  
1997-2001 (Rp. billion)

	Year					Annual growth rate (%)
	1997	1998	1999	2000	2001	
Non-oil/gas manufacturing	28 993.7	35 992.0	42 543.9	47 267.4	54 381.0	0.17
Food, beverages & tobacco	13 468.2	22 280.9	28 595.3	28 798.3	31 549.6	0.24
Textiles, garments & leather	4 853.1	4 522.4	3 984.6	4 848.0	5 618.4	0.04
Wood & wood products	2 394.8	2 972.3	2 953.4	3 115.5	3 189.9	0.08
Paper, printing & publications	869.4	1 182.6	1 377.6	1 571.5	1 877.7	0.21
Chemicals	1 793.7	1 002.1	1 289.8	1 955.5	2 381.4	0.07
Non-metallic mineral products	775.3	778.5	889.4	986.0	1 080.4	0.09
Basic iron & steel products	451.1	262.7	342.2	377.9	584.5	0.07
Fabricated metals & machinery	3 859.2	2 700.1	2 852.8	5 362.3	7 781.1	0.19
Other manufacturing	529.1	290.5	1 258.7	252.6	317.9	-0.12

Source: see Table 13

It also appears from the above two tables that the growth of value added in SSIs and MSIs, or SMIs as a group varies between sub-sectors or amongst groups of industry. In different industries, SMIs may have faced different problems and external conditions that affected their performance differently, including level of competition from LSIs as well as imported goods. In some industries, the growth of production in LSIs or the increase of competitive goods was at the expense of SMIs, as in the cases of bamboo weaving and palm sugar processing (Sandee *et al*, 2000). In other industries, SMIs performed well relative to LSIs (Hill, 1996).

During the New Order period, backed first with import substitution policies and followed later on by export promotion policies, Indonesia experienced a rapid development of large-scale manufacturing. In the 1970s and 1980s many LSIs emerged which was concentrated on labor-intensive assembly operations such as vehicle and machinery industries and a growing orientation towards exports markets such as electronics. As shown by many studies, in spite of the impressive growth of LSIs (including FDI), the overall importance of SMIs has not declined.<sup>52</sup> This does not appear, however, as a surprise. There is ample evidence that SMEs in many LDCs are able to survive simply because they have their own market segments, which are not of commercial interest of LSIs. Such markets are thus naturally protected from direct competition from LSIs, like for example cheap clothing and shoes and other simple consumption goods for medium to low income groups of population. Such evidence also observed in Indonesia by Hill (1992). According to him, the principal explanation of the SMEs' resilience in the country is their ability to exploit market niches, to concentrate on industrial activities characterized by economies of agglomeration rather than economies of scale, to serve particular markets not of commercial interest to LSIs, and to produce goods not easily adapted to mass production techniques. Other studies such as from Sandee *et al.* (1994) and van Dierman (1997) provide ample evidence of SMEs' technological upgrading, which has been essential to adjusting to market changes during the rapid growth years in the 1970s up to 1980s in Indonesia.

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<sup>52</sup> See for instance Hill (1992), Sandee *et al.* (1994), Sandee (1995), Tambunan (2000), and van Dierman (1997).

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