CHAPTER 1
INTRODUCTION

Ever since Malaysia attained her independence in 1957, the manufacturing sector has achieved rapid growth, with the share of manufacturing to total gross domestic product increasing from just 6.3% in 1957 to 33.1% by 1995 (Malaysia, 1996). It has also become Malaysia's major foreign exchange earner ever since 1980 as well as becoming one of the most important sources of employment in the country; recording a growth rate of 9% per annum during the Sixth Malaysia Plan from 1991 to 1995 (Jomo, 1993; Malaysia, 1991).

However, with the global recession in the late 1980s, it became apparent to the national policy planners that the country's industrial sector had become too dependent on foreign investments and foreign enterprises for much too long; causing the country to become very sensitive to world economic conditions. It was obvious by then that there was a need to encourage the development of small and medium scale industries (SMIs) with domestic entrepreneurship so that the economy could eventually become more self-reliant and the economic structure of the country could become more diversified and balanced (Fong, 1990).

1.1 Objective of Research

Realising the importance of SMIs to the development of Malaysia's industrial sector, the government has taken various steps to guide and promote the development of SMIs. The purpose of this paper is to study just how successful the various policies have been by looking at the contribution made by the SMIs to employment, output and income generation.
By further comparing the contribution made by the domestic SMIs in Malaysia to that of the SMIs in Japan, we would be able to gauge just how successful the various government policies have been in developing the domestic SMIs.

1.2 Literature Review

One of the few studies carried out to compare SMIs among the ASEAN countries was conducted by Bruch and Hiemenz (1984), who studied the development of SMIs during the 1970s. Bruch and Hiemenz were able to show that SMIs could significantly contribute to industrial growth and employment creation. However, they found that success would greatly depend on the level of technology used and the product mix. They also discussed the various programmes used by the governments of the ASEAN countries to promote SMIs. In their analysis, they found that the programmes employed to encourage industrial growth was in fact discriminative towards the development of SMIs and that strong encouragement was given only to the development of large scale industries (LSIs) (Bruch and Hiemenz, 1984).

Among the earliest studies conducted on SMIs in Malaysia was that carried out by Chee Peng Lim, Puthucheary and Lee (1979). The study was focused on entrepreneurial development programmes in Malaysia. They found that there was a need for the government to be more selective and provide assistance to entrepreneurs in industries that actually have the capability to grow. The study also found that there was a need to adopt an integrated approach in assisting small enterprises so that financial and credit problems could be viewed in relation to problems of management, production and marketing. Another recommendation of the study was that in giving aid to small enterprises, there
was also a need to provide them with financial, marketing and advisory service as well (Chee Peng Lim, Puthucheary and Lee, 1979).

In 1985, a very detailed and systematic research on technological and management factors of the SMIs was carried out by Universiti Pertanian Malaysia, Institut Teknologi Mara, University of Saskatchewan and Saskatchewan Research Council. The project was funded by the International Development Research Centre (IRDC) of Canada. Mohd Ghazali Mohayidin, Shaari Abd. Hamid and others who were involved in the project were able to produce a critical and comprehensive report on the technological development of the SMIs. Among others, it was noted that the SMIs were not utilising the latest technology available then and that there was a need to train and educate the managers/owners of the firm if any progress is to be made (Mohd. Ghazali Mohayidin and Shaari Abd. Hamid, 1988).

Utilising data collected from the same project, Dr. Mohd Ghazali Mohayidin, Loo Sin Chun, Nawawi Hj. Mohd Jan and K. Sarkar were able to identify the various problems faced by the SMIs then. Four major problems disclosed by the study were found to be related to marketing problems, financial constraints, poor manufacturing management as well as poor human resource management techniques. Marketing was perceived as the most major problem where the inability of the SMIs to sell their products resulted in low profit margins. It was found that only 13% of the samples studied was able to exploit the foreign market. Another problem faced by the SMIs then was in securing financial assistance. The study found that the banks, other than finding small loans unattractive, were also reluctant to assist the SMIs mainly because the SMIs were usually unable to provide the necessary financial records. The third problem identified by
the study was of poor management in manufacturing which resulted in the problem of under-utilisation and inadequate plant-capacity. The study found that about 60% of the small firms were not using the proper techniques for planning and controlling inventory and production. The study was also able to disclose the fact that 26% of the SMIs were faced with the problem of labour constraint and dissatisfied employees (Mohd. Ghazali Mohayidin and Shaari Abd. Hamid, 1988).

Another output from the research conducted in 1985 was a paper entitled “Small and Medium Scale Enterprises in Malaysia: Bumiputera Participation” by Yaakob Ibrahim, Ahmad Zahdi Jamil and Rohiyati Hj. Hashim. The paper took into account the age of the firms owned by bumiputras, their educational background and the sectoral concentration of the Bumiputera owned SMIs as well as the business problems faced by them. The study found that in comparing the Bumiputera owned SMI firm to that owned by a non-Bumiputera, the level of technology was influenced more by the size of the firm rather than the ownership. It also found that although the Bumiputera enterprises had better educated personnel as compared to non-Bumiputera enterprises, it did not result in the employment of higher level of technology (Yaakob Ibrahim, Ahmad Zahdi Jamil and Rohiyati Hj. Hashim, 1988).

Standing, in his paper on labour flexibility, found that instead of increasing employment opportunities, SMI firms in the 1980s actually expected to shrink in size, with most of them expecting to go out of business. The one reason that has been cited for this contrary finding is that the government’s fiscal policy has been biased towards large, export-oriented companies. The LSIs expected changes in technology and product mix that would influence employment creation whereas the only reason SMIs could give was
demand and business uncertainty. Hence, Standing concluded that there was little evidence that SMIs could be a major source of employment growth or new technology generators (Standing, 1993)

Standing's findings are to some extend supported by Pazim @ Fadzim Othman and Mohd. Rosli Mohamad (1995) who found that the share of small scale industries to the total number of industrial establishments have indeed reduced, from 77.01% in 1981 to only 24.33% in 1991. Their percentage of gross output, value added, total number of labour employed and fixed assets had also reduced. However, Pazim and Mohd. Rosli also found that the small scale industries had performed better when it came to labour, capital and total productivities although all three categories of industries (small, medium and large) had shown a significant increase. In discussing the problems faced by the SMIs, Pazim and Mohd. Rosli found that one of the major constraints to the development of SMIs was finance. It was found that most of the loans provided to the small-scale industries through various government programmes had not been utilised. Most of the small-scale entrepreneurs were found to have relied on past savings and borrowings through agencies that require no collateral to start and maintain their business. A reason cited for this negativity in acquiring loans from banks is the high interest rate attached to the loans as well as cumbersome administrative procedures. Pazim and Mohd Rosli also found that the SMIs would have to improve on their research and development in order to remain competitive in both the domestic as well as the international markets. To this effect, they suggest that the SMIs make full use of the various programmes provided by SIRIM. At the same time, Pazim and Mohd. Rosli also suggest that the SMI entrepreneurs should locate their industries to the east coast of Peninsular Malaysia to reduce regional disparity problems as well as benefit from the excess supply of resources such as labour
and other inputs to boost their competitiveness. In conclusion, Pazim and Mohd. Rosli found that although LSIs are generally better performers, the services of the SMIs were still required for resource-based industries (Pazim @ Fadzim Othman and Mohd. Rosli Mohamad, 1995:).

On management development of the SMIs during the 1980s, Thong Tin Sin, Mohamed Iqbal and Samuel Abishegam (1989) found that three-fourths of the entrepreneurs surveyed had no formal training whatsoever, relying more on intuition to guide them instead. They also found that most of the SMI entrepreneurs lacked the knowledge on how to obtain finance credit, retaining employees, keeping abreast with the appropriate technologies as well as proper marketing strategies. Hence, they recommended that the government's programmes should be aimed more at nurturing and moulding entrepreneurial management skills rather than focusing only on business development. They also believe that the government should encourage LSIs to rely on SMIs for subcontracting, at the same time acting as mentors to the SMIs. This would allow the SMIs to learn management know-how while performing their business. Gregory, Mohamed Iqbal and Samuel also recommend that potential entrepreneurs should first undergo training with an established company for a few months before actually starting on their own. They believe that what Malaysia needs is a coherent, co-ordinated, integrated and concerted inter-agency approach so as to ensure the development and growth of SMIs (Thong Tim Sin, Mohd Iqbal and Abishegam, 1989).

Fong Chan Onn's (1990) findings on the economic efficiency and entrepreneurship of SMIs in Malaysia revealed that the SMIs in Malaysia have not been able to play as
dynamic a role as the SMIs in other Asian countries, namely Korea, Taiwan, Singapore and Thailand. Some of his findings are as follows:

i) While the trend of the contribution of SMIs in Korea, Taiwan and Singapore to output and employment generation has been increasing, the contribution of Malaysia’s SMIs has actually declined;

ii) Malaysian SMIs have not utilised the vast network of government agencies providing financial assistance due to the relatively high interest rate compared to other Asian countries;

iii) There is a need to encourage Malaysia’s SMIs to shift their concentration from locality specific markets to that of national and international markets;

iv) There is also a need to improve the manufacturing and technological capabilities of SMIs in order to improve the economic linkages between SMIs and LSIs.

On linkages between SMIs and LSIs, Ismail Muhd Salleh and Latifah Rahim (1992) found that though Malaysia is experiencing rapid industrialisation, the linkages between SMIs and LSIs are still very limited. This has been found to be a result of ignorance and lack of information due to the vast number of agencies, ministries and departments involved in the development of strategies for the growth of SMIs. With no one single agency to direct and deal with the SMIs, a gap had been created between planning, implementation and institutional framework. The researchers believe that though government guidance is needed in terms of identifying the type of industry that needs financing, the industry itself must be market driven. It was also pointed out that although there was a need for the government programmes in assisting the SMIs, what was more
important is the ability of the SMIs to survive after getting out of the programme (Ismail Muhd Salleh and Latifah Rahiim eds, 1992).

Lim Pao Li’s (1992), research on subcontracting linkages between SMIs and LSIs reveal that:

i) Due to the long term commitment already established between LSIs and subcontractors from their home country, there is a tendency for these subcontractors to relocate together with the LSI in their offshore ventures as well;

ii) LSIs that do not relocate together with subcontractors from their home country have been found to encourage subcontractors from there to invest in Malaysia due to the slow development of local subcontractors;

iii) LSIs not relying on subcontractors from their home country were instead subcontracting from countries such as Thailand and China.

Another research on subcontracting was carried out by Wong Poh Kam (1992), who had done a study in Singapore on the technological development through subcontracting. His study reveals that the technological development of SMIs through subcontracting has been extensive. Wong’s research also reveals that the variations in the technological development between the SMI firm and the LSI firm is to some extent influenced by the LSI’s long-term commitment to the subcontracting relationship as well as the nature of the subcontracted work; the more specialised the work, the higher the potential for technology development. It was also found that the higher the extent of the LSI’s in-house expertise, the higher the technological development of the SMI. At the same time, to ensure that the technological development between the LSI and the
subcontracting SMI firm is at its best, the SMI firm should also fulfill certain characteristics. These include a clear business and technology development strategy as well as a certain minimal level of managerial and technical competence before they can even become a subcontracting partner to any LSI firm (Wong Poh Kam, 1992).

From the literatures reviewed, it can be seen that most of the researchers agree that one of the biggest constraints to the development of SMIs is not in the provision of financial assistance but in the utilisation of this assistance. Most of the SMIs prefer to use their own savings as it was found that the interest rate on the loans are relatively high, especially when compared to other Asian countries. The lack of management know-how as well as technological development has also been revealed as further setbacks to the development of Malaysia’s SMIs. Various researchers have also found that although the importance of linkages between SMIs and LSIs are realised, the present development of these linkages still leaves much to be desired.

1.3 Theoretical Framework

The most widely accepted argument in favour of SMIs has been the alleged fact that SMIs are more efficient users of capital and labour as compared to LSIs. It has been argued that SMIs usually produce a unit of output (value added) with less capital and more labour. This would mean that if capital were scarce, it would result in more output as well as more employment (Little, Mazumbar and Page, 1987). However, it would be necessary here to first review an economic theory as well as the findings by other researchers before accepting this argument as a basis for this paper.
1.3.1 The Theory

This research would be based on the theory used by Little (1987) in his paper comparing SMIs in India to those of other economies. Little had first established a relationship between size, wages (W), capital (K) and labour (L) productivity, and capital intensity, where both K and L are measured as per unit of value added. Arranging all enterprises in order of labour productivity, we derive Little’s first equation as:

\[(1.1) \quad L_1 > L_2 > \ldots\]

Assuming next that the rate profit is equalised, then:

\[(1.2) \quad \frac{1 - W_1 L_1}{K_1} = \frac{1 - W_2 L_2}{K_2}\]

Hence, if wages were to rise faster than productivity, then from (1.2), \(K_1 > K_2\).

This would mean that greater labour productivity is achieved with less capital. Assuming further that the wage differences are less than the productivity differences,

\[(1.3) \quad W_1 L_1 > W_2 L_2 \ldots\]

From (1.2) and (1.3), it follows that

\[(1.4) \quad \frac{1}{K_1} > \frac{1}{K_2}\]

which shows that capital productivity falls. From (1.4),

\[
\frac{1}{K} > \frac{1}{K_2}
\]

\[
L_1 \quad L_1\]

\[
L_2 \quad L_2
\]

and hence,

\[(1.5) \quad \frac{L_1}{K_1} < \frac{L_2}{K_2} \ldots\]

\[
\frac{L_2}{K_2} \quad \frac{K_1}{L_1}
\]
With the assumptions made, Little was able to conclude that when enterprises are arranged in order of increasing labour productivity, wages will not rise as fast while capital intensity (K/L) will rise faster. His theory also states that capital productivity falls as the size of the enterprise increases. Although Little admits that his theory does not relate the changes in factor intensities and productivities to the size of the enterprise, he states that it is an empirical matter that size and capital intensity as well as labour productivity are positively related. Hence, it is an assumption that is implicitly made.

Testing his own theory on manufacturing firms in Japan, Little found that measuring by size of employment, the empirical assumption of labour productivity rising with size holds true as was the assumption of capital intensity rising with size. He also found that wages rise as well, although less than in proportion to labour productivity; conforming to his theory (Little, Mazumbar and Page, 1987).

Fong Chan Onn’s 1990 findings on the economic efficiency and entrepreneurship of SMIs in Malaysia also supports Little’s theory. His study using data from the industrial censuses for 1968, 1973 and 1981 revealed that the capital intensity of SMIs was much lower than that of the LSIs; conforming that there was a positive relationship between firm size and the capital intensity ratio. He also found that although SMIs tended to be more capital productive, the labour productivity of SMIs were lower than that of LSIs. Here again, Fong’s findings support Little’s theory that labour productivity is positively related to firm size while capital productivity is not. It must also be pointed out here that although Fong observed a lower level of labour productivity among SMIs, he also noted that the annual growth rate of labour productivity for SMIs was 1.8% compared to only 0.5% for LSIs; indicating that the SMIs were more efficient in using labour.
Another study that also supports Little’s theory is one that was carried out by Pazim @ Fadzim Othman and Mohd. Rosli Mohamad (1995) on the current performance and future prospects of SMIs in Malaysia. Using data from 1981 to 1991, they found that LSIs tended to have higher levels of capital intensity as well as higher labour intensity. Again here it must be pointed out that the researchers found the growth rate of labour and capital intensities for the period studied was much higher for the small and medium scale industries (94.1% and 98.3% respectively) than that of the LSIs (68.3%), indicating that SMIs were more efficient.

With these findings, it would be clear that Little’s theory on the relationship between capital intensity, capital productivity and labour productivity with the size of the firm to be true. SMIs tend to be more capital productive but less capital intensive and labour productive than LSIs.

1.4 Research Methodology
In order to compare the contribution of SMIs to employment, output and income generation between Malaysia and Japan, the measurements used in this paper would be based on the measurements used by Bruch and Hiemenz (1984) in their study of SMIs among the ASEAN countries.

The analysis will be based on capital intensities, which indicate employment effects of changes in the plant size structure, capital productivity and labour productivity, as well as wage rates, which provide a yardstick for income generation.
1.4.1 Capital Intensity

Capital intensity is measured by the value of fixed assets per worker:

\[ \text{Capital Intensity} = \frac{K}{L} \]

Where,

\( K = \) Capital, defined as fixed asset in RM.
\( L = \) Labour, defined as the number of full-time and part-time labour forces.

The higher the value of the ratio of capital to labour, the more capital intensive the industry would be, and vice-versa (Pazim, 1995).

1.4.2 Capital Productivity

Capital productivity is measured by ratio of value added to fixed assets, which is given as:

\[ \text{Capital Productivity} = \frac{V}{K} \]

Where,

\( V = \) value added in RM per year.
\( K = \) capital input in RM per year, measured as net fixed asset.

Again here, the higher the value of the ratio, the higher the productivity of capital of the industry, and vice-versa (Pazim, 1995).

1.4.3 Labour Productivity

Labour productivity, or the average product of labour is measured by the ratio of value added to labour, given as:
Labour Productivity = \frac{V}{L}

Where,

V = Value added in RM per year

L = Labour input, measured as the number of full-time and part-time labour forces.

A higher labour productivity ratio would imply that the industry studied is more labour productive, and vice-versa. As has been put forth in Little's theory, SMIs are expected to have lower capital intensive as well as labour productive ratios but a higher capital productive ratio. The SMIs would be seen as efficient users of labour and capital if we find that the growth rates of capital and labour productivity are higher here for these industries as compared to LSI s.

1.5 Data

In order to carry out the analysis proposed for the Malaysian case, this paper would be using secondary data provided by the Department of Statistics of Malaysia. The latest available published data on the manufacturing sector provided by the department through its Industrial Surveys is for the year 1994. The overall performance of the manufacturing sector is analysed using this data for the years from 1981 to 1994. In order to analyse the performance of the sub-industries of the manufacturing sector, each SMI and LSI is selected at the three digit level of the Malaysian Industrial Classification.

However, the earliest available data for Japan's manufacturing sector is that of 1966. Nevertheless, since this paper seeks to study the performance of Malaysia’s SMIs to those in Japan, it would be appropriate to compare Malaysia’s SMIs to those in Japan at a
much earlier date since Japan’s SMIs now are at a far more advanced stage. By comparing the performance of Malaysia’s SMIs now to those in Japan in 1966, we would be able to see if Malaysia’s SMIs are in fact going in the right track.

1.6 Conclusion

The research proposed would be able to provide valuable information on the performance of Malaysia’s SMIs. A comparison study to the performance of SMIs in Japan would be able to indicate how and where the Malaysian SMIs are weak; providing needed guidelines for future policy measures.