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DIRECT INVESTMENT IN THE MALAYSIAN MANUFACTURING SECTOR, 1966-1991

An Econometric Study

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ABSTRACT

Foreign direct investment has played a significant role in the development of the Malaysian economy. At the time of independence the economy was agriculture and primary commodity based, but as the country has progressed, its structure has changed to manufacturing. The pattern of the foreign direct investment has also changed accordingly. The objective of this paper is to see the impact of certain economic variables and its ability in attracting foreign direct investment in the Malaysian manufacturing sector for the period 1966 to 1991. Applying regression analysis our result suggests that manufacturing imports, GDP growth and Export/Import ratio have significant impact on the flow of foreign direct invstment in the Malaysian manufacturing sector. On the other hand, in a separate specification, manufacturing income also has a significant positive relation with the dependent variable.

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LIST OF ABBREVIATIONS

ASEAN	Association of South East Asian Nations
BOP	Balance of Payment
c.i.f	Cost, insurance, freight
FDI	Foreign direct investment
GDP	Gross domestic product
GNP	Gross national product
IMF	International Monetary Fund
MIDA	Malaysian Industrial Development Authority
MNC	Multinational Corporation
MTI	Ministry of Trade and Industries
6MP	Sixth Malaysia Plan
NDP	National Development Plan
NEP	National Economic Policy
OPP2	Second Outline Perspective Plan

1. INTRODUCTION:

Malaysia is centrally located in the growth region of South East Asia which is part of the Pacific Rim and is becoming an economic showpiece and profit centre of Asia. With abundant natural resources, and rapid development of manufacturing and industrial sectors, Malaysia has achieved one of the highest growth in the region. Standards of living in Malaysia is one of the highest in the developing world. In 1991, GNP per head was RM 6,817 and its real gross GDP grew at 8.8% with export earning totalling over RM 100.12 billion. With successful diversification, the manufacturing sector has taken over as the main engine of economic growth. It contributed 28.1% to GDP and 64.9% of total exports in 1991 with a growth rate of 15% .

With the changing structure of Malaysian economy, manufacturing sector is playing a leading role in the development of the country. At the time of independence, in 1957, the manufacturing sector accounted for less than 8% of GDP while in 1991 it went up to 28.1% .

Foreign direct investment (FDI) played a major role in the growth of the economy. In 1991, foreign direct investment totalled more than RM 17 billion majority of which went into manufacturing sector. In the early stage of industrialization, FDI was concentrated in agriculture, mining and primary commodities sector. Japan had traditionally been the largest source of FDI for Malaysia,

though in 1990, Taiwan managed to take over. The other major sources are USA, UK, Singapore, HongKong, Taiwan, Korea, Australia and the EC countries.

Due to the lack of necessary technology, managerial and marketing know-how and the capital, Malaysia has always relied on foreign sources. To attract FDI Malaysian government has taken a number of steps by providing various kinds of fiscal incentives and created a conducive environment to boost the flow of FDI. The objective of this paper is to identify and measure the impact of certain local economic variables on the capacity of Malaysia to attract foreign direct investment. The present study is divided in the following manner. The section two deals with a discussion on the trends, performance and structure of the Malaysian manufacturing sector. A review of Foreign direct investment theory and the Malaysian policy towards foreign direct investment and its experience in Foreign direct investment is presented in section 3. The review of literature is presented in section 4. Section 5 deals with the research methodology, the empirical findings and its implications.

II. THE MALAYSIAN ECONOMY

A. The Economic Environment

The Malaysian economy has always been and continues to be one of the most open economies in the world. In fact, one of the important factors behind the growth of the economy has been its openness and pro development policies adopted by the government. The Malaysian economy is also one of the most rapidly growing economy. The average growth rate of the economy in 1960s was 6.3% and in 1970s it grew at an even faster average rate of 7.8%. However there was a slight depression in the 1980s which struck the economy badly in 1985 and the real GDP growth registered a negative growth of 1.1%. Nevertheless, the economy started to recover by 1986 with a growth of 1.2% and in 1991 it grew at a rate of 8.8%.

With a good grip on inflation and unemployment at the rate of 4.4% and 5.6% respectively, Malaysia is heading towards the status of a fully industrialised nation by the year 2020.

The structure of Malaysian economy has changed tremendously since its independence. In 1960s, the country was heavily dependent on agriculture, mining and primary commodities. But it is no longer dependent on those few commodities as the major source of income is the manufacturing sector. This can readily be seen from table 2.1.

TABLE 2.1
COMPOSITION OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN

	1970		1980		1990	
	RM million	%	RM million	%	RM million	%
Agriculture livestock Forestry Fishing	4,291	0.32	10,189	0.23	15,282	.19
Mining and Quarrying	750	0.05	4,487	0.10	7,739	.09
Manufacturing	1,710	0.13	8,742	0.20	20,947	.27
Construction	524	0.04	2,066	0.05	2,737	.03

Source: Statistical Year Book for Asia Pacific, UN. Various issues.

Note: All figures at 1978 constant prices.

In 1970, the income from the manufacturing sector was RM 1.36 billion and it grew to RM 8.74 billion in 1980 and in 1990 it surpassed agricultural income and became the sector, generating highest income in Malaysia.

In the initial stage until 1960, Government's strategy for industrialization was import substitution but due to the size constraint of the domestic market, the government changed its policy from import substitution to export promotion after 1968. But import substitution was not completely phased out. Instead, until 1974, government followed a parallel policy of both import substitution and export promotion. Starting from 1974 export promotion program was fully adopted.

The total exports in 1991 were worth of RM 94,497 million of which 61.6% were from manufactured goods. It grew at a rate of 20.1% in 1991 compared to 17.4% in 1990. This performance can be attributed to the competitive position enjoyed by Malaysian manufactures in the world market. The composition of Malaysian export has also changed over the years and it reflects the changing structure of the Malaysian economy. In 1970, the major exports consisted of primary commodities with 33.4% only from Rubber whereas manufactured goods accounted for only 11.9%. In 1989 manufactured goods accounted for 54.1% of total export whereas Rubber export came down to only 5.8% (Table 2.2).

TABLE 2.2
STRUCTURE OF MALAYSIAN EXPORT : 1970 - 1989
(%)

	1970	1980	1989
Rubber	33.4	16.4	5.8
Tin	19.6	8.9	1.7
Logs and Timbers	16.5	14.1	10.7
Palm Oil	5.1	9.2	6.9
Petroleum	3.9	23.8	11.6
Manufactures	11.9	21.7	54.0
Others	9.6	5.9	9.3

Source: Mohamed Ariff, The Malaysian Economy Pacific Connection, Oxford University Press, Singapore, 1991, p. 14.

Gross Merchandise import valued at c.i.f. have increased tremendously over the period 1970-1990. Gross imports which totalled at about RM 4.3 billion in 1970, 36.2%

of GDP, continued to increase at an average annual rate of 15% to reach RM 17.2 billion in 1979, or about 37% of GDP. During the period 1980-90, imports grew at an average rate of 14.9% reaching RM 79 billion in 1990 accounting for about 69% of GDP. The same pattern can be noticed in the structure of import. In the early 1960s when domestic production was less diversified, consumption goods accounted for the bulk (47%) of total imports, comprising mainly of consumer durables and food. The implementation of an import substitution strategy beginning in the 1960s led to a reduction in the proportion of consumption goods imports in total imports. With increasing industrialization based on import substitution and later export promotion programme, the share of consumption goods in total import continued to decline to 28% in 1970, 18% in 1980 and 16% in 1990.

With an industrialization strategy based on assembly type operation in the seventies, intermediate goods which experienced only marginal growth in the 1960s, rose rapidly at the rate of 20.4% in 1970s. However during the 1980s, the import of investment goods grew at a slower pace of 14.3%, which could possibly be because of the domestic sourcing of input for manufacturing.

In line with the favourable expansion of foreign direct investment activities and the rising capacities of the existing firms, the growth of investment goods imports increased from 4% in the sixties to an average annual rate of 22% in the 1970s and 17.4% in the 1980s. The growth rates in

1989 and 1990 were 62.5% and 43.5% respectively. The share of investment goods to total import increased from 25% in 1970 to 30% in 1980 and 38% in 1990 (Table 2.3).

TABLE 2.3
STRUCTURE OF MALAYSIAN IMPORT : 1970 -1990

	SHARE OF TOTAL (%)			AVERAGE ANNUAL GROWTH (%)	
	1970	1980	1990	1970-1979	1980-1990
Consumption Goods	28	18	16	11.0	12.7
Intermediate Goods	35	50	45	20.4	14.3
Investment Goods	25	30	38	22.0	17.4

SOURCE: Malaysia, Ministry of Finance, Economic Report, 1991/92, p. 164.

It is evident that a high import growth is inevitable at this juncture as the country is vigorously pursuing an export oriented industrialization strategy. A high import bill on machinery and intermediate goods is a passing phase. When the imported machinery is set in motion and the intermediate inputs gets translated into marketable exports, import growth will start to lag behind exports.

Malaysian economy is an open market oriented economy. Private sector is playing the leading role in terms of job creation and other kinds of economic activities. This does not mean that the government does not play any role at all, rather it plays a responsible role in ensuring the

development of the country in a balanced way so that the inequality between different sections of the society is removed. Much of the regulation and intervention revolves around the NEP aimed at eradication of poverty, and reduction of economic disparity. Since 1985, efforts have been made to deregulate and to decontrol the economy.

B. Structure and Performance of the Manufacturing Sector:

As the economy of Malaysia has experienced structural changes over the last thirty years, so the manufacturing sector. In the early years of Malaysian independence, the manufacturing sector was heavily dependent on the processing of primary commodities which over the years has changed into diversified and broad industrial base.

The policy makers of the country changed their attention to the development of the manufacturing sector when the terms of trade started getting worse in the 1960s. Manufacturing output recorded a 11.5% increase per annum between 1960-1970 and the share of manufacture in the GDP rose to 13% in 1970 partly as a result of a variety of fiscal incentives and physical facilities provided for investing in the manufacturing sector. These incentives include tax exemptions, tariff protection, financial assistance and industrial sites.

In the late 1960s, food industries started growing rapidly, and took over the dominating position of estate type product processing; as a percentage of gross output the share of estate type products was and food products were 18.5% and 22.7% respectively. Industries producing non-durable consumer or intermediate goods, such as Tobacco, Rubber, Textile, Wood products, Chemicals, Petroleum, nonmetallic mineral products etc. and the industries producing consumer durable and investment goods like electrical, non-electrical machinery and transport equipments also increased their output significantly.

With almost 90% of the durable and non-durable consumer goods and intermediate goods produced locally, the phase of import substitution concluded by 1973. During this period the external demand started to grow and this stimulated the output of the manufacturing sector and the composition of the manufacturing sector began to change.

Gross manufacturing output increased at 10.8% per annum during 1970-1980, much faster than output of all resource based industries except processing of estate type agricultural products. In the first half of the 1980s, manufacturing production on average grew at a slower pace compared to the whole decade and the growth rate of production index even turned negative in the wake of economic recession in 1985 (table 2.4).

The recovery after the recession was led by export oriented industries notably electrical and rubber products.

In the second half of the 1980s electrical machinery became the largest in terms of its share in manufacturing value added.

TABLE 2.4

MALAYSIA: MANUFACTURING PRODUCTION INDEX (1968 = 100)
Selected years

	Weights	1970	1980	1984[4]	1985[4]	1990[5]	1991[5]
All divisions	100.0	117.7	265.0	137.6	133.3	125.5	139.5
Mining[1]	41.0	95.5	67.7	165.6	166.4	113.1	118.9
Electricity[2]	3.7	115.3	307.4	124.7	134.7	127.3	144.1
Manufacturing[3]	55.3	129.8	362.6	125.4	117.6	132.1	150.4
Change				11.4	-6.2		
Off Estate Processing	5.9	130.1	439.9	133.1	146.9	114.8	99.8
Food Manufacturing	4.3	115.9	185.8	103.6	106.4	104.6	118.5
Beverages	1.6	131.0	378.0	82.5	87.0	125.4	127.7
Tobacco Products	2.7	119.9	207.1	113.6	106.8	108.9	110.1
Textile & Wearing Apparel	3.0	114.6	375.7	104.3	102.8	127.8	132.5
Wood and Wood products	3.4	125.5	287.3	99.9	89.0	133.4	140.4
Rubber Products	2.1	125.3	203.6	94.4	102.4	143.7	172.1
Chemicals & Chemical Products	10.0	118.9	250.7	102.7	113.0	115.5	131.7
Petroleum Products	1.8	99.5	193.7	149.0	139.1	118.5	126.0
Non Metallic Mineral Products	3.9	118.2	278.5	111.3	99.4	155.9	185.1
Basic Metals	2.4	139.3	358.8	135.2	113.4	131.7	145.5
Fabricated Metal Products	1.9	131.4	322.9	135.5	130.5	115.4	137.0
Electronic & Electrical Products	9.6	171.5	487.4	197.0	149.8	156.3	205.1
Transport Equipment	2.7	272.5	852.6	119.7	120.2	183.7	215.0
Others[6]	-	193.9	1705.8	94.3	-	-	-

SOURCE: Malaysia, Bank Negara Malaysia, Bank Negara Quarterly Bulletin, September, 1992, pp 78-79.

NOTES:

1. The production of the Mining Sector is represented by the production of tin ore, copper ore, crude petroleum and natural gas, which accounted for 99.6% of the census value added of the Mining Sector in 1988.

2. The production of Electricity Sector is represented by the

generation of electricity by the public sector which accounted for more than 95% of the total electricity generated in 1988.

3. This index was rebased to 1988 and now refers to the production of 52 industries selected from 17 major groups, covering 310 commodities. The selected industries 70% of the value added of the manufacturing sector in 1988. Two new industries covered in the new index were the refrigerating, exhaust ventilating and air conditioning machinery industry and other non-ferrous metal industry.

4. Data for 1984 refers to manufacturing production index 1981 = 100,

5. Data for the 1990 & 1991 refers to 1988 = 100.

6. This group has been deleted since the manufacturing production index of 1985 = 100.

Since 1987, the manufacturing sector having surpassed the agricultural sector in terms of its contribution, is now viewed as the principal sector that would propel the country towards a higher level of development.

In 1991, a total of 652 manufacturing projects were granted approval and a further 113 permitted for expansion and diversification. Total capital investment for these projects exceeds RM 28 million with potential employment for over 148,947 people. The number of foreign firms established in 1991 was 339 wholly owned compared to 262 in 1990.

The impact of past policies and strategies were thoroughly analysed and reevaluated during the formulation of Second Outline Perspective Plan (OPP2) and Sixth Malaysia Plan (6MP). In essence, Malaysia will embark on a renewed economic development path whereby the industrialization

process will be based more on the economic fundamentals of growth.

TABLE 2.5
MALAYSIA: VALUE ADDED[1] BY MANUFACTURING INDUSTRIES
Annual Survey Data[2]
(RM million)

	1975	1981	1985	1986	1987	1988
Processing of estate type agricultural products in factories of estates[3]		1,038.8	979.1	971.1	1,060.9	1,622.5
Food	477.0	836.5	970.4	1,084.9	1,118.8	1,282.7
Beverages	59.6	305.4	303.1	269.3	312.8	321.3
Tobacco Prs.	113.9	271.5	509.4	527.9	535.4	378.3
Textiles	106.4	525.4	329.1	447.1	545.3	588.9
Foot wear[4]	38.6	31.4	261.5	306.6	376.7	480.1
Wood Pr.	279.8	870.7	653.6	741.7	867.4	999.7
Furnitures	19.8	100.9	99.8	97.8	90.0	116.7
Printing	142.2	413.7	489.9	419.0	440.2	436.1
Paper prs.	27.0	93.9	137.3	158.6	168.1	250.1
Leather Prs.	2.9	89.5	6.2	5.8	5.9	7.4
Rubber Prs.	352.3	315.9	416.7	461.2	517.2	707.2
Chemical Prs.	187.6	461.6	1,907.6	1,696.8	1,954.7	2,309.1
Petroleum Prs	50.3	544.7	391.1	469.0	293.7	330.7
Non metallic mineral Prs.	122.0	581.3	737.0	675.3	650.8	820.0
Basic Metal	97.5	222.1	465.5	443.4	504.2	545.4
Metal Prs.	126.1	388.0	365.2	346.2	369.8	507.2
Machinery	114.4	329.9	247.0	251.0	330.1	461.2
Electrical machinery	259.1	1,235.3	1,832.0	1,858.0	2,147.3	2,714.1
Transport equipment	88.4	441.0	524.5	352.7	379.9	591.3
Miscellaneous	94.1	301.4	488.9	571.0	648.1	

SOURCE: Malaysia, Bank Negara Malaysia, Bank Negara Quarterly Bulletin, various issues.

NOTES:

1. Value added was derived as follows: (value of Production) - (Cost of materials consumed) + (stock changes)

2. Survey data for 1975 related to 95% and above 90% of value added covered by the 1968 and 1973 census report respectively.

3. Have been distributed to food and rubber products for the year 1975.

4. Except rubber footwear but includes other wearing apparel and made up textile goods

This development plan will be implemented within the overall frame work of the NDP which in turn, will set the pace to enable Malaysia to become a fully developed nation by the year 2020.

Finally, the new investment may need to rely on domestic financing in the near future. Though so far there have been a fair distribution among equity, foreign borrowing and domestic borrowing, but in future there may be a need for the support from the local banks and financial institutions to finance the expansion need of these companies. Bank Negara's survey in private investment in Malaysia showed that traditionally, the manufacturing sector has been financing their expansion through internal fund but it started declining from 71% in 1987 to 52% in 1991.[1] If this situation perpetuates then there will be a need to expand the capacity of capital market to raise funds efficiently and develop the domestic banking system in order to mobilise the fund more efficiently to serve their corporate clients more effectively.

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1. Malaysia, Annual Report, Bank Negara Malaysia, 1991, p 63.

III. FOREIGN DIRECT INVESTMENT

A. Economics of Foreign Direct Investment:

1. Reasons And Determinants of Foreign Direct Investment

The growing importance and necessity of FDI for achieving economic development in developed and developing countries has generated a great deal of interest in foreign investment decisions of the multinationals. Specially factors which prompt MNCs to increase or decrease FDI in individual countries have intrigued and evaded researchers for many years. Before the discussion of what prompts MNCs to invest or not to invest, there is another point that deserves attention i.e. why in the first place foreign direct investment takes place.

Firms expands internationally for a wide variety of reasons. The desire for growth necessitates corporations to seek wider market access in order to maintain or increase their sales. Another reason is to circumvent current barriers to trade and operate abroad as a domestic firm. In addition to government erected barriers, restrictions may be imposed by customers through their insistence on domestic goods and services, either as a result of nationalistic tendencies or as a function of cultural differences. For some products, country-of-origin effects may force a firm to establish a plant in a country that has a built-in-positive stereotype for production location and product quality.

Another important factor for investing abroad is the cost factor, with corporations attempting to obtain low cost resources and ensure their sources of supply.

Once a company has decided to invest abroad, the most crucial question of the location arises. There are various factors that determines the choice of location for FDI. In fact it is not possible to attribute one single factor for the decision rather it is a combination of factors that determines the location. These determinants of FDI can be classified into four major categories namely economic, social, political and policy variables (Table 3.1). All these variables affect the decision of any MNC to invest in a particular country. A detailed discussion is presented in chapter IV, on the effects of several of these factors on FDI flow into a country.

TABLE 3.1
POTENTIAL DETERMINANTS OF FOREIGN DIRECT INVESTMENT

CATEGORY	VARIABLES
A. Economic	1. GDP/GNP 2. GDP per capita, GDP growth rate, per capita growth rate 3. Manufactured Imports/GDP 4. Ratio of Export to Imports 5. International liquidity 6. Purchasing power of currency 7. Local credit 8. Ratio of commerce transport and communication to GDP 9. Energy production 10. Degree of economic integration 11. Ratio of manufacturing to GDP 12. Ratio of raw material exports to GDP

TABLE 3.1 (CONT'D)
POTENTIAL DETERMINANTS OF FOREIGN DIRECT INVESTMENT

CATEGORY	VARIABLES
B. Economic	1. Ratio of literacy and school enrollment
	2. Availability of technical and professional worker
	3. Modernization of outlook
	4. Strength of Labour movement
	5. Extent of urbanization
C. Political	1. Frequency of government change
	2. Number of internal armed attacks by period
	3. Degree of administrative efficiency
	4. Degree of nationalism
	5. Role of government in economy
D. Policy	1. Corporate taxation
	2. Tax incentive laws: complexity vs simplicity
	3. Tax incentive liberality
	4. Attitude towards joint venture
	5. Local content requirement
	6. Limitations on foreign personnel

SOURCE: Adapted from Root, Franklin R. and Ahmed, Ahmed A., 'The Influence of Policy Instruments on Manufacturing Direct Foreign Investment In Developing Countries', Journal of International Business Studies, Vol 9, No 3, Winter, 1978, pp 84-85.

In carrying out the investment abroad, MNCs have a wide range of choices of ownership, from 100% ownership to a minority interest. The different forms of ownerships have its own merits and demerits. The particular choice depends

on the management of the parent company basing on the profitability and opportunity cost of investment in a particular location.

Full ownership is a form, whereby management believes no outside entity should have an impact on corporation management. But it also depends on the host country policy. As the case in Malaysia, full ownership is allowed if 80% of the products of the company are exported.

Joint venture, another form of ownership is a collaboration of two or more organizations for more than a transitory period. In some form of joint ventures partners hold equal shares. But equality of shares among partners is not a necessary condition. However, usually developing countries insist on host country's majority ownership. One special form of joint venture is strategic alliance which is an informal or formal agreement between two or more companies with a common business objectives. It is more than the traditional customer vendor relationship but less than outright acquisition.

2. Impact of Foreign Direct Investment on the Host Country

There is considerable disagreement about the relative costs and benefit of foreign direct investment to developing countries. The principal argument in its favour is that package of capital, technological and managerial sources generally increases the real domestic income of the host country by more than the profits returned and repatriated. This increase is reflected in higher tax revenues, higher labour incomes, or lower prices. But the concern of the host country that some of the activities might have adverse consequence for a country's development prospect may lead to the adoption of restrictive policies toward foreign direct investment. This concern has been reinforced by dissatisfaction with some of the results of earlier investments.

The overall impact of FDI goes well beyond the direct transfer of capital and technology that they provide. Since, these entrepreneurs borrow from the host country and also from third parties abroad, they affect a share of total resources that is much larger than the recorded inflow of direct investment. Moreover, direct investment is often concentrated in import substituting or export industries, so that the foreign trade performance of enterprise based on direct investment can have a significant impact on their host's Balance of payments. Consequently, the achievement of development objective can be significantly affected by the