

POLICY ENDORSEMENT IN HIGH TECH-EXPORT INDUSTRIES OF MALAYSIA: A REGIOCENTRIC APPROACH

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ABSTRACT

Malaysia has shown a remarkable progress in the high technology industries with the help of the Foreign Direct Investment. However, the recent developments namely China's accession into WTO and AFTA has challenged the Malaysian position as the high technology exporters. This paper investigates the regional policy development issues in Malaysia to sustain the competitiveness of the high technology industries. Indeed recommendation on improvising the policy has been made by the study as the tool to further progress in the high technology sectors. The study recommended that improvement in terms of diversity, clusters, education, research and development, as a vital concern for the progress of high technology industries.

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1 INTRODUCTION

Over the three decades Malaysia has shown remarkable economic performance as a result of its outward looking strategies. Malaysia like other first-generation tigers (Korea, Taiwan, Singapore and Hong Kong) has used exports as its engine of growth and development since the 1970. Malaysia's economic growth continued to improve after the economic crisis in 1997 within an environment of low inflation and unemployment. Malaysia made a shift from the largely import-substitution prior to the 1970's to liberal outward oriented trade regime. (Shazali Abu Mansor et al, 2000) The most prominent sector contributing to the export earnings was manufacturing which accounted for 79% of the total export earning and nearly 29% of Malaysia's Gross Domestic Product (GDP). (Chandran V.G.R. et al, 2003)

Recent developments in trade flows and Foreign Direct Investment (FDI) has a remarkable impact on the Malaysia direction of trade and structure. The major advancement was the rise of China to a position of economic dominance in Asia as well as the world. The second wave of this advancement comes within the ASEAN members as trade liberalization and the implementation of ASEAN Free Trade Agreement (AFTA), has made the international trade more competitive. With the effort of industrialization among the ASEAN economics, the export market has become more competitive nowadays. As even the growth in the FDI might change the overall pattern of the trade in Malaysia. For example, Peter Wilson (2000) has noted that apart from Singapore, Thailand has emerged as the new dynamic ASEAN economies which became more competitive across a broad range of manufactured goods and managed to switch to higher value-added manufacturing product. On the other hand, research also suggests that ASEAN as a whole suffers the most in the Japanese market because of China's entry. (Herschede Fred, 1991)

Malaysia's reliance on export will be highly challenged by these new advancements where it could have an impact on Malaysia's exports in terms of direction of trade and the structure of the product mix. With respect to the above an urgent need emerge in tailoring the policy for the development of the export industries in particular the high technology industries.

2 OVERVIEW OF HIGH TECHNOLOGY EXPORTING INDUSTRIES

In the late 1970's and early 1980's Malaysia has emphasized on shifting the economy to a manufacturing base and this changes focuses on high-technology industries. The key strategic change occurred with the development of First National Science and Technology Policy in 1986. Number of institutions were established to stimulate technology base industries and industrial technology development such as Malaysian Technology Development Corporation (MTDC), Technology Park Malaysia (TPM), Malaysian Institute of Microelectronics Systems (MIMOS), Standards and Industrial Research Institute of Malaysia (SIRIM), Malaysian Institute for Nuclear Technology (MINT), and other private sector representative such as Malaysian Industry Government Group for High-Technology (MIGHT) and the Malaysian Business Council. The goals were to ensure that Malaysia continuously achieve scientific and technological development to accelerate economic growth, industrial development and technologically advanced society.

**TABLE 1: STRUCTURE OF HIGH TECHNOLOGY EXPORTS OF MALAYSIA
(Percentage of total manufactured exports)**

PRODUCTS									
Country/Year	Total High Tech	Aerospace	Chemistry	Computers	Electrical	Non-Electrical	Pharmacy	Scientific	Telecom
Malaysia									
1993	39.40	2.18	0.10	8.21	0.40	0.11	0.02	1.13	28.39
1994	42.49	3.34	0.09	10.49	0.43	0.06	0.02	1.04	28.05
1995	44.26	2.12	0.17	11.92	0.40	0.06	0.03	1.03	29.56
1996	42.75	1.32	0.17	11.42	0.30	0.07	0.02	1.01	29.45
1997	48.28	0.96	0.19	15.50	0.30	0.07	0.03	1.25	29.98
1998	54.14	1.64	0.25	18.87	0.27	0.09	0.03	1.12	31.86
1999	58.15	0.80	0.21	23.03	0.35	0.11	0.03	1.01	32.61
2000	58.84	0.21	0.23	23.99	0.55	0.09	0.03	1.22	32.52
2001	57.38	0.36	0.28	21.04	0.49	0.11	0.02	1.75	33.33

Author's Calculation

Government support in expediting high technology based enterprises has to some extent shifted the manufacturing activities in the high technology based industries. Table 1 below indicates the contribution (in percentage) of high technology exports in Malaysia to the total manufactured exports respectively from the year 1993-2001. Data illustrated the importance of high technology exports for Malaysia. Malaysia has gradually progressed the technological ladder and managed to concentrate in technology intensive activities. Malaysia total share of high tech exports increased from 39% to nearly 57% in 1993 and 2001. Half of the total manufactured exports of Malaysia consist of high technology exports.

3 POLICY DEVELOPMENT AND ISSUES

Numerous numbers of studies¹ have clearly indicated that in recent years Malaysian export competitiveness in general witnessed a slow down. Indeed the China factor has in average affected Malaysia's performance despite the fact that Malaysia has a long history of manufacturing exports especially in the technology intensive industries. In addition it is also evidenced that other ASEAN-4 also competed for the market share especially in the technology intensive industries. To take full advantage of the opportunities and to be more competitive Malaysia should tailor its policies progressively. Specific areas for policy development are discussed below.

3.1 Developing Diversity in Key Industries

Comparing the labor cost of selected Asian countries (Table 2) there is no doubt that China has its cost advantage with low labor cost (472 and 729 between 1980-84 and 1995-99 respectively). Malaysia on the other hand has a higher labor cost especially in the recent years compared to China, Thailand, Indonesia and Philippines. However, one priority that Malaysia should consider, to be a head of China is to enhance its products in terms of diversity in aspects of design and quality. In fact manufacturing value added in Malaysia is far better (increase by 49.8% between 1980-84 and 1995-99) if compared to China (-5.7%). This should be an area of opportunity for Malaysia to utilize and explore. For example, even China showing growth in exports of electronic

¹ For a compressive literature on export performance and challenges of Malaysia, please refer to the project entitled "The Trends, Prospects and Challenges of Malaysia's Export Market: A Shift-Share Analysis by Chandran V.G.R. et al.

and electrical products, lacks confidence on quality of the product slows the market penetration. Many studies also suggest that true competitiveness lie on the nations ability to yield greater value-added industries in order to upgrade itself from labor-intensive industries to high technology intensive industries. Indeed Malaysia would be able to compete despite similar export profiles and similar competitive nature of trade structure if diversity could be developed in the manufactured products. Malaysia should also attract investment that will create a lot of value. Quality and standards play an important role in building international competitiveness especially competency in industrial design, engineering design and product design. By working closely with the global players Malaysia would be able to establish a reputation for quality control, low costs and technological superiority. For example, Thailand's experience in auto car parts could be a good lesson on how they have managed to capture the market for auto parts. In Thailand, local suppliers of car parts export businesses got their early start when Japanese carmakers began building assembly plants in Thailand in the 1980s and today Thailand made parts are shipped worldwide as they have established quality by working closely with global carmakers. In this case even if China enjoys a lower cost base internationally it will find it difficult to compete with Thailand, as China is not known for quality. Indeed establishing precision and high quality would mean securing higher export market share. In addition manufactures would also be able to climb up the value chain by learning and being more innovative. An early start may mean leaving the competitors such as China behind the race for competitiveness. Under the National Action Plan on Industrial Technology Development strategies were focused on setting up a National Center for Product Design and Development that could encourage the development of specialized quality of the emerging industries. With regard to the prospect industries, telecommunication and computers would certainly need to be included.²

TABLE 2: LABOR COSTS AND VALUE ADDED PER WORKER IN MANUFACTURING (US\$ PER YEAR)

Countries	Labor Costs (Wage)			Value added		
	1980-1984	1995-1999	% Increase	1980-1984	1995-1999	% Increase
Malaysia	2519	3429	36.1	8454	12661	49.8
Thailand	2305	2705	17.4	11072	19946	80.1
Indonesia	898	1008	12.2	3807	5139	35.0
Philippines	1240	2450	97.6	5266	10781	104.7
Singapore	5576	21534	286.2	16442	40674	147.4
Republic of Korea	3153	10743	240.7	11617	40916	252.2
China	472	729	54.4	3061	2885	-5.7

Source: World Bank, World Development Indicator, 2000.

Furthermore, Malaysia can fast become a significant player in the Chinese market if cooperation and economic ties is been established between the nations. Recent visit by Prime Minister, Abdullah Ahmad Badawi has marked the effort of future economic cooperation and one area of interest should be the industries specified earlier.

² MIGHT, a non-profit company providing a platform for government and industry collaboration focused on aerospace, advanced materials, telecommunications, pharmaceuticals, low emission vehicles, housing and construction sectors for national development.

3.2 Clustering of Industries

According to Michael E. Porter, the competitiveness of the nations is determined by productivity growth. How a nation uses its human, capital and natural resources will determine a firm's competition in the same industries. Cluster development holds the key for productivity growth and competitiveness. Porter suggested that locating critical masses of linked industries and institutions in one place help firms to enjoy competitive success. Clustering benefits the industry by providing efficient concentration of supplier, efficient access for information, close relationship and coordination, enhanced diffusion of knowledge on best practices and stimulate innovation. For example, Australia successfully developed clusters in growing grapes for wines and countries like Portugal, China and Romania are famous footwear clusters for production of lower to medium price range shoes.

In this respect Malaysia should be more proactive in establishing cluster developments. In Malaysia the Second Industrial Master Plan adopted a cluster based industrial development to sustain the growth of the manufacturing sector. One promising cluster development in Malaysia is the creation of the Multimedia Super Corridor where it promise to be renowned, vibrant and strategic regional hub for Information Technology trade and services, education services, medical services and telecommunication. However of late, hi-technology investors are shying away from Cyberjaya forcing the government to market its project as affordable alternative for call centers, back offices operations and low tech administrative subsidiaries. Furthermore, the adoption of cluster based industrial development does not show significant concomitant growth of the supporting industries that will fuel the engine of growth for the economy. In fact SMEs contribution as the key suppliers to the locally based larger firms and the export market should be fully integrated along the manufacturing value chain. Lack of coordination and linkages between industry, research institution and government has served as the blocking agent for the cluster development.

3.3 Information, Communication and Technology

Recent literatures tend to emphasize the role of Information, Communication and Technology (ICT) as the driving force for economic and industrial performance. A report by David de Ferranti et al. (2002), clearly indicated the influence of ICT on the structure of trade. Indeed this basic result shows a high fit of regression between ICT index (including communications, computer penetration, and access to the Internet) with income per capita. Investment in technology and research and development has to be improved to ripen the benefits of international competitiveness. Example, learning for the world's broadband leader such as South Korea (it has invested \$850 million in broadband infrastructure and promise another \$850 million over the next four years) would improve the competitiveness of the Malaysian industries.

TABLE 3: TECHNOLOGY DIFFUSION AND CREATION

Country	Telephone mainlines		Cellular subscribers		Internet users	
	(per 1,000 people)		(per 1,000 people)		(per 1,000 people)	
	1990	2001	1990	2001	1990	2001
Hong Kong, China (SAR)	450	580	24	859	1.3 (a)	386.8
Singapore	346	471	17	724	1.6(a)	411.5
Korea, Rep. of	306	486	2	621	0.2	521.1
Brunei Darussalam	136	259	7	401	..	102.3
Malaysia	89	198	5	314	(.) (b)	273.1
Thailand	24	99	1	123	0.0	57.7
Philippines	10	42	0	150	..	25.6
China	6	137	(.)	110	..	25.7
Viet Nam	1	38	0	15	..	12.4
Indonesia	6	35	(.)	31	..	19.1
India	6	38	0	6	(.) (b)	6.8
Myanmar	2	6	0	(.)	..	0.2

Source: UNDP, Human Development Report, 2003

a. Data refer to 1991.

b. Data refer to 1992.

Many other countries (For example Singapore, Japan and Canada) are aggressively progressing in establishing and making broadband infrastructure available to the industries and public. In Australia the information economy is seen as the key ingredient to business survival. Improvements in ICT infrastructure are critical to productivity. For example, through video conferencing, people work faster and more efficiently. In addition deploying broadband means a cheaper solution for entrepreneur and business. The ICT development is also crucial in fostering knowledge worker where these types of workers are highly needed as Malaysia moves towards technology driven industries

Competitiveness can be viewed in the sense of lowering production costs, which focuses on improving efficiency and productivity. Lower wage rate is not the only attraction that promises growth but also the productivity driven economy and in these aspect Malaysia has the advantage of overriding China and other ASEAN economies. Referring to Table 3, comparatively Malaysia is ranked number three as a whole promising better establishment of ICT. Since Malaysia has better ICT establishment, its success in altering its export structure towards high skill activities or its capability in developing high technology industries is a head of China. Of course the other caveats applies to the development of the high technology industries such as Asian crisis, sluggish US market, and SARS.

Many business models for example, Dell and AirAsia have proved that ICT could be used as the tool for global competition with the establishment of global marketing through Internet and at the same time keeping the cost at the lowest. Information technology has proved even more potent in stimulating the productivity growth. However, it takes a few years to get down the learning curve and figure out ways to use it. For example, many companies in the US are only now making full use of computers and software bought during the tech-spending boom that ended in 2000. Emphasizing Malaysian policies to gear up the usage of IT would provide an earlier start for

productivity growth. Despite productivity growth, ICT improvements are also a key element in attracting FDI which serves as the short cut for Malaysia's export competitiveness.

3.4 Nourishing Human Capital Through Education

Roles of education, training and dissemination of information is vital for the process of industrialization especially for the high tech industries. The continued surge for productivity through education is a key reason in strengthening a firm's profit even as growth remained tepid. For example, with the rapid expansion of competition, pricing power remains non-existent in many sectors yet ever improving productivity has enabled firms to squeeze costs and rebuild their bottom line. Even, The Corporate Sector Survey in 1998/1999 has indicated that firms employing workers with higher education (diploma/degree) are able to withstand the economic crises better than those who are not. The progress of these high tech industries of Malaysia may suffer because of the weak human resource base in particular a lack of well-qualified secondary and tertiary educated workers. One essential policy issue would be building up a well-defined infrastructure for education and the development of a science oriented society inline with the industry needs. Indeed recent studies suggest that required skills of employees in four main industrial clusters that highly dependent on knowledge such as computers & semiconductor, telecommunication, instrumentation, health and medical products have risen greatly. With proper supply of skilled labor Malaysia (in which China is lagging behind) could develop an attractive atmosphere for the flow of FDI in the high tech industries. The best contribution the government can make is to work on knowledge producing agendas. Progressive measures in facilitating the creation of knowledge based economy through information highway and smart school should be given top priority for economic growth as well as for the development of high technology industries. Strengthening of the vocational and technical training schools should be emphasized to a great extent in facilitating the growth of the high technology industries.

Table 4 shows a comparison between countries on the status of student literacy and enrolment. Malaysia has done fairly well in the adults and young literacy rate compared to other countries. However these raw data may be insufficient to say that Malaysia has the needed human resources to fulfill the high tech industries' needs. In addition high literacy and enrolment rate do not reflect the quality of education that is available and recent rapid expansion of new educational institutions (colleges, universities and training institutes) does not promise a great return if quality of graduates deteriorates and if a large portion of the programs available in these institutions are focused towards non-science and technical subjects. Another alarming situation for Malaysia and other Asian countries compared with China is its low level of tertiary student enrolment in science math and engineering where China has a higher percentage (53%) of enrollment.

TABLE 4: EDUCATION INDICATORS IN SELECTED ASIAN ECONOMICS

	Adult literacy rate (% age 15 and above)		Youth literacy rate (% age 15-24)		Net primary enrolment ratio (%) ^a		Net secondary enrolment ratio (%) ^a		Tertiary students in science, math and engineering (as % of all tertiary students) 1994-97		
	1990	2001	1990	2001	1990-91	2000-01	1990-91	2000-01			
Hong Kong, China (SAR)	89.7	93.5	98.2	99.4	..	..	..	..	..
Singapore	88.8	92.5	99.0	99.8	..	..	..	..	..
Korea, Rep. of	95.9	97.9	99.8	99.8	104	99	c	86	91	c	34
Brunei Darussalam	85.5	91.6	97.9	99.4	91	b	..	..	..	6	
Malaysia	80.7	87.9	94.8	97.7	..	98	c	..	70	c	..
Thailand	92.4	95.7	98.1	99.0	..	85	c	..	..	21	
Philippines	91.7	95.1	97.3	98.8	98	93	c	..	53	c	..
China	78.3	85.8	95.3	97.9	97	93	d,c	..	..	53	
Viet Nam	90.4	92.7	94.1	95.4	..	95	..	..	62	..	
Indonesia	79.5	87.3	95.0	97.9	98	92	c	38	48	d,c	28
India	49.3	58.0	64.3	73.3	..	..	..	..	..	25	
Cambodia	62.0	68.7	73.5	79.7	..	95	..	..	17	23	
Myanmar	80.7	85.0	88.2	91.2	..	83	..	..	37	37	

Source: UNDP, Human Development Report, 2003

a. Data refer to the 1990/91 or 2000/01 school years. The net enrolment ratio is the ratio of enrolled children of the official age for the education level indicated to the total population of that age. Net enrolment ratios exceeding 100% reflect discrepancies between these two data sets.

b. Data refer to the 1991/92 school years.

c. Preliminary UNESCO Institute for Statistics estimates, subject to further revision

d. Data refer to the 1999/2000 school year.

To gain competitiveness in the high tech industries Malaysia should find ways to increase their tertiary enrolment in these subjects. China will have an added advantage and higher capability in supplying workforce to the high tech industries in the future considering the high enrolment in science and technical subjects. In maintaining and gaining the competitive edge on high tech areas, strategies in development of human capital should focus on the shift in the education policy from focusing on basic education to a focus on supply of high tech human capital and from learning to performing. Meaning to say that learning by performing in real business environments and in a systemic network rather than in a vacuum or formal training institution is vital. The industrial institutions such as German Malaysian Institute, Japan-Malaysian Institute and Malaysian France Institute and others should establish a network with the industries for better synergy and in future to reduce the demand supply deficits of the high tech industries. For example, a study by Rajah Rasiah (2001), indicated that Penang and Klang Valley¹ failed to enjoy

¹ Export oriented MNCs began relocating on a large scale in Malaysia following the opening of Free Trade Zones and Licensed Manufacturing Warehouse. Penang is the largest in terms of firm numbers, employment and value added, followed by Klang Valley.

sufficient supplies of high tech human capital because of lack of effective coordination of supply and demand of high human capital. Building technological capability in Malaysia owes its existence to an early nurturing of its human capital and strong commitment by the government to support a new education system that fosters creativity, innovation and critical thinking. Malaysia has realized the importance of technology and has begun making large investments in this area however it is virtually impossible to gain without having a better higher education. In order to move into higher manufacturing industries, strategies and policies in Malaysia should focus on four distinct areas. There is an urgent need to:

1. Place greater emphasis on enrolment of tertiary students in science, mathematics and engineering and tertiary level curriculum should emphasis on basic and applied science and technology
2. Enhance coordination and linkages between the higher education institution and industries
3. Expand creation of knowledge workers by emphasizing in quality of education rather than quantity. This includes quality of students, quality of teachers, learning aids, school facilities and others.
4. Provide vocational and technical education and training with the motive to supplant the industrial needs rather than for the purpose of encouragement

3.5 Managing Technology Commercialization and Intellectual Property

Given today's competitive environment the development of new products and processes will be the lifeline of the success of export industries. Opportunities should be created through academic research especially by encouraging the partnership between universities, research institutions and the private sector. Potential research projects in any of these institutions should be identified and given the support necessary to facilitate the flow of innovation and new ideas. Innovations are the indicators of the high tech industries competitiveness. Two key factors contribute to the innovation in high tech industries. One being the notion as whether businesses, government and cultural encourage the high tech development and, second being the socioeconomic infrastructure such as physical, human resource and financial support for modern technology based economy.

TABLE 5: PATENTS, ROYALTIES AND LICENSE FEES FOR SELECTED COUNTRIES

Country	Patents granted to residents (per million people)	Receipts of royalties and license fees (US\$ per person)
	1999	2001
Hong Kong, China (SAR)	4	16.0
Singapore	12	..
Korea, Rep. of	931	14.6
Brunei Darussalam	..	..
Malaysia	..	0.9
Thailand	..	0.1
Philippines	(.)	(.)
China	2	0.1
Viet Nam	(.)	..
Indonesia	0	..
India	1	0.1
Myanmar	..	(.)

Source: UNDP, Human Development Report, 2003

a. Note: Some of the data refer to the most recent year available during the period specified.

Based on Table 5, it is evident that Korea and Singapore (high patent grants and royalties) have an understanding of the relationship between innovativeness and exporting meaning to say that they intended to improve competitiveness by being more innovative. Malaysia needs to foster more innovativeness and thus improve its competitiveness especially among the local companies and the Small Medium Enterprises (SME).

Apart from being innovative Malaysia must also spring to the mind of investors as the center of technology venture capital. Malaysia is capable of channeling much investment capital into tech startups with better intellectual property protection. One move towards encouraging venture capital to invest in Malaysia is by improving the law that will safeguard intellectual property. Even Russia with her handful skilled technical talent and supply of unemployed engineers has experienced little investment in high tech because of Russian law, which didn't safeguard intellectual property. China might also been unfavorable for investors of high technology industries as the effect of the low protection of intellectual property in the country.

3.6 Research and Development

Technological effort is vital to Malaysia, even though it is clear that they are not “innovating” at the frontier. Another policy issue concerning for the survival of export industries is the strength of research and development activities in Malaysia. So far Malaysia has learned to use the imported new technology and equipment from the more advanced countries. However it is time to upgrade

Malaysia from the assembly stage to manufacturing, design and development of new products. In this respect China is unique because of its size, industrial tradition, background and overseas ethnic linkages such as Taiwan and Korea. It can combine its uniqueness into its own policy to restructure and develop domestic enterprises.

Enhancing total factor productivity by improving technological know-how, innovation, gains of specialization, increased efficiency as well as workers education, skills and experience is vital. The Corporate Sector Survey in 1998/1999 has shed some light on the firm level total factor productivity. Results of the survey suggested that firms, which reported higher TFP, are those that conducted training and R&D, semi-automated and utilized new machinery. The survey also suggested that firms, which withstood the economic crises, are those that have higher TFP and those that spent more on training and Research and Development (R&D).

Comparing the R& D expenditure and the number of scientist and engineers (Table 6) it is clear that Malaysia is still lagging behind from many of the other nations such as China and Singapore. The government should focus on shaping the national system of innovation, and provide more proactive R & D infrastructure to enable the progress of the exporting industries. Furthermore apart from depending on the Multinational Companies local talent should be cultivated.

TABLE 6: R & D EXPENDITURE AND NUMBER OF SCIENTISTS AND ENGINEERS

Country	Research and development (R&D)	Scientists and engineers in
	expenditures (as % of GDP)	R&D (per million people)
	1996-2000 ^a	1996-2000 ^a
Hong Kong, China (SAR)	0.4	93(e)
Singapore	1.9	4,140
Korea, Rep. of	2.7	2,319
Malaysia	0.4	160
Thailand	0.1	74
Philippines	..	156 (e)
China	1.0	545
Viet Nam	..	274(e)
Indonesia	..	130(e)
India	1.2	157

Source: UNDP, Human Development Report, 2003

Note: Some of the data refer to the most recent year available during the period specified.

3.7 Development of Small Medium Enterprise

Malaysia should also focus on the development of the Small Medium Enterprise (SME) realizing that their out of date export oriented economic models are vulnerable to the depressed global demand. It is acceptable to conclude that vibrant and healthy economy depends on the competitive advantage of the strong and dynamic SME sectors. In addition, these SMEs play an important role in a sub-contracting or supply chain relationship to large organizations. Participation of SMEs is an important part of our national economic development realizing the flexibility of SMEs over the Multinational Corporations. Better integration with the world is vital

for the development of exporting SME of Malaysia. In recent years with disgusting financial status and shoddy corporate governance the SME may become drivers of the 21st century economy. For example, as an ideal long-term strategy SMEs in Korea have started cultivating their own brand despite simply being the supplier of chaebol (large industrial conglomerates). Encouragement should be given for the SME to develop and adopt the best international practices in strategic management and advance technology. Seoul is spending \$75 million over three years to give small business online access to share some of the business tools (same tools that the big companies use) in the area of planning, management and accounting. This was implemented in an attempt to increase efficiency, to hook SMEs into the bigger company supply chains, which are largely powered by internet and to improve productivity

4 CONCLUSION

This research has provided some insights on policy improvements as the tool in maintaining the survival of the high technology exporting industries. Malaysia may view the trade liberalization process as offering many potential economic benefits. However the undeniable important for Malaysia to be competitive is to create and adopt national policies to complement the emergence of the high technology industries. Indeed Malaysia should take a pro-active approach concerning the policy developments.

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