



***MANUFACTURING SECTOR DEVELOPMENT
AND IT'S EXPORT GROWTH***

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By

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SPECIAL DEDICATION

First of all I would like to thank God for His blessings and for giving me the inner to completion of my studies in UPM.

I also would like to extend my gratitude to my “Amma and Accha” and my beloved siblings for their unconditional love and support. The list of sacrifices they have done for me is uncountable.

“Muthi”, “mamas” and “ammaiyees” thanks for all of your support.

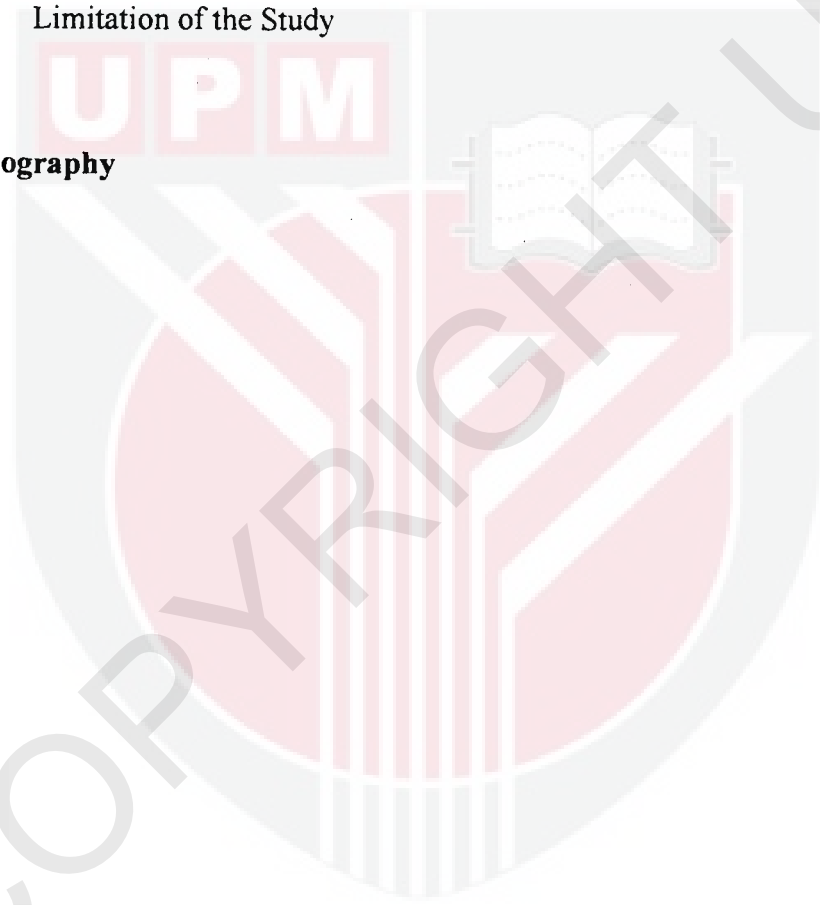
Last but not least my honey Amuta, thanks for the encouragement and keep me on the move.

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ABSTRACT

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Malaysia has transformed from commodity based economy to a manufacturing based economy for the past two decades. The good performance of manufacturing sector had lead Malaysia penetrate international market and changed its strategy to export promotion. Manufacturing sector in Malaysian achieved the most rapid economic growth in the past few years. Nevertheless, there are still some 'bottle necks' in achieving extensive export growth in international market.

This study whenever possible takes the effort to capture the ideas of major factors that exhilarating and demoting export growth in Malaysian Manufacturing sector. About seven internal and external variables are identified for the purpose of this study. They are Foreign Direct Investment (FDI), Exchange Rate (ER), Tariff (TP), Productivity level (P), Wage Rate (WR), Economic Growth (EG) and Export Price (EP).

The primary mission of this study is to analyze the relative importance of factors that significantly contributed to manufacturing goods export growth in Malaysia. The objective of the study is achieved by estimation of Vector Error-Correction Model (VECM). The data for the study consists of quarterly observations from 1980:1 to 2000:1.

The result shows that, there are direct and indirect causality linkages among the variables in determining the export growth. Both the external and internal factors are equally important in construction the export growth in Malaysia. In general the findings shows that external factors are relatively play an important role in explaining the growth of manufacturing export goods in international market. The external shocks are predicted to effect the manufacturing export extremely. On the other side, the internal factors also influencing export due to the chain reaction that brought by the external factors.

ABSTRAK

PEMBANGUNAN DAN PERKEMBANGAN SEKTOR PERKILANGAN

SERTA

PERTUMBUHAN EKSPORTNYA

Oleh

SUTHAKARAN A/L RAVINDRAN

2000

Sejak dua dekad kebelakangan ini, Malaysia telah mengubah strategi ekonominya daripada sektor pengeluaran bahan mentah kepada sektor pengilangan dan pembuatan. Barangan perkilangan dan pembuatan Malaysia kini mampu menembusi pasaran antarabangsa dan ekoran daripada itu ia telah mengubahkan strateginya kearah mempromosikan eksportnya. Walaupun Malaysia telah mencapai pertumbuhan ekonomi yang mendadak melalui eksport, namun masih terdapat beberapa halangan yang terpaksa dilalui dalam usaha mencapai pertumbuhan eksport di peringkat antarabangsa

Kajian ini sebaik mungkin telah mengenalpasti faktor-faktor yang dapat mempercepat dan melembabkan pertumbuhan eksport dalam sektor perkilangan Malaysia. Sebanyak tujuh pembolehubah dalaman dan luaran yang boleh menjayakan kajian ini telah

dikenalpasti. Pembolehubah-pembolehubah tersebut terdiri daripada pelaburan asing (FDI), kadar pertukaran asing (ER), tarif (TP), tahap produktiviti (P), kadar upah (WR), pertumbuhan ekonomi (EG) dan harga eksport (EP).

Misi utama kajian ini adalah untuk menganalisa kepentingan faktor yang telah menyumbang kearah pertumbuhan eksport di Malaysia. Objektif kajian ini telah dicapai melalui anggaran 'Vector Error-Correction Model'(VECM). Data yang digunakan untuk menjalankan kajian terdiri daripada data suku tahunan dari 1980:1 ke 2000:1.

Keputusan yang diperolehi menunjukkan bahawa terdapat kesan langsung dan tidak langsung yang menghubungkan antara pembolehubah-pembolehubah dalam pertumbuhan eksport. Kedua-dua faktor dalaman dan luaran adalah sama penting dalam usaha mempercepatkan pertumbuhan eksport di Malaysia. Secara amnya faktor luaran memainkan peranan penting dalam pertumbuhan eksport barangan pembuatan dan pengilangan di peringkat pasaran antarabangsa. Faktor dalaman pula mempengaruhi eksport melalui tindakbalas yang disebabkan oleh faktor luaran.

CHAPTER 1

INTRODUCTION

Prior to independence, the Malaysian economy was heavily geared towards the production of primary commodities. Manufacturing activities were very rudimentary and the country had to depend almost entirely on import to meet the domestic demand for both consumer and investment goods.

Malaysia experienced a period of sustained rapid growth and diversification during the period of 1965 to 1984. Despite good performance by the manufacturing sector the sharp fall in price of major commodities such as palm oil, rubber, tin and timber drove the economy into recession. This is the major factor that led countries like Malaysia, Singapore, Hong Kong, Taiwan and many other less developing countries to promote domestic industrialization. Export orientated manufacturing lead these countries to reduce their dependence on unstable primary product export and to have a stable earnings from their export. This directly contributed to the increase in domestic economic development.

Malaysian economy is a small and open economy, which largely depended on business swings in the industrialized countries. Malaysian economy had undergone tremendous structural changes, evolving from a primary commodity producer on the increasingly

diversified economy with expanding industrial base. This is where the industrialization expansion takes place.

Import substitution industrialization is not a good policy due to the constrained of limited domestic market compared to manufacturing industry for export which can grow faster than domestic demand.

In the past two decades, Malaysia has transformed from a commodity-based economy into a manufacturing based economy. This transformation can be attributed to macro-economic and structural adjustment policies and strategies undertaken by the government in the mid-eighties, which significantly contributed to major in flow of Foreign Direct Investment (FDI). During the seventies, developing country like Malaysia was is lack of capital to grow towards industrial development. These problems were overcome by the foreign direct investment that done by Multinational Corporations (MNC) like International Business Machines (IBM), Motorola, International Chemical Limited (ICI) and many others. These host companies found that manufacturing industry is a major contributor towards export expansion policies. Followed by the local government's policies that encouraged investment, low productive cost, tariff evasion and so on to attract the foreign companies to penetrate into the domestic market.

Manufacturing Industry Development in Malaysia

In the beginning, the introduction of Pioneer Industries Ordinance in 1958 was the first step undertaken by the government to encourage the development of manufacturing sector. Then it was followed by the establishment of the Federal Industrial Development Authority (FIDA) which later renamed as Malaysian Industrial Development Authority (MIDA) to accelerate industrial development.

Malaysia started to pursue domestic industrialization programs, especially for the production of consumer goods, through import substitution strategy in the 1960s, which restricted import of manufactured goods so that the domestic market is preserved for local producers. Import substitution strategy was not as successful in generating growth of manufacturing output and employment.

Therefore, in the 1970s, Malaysia pursued export promotion (export led-growth) strategy to complement the import substitution strategy. This resulted in major structural changes in export sector. Prior to export oriented industrialization in the early 1970s Malaysia's export consisted almost entirely of primary products, while import comprised mostly manufacturers.

The increasing share of manufacturers in then total exports of Malaysia during 1970s and 1980s had led to a growing volume which are termed as "intra-industry" trade flows.

While “inter-industry” refers to trade in different products, “intra-industry” trade may be defined as the value of export of an industry, which is matched by imports of similar products. Intra-industry trade is of the greatest importance for Malaysia in its trade especially with the United States, East Asian NIEs and ASEAN partners.

Manufacturing sector underwent drastic growth among all the sectors in Malaysia. As shown in Table 1.1, between year 1970 and 1980 manufacturing output expanded at an annual average of 12% compared to the total growth of 7.8%. Meanwhile for the period of 1980 to 1990 the manufacturing output expanded about 14.4% and the figure of employment in this sector shows about 12.0%. The share of manufacturing in economy was in outstanding performance between year 1990 and 1995. The total output of manufacturing sector gives about 13.3% compared to the total GDP growth, which is just 8%. Meanwhile in year 1998 manufacturing output is figured at 45,155 which is 16.6% more than the term before. This shows that manufacturing activity has been an important activity in Malaysia.

The basic reason of the increase in manufacturing activity is because of the increase in the involvement of more employees in this industry. The increase in manufacturing employment caused manufacturing output to rise up very intensively. This indirectly encouraged manufacturing export to the world market. According to the table, Malaysia’s manufacturing export to the world market grows fast and steadily. During the period 1970-1980 the manufacturing export was 25.9% compared to 18.8% for the total

export growth. In 1980-1990 the figure shows 24.2% and followed by 25.0% during the period of 1990-1995 where the total export was 24.4%. At the same time, total manufacturing export in year 1998 also shows an increase about 61.4%. This brings to the outstanding contribution of manufacturing sector to the GDP growth of Malaysia economy.

This achievement of steady growth in manufacturing sector is caused by the government policies. The contribution of manufacturing export to economic growth has been very significant.

Table 1.1 Manufacturing Share In The Economy

Year	(RM Million : 1978 Price)		(RM Million : Current Price)
	GDP	Manufacturing Output	Manufacturing Export
1970	20,924	2,805	612
1975	29,251	4,845	1,978
1980	44,512	8,724	6,101
1985	57,150	11,263	12,111
1990	79,155	21,323	47,143
1995	118,712	38,719	147,253
1998	131,258	45,155	237,677
Growth Rate (Percent):			
1970-1980	7.8	12.0	25.9
1980-1990	7.8	14.4	24.2
1990-1995	8.0	13.3	25.0

Source: Ministry of Finance Annual Report, Various Issues. The Second Industrial Master Plan Study Report, 1996

With the rapid growth in the manufacturing sector, demand for labour has been growing from year to year. The analysis shows that manufacturing sector was the largest contributor in term of new job creation in the economy. According to Ministry of Finance Annual Report, the employment in manufacturing sector increase about 9.6% from year 1970 to 1980 and on the other hand, the employment level increase to 12.0% in between year 1980 to 1990. Table 1.2 explain that, in year 90s manufacturing sector contributes about 20% to 30% job creation in the total job market. In year 1992, manufacturing sector contributes about 22.9% job opportunity to the population of Malaysia. This figure increase to 23.6% in year 1993, followed by 24.6% in year 1994 and 25.9% in year 1995.

The induce of Second Industrial Master Plan (IMP2), 1996 – 2000, the growth of manufacturing sector is really emphasized with enhancing value-added activities and increasing in the productivity level of manufacturing sector. This plan implementation has caused the demand of labour increase in year 1996, 1997 and 1998 which shows figures of 26.7%, 27.1% and 27.1% respectively. This is parallel to the need of labour because most of the productivity process in manufacturing activities are based on labour intensive. This increased in employment show the important of the manufacturing sector towards the economic growth process.

Table 1.2 Malaysia: Employment by Sector (1992-1998)

SECTORS	1992 %	1993 %	1994 %	1995 %	1996 %	1997 %	1998 %
Agriculture, Forestry, Livestock & Fishing	22.9	21.3	19.9	18.0	16.4	17.0	16.5
Mining & Quarrying	0.5	0.5	0.5	0.5	0.5	0.4	0.5
Manufacturing	22.9	23.6	24.6	25.9	26.7	27.1	27.1
Construction	7.1	7.4	7.8	8.3	8.9	9.9	8.8
Electricity, Gas & Water	0.6	0.8	0.8	0.8	0.9	0.9	0.9
Transport, Storage & Communication	17.6	17.2	17.3	16.2	16.6	16.4	16.8
Wholesales & Retail Trade, Hotel & Restaurant	4.2	4.5	4.5	4.8	4.9	4.6	4.9
Finance, Insurance, Real Estate & Business Services	4.6	4.7	4.8	5.0	5.1	5.0	16.8
Government Services	12.0	11.6	11.4	11.0	10.7	9.9	4.9
Other Services	7.6	8.4	8.4	8.7	9.2	8.7	5.2
Total Employment	100	100	100	100	100	100	100

Sources: Economic Planning Unit, Various Issues

Table 1.3: Sectoral Share of Gross Domestic Product Malaysia

In Constant 1978 Prices (In Percentages).

Sectors	1970	1975	1980	1985	1990	1995
Agriculture	30.6	28.4	23.4	20.8	19.1	13.6
Mining	6.5	4.7	10.3	10.5	9.7	7.4
Manufacturing	13.1	16.8	20.5	19.8	24.8	33.1
Construction	3.9	3.9	4.7	4.8	3.4	4.4
Services	45.9	46.2	41.1	44.1	43.0	44.3
Total :	100	100	100	100	100	100

Source: Economic Reports, Ministry of Finance, The Second Industrial Master Plan Study Report, 1996

For the recent decades, the growth in the real GDP progressed excellently. This can be seen through the table above which shows, sectoral share of the GDP of Malaysia for the manufacturing sector increasing from year to year except in year 1985 due to economic crisis. The growth rate was 13.1% in year 1970 and increased to 33.1% in year 1995. In between these years the trend shows increasing except in 1985 which diminished and stood at 19.8%. This was caused by the adoption of the 10-year Second Industrial Master

Plan (IMP2) in 1996, which encourage manufacturing orientation activities and providing the guide line principles for the development of the sector. Generally, the current situation shows that manufacturing industry is the most important sector in Malaysia.

Table 1.4 explains the forecasts that done by the Second Master Plan Study Report on the manufacturing sector during year 2000 and 2005. Among the primary sectors, manufacturing, construction and services are predicted to increase. On the other hand, sector like agriculture and mining is expected to decline. This study shows that the manufacturing sector has the prospect to grow steadily for the year 2000 and 2005 compare to the other two sectors.

The forecast also estimates that manufacturing sector will increase about 37.5% and 38.4% in year 2000 and 2005 respectively. This shows that manufacturing sector will still contribute significantly to the growth of economics in coming years.

Table 1.4 Malaysia: Forecast of Sectoral Value Added Shares

SECTORS	RM Million (in 1978 prices)			Average Annual Growth Rate (%)		Share of GDP (%)		
	1995	2000	2005	1996-2000	2001-2005	1995	2000	2005
Agriculture	16,230	18,542	21,081	2.6	2.5	13.5	10.5	8.2
Mining	8,979	10,062	10,824	2.3	1.5	7.4	5.7	4.2
Manufacturing	39,825	66,323	98,672	10.7	8.3	33.1	37.5	38.4
Construction	5,385	8,557	12,159	9.7	7.3	4.5	4.8	4.7
Services	53,303	81,117	124,245	8.8	8.9	44.3	45.8	48.4
Net imputed bank Charges (-) and Import duties (+)	(3,413)	(7,502)	(10,358)	-	-	(2.8)	(4.2)	(4.0)
GDP at Purchasers Value	120,309	177,099	256,623	8.04	7.7	100	100	100

**Source : Economic Report, Ministry of Finance, Bank Negara Annual Report
The Second Master Plan Study Report, 1996**

Table 1.5 GROSS DOMESTIC PRODUCT BY INDUSTRY OF ORIGIN 1970-2000

SECTORS	RM Million							
	1970	1975	1980	1985	1990	1995	1998	Estimated 2000'
Agriculture, Forestry, Livestock & Fishing	3,432	4,563	6,255	11,854	14,799	16,231	16,133	17,840
Mining & Quarrying	613	612	1,171	5,959	7,760	8,979	9,553	9,786
Manufacturing	1,307	2,197	4,857	11,263	21,340	39,790	45,155	48,247
Construction	481	711	1,209	2,738	2,835	5,385	5,086	4,912
Electricity, Gas & Water	245	401	605	948	1,526	2,797	3,672	4,084
Transport, Storage & Communication	606	1,098	1,803	3,630	5,483	8,852	10,652	11,422
Wholesales & Retail Trade, Hotel & Restaurant	1,423	2,086	3,529	6,911	8,825	14,781	16,936	17,858
Finance, Insurance, Real Estate & Business Services	836	1,109	2,041	5,121	7,759	12,938	16,945	18,957
Government Services	794	1,199	3,202	6,957	8,579	11,454	12,953	13,733
Other Services	874	1,237	720	1,301	1,678	2,478	2,951	3,182
(-) Imputed Bank Services Charges	+97	+102	407	1,834	4,076	8,503	12,355	14,656
(+) Import Duties			1,225	2,246	2,947	5,090	3,577	3,780
GDP at Purchasers Value	10,708	15,315	26,228	57,093	79,455	120,272	131,258	139,145

→1970 -1975 is in 1970 prices, → 1985 - 2000 is in 1978 prices

Source: Ministry of Finance, Annual Report Various Issues

The manufacturing sector remained as the key sector in Malaysia in terms of its contribution to the Gross Domestic Product (GDP). This sector expands at a more rapid pace than the overall economy growth.

This can be seen in Table 1.5, where the contribution of manufacturing sector is much higher than the other sectors to the GDP. In 1970, manufacturing sector only shares about 22% of the GDP. This situation totally changed in 1985 where manufacturing sector shows about 19.7% of the total GDP although its performance is affected by the economic slowdown because of recession. Manufacturing sector shares about 34.4% of the total GDP in the year 1998 and its forecasted to increase to 34.6% in year 2000.

This increase trend in manufacturing sector from the 1970 until today is brought by the strong demand in both domestic and foreign market for our manufacturing goods. Parallel to this situation local and foreign investment also has increase substantially to support the expansion of this sector.

Manufacturing's Export Performance

Trade has been the backbone of economic development of Malaysia since the colonial times. However, export expansion has only been given emphasis during the period of 1970s, after the failure of import substitution to act as the engine of growth.

During the export expansion period, there was two main structural changes occurred in the export sectors. Firstly, Malaysia had diversified its export and considered the manufacturing sector as an alternative source of economic growth. Secondly, diversification also takes place within the agricultural export in order to sustain the inflow of foreign exchange from the sector.

Lately, a number of government policies have been developed, aimed at creating a broad-base, efficient and export orientated manufacturing sector with a view to redressing structural growth. Manufacturing industry for export was highlighted in the Fifth Malaysian Plan followed by Sixth Malaysian Plan.

Besides these, due to the significant contribution of major inflow of foreign direct investment and the rapid growth in manufacturing sectors in mid eighties, the government came with The Industrial Master Plan (IMP), 1986-1995 which has laid the foundation for the growth of the manufacturing sector. The second Industrial master

Plan (IMP2), 1996-2005 which focused on the increasing competitiveness through strengthening industrial linkages also emphasis on export growth.

Institution like Malaysian Industrial Development Authority (MIDA), Ministry of International Trade and Industry (MITI) and many more were involved in formulating policies and strategies for promoting exports. Such policies has help our manufacturing goods to penetrate not only in traditional export market but also to new market such as Eastern Europe, Middle East Countries, New Industrializes Countries and some countries in the African Region.

Table 1.6 Malaysia : Share of Exports by Sector (in Percentages %)

Sectors	1970	1980	1990	1995	2000'
Agriculture	74.4	48.5	22.3	13.1	4.5
Mining	5.2	26.4	18.3	5.8	3.8
Manufacturing	11.1	20.6	58.8	79.6	88.6
Other	9.3	4.5	0.6	1.5	3.1
Total	100	100	100	100	100
Value (RM Million)	5,163	28,445	79,646	185,325	363,768

Source : Economic Report, Ministry of Finance,

Fifth Malaysia Plan, Sixth Malaysian Plan, Seventh Malaysian Plan.

Based on Table 1.6, Malaysia's manufacturing goods had penetrated international market by every sub sectors. The export primary commodities, both agricultural and mineral products, will continue to grow but its shares in term of the value of total exports will witness a decline as manufacturing exports grow faster. In the year 1970s, manufacturing sector shares 11.1% from the total export of Malaysian goods. The trend changes in year 1990 where the export of manufacturing goods increased to 58.8% although the other sectors are slowly declining. Year 1995, shows the shoot up of manufacturing sector's export to 79.6% compared to previous years. And these growths of export in manufacturing sectors are expected to increase about 88.6% in year of 2000. The study of trend for manufacturing sector has become an important sector to induce international trade through export expansion strategy.

During the year 1975, the total export was only RM 1,978 million but by year 1998 it stood at RM 237,677 million. Export still expand during the crisis mainly 1985, while Malaysia face a negative economic growth and it growth increase unexpectedly in the year after that. This large increment of export shows that the export of manufactured goods become increasingly important from 1975 to 1998. The trend in Table 1.7 shows that, electrical and electronics products have become a major source of export earning from year 1985 until today. Besides electrical and electronic products, the analysis shows that a diversification taken place to the expansion of export growth among industries such as transportation and chemical products due to the strong upsurge in private investment in manufacturing sector based on this areas. Besides that, wood

products also can be defined as one of the strong manufacturing export, where it contributes a constant increase from year to year. This indicates that Malaysia has become a strong niche in the export of manufacturing goods to the world market.

Table 1.7 Export of Manufacturing Goods By Major Groups (1975 Until 1998)

(RM MILLION)

SECTORS	1975	1980	1985	1990	1995	1998
Food, Beverages and Tobacco	270	475	594	2,061	3,629	5,492
Textiles, Clothing and Footwear	218	806	1,289	3,097	6,473	9,361
Wood Products	205	467	363	1,347	3,305	5,982
Rubber Products	43	48	133	1,353	3,305	5,818
Non Metallic Mineral Products	185	361	1,412	771	1,677	2,096
Chemical and Petroleum Products	23	61	150	2,753	9,453	13,765
Iron, Steel and Metal Manufacturers	49	161	300	1,577	4,695	8,254
Electrical and Electronic Appliances	304	2,822	6,028	26,502	96,886	161,746
Other Machinery and Transport						
Equipment	269	407	1,301	1,928	5,251	8,061
Others	412	447	831	4,639	11,196	17,102
Total:	1,978	6,101	12,111	46,835	147,524	237,677

Source: Ministry of Finance, Annual Report, Various Issues.

Meanwhile Table 1.8 shows the market for our manufacture export goods. The United States (US) and European Union was two huge markets of our manufacturing goods in the west. Besides these, Singapore has been the main market for manufacturing goods export among the ASEAN countries which amounting about RM32.8 Million. On the other hand Japan also one of the strong market for our manufacturing export goods. These are the major market that Malaysia's manufacturing goods had penetrated which is about 74% of the total manufactured export for the year 1995 besides Hong Kong and Taiwan. Malaysia also exported manufacturing goods to the new countries in South Countries, Brazil, Mexico, Nigeria, and Papua New Guinea during the years 1990 to 1995.

In this regards, the Malaysia External Trade Development Corporation (MATRADE) which was established in 1993 played a major role in term providing market information through its worldwide network. These shows that Malaysia's manufacturing goods able to penetrate new market and it rapidly growing to sustain and to attain the objective of becoming a fully industrialized nation by the year 2020.

Table 1.8 Principal Market For Manufacturing Exports From 1990 Until 1995

RM MILLION

Country	1990	%	1995	%	Average Annual Growth Rate 1990 to 1995
USA	11,756	25.1	38,504	26.1	26.8
Singapore	12,880	27.5	32,750	22.2	20.5
European Union	8,196	17.5	22,719	15.4	22.6
Japan	3,840	8.2	15,195	10.3	31.7
Hong Kong	2,248	4.8	9,164	6.2	32.4
Taiwan	656	1.4	4,426	3.0	46.5
South Countries	1,358	2.9	8,999	6.1	46.0
Rest of The World	5,901	12.6	15,785	10.7	21.7
Total:	46,385	100	147,524	100	43.6

Source: Seventh Malaysian Plan 1996 -2000

Table 1.9 Foreign Investment in Approved Projects by Country

Country	RM Million					
	1985	1995	1996	1997	1998	(Jan – August) 1999
United States	111.9	1,801.6	2,666.3	2,397.0	6,433.2	2,611.5
Australia	25.7	139.5	136.5	90.6	116.6	44.3
Hong Kong	28.2	175.1	13.8	23.2	22.4	39.5
Indonesia	12.8	88.0	47.0	100.0	56.3	26.1
Japan	264.4	2,096.3	4,806.3	2,164.3	1,867.9	804.3
Germany	8.0	149.5	148.2	1,810.7	151.8	92.1
South Korea	25.0	604.4	644.3	677.8	76.1	29.3
Singapore	100.2	1,008.7	4,765.6	1,281.3	968.1	631.4
Taiwan	31.9	1,442.2	776.7	1,344.9	1,000.8	190.7
United Kingdom	26.9	189.9	368.2	206.7	479.4	189.4
Others	323.4	1,436.9	2,879.7	1,376.7	1,890.4	2,644.9
Total	959.0	9,143.6	17,056.6	11,473.0	13,063.5	7,503.9

Source: Ministry of Finance, Annual Report Various Issues

Table 1.10 Foreign Investment in Approved Projects by Industry

SECTORS	RM Million					
	1985	1995	1996	1997	1998	(Jan - August) 1999
Food Manufacturing	58.6	119.4	128.0	173.8	364.8	264.5
Textiles and Textiles Product	31.3	473.6	344.1	141.5	624.1	36.7
Paper printing and Publishing	102.0	98.3	1,571.9	474.8	286.8	81.8
Chemical and Chemical product	29.4	1,825.8	2,101.2	730.3	4,150.0	180.8
Petroleum and Gas	0.8	392.9	627.9	4,201.5	2,151.5	411.8
Rubber and Rubber product	29.8	76.6	58.5	90.2	48.7	69.9
Non Metallic and Mineral Product	110.8	1,254.9	649.5	115.8	464.7	130.8
Basic Metal Product	148.1	474.5	612.2	700.2	992.4	64.7
Fabricated Metal Product	43.8	285.4	577.9	806.3	540.4	143.6
Electrical and Electronic	110.7	2,373.7	9,239.5	2,875.1	1,905.7	5,644.7
Transport Equipment	180.4	461.3	332.8	281.3	503.1	101.6
Miscellaneous	107.3	1,307.2	815.1	083.2	1,031.3	373.0
Total	959.0	9,143.8	17,056.6	11,473.0	13,063.5	7,503.9

Source: Ministry of Finance, Annual Report Various Issues

The table 1.9 explains the trend of our foreign direct investment towards manufacturing sector according to countries. In that case United States and Japan stand in the top list of major foreign investors during 1995 until 1998. In 1998 United States was in the top with RM 6433.2 million of the proposed FDI. Other major sources of FDI in manufacturing sector were Japan and Taiwan. Singapore also one of the countries that invest Malaysia's manufacturing industry between the year 1995 until 1997. Proposed capital investment from foreign sources increased from year to year. The total capital invested in manufacturing sector through foreign sources increased by 86.3% in year 1998 compare to 1985.

The contribution of Newly Industrialized Economies (NIE) also play a major role in Malaysian manufacturing sector. In 1996, Singapore was the first leading investor in the Malaysian manufacturing sector which contribute about RM 47.7 billion or 29.94% of approved projects in the foreign investment, an increase of 372.4% from 10.1 billion in year 1995. The proposed FDI by Taiwan in manufacturing sector increase substantially from RM 775.7 million in 1996 to RM 1344.9 million in 1997. Same goes for Australia , it grow from RM 90.6 million in 1997 to RM 116.6 million in 1998.

This increase of FDI in Malaysian manufacturing sector is due to the increase in cost of production in some of the developed countries such as Japan, Taiwan and some other.

This makes them to look for a cheaper place to produce their good with a low cost of production. Besides that the appreciation of the currencies of some countries such as

Taiwan and Japan in relation to the Malaysia Ringgit has also helped to increase the attractiveness of Malaysia as the location for the establishment of their offshore plants to produce goods.

The diversification of Foreign investment on Malaysian manufacturing sector is increasing from time to time. This foreign investment are contributed to the success of all kind of manufacturing goods that produced in Malaysia The data's in table 1.10 shows the electrical and electronic attracted the most of FDI during the 1995 until 1999. In the year 1996 electrical and electronic attracted the most FDI about RM 9239.5 million. This followed by petroleum refinery industry. In 1997 this industry contribute RM 4201.5 million. Chemical and chemical product received large amount of FDI in year 1998, which is about 4150.0 million. The contribution of FDI in textiles and textiles product increase a lot in 1998 compare to 1997. It reach RM 624.1 million in 1998. Besides this, contribution of FDI on fabricated metal products increase each year start from 1995. But it's slowly dropped in year 1998 to RM 540.4 million.

This increase in FDI among manufacturing sector shows the importance and the quality of Malaysian manufacturing goods which is equally good to others in international market. This FDI also encourage our export growth policy towards achieving Vision 2020.

The Statement of the Problem

The strive for a higher growth has been the main objective of any countries including Malaysia, which has graduated the first step towards industrialization. She produces a substantial proportion of the consumer goods and a significant range of intermediate and finished products required by the local market as well as the international market.

The manufacturing sector remained the key sector in Malaysia and this sector contribute significantly to the progress of Malaysian economy in terms of its contribution to Gross Domestic Product (GDP), export and employment during the review period. Although the sector expanded at a more rapid pace than the overall economy, its performance was affected by the economic slowdown and increasingly competitive global environment. However, there are still some other major problems confront to our manufacturing industry which effecting the current and future export growth.

One of the factor that influencing Malaysia's export expansion is the Foreign Direct Investment (FDI). The movement of FDI is parallel to the movement of manufacturing sector in Malaysia. But now the increase in the cost of production in Malaysia, the flow of FDI has been changed to neighborhood countries such as Thailand, Indonesia and Vietnam. Besides that, until today, Malaysia has not yet produce her own industrial elite and not yet invented her own industrial culture. Thus, Foreign investment still dominates in the industrial sector , especially the multi-national corporations. The FDI is expected

to accelerate the pace of economic development but then it is necessary to have some control over it. Malaysia poses a major problem for future development if the FDI intention lies in making fast profits and repatriating their funds to external accounts. The importance of reviewing on foreign capital regulation is necessary to overcome previous shortcomings and to enhance future growth which is depends on present investment. Malaysia's export of manufactured goods will decline and will not be sufficient for future export expansion if the problems like above occurred. As we have discussed that manufacturing for export is expected to take the front lead in the Industrial Master Plan II, but with this kind of problems, our export growth will be effected.

Besides, the foreign exchange is also another factor that becomes a threat for export expansion. The foreign exchange market has been volatile on the Malaysian Ringgit. High speculation on our Ringgit caused no suitable exchange rate determination on the exchange rate. These caused problem in justifying the real exchange rate ratio. The floating exchange rate creates problem to our major trade partners because it leads to unstable volume of manufacturing goods in the process of promoting our manufacturing goods. Although recently the government changed the policy to fixed exchange rate still problem can occurred.

The real exchange rate has the ability to influence the demand for export of primary commodities from Malaysia. The seemingly unrelated regression result form this study clearly indicated that the real exchange rate could have influences the foreign export.

(Mohammed Yussof and Ahmad Zubaidi Baharumshah 1993) The volatility in exchange rate caused export goods unstable and effecting the export growth of a country.

The productivity in the manufacturing sectors also another factor that affects the export expansion policy. Although government has encourage increasing productivity through Research and Development (R&D) but still the productivity level in manufacturing sector is undetermined and even decline sometimes. Malaysian labours are in a medium knowledge level in the term of product innovation and improvement. Moreover, the goods that has been produced is more to labour intensive than capital or technology intensive.

At the same time, the manufacturing product that assembled and made in Malaysia is relatively has a low value added. This is another reason why the productivity level in Malaysia is low. These low added value products cannot compete with other products in the international market. In generally, this problem has lead the exports of manufactured goods unable to penetrate international market and caused problem in expanding export.

The economy has robust and high employment level has been achieved. The embarked in economy due to the manufacturing expansion in domestic market has lead to labour shortage where Malaysia has a limited labour force with a small number of populations. Addition labour force is needed due to the rapid growth of activities towards industrialization. The excess of demand and the shortage of supply of labour has

increase the nominal wage rate dramatically. We have relatively high labour wage rate compare to the other countries in the ASEAN region like Indonesia, Thailand and Cambodia. The high wage rate makes the cost of production of manufacturing goods to increase and problem in competing with other countries product because they can sell their manufacturing goods at a lower price than Malaysia. Moreover Malaysia is a small country, which don't have the ability or power in control price. In another word Malaysia is a price taker in the international market. This factor also will effect the export expansion strategy of Malaysia.

Another problem that effects the export growth of Malaysia especially manufactured goods is the tariff policy that implemented by the other countries. Giant trade blocks such as EU, NAFTA imposed high tariff level on our manufacturing goods. This makes the manufacturing goods relatively expensive compare to theirs. This high price unable manufacturing goods to penetrate the market. To overcome this problem agreement on tariff reduction was done through World Trade Organization (WTO), Asean Free Trade Area (AFTA) and many others but still the agreement was not so efficient enough to control the tariff rate.

Many other developing countries like China, India, Indonesia, Latin American Countries emerged as a manufacturing countries and in order to protect their domestic manufacturing industries they impose high tariff rate. This tariff implementation also caused our manufacturing goods to be sold at high price and problem to compete

happens. If this high tariff rate is implemented wherever in the international market the export expansion will be effected terribly.

As noted earlier, the manufacturing sector has been identified as the key vehicle towards the diversification of the country's economy. So in order to develop export of manufactured goods an encouragement and strong support is needed. We have witnessed the trend of manufacturing sector's performance in term of contribution to the GDP. Generally the trend shows that it was unstable during the middle 80s and pick up excellently until today, so it is our interest to determine the causality between the manufacturing sectors and export growth.

Thus, in this study ,we try to investigate the problems that manufacturing sector faces towards the expansion of its export so it is appropriate to focus on the effect of industrialization with reference to the export sector growth and output growth on-line with Malaysian Industrial Policy.

Objectives of Study

The manufacturing sector will continue to be the prime mover of the economy to robust economic growth towards an industrialize country by the year of 2020. In order to ensure the acceleration of manufacturing sector, Various steps has been taken by the government such as tax incentives, export subsidies, export financing and so on to ensure acceleration of manufacturing export growth. Even though these policies has been implemented but still the successive of the manufacturing exports is not guarantee due to some problem that still not solved.

The objective of this study is to investigate the impact and performance of manufacturing sector towards export expansion and the specific objectives are as follows:-

1. To identify and highlight the important factors that contribute to the export of manufactured goods.
2. To develop an econometric export model for the Malaysian export of manufactured goods.
3. To study the dynamic relationship between the macroeconomic variables and manufacturing export in Malaysia.
4. To suggest and recommend policies on the prospects of Malaysian manufacturing export growth.

Significant of the Study

Export sector is a tool in the industrial development that dominated agriculture as the Malaysian country is projected to sustain rapid economic growth towards "Vision 2020". There was evidence that accelerated economic growth will require the export sectors to increase significantly its contributions of output and employment.

From the long run general efficiency point of view, industrial development offers substantial dynamic benefits that are important for overall technological progress. Increase in the exportation goods and the domestic replacement of imports are needed to support the balance of payments implications of accelerated economic growth.

The expansion role of exports in the foreign trade as a percentage of gross domestic products or gross of national income is a convenient measure of country's involvement in the international trade. Consequently, the determinants of demand and supply for Malaysian export and imports have been the major field in determining the trade flow of Malaysian economy and also for policy implementation.

Until recently, people and business organizations have limited knowledge about the progress of manufacturing sector in Malaysia. Literature on the issue discussed has started to grow as the importance of manufacturing sector towards the new evolution heading to industrialization country. There was quite few books and articles address the

problems and the potentials of the manufacturing sector export expansion, thus limiting further general knowledge about issues, challenges and benefits involved in the manufacturing sector in Malaysia. It is therefore, essential to study this up coming sector and to analyze the prospect of Malaysian manufacturing sector and its problems.

This study employed more advance and effective analytical methods to capture the dynamic interrelationship among the variables in the context of Malaysian export growth by using a relatively new technique of vector error- correction modeling (VECM). The construction of vector error-correction modeling (VECM), as an extension to traditional VAR models enables us to distinguish between short term and long term causal effect of variables in the system in addition to capture the short term runs dynamic adjustment of co-integrated variables and to indicate the causality among the variables.

Studying this issue will enable industrialized sector and the government to formulate policies and adopt plans that are conducive and beneficial to the advancement of the future Malaysian Economy. This study is, in effect, an attempt to get to know, to help the process of export growth among Malaysian Manufacturing products and to establish guiding principles to deal with the issue as well.

Organization of the Study

The outline of the project is as follow. Chapter I describe the relevant aspect of Malaysian manufacturing sector. This chapter also discussed the background of Malaysian manufacturing industries and its progress. Besides that, the contribution of Malaysian manufacturing industry towards economic growth also discussed briefly.

Chapter II reviews the empirical study on the process of export growth in general. This chapter also provides a review of the literature on aspect of export expansion in manufacturing sector.

Chapter III states the methodology and data used in the study. This chapter starts with a general description on the technique adopted in the study and the concept related to it.. in this chapter also the data collection method and the estimation procedures was discussed.

Chapter IV presents the empirical results of the analysis as well as the interpretation of the estimation results.

Chapter VII gives a summary of the study and highlights the findings of the empirical analysis. Also included in this chapter is the results obtained and policy recommendation as well as recommendation of possible extensions for further research.

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