

Chapter 6

POLICY RECOMMENDATIONS & CONCLUSION

The research findings of the survey present a mix picture as far as the role of the domestic partner in JVs are concerned. Certainly the domestic partners in low technology and high labor-intensive areas in the component and consumer electronics sub-sector have made significant gains in assimilating technology and knowledge. Whereas in the high technology area the domestic partner's role remains to be that of providing equity and local political support.

The reason for domestic partners low flexibility in matters of technology access, research & development and exports is primarily due to contractual restrictions imposed by the JV agreements. Technology and development does not come free and a rent is to be paid to the foreign partner for getting access to new technology. No foreign partner will readily give away proprietary knowledge, hence the foremost responsibility lies with the domestic partner to acquire, assimilate and absorb as much knowledge they are capable of and doing so in the shortest possible time. It can be said that the dormant role of domestic partners in many JVs operating in Malaysia, is primarily due to their own choice and is of strategic advantage to the foreign partner who is able to run the operations independently without sacrificing much control and at the same time enjoying all the benefits of investing through a Joint Venture. In such cases the onus lies on the domestic partner to take a more proactive and participative role, as any legislative regulations will prove to be ineffective in such cases.

The next section briefly analyses the development of electronics manufacturing in Asian NIEs and its impact on Malaysia. The subsequent sections sets forth some of the policy recommendations which are an apparent outcome of this research paper.

6.1 TRENDS IN ELECTRONICS MANUFACTURING INDUSTRY: ASIA PACIFIC AND MALAYSIA

The rise of the electronic industry during 1980s in the Newly Industrialized Asian countries (Korea, Taiwan, Hong Kong and Singapore) can be largely attributed to international specialization, that is relations of mutual interdependence, broadly based on multiple levels (Yamada Bundo, 1990). Such relations have developed between Japan and Asian NIEs, between Asian NIEs and ASEAN countries, and between ASEAN countries and Japan. The early 1980's witnessed a shifting of labor intensive electronic industries from Japan to Asian NIEs. This was prompted due to rising cost of labor in Japan and appreciation of the Yen against other hard currencies. The same trend repeated in relocation of labor-intensive industries from Asian NIEs to newly developing countries in ASEAN region, especially Malaysia, Thailand and Indonesia. The increased interdependence of these three industrial regions in Asia-Pacific is one of the major reason for the phenomenal and unprecedented growth of South East Asia region during the last decade. The electronics industry in the Asian NIEs transformed from a pure electronics assembly industry to an OEM producing electronics industry and finally, to a high tech producing electronics industry. It has metamorphosed itself from a fragile industrial structure into a well-structured and integrated industry (Gee San, 1990).

The growth of the electronics industry in Malaysia has shown similar trends. When in the early 70's Malaysia started as a pure electronics assembly location and during the late 1980s it converted itself into an OEM producing base. Malaysian electronics industry has yet to reach the stage of high tech producing industry, although the same is being pursued increasingly by foreign WOS.

Since 1995 Malaysia started facing the same problems, which were faced by Japan in early 1980s and Asian NIEs in late 1980's and early 1990. The cost of labor, a major input to the manufacturing sector and the appreciation of Ringgit, had made labor-intensive industries in Malaysia less competitive by the year 1995. This did result in closure of many labor-intensive companies especially Taiwanese companies in Penang during 1995, which started relocating to China

and Vietnam. This also resulted in a major policy shift of the Malaysian government under the IMP-II and seventh Malaysia Plan (7MP), which abandoned its decade old policy of seeking labor-intensive industry to more value adding capital-intensive industries, especially in the electronics sector, which is a major export sector for Malaysia.

The recent economic and currency crisis, has helped in restoring the competitive advantage (of cheap labour and cost of operation) of Malaysia. Although these have been restored temporarily, but can be negated by rising inflation and slow growth rate of the local economy. It was only in early December 1997 that the Prime Minister Dr. Mahathir announced in Japan, that Malaysia would continue to seek investments in the labor-intensive industry in the export sector. This is a turnaround in government's policy, primarily designed to exploit the advantages of cheaper labor and operating cost due to the depreciation of Ringgit against other major hard currencies.

One can argue that the recent economic crisis has come as a blessing in disguise for the export oriented labour-intensive companies in the electronics-manufacturing sector. It may not open up new opportunities within ASEAN or Asian NIEs, but certainly will make Malaysian exports to developed countries cheaper and give a fresh lease of life to some of the local industries. The recent crisis will help Malaysia in the short-term, but the long-term future growth and survival of the Malaysian electronics sector will largely depend on development of an innovative and vibrant local industry, which has to be built on inherent local strengths. This essentially implies that the local electronics industry has to come out of the shackles of direct foreign investors.

The real challenge facing the Malaysian policy maker is to devise a strategy to develop a critical technological mass in a selected area of specialization, which can usher Malaysia towards full industrialization.

6.2 FRAMEWORK FOR POLICY RECOMMENDATIONS

The paper sets forth the following policy recommendations using the survey research's findings, and it is also influenced by the future expectations of the domestic partners or local managers about their perceived future roles. It is also shaped by the recent developments in the electronics industry which is used as the backdrop for laying a framework the subsequent section.

It must be said that any policy recommendation has to be made with extreme care, especially in wake of the new restrictions imposed by the GATT agreement to which Malaysia is a signatory. Yet, in Malaysia as in many other developing countries, policymakers do not have the luxury to design policies with regard to the country's foreign exchange, balance of payments and other policy restrictions. There are clearly hard tradeoffs, which must be faced. No, doubt some amount of specialization is required in any country's electronics industry, even the industry of the most advances OECD countries (Emmerji 1990).

There are two important issues facing the policy makers. Firstly, whether to follow an open door policy by continuing to attract foreign direct investment in all electronics sectors or to promote a more inward looking policy by actively promoting Joint Ventures and locally owned enterprises to promote in certain electronics sub-sector, in which Malaysia should develop a critical mass. Secondly Malaysia should identify and promote the key areas of specialization for Joint Ventures and domestic Malaysian owned enterprises in the electronics sector.

This will help in resource consolidation and redirecting the countries limited human and monetary resources to develop competitive advantage in a particular sub-sector. Should Malaysia abandon the labor-intensive manufacturing and go for higher capital intensive industry with more value addition. Even if all areas of electronics were pursued, the resource constraints would surely prevent the nation from pursuing this multi-pronged strategy.

Underlying such a choice is an extremely serious dilemma, which defies easy solution. Obviously the need of the hour for Malaysia is to device strategies of

specialization, which makes effective use of limited financial and technical resources. The choices are further limited due to the current economic meltdown being faced by the Asian region, which is destined to have global ramifications. The need for change in policy shift from a more outward looking to inward looking will have two inherent benefits. Firstly it will prompt the local electronics industry including Joint Ventures to innovate and develop a self-sufficient local industry. The rationale supporting such a move can be supported by similar success achieved in other East Asian NICs like Korea, Taiwan and developing countries like India, which did follow restrictive import policies. Secondly it will also help in conserving precious foreign exchange, which eventually will lead to increase in net export earnings. Presently the import content of the Malaysian electronics sector is as high as 80 per cent (MIDA 1996).

6.2.1 Issues for the JVs in Electronics Industry

The first issue to be addresses by the policy makers is to decide on the status, whether foreign direct investment (in form of foreign WOS) is preferred over Joint Ventures. The Malaysian government is encouraging Joint Ventures in the electronic sector between foreign and local entrepreneurs, as well as the development of supplier and support industries in the country¹. Dato' Rafidah Aziz sets the tone for the future prospects of industrialization in her foreword of MIDAs publication circulated to foreign investor².

"The IMP2 moves beyond a mere focus on manufacturing operations to include strengthening industrial linkages and enhancing productivity through full integration of activities such as R&D and design capabilities, and development of supporting industries on one side, and packaging, industrial distribution and marketing on the other side. This is what is called as manufacturing ++."

It is obvious that FDI has played a major role in the development of Malaysia, but the high dependence on import of electronics parts and components, have reduced the net savings in this sector. The Seventh Malaysian Plan has realized

¹ Message from Tan Sri Datuk Zainal Sulong, Chairman of MIDA in his foreword in "Malaysia : Electronics & Electrical industries", Trade Directory, Business Times 1996.

this and sets forth developing the local electronic parts and component industry as a key strategy for growth (7MP, pg 289). The 7MP also lay down the strategy to promote backward integration of the semiconductor industry through the establishment of wafer fabrication plants. This is of strategic importance for the country's industrialization drive.

6.3 POLICY RECOMMENDATIONS FOR JOINT VENTURES IN ELECTRONICS SECTOR

There is certainly a need for consolidation of the Joint Ventures in the electronics industry, as Malaysian company enhances there position in value chain from that of being screw driver assembler to OEM manufactures and eventually to market their own brands.

There has to be differences in policies with respect to setting up Joint Ventures in various sub-sectors in the electronics industry for this vision to be achieved. The next section briefly discusses the sub-sector specific directions for the Joint Ventures in the electronics sector.

6.3.1 Policy for Component Sub-sector

It is argued that Malaysia should follow a strategy to further develop a strong local electronic component sector. Only a well-developed electronic component industry can help in the overall development of the electronics sector. Although the development and production cost associated with the component sectors are high, but a technological edge in this sector will lay the strong foundation of a well-established and vibrant electronics industry for Malaysia.

Secondly it can ensure higher local value addition, which can help the country generate higher level of foreign exchange. This can be achieved by ensuring higher level of technology diffusion. The government must seek more investment in terms of JVs to promote the component industry. Most of the JVs in the high technology areas like semiconductors and micro electronic components are

² "Malaysia – Investment in the manufacturing sector : Policies, Incentives and Facilities", MIDA Publication, 1997

either foreign owned subsidiaries or JVs, where the role of the domestic partner is restricted to be a mere equity provider. The technology in this sector is mainly controlled by the foreigners.

The options available to policymakers are limited, when it comes to existing foreign WOS. Any new policy for divestment of equity by the foreign partner will invite opposition from the foreign partner.

But what the Malaysian government can always do is to adopt a two pronged strategy to stimulate growth of the local component industry. Firstly it can enforce more active participation of the domestic partner in running of JVs operation. This way locals can take more active control of various management functions, besides increasing the technological knowledge base of the local employees of these JVs. Secondly the government should attract more foreign investors to form JVs with local partners. This way any new foreign investments in the field can be channeled through JVs. Lastly increased level of export promotion of this sector will position Malaysia as a major component supplier to the world markets.

The down side of such a policy is that many investors may shy away from Malaysia. Although they can be still lured by giving various types of fiscal and non-fiscal investments.

6.3.2 Consumer Electronics Sub-Sector

This sector holds good potential in the immediate future. Especially due to depreciation of the Ringgit recently, the cost of production of consumer electronics item has reduced, thereby making exports competitive. Malaysian electronic industry should position itself to takeover the role of an OEM producer of electronics from countries like Taiwan and Singapore. The government should actively promote JVs in this sector. The JVs operating in the consumer sector are producing OEM manufactured goods for other well-established MNCs. It is high time now for the government to stop attracting direct foreign investment in this sector and start promoting local manufacturers. Establishment of Malaysian Electric Corporation (MEC) is a step in the right direction.

The government should give incentives for JVs to launch and establish their own brands, which can help Malaysian consumer electronics manufacturers to put themselves onto the world map. Although it is no mean task, but with a well established and existing knowledge base, the right policy directions will help achieve meaningful results.

6.3.3 Industrial Electronics Sub-Sector

Most of the JVs in this sector are primarily import substituting ventures. It must be stressed at the outset that the industrial sector is relatively a high technology area. Development of local industrial base in this sector will not only be time consuming, but will also require substantial monetary and human resources. It would not be worthwhile presently to allocate scarce resources to developing this sector on a large scale.

Companies operating in the Industrial sub-sector are usually successful only if either they have a large market base in the domestic markets or they have unique technological advantage, which enables them to compete worldwide. Often, a large and well-developed domestic market is a precondition for developing a successful export strategy.

Presently companies in Malaysia's industrial sub-sector do not enjoy any of these advantages. Hence it is recommended that no major changes should be sought in the governments policy for JVs in the industrial sub-sector. The policy shift in this case could be to prompt the JVs in this sector to start export promotion activity. It is recommended that the government should impose a minimum of 30 per cent criteria for exports, as compared to no export quota for JVs in the industrial sector (practically none of the JVs in this sector engage in any form of export activity). Presently Malaysian government policy does not allow for more than 30 per cent foreign equity in case the export is not more than 20 per cent.

6.3.4 Changes Recommended In Policies For Joint Ventures

In order to stimulate growth of the Joint Ventures in the electronics industry, the government must undertake some structural changes in the foreign investment

policy for future. Although some of these changes may brand Malaysian industry being nationalistic, but some of these policies are the need of the hour especially in wake of the current economic meltdown in Asia region. The need of the hour is to reinforce the local electronics industry so that it can develop further and achieve self-reliance to a limited extent.

These policies are summarized as follows:

1. Firstly attract foreign investment without any equity limitations in capital-intensive industry exporting more than 80% of its output. No more foreign WOS must be allowed in any labor-intensive industry. Only Joint Venture must be the promoted form of investment in this category.
2. In any JVs or JVs if the government imposes equity restriction, then the domestic partners role should not be merely that of an equity provider. They should be compelled to take up active participation in various managerial functions, which will eventually result in knowledge assimilation and skill upgradation of the domestic partners. Alternatively the local managers must be required to take charge of the various management functions.
3. The JV agreements should have clause of reduction in foreign equity of the foreign partner after ten years of formation. Ten year time frame will ensure that appropriate technology transfer takes place during the initial years, and moreover it gives the necessary incentive to the foreign partner to earn profits from the venture. The reduction in equity by 5 per cent per annum, subject to a minimum equity of 30 per cent for the foreign partner must be imposed after the initial ten years. The reduction must be gradual with the aim of increasing local management and control. The equity reduction clause can be waived if the local JVs increase direct export to hard currency areas by similar percentage amount.
4. The government should closely monitor the technology transfer clause in the JV agreement. MITI who presently monitors all JV agreements should ensure that the domestic partner has access to technology from other sources after five years of signing of JV agreement. As per a senior representative of

MIDA, whom the author interviewed, MITI ensure that the JV agreement does not have unfair clauses, but often they are not adhered to in practice by the foreign partner as most of the times there are no counter checks by the relevant authorities. The major advantage of having access to outside technology will reduce dependence on foreign partner and put necessary competitive pressure on them to give their next generation technology.

5. More fiscal and non fiscal benefits or incentives must be given to promote JVs in the component and consumer sub-sectors. These benefits can be more in terms of special pioneer status and availability of grants or loans for R&D activity. Although this may have additional burden on the government, but will help in generating precious foreign exchange in the long run.
6. The JVs in both the export and import substituting sectors must be compelled to meet certain minimum value addition criteria. For example local value addition must be at least 15 per cent for export oriented sector and 25 per cent for import substituting sector respectively by the end of first five years of formation of the JV. Although this is a form of protectionism, which may fall under the purview of WTO. A carefully structured policy on similar lines may help in promoting increased linkages with domestic firms and also prompt many firms to pursue increased R&D activity to adapt their designs to local components. Besides it will improve the local value addition. Failure to meet these objectives can be compensated by drop in foreign equity by the foreign partner or by increase in direct export from the ventures.
7. Import Substituting JVs must be given a minimum export quota to fulfill. For example that the import substituting JVs must be required to export at least 30 per cent of their output. This has to be achieved over five year period from the time of formation of the JV. Similar criteria's should apply to already existing JVs. Although difficult to enforce but some results can be obtained if lucrative government or public sector contracts are given to JVs who fulfill these criteria. This will enable local partners to gain knowledge about export marketing.

6.3.5 Promotion Of Research & Development Activities

The long-term success of the local electronics industry will sufficiently depend on Malaysian JVs to innovate and launch new products for worldwide markets. As seen from the research findings, that only recently JVs have started pursuing research and development activities. Moreover the activities pursued are very basic in nature, that are meant primarily for product or process upgradation or adaptation.

The major problem faced by the local JVs to pursue R&D activity is lack of monetary, and human resources. In wake of these, the paper advocates the following policy recommendations for the policy makers to consider.

1. Setting up of a pilot committee under the auspices of MIMOS or any other local institution, which can overlook the development of research and development related activities in Malaysia. The bodies key role will include acquisition and development of new technologies which can be then shared by the local industry. This policy was pursued strongly by the government in Taiwan and proved very effective in developing the electronics industry in Taiwan (Gee San 1990).
2. Setting up of a Research and Development fund for local electronic industry, which can provide R&D grants to companies interested in pursuing R&D activities in approved areas. This fund will help in providing grants to local companies for developing technology locally. This fund can be also given for joint research by domestic companies including JVs and local research institutions like MIMOS.
3. The government should provide fiscal incentives in terms of tax deductions for companies pursuing research and development activities. This incentive can be similar to the human resources development fund which provides for double deduction of expenses incurred on R&D activities. Off course such R&D programs can be monitored closely by an appropriate government institution like MIMOS to ensure that the facility is not being mis-utilised.

6.3.6 Manpower Development Policy

The real long-term viability and competitiveness of the electronics industry in Malaysia will depend on Malaysia's ability to capitalize on its large manpower base, *which has been well trained in various aspects of production of electronics equipment*. To further develop a so-called critical mass the skills and knowledge of the local manpower has to be continuously upgraded for making the local industry competitive and cost effective. This can be achieved by the following recommendations:

1. Setting up of an institute of higher learning for teaching courses in advanced electronics and generating an overall interest in the field of electronics research and development. There is an urgent need to increase the output of quality R&D engineers in the electronics field.
2. The government should also promote increased linkages between local industry and technical institutions to run joint research programs. There is immense scope for engaging in joint research programs between institutions of higher learning and local industry. Institutions like MIMOS can play a vital role *in identifying key areas for research and then running and monitoring joint research and development programs*. These joint programs can include sponsoring of companies' staff to pursue higher degree courses in local institutions and students being sent to industry for joint R&D project. The added benefit of such program will be due to increased interest in the field of R&D and training of manpower, which can be eventually absorbed by the local electronics industry.
3. Setting up joint research programs with overseas universities in the western countries, where local students and industry personnel can be sponsored for pursuing higher studies and joint research programs.
4. Setting up of a local consultative body, comprising of local experts, drawn from government institutions, educational institutes and industry experts drawn from local electronics industry. This consultative body can then be used setup a national agenda for developing the future course of electronics

industry in Malaysia. It will also be instrumental in training and upgrading the skills of the other smaller companies operating in the electronics industry.

The real long-term success of the Malaysian electronics industry will largely depend on the local educational institutes ability to provide quality manpower resources and Malaysian governments ability to increase linkages between local R&D Institutions, educational institutes and industry. At least initially the government has to take the lead in developing an environment for promoting R&D activity, only this will lead to self-motivated emphasis on R&D. The industry presently lacks the necessary resources and are looking forward for the government to provide the strategic support.

6.4 CONCLUSION

The electronics industry is the most important export industry in Malaysia. It has been developed over three decades and established a good foundation for further development. The key to survival of the electronics industry will lie in the ability of the Malaysian enterprises to independently run the industry. Although it is still a distant goal, but various policies are being put in place by the government to further develop the local electronics industry. Electronics industry is probably one of the most technologically advanced industry in the world and its rapid pace of development requires constant technological acquisition and skill upgradation. One of the best ways to acquire new technology and upgrade skills of the local employees is by using Joint Ventures as an effective form of attracting foreign direct investment.

The electronics industry in Malaysia, especially in the high technology sector is currently dominated by the foreign wholly owned subsidiaries of MNCs, which limits the acquisition of technology and skill resources. To speedily enhance the development of local electronics industry in Malaysia, the government has to play a more intervening role in promoting Joint Ventures in this sector. Besides the government has to also set the right policies in perspective, so that the domestic partners can accrue maximum benefits from the Joint Ventures.

There is little doubt that the domestic partners have made significant gains in the low end component and consumer sector, but the gains could be further enhanced by a more interventionist policy of the government. Some of these have been recommended in the previous section.

The growth prospects for the electronics industry in Malaysia looks promising due to the three major locational advantages offered. Malaysia offers excellent infrastructure facilities, availability of semi and skilled manpower and a stable socio-political environment, which is conducive to business. The growth of the local electronics industry can be accelerated by a more inward looking policy of the government, which must foster local linkages and promotion of the so called manufacturing ++. These can be specially achieved in the electronic component and consumer electronics sub sectors.

There is lot to be done to ensure that the domestic partners enhance their knowledge assimilation and ultimately become independent. This is specially required in the high technology areas, where the foreign partners dominance continue. Malaysia's local electronics industry can be further developed once these Joint Ventures become independent from the support and dominance of the foreign partner.

Further development of the domestic partners role will largely depends on their own commitment to assimilate knowledge and play a more active role in the venture. Our study reveals that the lack of change in role in case of 6 JVs is purely because local partners do not take active participation in any management aspect of the operations.

The role of government will be limited to setting forth the right policies, which can attract foreign investment. But the real technology transfer has to occur at the ground level, which is in the mind of the technocrats working in JVs.

Both the government and the private sector have to play their role in ensuring a young and vibrant local electronics industry is developed, which will play a pivotal role in Malaysia's quest for becoming a developed nation by year 2020.