

**EXPORT SPECIALIZATION, CONCENTRATION AND INTRA-INDUSTRY TRADE:
EVIDENCE FROM MALAYSIA**

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ABSTRACT

Malaysia's outward-looking trade strategy that focuses significantly on export promotion especially in manufacturing trade, has benefited the nation as a whole. Indeed the export-led strategy has been the engine of growth for the past three decades. This paper investigated the emerging manufacturing products at 3 digits SITC level of Malaysia from the period 1996 –2000 using the Revealed Comparative Advantage Method. The results indicated that Malaysia had the comparative advantage in division 762, 763,761 and 764. In Section 75 the leading products were 759 and 752. In the Clothing and other consumer industries group 848 marked the highest RCAI. The results also showed that Malaysia has departed from natural resource based industries to skilled and technology intensive industries. In addition the export specialisation patterns are inline with the world trade of dynamic products. Malaysia's export structure indicated a favourable condition as its product specialisation was well distributed with low concentration on one particular product. The GL index showed that Malaysia was experiencing the intra-industry trade phenomena where export and import tend to be in the same product indicating a limited role of economies of scale and product differentiation.

KEY WORDS: Trade Specialization, Revealed Comparative Advantage, Export Diversification, Intra-Industry Trade

1. INTRODUCTION

Trade and Foreign Direct Investment (FDI) has become a vital element of growth for developing countries as it helps to boost productivity, allocate resources efficiently, and transfer technology and skills. World export trade increased rapidly about 5.5% per year in real terms from 1978 to 2001, developed countries contributing to most of the bulk. The developing countries have accounted about below 6% per year in real terms from 1978 to 2001. In addition the Foreign Direct Investment (FDI) flows expanded in late 1990's to about \$160 billion to developing countries, which benefited the countries in boosting their export performance (World Bank, 2003). Malaysia is no exception to the above scenario. Malaysia has increased its participation in the international networks. According to a World Bank report the developing countries' participation in the global network is highly concentrated and the top five developing country exporters of parts and components which accounted for 78% were China (28%) Mexico (17%) the Republic of Korea (14%) Malaysia (13%) and Thailand (6%). For over three decades Malaysia has shown remarkable economic performance as a result of its outward looking strategies. The proportion of export to GDP in late 1987 was 55.7% and the size was much larger in 1999 at 107.4%. (Bala Ramasamy, 2000). 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's. Malaysian's economic growth continued to improve after the economic crisis in 1997 within an environment of low inflation and unemployment. The most prominent sector contributing to the export earnings was manufacturing which account for 79% of the total export earning and nearly 29% of Malaysia's Gross Domestic Product (GDP). It has been noted that Malaysia and Thailand have emerged as the new dynamic Asian economies which became more competitive across a broad range of manufactured goods and managed to switch to higher value-added manufacturing products (Peter Wilson, 2000).

Recent developments in the international arena such as trade liberalization, the implementation of ASEAN Free Trade Agreement (AFTA), China's entry into the World Trade Organisation (WTO) and borderless business developments have made international trade more competitive. Malaysia's reliance on export will be highly challenged by these new developments and this has prompted for the study of the Malaysian export structure for the period of 1996-2000. This study investigates the patterns and trends of manufacturing export specialization in Malaysia from the period 1996-2000 using the relative revealed comparative advantage (RCAI) approach based on the Standard International Trade Classification (SITC) product categories. In addition the trend

of exports is also analysed by categorising the industries based on various factor endowments (natural resources, unskilled labour, value added and skilled labour industries) as suggested by the trade theories. However new factor endowments such as logistics costs, Information and Communication Technology and knowledge are not considered in this paper, as this data is not available in the Malaysian context. The study also investigated the linkage between sectorial comparative advantage with issues of export concentration and intra-industry trade by using the Herfindahl Index and the Grubel-Lloyd index respectively.

2. OBJECTIVES

Specifically this paper examines the following question statements, that might be useful to answer the challenges of recent development. Among the objectives of the study are:

1. What are the leading Malaysian industries in terms of their revealed comparative advantage?
2. To what extent has the Malaysian manufacturing grown in respect to the world's?
3. Has Malaysia been specialising in labour and natural resource intensive industries in recent years?
4. What is the pattern of Malaysia's export concentration and intra-industry trade?

As Malaysia's competitiveness has continued to decline over the years, investigating the above phenomena is important in drawing future policy directions to improve export competitiveness.

3. FRAMEWORK OF ANALYSIS

Research on international trade uses a wide range of statistical tools from the simplest to the most complex econometric techniques with the availability of detailed data. The revealed comparative advantage index (RCAI) is one of the most widely used measures of trade competitiveness and measures the extent of international trade specialization in different products. The Revealed Comparative Advantage Index (RCAI) by Bela Balassa is well known and there are many studies have used this approach.

3.1 Revealed Comparative Advantage

A number of RCAI indicators are available to measure export specialization. To achieve the objective of the study the relative revealed comparative export advantage approach by Balassa is

used to analyse the comparative advantage of a country's product exports in world exports. The approach uses information, which is revealed from post trade situations.

$$RCAI = X_{ij} / \sum_i X_{ij} / X_{iw} / \sum_i X_{iw} \quad (1)$$

Where

X_{ij} = Export value of product i by Malaysia

$\sum X_{ij}$ = Total exports of Malaysia

$\sum_i X_{iw}$ = Total world exports of product i

$\sum_i X_{iw}$ = Total exports of the world

The numerator represents the percentage share of a given product in national exports and the denominator represents the percentage share of a given product in world exports. Thus the RCAI measures the comparison of national export structure with the world export structure. The percentage share of exports will be identical with the world average when the RCAI equals to 1. A value of above 1 indicates the country's export advantage (country is said to be specialised in that product) and vice versa where the RCAI is below 1. Although the RCAI proves to be useful the results in this paper were interpreted with caution as the RCAI can be distorted by government policies and other interventions in the market.

This study also used the normalized trade balance to complement the RCAI measure since the degree of export specialisation may differ according to the import dependence. Example if a countries RCAI is above 1 in a particular product with a high import dependence in that product one cannot conclude that the countries has the comparative advantage in the particular product. To overcome this weakness, the normalized trade balance indicators (z) are used. This measure is used together with the RCAI to identify the true comparative advantage of Malaysia's export specialisation. The following measure the value of z.

$$Z_{ij} = X_{ij} - M_{ij} / X_{ij} + M_{ij} \quad (2)$$

Where,

X_{ij} = Export of country i of product j

M_{ij} = Import of country i of product j

The range of the indicator is between -1 to $+1$. The normalized trade balance would improve if the export growth were higher than that of imports. This makes the indicator a suitable measure of the degree of disequilibrium of trade flows and as a tool for comparisons over time and space.

To study the export concentration and intra-industry trade, the study used the Herfindahl Index and the Grubel-Lloyd index. The following applies

$$H = \sum_i^n X_i / \sum_i X_i \quad (3)$$

Where

n = Total number of product

x_i = Export of product i

The Herfindahl index measures the export concentration where when export revenues are evenly distributed over a large number of products, H approaches 0 and if a single product produces all the revenue H approaches 1.

$$GL_{ij} = 1 - \frac{\sum_{j=1}^n |X_{ij} - M_{ij}|}{\sum_{j=1}^n X_{ij} + M_{ij}} \quad (4)$$

The Grubel-Lloyd index measures the share of imports and exports of identical products at 3-digit level of the SITC. This index varies between 0 and 1

3.2 DATA

Country exports and imports data used in this study are based on the United Nations COMTRADE database from the year 1996 to 2000. Due to the unavailability of data, the years 2001 and 2002 have not been included. All product groups are defined according to the Standard International Trade Classification (SITC) and the following manufacturing export groupings are used in this study: Manufactures (SITC sections 5, 6, 7, 8 minus division 68 and group 891). In addition the study also categories the manufactured products into four main industrial clusters (technology, unskilled labour, skilled labour and natural resources).

4. OVERVIEW OF MALAYSIA'S MANUFACTURING EXPORT AND IMPORT FLOWS

Malaysia's manufacturing export contribution to the total merchandise exports accounted for 76.69% in 1996 and improved over time to 81.27 % in 2000. (Refer to Table 1) The export of manufacturing product has become the backbone of the economic development of Malaysia. Malaysia's economic development, built on the base of import substitution in three areas, transport equipments, industrial chemicals and fertilizers and industrial machinery have improved industrial competitiveness and is seen as a vehicle towards achieving vision 2020. This is mainly due to the government policy which emphasizes export led strategies especially in attracting the foreign direct investment from Japan, Taiwan United States, France, Singapore and United Kingdom. In addition, due to cheap outlay, production cost and change of investment strategy, Malaysia has managed to attract more foreign direct investment. It has been noted that the process of industrial restructuring in Japan and the Newly Industrialist Countries (NIC's) has migrated some activities through foreign direct investment channels to Malaysia and other ASEAN member countries. (Hiley Mark, 1999)

The most promising product, which contribute significantly to the total share of manufacturing exports was the SITC section 7- Machinery contributing to 52.29% and to 62.52% in 1996 and 2000 respectively. In 1996 the leading groups of products in this section were divisions 77- Electrical machinery (22.45%), 76 - Telecommunications (15.18%) followed by 75 - Office machines (11.50%). The flow of export continued to improve for Electrical machinery and Office machines in 2000. Relatively the net balance of trade suggests that division 75 and 76 were the main leaders since division 77 accounted for a higher import share. (The share of import increased to about 10.54% between 1996 and 2000 compared with export share, which only increased by 2.11%.) Based on Table 1 the total manufacturing export (in percentage) between 1997 and 2000 showed positive growth by 4.58% although Malaysia was undergoing turbulence due to the 1997/98 economic crisis. The improvement in export trade was mainly due to the contribution of Section 7 (mostly technology intensive) whereas the other sectors showed a declining trend after 1997. In addition, the impact of the economic crisis on the manufacturing sector was diverse with Section 7 improving and others deteriorating in terms of contribution to the overall merchandise trade. This suggests Section 7 was an important sector that contributed significantly to the Malaysian balance of trade during the period of study.

The second largest share of manufacturing exports came from Section 6- Leather Manufacturer with 63- Cork and wood manufacturing and 65 - Textile being the leading products. However the trend showed that the contribution of this product declined considerably between 1996 and 2000 from 9.28% to 6.91%. The import of Section 6 showed a similar trend where it declined by about 2.85% as a whole between 1996-2000.

In Section 8 sub sector 84 - Apparel and Clothing led the section followed by 89 - Misc. Manufactured articles and 82 - Furniture and parts. However this section too showed a considerably declining trend. Between 1996 –2000 the total section 8 export changes had declined by 0.97%. In the same period of time only 82 Furniture /parts and 87-Professional and scientific inst. showed positive growth. However group 87 showed a higher import growth relative to other products in Section 8. Group 84 - Apparel & Clothing the leading product showed the sharpest decline (0.74%) within the range of Section 8 products.

5. COMPARATIVE ADVANTAGE: FACTS FROM MALAYSIA

The RCAI measure reflects the revealed comparative advantage of Malaysia in particular products as determined by technology and factor endowments, modified by government policies designed to draw resources into the favoured sectors in Malaysia. Using the RCAI the 25 most dynamic products, where Malaysia enjoyed a strong comparative advantage were identified (**Refer to Table 2**). The results of the RCAI were analysed by their main industry as shown below:

5.1 Clothing and other Consumer Goods Industry (SITC Division 84, 82 & 88)

Section 8 was the third largest contributor to manufacturing exports between the years 1996-2000. One of the leading products in Section 8 was division 84 (Clothing) particularly group 848 (Headgear/Non-text Clothing) improving its RCA ranking in 1998 & 1999 to third and second leading product respectively. However in 2000 its position declined. Among other products with an RCAI of more than 1 based on unskilled labour intensive product are group 843 Men/Boy Wear, and 821 Furniture/Stuff Furnish with 821 maintaining a better position than 843. Under the technology intensive product group 881 Photographic Equipment was one of the leading industries maintaining its position at 9th place.

5.2 Electronic & Electrical Industry (SITC 75, 76 & 77)

SITC Section 7 comprises most of the dynamic products of Malaysia. In addition most of these dynamic products are in the high value added sectors. In group 76, division 762 (Radio Broadcast Receiver), 763 (Sound/TV recorders), 761 (Television receivers), 764 (Telecommunication Equipment) were the leading products maintaining the first 10 high rankings of the RCAI with 762 (Radio Broadcast Receiver) being the most dynamic product and maintaining its position through out 1996-2000. Although the ranking for individual products remained steady over time it has to be noted that the absolute values of the RCAI declined over time. This downward trend indicates that among other factors, competition had risen due to globalisation. The second largest group has 75 with division 759 (Office equip parts/accs) and 752 (Computer Equipment) leading the way for Malaysia. An interesting pattern emerged for division 759 where it improved its comparative advantage and become a the third leading product in 1999 and 2000. Similarly 752 had also improved its position since 1996. The economic crisis in 1997 might have also dampened the value of the RCAI in Section 7.

Although group 77 seemed to have a comparative advantage especially in SITC 776 (Valves/Transistors/etc), 772 (Electric Circuit Equipment) and 771 (Electrical Power Equip.), these products are somewhat subject to imported volumes indicated by the low normalized trade balance.

5.3 Wood, Paper & Textiles Industry (SITC Division 62,63 & 65)

In section 6 group 63 led the industry with 634 Veneer/Plywood ranking number 3 and 4 in terms of RCAI in 1996 -1997 and 1998-2000 respectively. However the net trade balance indicated a high portion of imports in the same category. The textile industry group 65, which is an unskilled intensive industry, showed a low level of net trade balance suggesting the product's high reliance on imports. Division 651 was identified as the leading industry in Section 6 with an RCAI of more than 1.

5.4 Chemical Industry (Section 5)

The chemical industry showed an improvement since 1996 especially 512 – Alcohols/Phenols and 572- Styrene Primary Polymers. In 1996 both the products were ranked 24 and 18 respectively and over the years it improved and in 2000 the product was ranked 10 and 14

respectively. However the normalised trade balance shows that the above product was also heavily reliant on imports, which jeopardised the true RCAI results.

In analysing the pattern of trade among the 25-leading products of Malaysia based on the RCAI measure it was found that technology intensive manufacturing industries dominated, followed by skilled and unskilled manufacturing industries. The results also suggest that Malaysia is losing competitiveness (shown by the declining RCAI ranking) in natural resource industries. The evidence suggests Malaysia's reorientation of manufacturing industries away from natural resource intensive to technology and skilled labour intensive. Overall in 1997 the number of products maintaining comparative advantage declined to 23 and further to 20 in 1998, 1999 and 2000 as a result of the economic crisis in 1996/1997.

6. EXPORT STRUCTURE OF MALAYSIA AND THE WORLD

It has been suggested that developing countries lack product dynamism in the world market as they are still concentrating on natural resources or unskilled labour. In order to investigate the above claim this study also compared the results of Malaysia's export structure with the world export trends. In measuring the dynamic products of the world this study relied on the United Nations' report on Dynamic Products in World Export between 1980-1998. The study by the United Nations is based on ranking the products by average annual export value growth between 1980-1998. However by comparing the RCAI results one can assess whether Malaysian trade structures are concentrated on the demanding product categories of the world.

It is important to note that Malaysia's export specialization trend was in line with some of the dynamic average annual growth products of NIEs especially 752 and 759 where Malaysia had a comparative advantage. The trend of developed countries' exports showed that they tend to be more dominant in section 7 and 8 and again 752 and 759 were one of the dynamic products of developed countries. The share of export in 752 and 759 by developing countries alone amounted for 36% and 38% respectively and Malaysia was as one of the main exporters of 759 (Ranking number 6)(**Refer to Table 3**)

In comparing Malaysian and other ASEAN countries it has been noted that many other ASEAN countries especially Thailand, Singapore, Indonesia and the Philippines have similar export specialisation structures although Indonesia lack behind in terms of competitiveness. (Chandran V.G.R. et. al. 2003) Many have jumped onto the bandwagon of manufactured products at the

expense of primary products but one distinguishing pattern is that Malaysia's and Singapore's exports are more concentrated on value added and technology intensive industries but in the near future other countries will indeed follow suit.

7. EXPORT CONCENTRATION AND INTRA INDUSTRY TRADE

Many economists believe that if countries rely on a few products for export they will face more severe and sudden variations in their terms of trade. In addition a high concentration of export revenues on a handful of products can affect the growth performance. Table 4 shows the Herfindahl Index of the export concentration of Malaysia between 1996-2000. When a single export product produces all the revenue the Herfindahl Index approaches 1 and when export revenues are evenly distributed over a large number of products, H approaches 0. From Table: 4 , it can be seen that Malaysia seemed to have desirable qualities of low export concentration, meaning to say that the export revenues of Malaysia were evenly distributed over a large number of products within the total manufacturing exports. However, if compared between years, it is evident that there was a slow increase in the Malaysian H-Index. This may have resulted from the Malaysian outward policy in attracting more FDI as many studies associate trade liberalization with reduction in the concentration of export revenue.

Table 4: Herfindahl Index between 1996 –2000

YEAR	1996	1997	1998	1999	2000
H-INDEX	0.159	0.164	0.170	0.192	0.193

Source: Author's calculation based on COMTRADE database

Note: Herfindahl Index was calculated based on the SITC 2 digit level

Table 5: Intra vs. Inter Industry Trade (IIT)

YEAR	1996	1997	1998	1999	2000
GL-Index	0.0689	0.0621	0.06936	0.08956	0.0556

Source: Author's calculation based on COMTRADE database

Note: GL-Index was calculated based on the SITC 3 digit level

In analysing the share of total trade that is conducted among identical products (that is imports and exports of the same product category) the GL index proposed by Grubel and Lloyd was calculated. Based on Table 5, the evidence indicates that Malaysian exports tend to equal imports of the same product. As a result one can conclude a Malaysian trade presence of sizeable intra-industry trade phenomena as indicated by the low GL Index. Previous studies that used data from

industries within countries have emphasized the role of economies of scale, product differentiation and imperfect competition as the determinants of the GL-Index.

8. CONCLUSION

This paper has focused on export specialisation, concentration and intra trade issues in the Malaysian scenario. The main results of the paper indicate that Malaysian comparative advantage was mainly in the Electrical and Electronic industry particularly groups 76, 77 and 75. On the other hand the study also found that Malaysia had departed from natural resource intensive industries to skilled and technology-based industries following the trend of the NIE's and the world. In addition the export concentration structure appeared to be well distributed within the manufacturing products. However the index for measuring trade diversification appeared to be more of intra-industry trade phenomena. This may suggest that Malaysia is still in the process of acquisition of foreign knowledge with a low capability of building its own competitive industries in technology-based industries.

APPENDIX

TABLE 1: SHARE OF MANUFACTURING EXPORT IN TOTAL MERCHANDISE EXPORT

SITC (2 Digit Level)	Share of total manufacturing exports (%)					Share of Total manufacturing Imports(%)					Change 1996-2000	
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	Export	Import
51 Organic Chemicals	0.63	0.95	0.91	0.81	1.12	1.36	1.53	1.75	1.59	1.86	0.49	0.50
52 Inorganic Chemicals	0.07	0.09	0.11	0.11	0.10	0.76	0.75	0.75	0.71	0.58	0.03	-0.17
53 Dyeing, Tanning & Coloring	0.20	0.20	0.22	0.21	0.21	0.49	0.46	0.42	0.45	0.42	0.00	-0.07
54 Medicinal & Pharmaceutical	0.11	0.09	0.09	0.09	0.08	0.43	0.47	0.45	0.50	0.42	-0.03	-0.01
55 Cleansing preparations	0.26	0.28	0.30	0.29	0.26	0.47	0.49	0.49	0.52	0.43	0.00	-0.05
56 Fertilizers (other than group 272)	0.15	0.10	0.09	0.10	0.14	0.43	0.47	0.54	0.53	0.43	-0.01	0.00
57 Plastics in primary forms	0.58	0.70	0.75	0.65	0.90	1.62	1.59	1.53	1.74	1.75	0.32	0.13
58 Plastic in non-primary forms	0.22	0.27	0.27	0.30	0.36	0.44	0.44	0.47	0.57	0.54	0.15	0.10
59 Chemical materials n.e.s.	0.90	0.89	0.74	0.65	0.65	0.79	0.81	0.80	0.94	0.82	-0.25	0.02
Total Section 5	3.13	3.57	3.48	3.23	3.83	6.79	7.01	7.20	7.55	7.23	0.70	0.45
61 Leather manufactures	0.10	0.07	0.12	0.04	0.03	0.13	0.09	0.08	0.09	0.08	-0.07	-0.04
62 Rubber manufactures	0.52	0.51	0.56	0.44	0.36	0.24	0.25	0.23	0.26	0.25	-0.15	0.01
63 Cork & wood manufactures	3.07	2.92	2.08	2.16	1.81	0.09	0.10	0.11	0.13	0.12	-1.27	0.03
64 Paper, paperboard & paper pulp	0.34	0.33	0.32	0.34	0.36	1.39	1.37	1.22	1.38	1.36	0.01	-0.02
65 Textile	1.66	1.64	1.49	1.33	1.29	1.75	1.56	1.60	1.56	1.37	-0.37	-0.38
66 Non-metallic minerals	0.83	0.77	0.73	0.70	0.69	1.40	1.20	0.82	0.83	0.81	-0.15	-0.59
67 Iron & steel	0.74	0.75	0.96	0.62	0.62	4.42	4.41	2.96	3.30	2.61	-0.12	-1.82
68 Non-ferrous metals	0.99	1.00	1.02	1.01	0.92	2.19	2.27	2.21	2.47	2.27	-0.07	0.08
69 Manufactures of metals	1.03	1.00	1.03	0.94	0.83	0.96	0.90	0.85	0.81	0.84	-0.21	-0.12
Total Section 6	9.28	9.00	8.31	7.57	6.91	12.56	12.15	10.09	10.84	9.71	-2.37	-2.85
71 Power Generating machinery	1.01	0.82	0.86	0.89	0.79	2.59	2.04	1.92	1.83	1.74	-0.22	-0.85
72 Machinery specialized for industries	0.73	0.68	0.90	0.61	0.68	5.74	5.08	3.67	2.96	4.15	-0.05	-1.59
73 Metalworking machinery	0.13	0.15	0.16	0.13	0.12	1.50	1.67	1.21	0.92	1.05	-0.01	-0.46
74 General industry machinery	1.92	1.38	1.42	1.39	1.30	4.72	4.94	3.67	4.03	3.21	-0.62	-1.51
75 Office machines	11.50	14.34	15.95	20.30	21.06	5.01	6.03	6.00	5.59	5.47	9.57	0.46
76 Telecommunications	15.18	13.27	12.33	11.69	13.20	4.12	3.94	3.44	3.48	4.23	-1.98	0.12
77 Electrical machinery	22.46	23.25	24.75	25.71	24.57	29.26	28.30	36.59	38.21	39.80	2.11	10.54
78 Road vehicles	0.66	0.66	0.72	0.55	0.44	3.92	3.76	1.24	2.05	2.13	-0.22	-1.79
79 Other transport equipments	1.70	1.59	2.12	1.04	0.35	3.09	4.27	5.21	2.65	0.86	-1.35	-2.22
Total Section 7	55.29	56.13	59.22	62.32	62.52	59.96	60.02	62.95	61.72	62.64	7.23	2.68
81 Buildings, plumbing, sanitary	0.10	0.08	0.09	0.09	0.07	0.11	0.09	0.08	0.10	0.06	-0.02	-0.04
82 Furniture and parts	1.43	1.53	1.52	1.66	1.62	0.14	0.15	0.11	0.12	0.13	0.20	-0.01
83 Travel goods, handbags	0.06	0.04	0.04	0.02	0.02	0.04	0.04	0.03	0.03	0.04	-0.04	0.01
84 Apparel & Clothing accessories	3.03	2.97	3.14	2.67	2.30	0.21	0.20	0.19	0.19	0.18	-0.74	-0.03
85 Footwear	0.14	0.12	0.10	0.10	0.09	0.07	0.08	0.05	0.07	0.08	-0.05	0.01
87 Professional & scientific inst.	0.62	0.74	0.63	0.66	0.87	1.49	1.96	2.05	1.86	2.26	0.25	0.78
88 Photographic apparatus	0.96	1.03	1.03	0.85	0.96	1.06	0.89	0.84	0.85	0.85	0.00	-0.21
89 Misc. manufactured articles	2.65	2.23	2.16	2.12	2.08	1.69	1.84	1.86	1.98	2.05	-0.57	0.36
Total Section 8	8.99	8.75	8.71	8.16	8.02	4.80	5.25	5.21	5.20	5.67	-0.97	0.87
Total Manufacturing Export/Import	76.69	77.44	79.71	81.28	81.27	84.11	84.43	85.44	85.31	85.26	4.58	1.15

Source: Author's calculation based on COMTRADE database

TABLE 2: MALAYSIA'S DYNAMIC PRODUCT (RCA MORE THAN 1)

1996				1997			
PRODUCT	RCA	NTB	Rank/FI	PRODUCT	RCA	NTB	Rank/FI
512 - ALCOHOLS/PHENOLS/DERIVS	1.12	0.20	24(T)	512 - ALCOHOLS/PHENOLS/DERIVS	1.93	0.26	12(T)
572 - STYRENE PRIMARY POLYMERS	1.35	-0.20	18(T)	572 - STYRENE PRIMARY POLYMERS	1.59	-0.07	14(T)
598 - MISC CHEMICAL PRODS NES	1.22	0.28	21(T)	598 - MISC CHEMICAL PRODS NES	1.18	0.26	21(T)
621 - MATERIALS OF RUBBER	1.93	0.69	10(N)	621 - MATERIALS OF RUBBER	1.99	0.70	10(N)
634 - VENEER/PLYWOOD/ETC	7.62	0.95	3(N)	634 - VENEER/PLYWOOD/ETC	7.31	0.94	3(N)
635 - WOOD MANUFACTURES N.E.S.	1.32	0.88	20(N)	635 - WOOD MANUFACTURES N.E.S.	1.44	0.87	16(N)
651 - TEXTILE YARN	1.33	0.36	19(U)	651 - TEXTILE YARN	1.21	0.40	20(U)
655 - KNIT/CROCHET FABRICS	1.09	-0.18	25(U)	716 - ROTATING ELECTR PLANT	1.00	-0.28	23(T)
716 - ROTATING ELECTR PLANT	1.14	-0.24	23(T)	752 - COMPUTER EQUIPMENT	2.41	0.68	8(T)
741 - INDUST HEAT/COOL EQUIPMT	1.41	0.21	17(T)	759 - OFFICE EQUIP. PARTS/ACCS.	3.44	0.20	7(T)
752 - COMPUTER EQUIPMENT	1.78	0.61	11(T)	761 - TELEVISION RECEIVERS	4.81	0.98	6(S)
759 - OFFICE EQUIP PARTS/ACCS.	3.34	0.26	7(T)	762 - RADIO BROADCAST RECEIVER	10.49	0.94	1(S)
761 - TELEVISION RECEIVERS	5.71	0.98	5(S)	763 - SOUND/TV RECORDERS ETC	7.86	0.96	2(S)
762 - RADIO BROADCAST RECEIVER	11.76	0.93	1(S)	764 - TELECOMMS EQUIPMENT NES	1.96	0.16	11(T)
763 - SOUND/TV RECORDERS ETC	8.87	0.96	2(S)	771 - ELECT POWER TRANSM EQUIP	1.38	-0.17	18(T)
764 - TELECOMMS EQUIPMENT NES	2.09	0.13	8(T)	772 - ELECTRIC CIRCUIT EQUIPMT	1.64	-0.19	13(T)
771 - ELECT POWER TRANSM EQUIP	1.46	-0.21	16(T)	776 - VALVES/TRANSISTORS/ETC	4.98	-0.05	5(T)
772 - ELECTRIC CIRCUIT EQUIPMT	1.50	-0.25	13(T)	821 - FURNITURE/STUFF FURNISHG	1.59	0.82	15(U)
776 - VALVES/TRANSISTORS/ETC	5.08	-0.08	6(T)	843 - MEN/BOY WEAR KNIT/CROCH	1.38	0.92	17(U)
821 - FURNITURE/STUFF FURNISHG	1.47	0.82	14(U)	848 - HEADGEAR/NON-TEXT CLOTHG	5.92	0.97	4(U)
843 - MEN/BOY WEAR KNIT/CROCH	1.65	0.92	12(U)	881 - PHOTOGRAPHIC EQUIPMENT	2.23	0.44	9(T)
848 - HEADGEAR/NON-TEXT CLOTHG	5.93	0.97	4(U)	885 - WATCHES AND CLOCKS	1.06	-0.02	22(T)
881 - PHOTOGRAPHIC EQUIPMENT	2.09	0.19	9(T)	897 - JEWELLERY	1.24	0.56	19(S)
894 - BABY CARR/TOY/GAME/SPORT	1.19	0.42	22(U)				
897 - JEWELLERY	1.47	0.89	15(S)				

1998				1999			
PRODUCT	RCA	NTB	RANK/FI	PRODUCT	RCA	NTB	RANK/FI
512 - ALCOHOLS/PHENOLS/DERIVS	2.09	0.32	11(T)	512 - ALCOHOLS/PHENOLS/DERIVS	1.89	0.32	10(T)
572 - STYRENE PRIMARY POLYMERS	1.65	0.04	13(T)	572 - STYRENE PRIMARY POLYMERS	1.50	-0.04	14(T)
621 - MATERIALS OF RUBBER	1.62	0.68	14(N)	621 - MATERIALS OF RUBBER	1.47	0.66	15(N)
634 - VENEER/PLYWOOD/ETC	5.41	0.93	4(N)	634 - VENEER/PLYWOOD/ETC	5.30	0.92	4(N)
635 - WOOD MANUFACTURES N.E.S.	1.40	0.88	17(N)	635 - WOOD MANUFACTURES N.E.S.	1.19	0.85	18(N)
651 - TEXTILE YARN	1.15	0.45	20(U)	651 - TEXTILE YARN	1.14	0.35	19(U)
752 - COMPUTER EQUIPMENT	2.35	0.70	9(T)	752 - COMPUTER EQUIPMENT	2.36	0.72	8(T)
759 - OFFICE EQUIP PARTS/ACCS.	4.16	0.43	6(T)	759 - OFFICE EQUIP PARTS/ACCS.	5.40	0.61	3(T)
761 - TELEVISION RECEIVERS	4.04	0.99	7(S)	761 - TELEVISION RECEIVERS	3.85	0.95	7(S)
762 - RADIO BROADCAST RECEIVER	9.68	0.97	1(S)	762 - RADIO BROADCAST RECEIVER	10.26	0.95	1(S)
763 - SOUND/TV RECORDERS ETC	6.88	0.98	2(S)	763 - SOUND/TV RECORDERS ETC	5.00	0.95	5(S)
764 - TELECOMMS EQUIPMENT NES	1.83	0.32	12(T)	764 - TELECOMMS EQUIPMENT NES	1.56	0.33	12(T)
771 - ELECT POWER TRANSM EQUIP	1.20	-0.19	19(T)	771 - ELECT POWER TRANSM EQUIP	1.27	-0.07	17(T)
772 - ELECTRIC CIRCUIT EQUIPMT	2.33	0.02	10(T)	772 - ELECTRIC CIRCUIT EQUIPMT	1.88	-0.06	11(T)
776 - VALVES/TRANSISTORS/ETC	5.16	-0.08	5(T)	776 - VALVES/TRANSISTORS/ETC	4.80	-0.06	6(T)
821 - FURNITURE/STUFF FURNISHG	1.47	0.89	15(U)	821 - FURNITURE/STUFF FURNISHG	1.51	0.89	13(U)
843 - MEN/BOY WEAR KNIT/CROCH	1.42	0.96	16(U)	843 - MEN/BOY WEAR KNIT/CROCH	1.13	0.96	20(U)
848 - HEADGEAR/NON-TEXT CLOTHG	6.86	0.98	3(U)	848 - HEADGEAR/NON-TEXT CLOTHG	5.78	0.97	2(U)
881 - PHOTOGRAPHIC EQUIPMENT	2.56	0.55	8(T)	881 - PHOTOGRAPHIC EQUIPMENT	2.00	0.52	9(T)
897 - JEWELLERY	1.33	0.45	18(S)	897 - JEWELLERY	1.42	0.64	16(S)

Table 2: *Continued***2000**

PRODUCT	RCA	NTB	RANK
512 - ALCOHOLS/PHENOLS/DERIVS	1.83	0.22	10(T)
572 - STYRENE PRIMARY POLYMERS	1.57	-0.09	14(T)
621 - MATERIALS OF RUBBER	1.41	0.662	17(N)
634 - VENEER/PLYWOOD/ETC	4.81	0.909	4(N)
635 - WOOD MANUFACTURES N.E.S.	1.12	0.824	20(N)
651 - TEXTILE YARN	1.20	0.364	18(U)
752 - COMPUTER EQUIPMENT	2.25	0.773	8(T)
759 - OFFICE EQUIP PARTS/ACCS.	5.22	0.585	3(T)
761 - TELEVISION RECEIVERS	4.07	0.927	6(S)
762 - RADIO BROADCAST RECEIVER	9.02	0.948	1(S)
763 - SOUND/TV RECORDERS ETC	5.24	0.965	2(S)
764 - TELECOMMS EQUIPMENT NES	1.61	0.296	13(T)
771 - ELECT POWER TRANSM EQUIP	1.50	-0.1	15(T)
772 - ELECTRIC CIRCUIT EQUIPMT	1.63	-0.18	12(T)
776 - VALVES/TRANSISTORS/ETC	3.85	-0.13	7(T)
821 - FURNITURE/STUFF FURNISHG	1.50	0.876	16(U)
843 - MEN/BOY WEAR KNIT/CROCH	1.18	0.935	19(U)
848 - HEADGEAR/NON-TEXT CLOTHG	4.52	0.964	5(U)
881 - PHOTOGRAPHIC EQUIPMENT	1.95	0.479	9(T)
897 - JEWELLERY	1.73	0.544	11(S)

Source: Author's calculation based on COMTARDE database by United Nations

*Note: NTB – Normalized Trade Balance, Rank was based on RCAI for the 25 dynamic products in Malaysia

FI – Factor Intensity – (T) – Technology, (U) Unskilled Labour, (S) Skilled Labour and (N) Natural Resource

Table 3: Dynamic Export Products (Average Annual Growth 1980-1998)

Developed Countries	First NIEs	*Developing Asia
776 (1)	752 (1)	752 (1)
752 (5)	783 (3)	759 (2)
759 (7)	781 (7)	763 (3)
764 (14)	759 (13)	761 (5)
771 (15)	712 (18)	751 (6)
783 (16)	774 (19)	
844 (2)		
871 (4)		
893 (6)		
898 (8)		
846 (10)		
872 (11)		
873 (19)		

Source: United Nations, Trade and Development Report, May 2002

Note: () indicate the ranking of the product base on annual average growth 1980-1998

* Excluding West Asia, Central Asia, 1st NIEs and China

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