

CHAPTER 4

THE ROLE PLAYED BY JDI IN MALAYSIAN MANUFACTURING SECTOR

4.1 Introduction

In this chapter, we will attempt to examine the contributions of JDI in the Malaysian manufacturing sector. Japanese affiliates contribute in various ways, ranging from increasing production and employment, to earning foreign currency through higher exports. One has to admit that the major contribution would be the continuous transfer of technology, which has to certain extent stimulated the industrialisation of Malaysia. However, this aspect would be taken up in the following chapter. But, basically there are various types of technology transfer, which take place, for example, through comprehensive production control. Japanese affiliates in Malaysia also educate and train local employees, especially by emphasizing production control. In addition, JDI also foster the development of local parts and material suppliers. They do discover and develop capable suppliers. In the following sections of this chapter, we would attempt to examine further in detail the role-played by JDI in Malaysian manufacturing sector.

4.2 Employment

Malaysia is a country bestowed with low unemployment rate compared with the high labour force. Every year nearly 250,000 workers enter the labour market (Malaysia, 1998). However at the same time, Malaysia do suffer from a shortage of skilled and experienced industrial workers. This shortage may be attributed to the inadequacy and shortcomings of both government and private sponsored training schemes to meet the demand for skilled workers as Malaysia ventures into industrialization. In view of this, shortage of skilled workers problem, obviously the government policy was directed towards generating more employment opportunities and increasing the reservoir of skilled manpower (Chee & Lim, 1979). So Malaysian government welcomed FDIs, especially JDI as it is assumed that Japanese companies would have a

favourable impact on the economy if they can contribute towards the achievement of this objective.

In accordance with the increase in the JDI in Malaysian manufacturing sector, observe that the employment in the manufacturing sector also increased consistently above 6 per cent since 1991, as shown in Table 4.1 below, which is actually above the average increase in total labour force. It is expected that it might see a slight reduction of 2.9 per cent in 1998. By 1997, there were actually 2.3 million workers in the manufacturing sector, which is almost 28 per cent of the total labour force. The continuous increase in the FDI, especially JDI, also had enabled the unemployment rate in Malaysia to slide down from 4.3 per cent in 1991 to 2.8 per cent in 1997. Even though it is not predominantly due to JDI, but to a certain extent it was due to the increase in JDI in Malaysian manufacturing sector. As a general estimation, we could suggest that JDI had actually played a positive role in increasing the employment in Malaysian manufacturing sector. However, the significance of the Japanese contribution is yet to be investigated in detail.

From our observations, with respect to employment, Japanese firms in Malaysia employ only a fraction of the total labour force in Malaysia which numbers 9.0 million in 1997 (Malaysia, 1998). This primarily is due to the fact that there is still heavy concentration in the agricultural sector even though the figure is continuously declining. Even in the manufacturing sector there are many multinationals in Malaysia from various countries which resulted in the workforce being spreaded out. In the case of Japanese firms, the bulk of the workers are employed by large companies such as Matsushita Television (MTV), Sharp and Sony (Malaysia).

Table 4.1: Labour Force in Malaysian Manufacturing Sector
1991-97 ('000)

Year	Manufacturing Sector	Growth	Total Labour Force	Growth	UE rate (%)
1991	1470.0	10.3	6891.0		4.3
1992	1639.0	11.5	7096.0	2.3	3.7
1993	1742.0	6.3	7396.2	3.5	3.0
1994	1892.1	8.6	7618.4	2.7	2.9
1995	2051.6	8.9	7915.4	5.4	2.8
1996	2177.8	7.7	8161.4	4.6	2.5
1997	2307.6	7.6	8390.9	4.6	2.8
1998 ¹	2321.1	-2.9	9006.5	-0.4	4.9

¹ Jan-July figures only

Source: Economic Planning Unit (EPU) & Ministry of Human Resource (MHR) various years

On the whole, it appears that Japanese firms are rather capital-intensive. The reason may be that most of the Japanese firms are concentrated in the manufacturing sector that is relatively capital-intensive compared with the service sector where there are only a few Japanese firms. The Japanese investment practically transferred higher technology production to Malaysia, but at the same time wanted to make use of the cheap labour force in Malaysia to run the machineries. Within the manufacturing sector itself, we have identified that many of the Japanese companies are found in such industries as electrical machinery and chemicals/chemicals products, which again are relatively capital-intensive (JETRO, 1997).

An example of the capital-intensive nature of Japanese companies in the manufacturing sector is Matsushita Television (MTV). MTV's production process in Japan is almost fully automated. Even though MTV's insertion process in Malaysia is a little less automated than in Japan, but at MTV in

Malaysia, 80 to 87 per cent of the parts usually are still automated. Meanwhile 90 per cent of the parts usually are automated in Japan. The slightly lower degree of automation simplifies maintenance. While the insertion of radial and larger parts requires more manual work, the low cost of labour in Malaysia makes it unnecessary to automate these functions, and limitations in local maintenance capabilities make it undesirable to do so. So to certain extent, even though the JDI is focused in capital-intensive industries but it still do create employment opportunities in this sector (Kawamura, 1997).

In addition, in line with the government's policy of providing more industrial employment to bumiputras, majority of the workers in Japanese firms are bumiputras. Bumiputras are mainly involved in the production line of Japanese manufacturing firms, with the bulk of them concentrating in manufacturing of electrical/electricals components such as Matsushita Television and Sony (Malaysia). Most of the bumiputra workers are basically from rural areas with lower education levels and are basically low skilled workers. This means that even though the JDI's employ high number of bumiputra workers but this just fulfills the objective of increasing the manpower, but not upgrading their skills and capabilities at the same time.

Furthermore, Japanese employees form only 2 to 3 per cent of the total labour force. This again could be due to government's policy where Japanese personnel in Japanese firms are mainly restricted to top line managers or professionals. So most of the Malaysian workers employed would be normally low-skilled or even unskilled pool of workers, just to follow instructions from these Japanese leaders or engineers. This would show that there is actually no transfer of technology. An example is Sharp's Malaysian operation which is characterised by a large workforce, but still a significant number are dispatched directly from Japan. According to Sharp's managers, this is due to shortage of managers and skilled workers in Malaysia who have an adequate understanding of the Japanese production approach, which stresses Japanese level quality control, and only a few have the ability to communicate directly with headquarters in Japan (Kawabe, 1997).

In addition the line up of Japanese personnel reflects the composition of Japanese equity and control in the firm. Where the Japanese investors have a controlling interest in the firm, the chief executive is generally a Japanese. For example in Sony (Malaysia), the Managing Director is Mr. Hideo Kojima. Other top posts generally held by Japanese expatriates are the positions of production manager and chief engineer. This is not surprising since the Japanese partners are generally responsible for the technical side of the joint ventures.

At the same time, we have to admit that the JDI involvement in Malaysian manufacturing sector had enabled more participation of female workers in the labour force. With the opening up of more Japanese MNCs, in FTZ areas in Penang and Klang Valley, we had seen a sudden emergence of a bigger pool of female production workers compared to the late eighties. Even though these increases is only involving the unskilled female workers, which were involved with manual insertion process or at the production line, but this had enabled Malaysia to increase the participation rate and lower the unemployment rate at the same time (Rajah Rasiah, 1995). As shown in Table 4.2, female labour force participation rate in Malaysia was constantly above 40 per cent, which is definitely higher than in the late eighties. But yet again, whether it is solely due to JDI is still open for argument. However, up to now we still could accept that to certain degree JDI had enabled more female workers to enter the labour market.

Table 4.2 Labour Force Participation Rate (Percentage)

Year	Labour Force (ribu)	Participation Rate (Total) %	Males %	Females %
1992	7370	66.7	85.7	47.6
1993	7627.0	66.8	87.0	46.1
1994	7834.0	66.8	87.1	46.5
1995	8256.8	66.9	86.8	47.1
1996	8641.4	66.7	86.6	47.2
1997	9038.2	66.6	86.9	47.3
1998 ¹	9006.5	64.3	86.7	46.8

¹ Estimates by EPU

Source: EPU and MHR

4.3 Training

Another contribution of JDI in Malaysian manufacturing sector is in the training aspect. Basically all Japanese related firms involve themselves with training the local workforce in the technical front. In their opinion, the most important are the knowledge and skills necessary not only to operate and maintain, but also to repair, modify and improve the machineries and technologies used. Almost all Japanese firms believed that regular training for employees was an essential part of the company policy which not only led to more skilled workforce, but also created an important attachment between the worker and the company. The two common training schemes would be on-the job training (OJT) and out-of-plant overseas (Woon, 1990).

Most firms extend OJT to both managerial and line staff. This OJT is more common for the production workers (line staff), while for the upper and middle management, special courses conducted by Malaysian institutions such as the CIAST and JMTI were offered. In general OJT tends to be carried out by Japanese expatriates, although senior local staff also contribute towards OJT.

In general, the in-house-training or OJT is carried out to provide training to improve performance in the current job specifications and also to increase the worker's ability to perform other jobs as well. This multi-skilling has obviously benefited Malaysian manufacturing sector in various aspects. First, it removes the need to increase the number of workers employed as the number of job specifications increased. Second, and more importantly, it increases the flexibility of the workforce, enabling them to be redeployed as and when the management deems it desirable or necessary. Third, it reduces the problem of a skilled labour shortage. Finally, it provides some security against absenteeism.

The second level of training is normally geared towards upgrading the workforce. A point to note here is, on the whole, it was the MNCs, rather than the smaller firms, which seems to have the vision and resources to carry out such programs. Workers at every level have a fixed training schedule by which they gradually move up the job scale. However, the length of this process tends to be between three to five years, revealing that the Japanese MNCs are keen for their employees to demonstrate their loyalty to the company before they are rewarded with higher level training and promotion.

In addition to the OJT, many Japanese MNCs also do send their local workers for training abroad. Almost all the companies send a number of their employees on regular training visits to the parent company in Japan. Those category of employees chosen to go were overwhelmingly technicians and engineers, although supervisors and managers were often asked to go as well. The length of the training visit varied from two weeks to six months, depending largely upon the type of skill to be mastered. The Japanese firms viewed such overseas training trips as an important measure to overcome skilled manpower shortages (Itagaki, 1997).

In Malaysia also, the workers from Japanese multinational are sent to training centres in Malaysia itself, such as CIIAST and JMTI. The main idea behind this is to improve the skills and capabilities of workers involved in the manufacturing process and also as some sort of training. But unfortunately,

not all firms are into this idea as the centres are normally located in certain areas only and they only cater for workers without any skills at all or just for the low level of skills only. There's no continuation in the training that is passed on to the workers. The facilities at training centres itself are appalling. They are lacking in terms of equipment and machineries for trainers to work on. A check with one of the JMTI branches in Shah Alam revealed that they are still using outdated tools and equipment which were sent to Malaysia under the Look East Policy more than 10 years ago. So the problem in Malaysia is that even though there are training centres, the quality of training and skills enhancement in Malaysia is still lagging way behind compared to the technology that are supposed to be absorbed. We can sum up that even though workers are given training but it is outdated and does not increase their skills in accordance with the ever changing needs of the manufacturing industry.

In evaluating the benefit gained by the Malaysian workforce in terms of training, it seems that the local workers have benefited from the JDI in the manufacturing sector. But such claims cannot be clearly verified. Japanese managers normally would express that the prevailing level of skills in their workforce prevented them from being able to absorb sophisticated technology. This shows that the training of the local staff and internal dissemination of skills and technology are still not sufficient to ensure eventual effective transfer of technology. The dependency of local firms on their principals for technical guidance and expertise is still significant.

As a result, in modern industries which demand high technology, such as those involved in manufacture of machineries, chemicals and electronics products, the dependency on Japanese expertise is still pronounced despite claims that local workers has benefited in terms of upgraded skills, training and introduction of new technologies. There is no denying that local workers have experienced a higher level of specialisation but compare this to even higher dependency level of local workers on Japanese expertise, clearly shows that total diffusion of technology from Japan to the Malaysian manufacturing sector has not been fully realised.

However, in the Malaysian managers' point of view, they felt that because high level transfer of technology was not necessarily forthcoming, workers were not necessarily given the opportunity to upgrade their skills. The training mustered by locals in Japanese firms does not permit local workers to handle full-blown operations themselves. Most Japanese firms were involved in the manufacture and assembly of CTVs and VCRs, relatively old technology. It appears that the comparative advantage for more sophisticated electronic products, such as camcoders and high definition TVs, is likely to remain in Japan for some time to come. This is in part because of the inability of overseas workers to absorb such technology, but primarily due to the fact that such technology is often slowly and reluctantly transferred by the parent companies. So a separation from Japanese principals is almost impossible if we continue to allow foreign firms to maintain similar training procedures.

4.4 Manufacturing practices

Malaysia can now be considered to be in the technology phase of industrialisation, where it has acquired operational and process adaptation knowledge and experience in the production process, to the extent of running a fairly sophisticated assembly of a wide range of products. There is now a relatively much higher degree of automation, especially in the bigger companies. So clearly it shows that the JDI had brought into Malaysia better manufacturing practices compared to those previously used.

However, the level of automation in Japanese subsidiaries in Malaysia is generally much lower than in similar operations in Japan. Many of the manufacturers use the conventional conveyor-belt type of operations that mainly involve handwork processes. Some of the firms had introduced computer numerically controlled (CNC) machines and adopted automatic control in operations such as printed circuit board (PCB) insertion and in-circuit testing. Furthermore, there was some evidence of the usage of robotics in technology intensive production.

A number of Japanese firms practice just-in-time (JIT) or the principle of *kanban*, but due to the reliance on imported parts, the Japanese subsidiaries tended to carry a higher volume of inventory compared to their parent companies. So even though they practice the principle of *kanban* but they cannot be fully implemented. However we should admit that the Japanese counterpart had introduced a practice which should help the firms to reduce the cost of operation by practising JIT. Generally, manufacturers have also adopted quality assurance systems, with a high percentage using quality circles and total quality control (TQC). For almost all the firms the nature of the manufacturing practices within the subsidiaries are determined by the respective parent companies.

In the area of product design for manufacture, there has been little deepening as most product design still originates from the parent company. Consequently, majority of the firms was only engaged in assembly, inspection and testing activities. Where product design did occur, it tended to involve either customization or standardization rather than total design activities. What this demonstrate is that the type of Japanese manufacturing practices which Malaysia has been so keen to attract (such as R&D and design), are not necessarily being readily transferred to either subsidiary companies, let alone to Malaysian vendor companies.

4.5 Japanese Type Management

At the management level, wholly Japanese owned companies tend to employ more Japanese personnel. These Japanese were often assigned key positions in the company. Normally, these Japanese personnel were sent by their parent company to supervise their investment interest overseas. It is basically in accordance with the company's employment policy. This can be clearly seen in Japanese companies where they CEO's are pre-selected by the "*mother-plant*" in Japan. For instance the CEO for Sony Malaysia is Mr. Kojima. As for western multinational we find that they employ local managers to run the show for them. This can be seen for instance in Western Digital and Intel which are US based multinational. However even though they employ

local managers but decisions pertaining to transfer of management practices are still handled by their headquarters. For Japanese multinationals all decisions are made in headquarters and carried out by Japanese personnel in Malaysia.

However in joint venture organisations, Japanese personnel were absorbed as management advisors in the field of administration, sales, marketing and purchasing. The lack of local qualified personnel in these areas has given the Japanese an opportunity to bring in Japanese personnel into the Malaysian manufacturing sector. The presence of Japanese management staff is moderately lower compared to their presence in the capacity of technical and engineering personnel.

The Japanese management style has not slotted well into the Malaysian manufacturing environment, and the indigenous personnel have found it quite impossible to duplicate all the essentials underlining the Japanese management style in Malaysian economy. Many of the indigenous personnel have undergone a different set of orientation, particularly those who were sent abroad for formal education and training. They were greatly influenced by Western management systems which they have been exposed to all this while.

The population of the management personnel who are actually experienced and been exposed to the Japanese type of management is comparatively small. As a result, the number of management personnel who can really adopt the Japanese system is neither sufficient nor supportive to ensure successful implementation and future diffusion of the management know-how. In this way, when the government encourages and pushes for the dissemination of the Japanese management discipline into the Malaysian economy, the intention was not well received. In fact, most companies has adopted only selected types of management techniques.

Furthermore it is evident that the Japanese themselves are reluctant to diffuse their management knowledge to the local workforce. Their dominance

in key management positions of their company is self justifiable. In most cases, local based Japanese firms are not obligated to adopt Japanese management system in their work, although certain emphasis is placed on the usage of Japanese technical know-how. In most cases, the Japanese technical know-how is adopted because they purchase machinery and equipment from Japan. Furthermore, technical know-how is inter-related to machinery and equipment.

4.6 Export Creation

Export-oriented manufacturers, whether undertaken by domestically owned companies or by MNC subsidiaries, has relied heavily on foreign technology, more so than production for the domestic market. Topping the list with heavy foreign direct investment are electrical/electronics and machinery industries with relatively high JDI. In considering these are export-oriented industries, we can explicitly conclude that Japanese manufacturing investments are centred more in export oriented industries (Table 4.3).

There are few reasons to explain the high concentration of Japanese manufacturing investment in export oriented industries. Firstly, the attitude adopted by the Malaysian government, where in it's efforts to develop the industrial sector, to create more jobs and to earn foreign exchange, has often encouraged foreign investors to invest in new undeveloped areas within the manufacturing sector.

The undeveloped industries within the Malaysian manufacturing sector are usually export based. These industries have not been extensively exploited because local producers did not favour them since high level technology application is needed in production, and local entrepreneurs are not technically proficient to handle such production.

By inviting foreign participation, especially JDI, in the export-oriented industries, the domestic economic base can be widened to avoid heavy

Table 4.3: Exports Concentration Ratios, 1988, 1994-96

SHARE OF TOP THREE MANUFACTURED EXPORTS IN TOTAL MERCHANDISE EXPORTS:
SHARE OF EACH CATEGORY IN EXPORT MARKET TO TOTAL EXPORTS OF EACH GIVEN CATEGORY

Selected Description	JAPAN					% SHARE IN TOTAL MERCHANDISE EXPORTS				
	1998	1994	1995	1996	1988	1994	1995	1996		
1 Electrical & Electronic Products Including Electrical Machinery										
1.1 Power generating machinery & equipment	13.5	10.1	11.0	8.4	0.6	0.9	0.9	1.0		
1.2 Machinery specialised for particular industry	2.3	5.0	13.0	8.7	0.7	0.5	0.6	0.7		
1.3 Metalworking machinery	6.3	16.0	13.4	14.9	0.0	0.1	0.1	0.1		
1.4 General industry machinery, equipment & parts n.e.s.	5.9	9.3	12.1	11.9	1.3	2.2	2.3	1.9		
1.5 Office machinery & automatic data processing equipment	7.2	5.3	8.2	11.6	0.3	8.6	9.7	11.6		
1.6 Telecommunication and sound recording apparatus & equipment	1.9	8.9	12.5	14.2	6.5	17.1	16.7	15.2		
1.7 Electrical machinery, app. And appliances n.e.s. & parts there of	7.3	9.2	8.4	9.4	18.0		22.0	22.5		
2 Textiles, Clothing and Footwear (Selected items only) (Excluding Rubber Gloves)										
2.1 Textile yarn and thread	3.9	13.3	9.8	9.4	0.2	0.5	0.7	0.8		
2.2 Woven cotton fabrics	5.7	9.7	9.9	11.6	0.3	0.2	0.2	0.2		
2.3 Woven fabrics not of cotton or man-made fibres	0.9	0.3	0.3	0.4	0.4	0.4	0.4	0.4		
2.4 Men's & boys' outer & inner garments of textile fabrics	0.0	1.1	2.4	4.3	0.7	0.6	0.5	0.5		
2.5 Women's, girls' & infants' outer & inner garments of cotton fabrics	0.0	2.4	3.5	3.8	0.6	0.4	0.3	0.2		
2.6 Clothings and other articles of textiles	0.4	6.8	8.5	7.8	0.6	0.5	0.4	0.4		
2.7 Footwear	0.8	1.4	3.2	2.8	0.3	0.2	0.2	0.1		
3 Wood products										
3.1 Veneers, plywood, improved or reconstituted wood and other wood, worked n.e.s.	9.1	19.8	30.3	36.6	1.4	2.8	2.4	2.8		
3.2 Wood manufacturers n.e.s.	5.2	7.5	11.6	16.6	0.3	0.3	0.3	0.3		
3.3 Other wooden furniture	7.9	22.1	27.3	19.8	0.1	0.5	0.5	0.6		

Source: Department of Statistics
Analysis and table by MITI based on data from DOS

dependence and high concentration on the import replacing industries. Furthermore, the injection of foreign capital and technology would help to improve the production of exportables in terms of quality, which would enhance Malaysia's competitive edge in the world market.

In terms of export destinations, it is clear that the total export to Japan is comparatively small. As shown in Table 4.4, the amount that are exported back to Japan is relatively small as compared to exports to other countries. The three countries, which reported strong demand for Malaysian manufactured goods, are Singapore, USA and EEU. Most of the export of manufactured goods goes to USA and Singapore which continuously compliment the 20 percent of the total export, while the percentage of export to Japan constitutes around 10 percent.

Table 4.4 Direction of Malaysian Manufactured Exports (RM million)

Year	EEU	USA	S'PORE	JAPAN	TOTAL
1990	8,190 (18.6)	11,770 (26.7)	11,855 (26.9)	3,489 (7.9)	44,110 (100.0)
1991	10,447 (5.0)	14,430 (24.7)	16,021 (27.4)	5,433 (9.3)	48,381 (100.0)
1992	11,876 (5.5)	17,941 (26.4)	17,695 (26.0)	5,253 (7.7)	68,061 (100.0)
1993	14,021 (16.4)	23,410 (27.3)	20,314 (23.7)	7,376 (8.6)	85,745 (100.0)
1994	17,623 (15.3)	31,060 (27.0)	26,000 (22.6)	10,032 (8.7)	114,987 (100.0)
1995	21,454 (15.2)	36,604 (26.0)	30,975 (22.0)	14,606 (10.4)	140,700 (100.0)
1996	22,590 (14.8)	34,191 (22.5)	34,000 (22.4)	16,770 (11.1)	151,705 (100.0)
1997 ²	13,919 (15.6)	19,120 (21.5)	20,145 (22.6)	9,683 (10.9)	89,034 (100.0)

¹ Figures in parenthesis are percentage

² January to June ;source: DOS

Many Japanese firms cited the low costs of production, availability of raw material and the generous investment incentives extended by the government, as some of the main attractions, which the country has to offer. But what is most important is the Japanese intention to penetrate into the Malaysian market, is not so much as a market. This is because Malaysia's relatively small population of 20 million has often been cited as portraying low local demand.

In addition, because of the small population the Japanese investors did not consider Malaysia as a potential market for their manufactured goods. The weak purchasing power of the Malaysian consumer also further discouraged the Japanese investors from producing consumption goods for the domestic market. They had considered the production of export-oriented goods as more profitable because of a larger export market and simultaneously captured part of the domestic market. The Japanese firms used Malaysia more as a distributing centre for both the South East Asia region and other countries, like USA and European Economic Community (EEC).

Secondly, as a newly industrializing nation in late eighties, Malaysia's export volume has yet to fulfill a preset quota under the GSP agreement. Malaysia lacks the appropriate technical know-how to enable it to produce the required volume. To overcome this problem, the Malaysian government has decided to open its economic borders to foreign investors. Japanese investors, who showed great potential of developing the export-oriented industries, were encouraged.

Furthermore, Japan was facing the problem of having filled up the limited export quota. The main two industries that were affected by the quota requirement were electrical/electronics and textile industries. The Japanese, hold comparative advantage in the production of these two products and hoped to maintain their dominance in these industries. To do so, they sought other production base and attention was directed to Malaysia, which seemed

the most suitable during mid-eighties as they had not reached the export quota.

4.7 Linkages

Japanese manufacturing firms have been in the Malaysian manufacturing sector since the late sixties and early seventies. After establishing themselves in the manufacturing sector, it is interesting to examine the impact of JDI in engineering linkages between Japan and local firms. The Japanese economy is well known for its reliance on subcontracting. Indeed, this practice makes a significant contribution to the efficiency of the Japanese economy. In view of this, one would have thought that Japanese firms would introduce such a practice to Malaysia and, in doing so, would have helped the development of local ancillary firms and, perhaps, in the long run, also improve the industrial efficiency of the Malaysian economy. Unfortunately, this is not happening fully as most Japanese firms in Malaysia are not making full contribution in this aspect. The excuse given, as usual, nobody is making the component locally. If the component were manufactured locally, then the excuse would be that the local component is relatively expensive or of poor quality. In addition, the product design is always rigidly controlled by the parent company. This severely restricts the use of local component.

However, the continuance of transfer of technology, even though limited, would take the lead in stimulating ancillary firms locally by encouraging the production of components which are still being imported, or help in improving the quality and price of existing components. Considering the demand for local raw material in manufacturing sector, a number of Japanese firms still use imported raw materials. In some cases, this is because the material is not available locally or local material is not suitable. As a result, some firms still use high proportions of imported material. For example in the Japanese textile mill, all the cotton and chemicals are imported.

Many of the components used by Japanese firms in the assembly of their final products are produced locally. For example, in the case of an electrical appliance manufacturer whose products probably incorporate a relatively high percentage of local contents. Its electric fan has 70 percent local content. All the components used in the assembly of the fan are purchased from local suppliers except for the switch, gear and bearing metal, all of which are imported. Its television receiver has 65 percent local content. The local components include capacitor, resistor, turner and plastic parts. This particular firm has established a wholly owned subsidiary to produce electronic components such as the variable resistor and electrolytic capacitor.

Unfortunately, not all Japanese firms use more than 50 percent of local contents. There are still many Japanese firms that have a low percentage of local content. Some of these firms still import up to 50 percent of the total value of the products from the parent company. But there has been much improvement since the initial stages where local components only contribute 5 percent of the total value of the product (Chee, 1979). This is because the pioneer status, enjoyed by most of the JDI firms initially, required the firms to manufacture at least 20 percent of the value of the parts used in the assembly of the local products. But the Japanese firms are only increasing the usage of local parts at a very slow pace. It looks like the Japanese firms would not proceed beyond certain stage.

Linkages between the Japanese firms and supporting or ancillary firms have the potential not only for spurring the growth of the latter, but also for facilitating their technological upgrading. The stringent quality, delivery and reliability requirements of the Japanese companies can force their suppliers to improve their own capabilities. However, evidences revealed that local suppliers were rarely used (Guyton, 1996). The Japanese firms still have strong linkages with their foreign suppliers and parent plant and thus will continue to import from Japan. This is indicating that most of the firms had no relationship with local ancillary companies. This seems consistent with studies carried out by the United Nations which drew a conclusion that between

foreign MNCs and domestic ancillary industries, there are only weak inter-industry linkages (UNCTAD, 1980).

However, the government is keeping up its pressure on Japanese firms to induce them to use more locally produced components. In addition, another problem associated with subcontracting is that the small groups of Japanese firms using local components tend to buy from one or two suppliers. Unlike the situation in Japan, the relationship between the purchasing and supplying firms is not very close. According to the Japanese firms, the local suppliers prefer to be independent instead of being tied closely to one purchaser. In any case, the volume supplied to any one firm is relatively small, so the suppliers need more than one purchaser. In view of the loose ties between the Japanese firms and their suppliers, we do not expect the Japanese firms to provide any technical assistance to the latter. In fact, only few firms advise its suppliers on measures to rationalize their production system. They also trained personnel from the supplier firms.

We also found out that, the foreign companies are usually located in the FTZs with little linkages with the rest of the economies. The necessary material and capital goods industries are still at the beginning stage of their development and appear to have extremely weak linkages with related industries (Woon, 1990). Some Japanese firms had subcontracted a portion of their operation to local firms. The main activities involved normally are transportation services, warehousing, packaging and to smaller extent, manufacturing of parts and components.

To sum up, the extensive use of domestic materials is needed to promote significant linkages with local ancillary firms. However, the evidences in Malaysian manufacturing sector suggest that Malaysia has not benefited greatly from the possible linkage effects of JDI.

4.8 Conclusion

This chapter attempts to explore the extent or the role played by JDI which has taken place within the Japanese manufacturing companies in Malaysia. Without any doubt, one of the dominant factors that enabled economic progress experienced in recent times by Malaysia is the growth of the manufacturing sector (the application of technology oriented production rather than agricultural sectors). Therefore, in order to continue the growth even during this economic turmoil, Malaysia needs the skills and technology, which could be passed on by foreign investors. By providing the needed environment for this, Malaysia hoped that the contribution from JDI would enable it to maintain it on track for continuous and high growth.

Our findings revealed that we have reached almost maximum gain (with the growth rate continuously above 7 per cent for the past 10 years), but the JDI has failed to fully diffuse their expertise and technology into Malaysian manufacturing environment, despite regular claims that this has been carried out. The expected spill-over effect from the penetration of JDI into Malaysian manufacturing sector is still low, considering the fact that the JDI has been in Malaysia for such a long time. This is evident from Malaysia's continuously high dependence on the Japanese for expertise assistance.

Even though JDI in Malaysian manufacturing sector is very obvious, but the contribution in terms of employment, training, subcontracting and export creation is still below the desired level. These might be attributed by conditions in Malaysia itself in terms of absorbing the contribution of JDI.