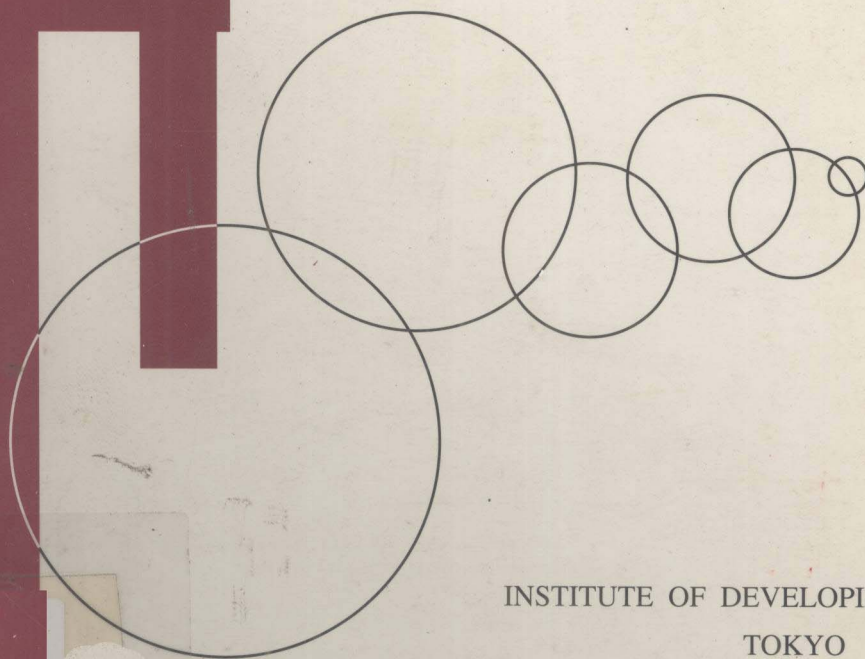




ASEDP NO. 18

FOREIGN DIRECT INVESTMENT IN MALAYSIA

Edited by
MOHAMED ARIFF and HISASHI YOKOYAMA



INSTITUTE OF DEVELOPING ECONOMIES
TOKYO

1992

I.D.E. ASED P Series No. 18

FOREIGN DIRECT INVESTMENT IN MALAYSIA

Edited by

MOHAMED ARIFF and HISASHI YOKOYAMA

INSTITUTE OF DEVELOPING ECONOMIES

TOKYO

1992

© Copyright in 1992 by Institute of Developing Economies
42 Ichigaya-Hommura-cho, Shinjuku-ku, Tokyo, Japan
All rights reserved.

No parts of this publication may be reprinted by any means without written permission from the
Institute.

ISBN: 4-258-55013-2-C3033

Typeset by Expo Holdings Sdn. Bhd., Petaling Jaya

Printed by Art Printing Works, Kuala Lumpur

PREFACE

This is the eighteenth volume, released in Malaysian, in a series of Joint Study Projects for Economic Development Policies in ASEAN and Neighbouring Areas, initiated in 1987 by the Institute of Developing Economies (IDE) in Tokyo.

In 1989 a research team, based in Kuala Lumpur, started the Malaysian joint project in line with Thailand, the Philippines, and Indonesia, followed by another joint project in Hong Kong in 1990. Since then the team has produced two volumes; "Malaysian Economy: Policy and Structural Change," (Series No.9) in 1990 and "Malaysian Economy in Transition" (Series No.13) in 1991, both of which were translated into Japanese and published in Tokyo each year. This third, in Malaysia, volume is expected to be published in Japanese also.

When I came here to take charge of this project in late 1989, I was not confident of accomplishing the job of producing three volumes in less than two and a half years. Now, as I am about to end my duty, I have three volumes, including this one, with me. This could not have been done without much help and cooperation from many people. I would like to express my heartfelt gratitude to all of them.

I am deeply indebted in particular to all the collaborating participants in this project, many of whom are contributing to this volume for their second or third time; Prof. Mokhtar Tamin, Dr. Ismail Salleh, Dr. Abdul Aziz Abdul Rahman, Prof. Mohamed Ariff, Prof. H. Osman-Rani, and Dr. Anuwar Ali. I must thank also Dr. Jaafar Ahmad and Mr. Tan Eu Chye for their contribution to the first and second volumes. Each of them are among the busiest persons in their institutions. Still they have squeezed time to participate and contribute chapters to this project.

My special thanks go to the academic and administrative staff of the Institute of Advanced Studies (IPT), University of Malaya (UM), headed by Prof. Mohamed Ali Hashim, who since 1989 have offered their generous help and support in allowing me to conduct this project. Life at IPT has been both comfortable and valuable, and has greatly encouraged me to proceed with this project. I should express my gratitude to a graduate from the Faculty of Economics and Administration (UM), Miss Goy Siew Ching, who provided invaluable help in editing this volume as well as the second volume. I am also very grateful to Ms Patricia Thorlby who read through all the pages to suggest corrections. Without their unselfish assistance this volume would not have appeared. Lastly many thanks to the staff of the Research Planning Department and the International Exchanges Department of IDE, who took on the burden of most of the administrative work in Tokyo and supported me in this project.

Our greatest wish is that these three volumes we have produced can help to strengthen mutual cooperation among economists in the world for further understanding of the Malaysian economy.

Hisashi Yokoyama
March 1992
Kuala Lumpur

CONTRIBUTORS

Mohamed Ariff

Professor, Faculty of Economics and Administration, University of Malaya.

Anuwar Ali

Associate Professor, Faculty of Economics, Universiti Kebangsaan Malaysia.

Hisashi Yokoyama

Senior Overseas Research Officer, Institute of Developing Economies; Research Associate, Institute of Advanced Studies, University of Malaya.

Ismail Md. Salleh

Assistant Director-General (National Economy), Institute of Strategic and International Studies Malaysia.

Mokhtar Tamin

Professor, Faculty of Economics and Administration, University of Malaya.

H. Osman-Rani

Professor, Dean, Faculty of Economics, Universiti Kebangsaan Malaysia.

Abdul Aziz Abdul Rahman

Director, Centre of Agricultural Policy Studies, Universiti Pertanian Malaysia; Research Associate, Malaysian Institute of Economic Research.

STATES OF MALAYSIA



INTRODUCTION

Malaysia has been exhibiting an enormous ability to adjust its socio-economic development in the face of an abruptly changing world economy. During the late 1970s and early 1980s, when the world economy went into recession following the second oil crisis, the Malaysian economy underwent some drastic changes. Malaysian's heavy dependence on world demand coupled with the recession stimulated an economy based on counter cyclical, socio-political (based on the New Economic Policy), and fiscal interventions. By the middle of the 1980s the Government was experiencing severe financial burdens which led to its tightening the belt in an effort to reduce expenditure and restructure its financial position. This policy of austerity and the collapse of primary commodities caused the Malaysian economy to register negative or near zero GDP growth in the mid-1980s. Immediately following these difficulties and the Plaza Accord in September 1985, the Government again opted for more liberal policies favouring private (especially foreign direct) investment. Evidence of this can be seen by the introduction of the Promotion of Investment Act (1986) and the Income Tax Act (Amended 1987). Responding to this swift change of policies, the private sector steadily picked up and marched confidently towards the 1990s backed by a massive inflow of foreign direct investment (FDI). Since 1988, GDP has been growing at more than 8.5% each consecutive year. By all indications GDP growth in 1992 may even exceed the 8.5% forecast by the Ministry of Finance (Economic Report 1991/1992).

The Malaysian economy's recent splendid performance began with that 1986/87 policy change and was reinforced by the rapid inflow of FDI. The domestic private sector has now caught up with the aggressive inflow of FDI to ensure sustained expansion. The Government has been trying to accommodate the behaviour of the active private sector as it has adjusted the economy towards that of an industrialised country.

Seeing the Malaysian economy in this light, we naturally ask ourselves how the massive inflow of FDI has affected the basically resource-based Malaysian economy. It is this question which constitutes the starting point for this volume. Partly because the literature of economic theory is so inadequate, and partly because the real economy has been so dynamic in an abruptly changing and "borderless" world, it is difficult to fully comprehend the complex phenomena induced by the inflow of FDI. Furthermore, it might be too early to evaluate the effects of FDI on the Malaysian economy since the data is not readily available. Nevertheless, we think it is time to attempt to answer the above question because the world economy and the Malaysian economy now seem to have reached a plateau in advance of another round of change. This volume will therefore take a hard look at the details in an attempt to provide some tentative answers.

This volume is divided into three parts: the macroscopic view of the impact of FDI; FDI's impact on each sector; and geographical dispersion of FDI. The first two chapters give overviews of the implications of FDI and its important role in technology transfer. The following three chapters are industry specific. Electronic/electrical industries are analysed in more details because they are growing the most rapidly. The final two chapters concentrate on the regional dispersion of FDI and industrial location.

As an overview, the *First Chapter* traces the recent trends in FDI in Malaysia, identifies what determines the inflow and discusses the policy implications pertaining to FDI. It points out that the Malaysian economy has become integrated within the Asia-Pacific region through the FDI network. It explains that the foreign stake in the fixed assets of the manufacturing sector exceeds 40%, and highlights the "new" characteristics of FDI in Malaysia. The liberal policy change of the mid-1980s (relaxing foreign equity rulings, tax incentives in favour of FDI) is identified as a major domestic determinant. The growing internationalisation of industrial production, exchange rate realignments and protectionism in developed countries, are identified as the critical external factors. Issues discussed include: the crowding out of local capital, high import content, foregone tax revenues and the balance of payment effects. As the external environment is so uncertain, it is argued that Malaysia needs to: step up investments in human capital, maintain political stability, improve its infrastructure, and undertake reverse investment abroad.

One of the most important role of FDI, from the host country's viewpoint, is technology transfer. *Chapter Two* examines Malaysia's experience of technological development and FDI's impact on the development process. During the first two phases of industrialisation, import-substitution in the 1960s and export-promotion in the 1970s, the process of "learning by doing" and "learning by adapting" are described as important components of technological transfers and acquisitions. During the third phase in the 1980s, characterised by the promotion of heavy industries, "learning by design" become more significant. The transition towards this third phase is still in its infancy. Of all the technological agreements approved, Japan, "technical assistance" and "know-how" are shown to be the most commonly adopted in the electronic/electrical, chemical and fabricated metal industries. Manpower training, skill upgrading and R&D within domestic industries/institutions, are reassessed for technological enhancement through FDI.

Chapter Three analyses the production structure, since 1986, of the manufacturing industries in the wake of the massive inflow of FDI. The annual production function is cross-sectionally estimated, applying the newly-released series of the capital "in production" either Malaysian or foreign owned. Major findings are: (a) the production function is almost homogeneous by degree one; returns to scale is constant every year; (b) foreign capital is much more elastic than

Malaysian capital, although the elasticity of the latter is increasing; (c) the marginal productivity of foreign capital is high enough to be around one (M\$1.00 per equivalent amount of foreign capital), while Malaysian capital is growing rapidly and labour is steady at around M\$10,000.00 per person; and in the case of capital intensive industries, findings (b) and (c) are more apparent, although the elasticity and the marginal productivity of labour are estimated to be smaller.

Within the rapidly growing manufacturing sector, the electrical/electronics industry has made tremendous progress since the mid-1970s, thanks to inflow of FDI. Reviewing the industry's profile, *Chapter Four* examines this rapid progress in terms of its contributions to value added, employment, and export. The chapter further investigates FDI's industrial role in terms of structure, employment, linkages with local industries, and technology. It also discusses the global outlook of this industry. The leaning towards components rather than consumer/industrial electronics, and the lack of skilled labour, product design, R&D, and weak linkages with local/supporting industries are all identified as major issues involved in the transformation of this industry from back-end to front-end manufacturing.

Despite its rapid industrialisation, the Malaysian economy is still an important primary producer with a wide spectrum of primary commodities. After reviewing the policies and the process of the economy's transformation, *Chapter Five* focuses on the performances of the agro-based industries since the 1985 recession. It shows that the policy changes (Promotion of Investment Act 1986, amendments to the Income Tax Act in 1987 and Industrial Master Plan 1986-1995), have stimulated the agro-based manufacturing with the help of FDI. The food and beverage, rubber product and wood-based industries are taken as examples. FDI's impact is favourably evaluated as a generator of income and employment opportunity. The deterioration of the trade balance and foregone tax revenues are also discussed.

The inflow of FDI influences not only the national/federal level of industrial development, but also local/state development. The profit maximising behaviour of FDI may sometimes cause conflict with the host country's objective of regionally balanced development. In fact, as *Chapter Six* discovers, FDI has tended to favour the more developed areas along the Western Corridor, despite government efforts in the 1970s to set up industrial estates in the east coast. The State Economic Development Corporations are competing with one another for FDI and sometimes team up. The Eastern Corridor linking Kelantan, Trengganu, Pahang and Johore, and the northern/southern growth triangles are good examples. Expecting a heavier concentration within the Western Corridor, this chapter concludes that because of over-congestion or shortage of labour there, FDI is also to be attracted to certain resource and agro-based industries in the less developed states.

The results of mail survey centred around Kuala Lumpur, in the Klang Valley, are summarised in *Chapter Seven*. This chapter also investigates the industrialists'

perception in relation to industrial and plant location. After reviewing the newly proposed long-run plans (the Sixth Malaysia Plan and the Second Outline Perspective Plan) this chapter anticipates that policies for regional dispersal of industries will continue. Not only to achieve a more balanced distribution of investment, but also to relocate industrial activities closer to the sources of labour and raw materials. The results of the inquiry lend evidence to support this anticipation. According to this survey, the two most important factors influencing foreign industrial firms in their choice of plant location and relocation are: (a) the availability of utilities and skilled/unskilled labours, and (b) access to suppliers and markets. Interaction with the rest of the corporation is not deemed to be of much importance in determining plant location. The chapter underscores the need for pragmatic policies to induce inflow of FDI to the less developed regions.

Editors

CONTENTS

Preface

Contributors

States of Malaysia

Introduction

Chapter 1	Foreign Direct Investment in Malaysia: Trends, Determinants and Implications	1
	<i>Mohamed Ariff</i>	
	I. Introduction	1
	II. Recent Trends	2
	III. Major Determinants	11
	<i>Domestic Factors</i>	11
	<i>External Factors</i>	16
	IV. Policy Implications	19
	V. Concluding Remarks	22
Chapter 2	Technology Transfer in Manufacturing Industries via Foreign Direct Investment	25
	<i>Anuwar Ali</i>	
	I. Introduction	25
	II. Industrialisation Process: Technology Transfer and Acquisition	26
	III. Extent of Technology Transfer into Domestic Industries	28
	IV. Technology Transfer: Major Issues	35
	V. New Directions for Technological Enhancement	41
Chapter 3	The Production Structure of Manufacturing Industries with Foreign Direct Investment: Production Function Perspectives	45
	<i>Hisashi Yokoyama</i>	
	I. Introduction	45
	II. Model	46
	III. Data	46
	IV. Results	48
	<i>Comparison with the Former Results</i>	48
	<i>Production Elasticity with Foreign Direct Investment</i>	53
	<i>Marginal Productivity with Foreign Direct Investment</i>	55
	V. Concluding Remarks	57
	Appendix	59

Chapter 4	Electronics and Electrical Machinery Industry	67
	<i>Ismail Md. Salleh</i>	
I.	Introduction	67
II.	Position of the Industry in the National Economy	67
III.	Profile of the Industry: 1981–1988	69
	<i>Structure of the Electronics Industry</i>	72
	<i>Production Trends of Specific Products</i>	74
IV.	Investment Structure in the Industry	75
V.	Profile of the Labour Force	87
VI.	Intra-Industry Linkage Trend	88
	<i>Direct Linkage</i>	88
	<i>Role of Multinational Corporations</i>	
	<i>and Linkages with Local Firms</i>	91
	<i>Linkages from the Free Trade Zones to</i>	
	<i>the Local Electronics Industry</i>	93
VII.	Technology and the Role of Multinational Corporations	93
	<i>The Electronics Subsector</i>	93
	<i>The Electrical Subsector</i>	96
VIII.	Issues and Problems Faced by the Industry	97
IX.	Global Outlook of the Industry in the 1990s	98
X.	Conclusion	99
Chapter 5	Foreign Direct Investment in Agro-Based Industries: 1985–1990	101
	<i>Mokhtar Tamin</i>	
I.	Malaysia's Primary Resource Position	101
II.	Early Incentives Schemes	102
III.	Investment Incentives for Agriculture and Agro-Based Industries	103
	<i>The Promotion of Investment Act (1986)</i>	103
	<i>Income Tax Act (Amended 1987)</i>	105
	<i>Price Discount for the Rubber Products Industry</i>	106
	<i>The Industrial Master Plan (IMP) 1986–1995</i>	106
IV.	The Agro-Based Industries and Foreign Direct Investment	107
	<i>Food, Beverages and Tobacco</i>	107
	<i>Rubber Products</i>	110
	<i>Wood Based Products</i>	111
V.	The Impact of Foreign Investment	115

Chapter 6	Industrial Decentralisation, Foreign Direct Investment and Regional Competition	119
	<i>H. Osman-Rani</i>	
I.	Introduction	119
II.	The Policy and the Instrument for Industrial Dispersal	121
III.	Spatial Pattern of Industrialisation and FDI	127
IV.	Inter-State Competition and Federal-State Relationship	135
V.	Conclusion	139
Chapter 7	Determinants of Industrial Locations of Foreign Direct Investment: A Case Study in Klang Valley	143
	<i>Abdul Aziz Abdul Rahman</i>	
I.	Introduction	143
II.	Industrial Dispersal Policies and Performances	143
	<i>Investors' Industrial Location Considerations</i>	146
III.	Methodology	148
IV.	Discussion of Results	148
	<i>Characteristics of Industries</i>	148
	<i>Importance of Factors Considered</i>	
	<i>in Selection of Current Industrial Location</i>	152
	<i>Relocating Industries to Rural Areas</i>	155
V.	Concluding Remarks	156

FOREIGN DIRECT INVESTMENT IN MALAYSIA: TRENDS, DETERMINANTS AND IMPLICATIONS

Mohamed Ariff

I. Introduction

The importance of foreign direct investment (FDI) to the Malaysian economy can hardly be exaggerated. FDI has contributed significantly to the economic development of the country not only in terms of GDP (gross domestic product) growth but also in terms of structural changes that have transformed Malaysia from basically a primary producer to a rapidly industrialising economy (Table 1). FDI has provided capital, technology, marketing channels and managerial inputs which constitute the necessary ingredients for rapid industrialisation.

Although the share of FDI in total capital inflows into the country has fluctuated, with portfolio investments figuring more prominently at times, FDI has exhibited less volatility than portfolio investments [Ariff (1991a)]. It appears that foreign portfolio investments are more sensitive to changes in the economic environment than foreign direct investments, but fluctuations in the latter tend to have more serious implications for the Malaysian economy. For the externalities

TABLE 1
KEY ECONOMIC INDICATORS

	1985	1986	1987	1988	1989	1990
GNP (M\$ Billion)	72.0	66.8	74.7	85.8	95.6	109.7
Per Capita GNP (M\$'000)	4.6	4.1	4.5	5.1	5.5	6.2
Consumption/GNP Ratio (%)	72.5	72.8	66.9	67.4	70.2	71.0
Savings/GNP (%)	27.5	27.4	33.6	33.0	30.0	29.4
Gross Capital Formation/GNP (%)	29.7	27.8	24.7	27.5	30.6	33.8
Resource Gap (%)	-2.2	-0.4	8.9	5.5	-0.6	-4.4
Exports of Goods & Services/GNP (%)	61.3	62.6	70.8	74.7	81.8	86.1
Imports of Goods & Services/GNP (%)	63.5	63.2	62.5	69.7	82.7	90.6
Share of Agriculture in GDP (%)	20.8	21.4	21.7	21.0	20.4	19.4
Share of Manufacturing in GDP (%)	19.7	21.0	22.6	24.4	25.1	26.6
Share of Manufactures in Exports (%)	32.8	43.5	45.0	48.6	54.0	60.1

Source: Adapted from Bank Negara Malaysia, *Quarterly Bulletin* 6(2), September 1991 and Ministry of finance Malaysia, *Economic Report 1990/91*, December 1990

associated with FDI are far more extensive and pervasive than portfolio investment flows whose impact is largely confined to the balance of payments. It is apparent that the drastic drop in the inflow of FDI in the first half of the 1980s contributed much to the recession that the Malaysian economy experienced in the mid-1980s, while the sharp increase in FDI inflows since 1987 have led to sustained economic expansion.

To be sure, one must not take FDI for granted. That Malaysia has been quite successful in attracting foreign direct investments does not mean that the recent uptrends will continue indefinitely in the future. Much will depend on the domestic policies pursued and the changes taking place in the international economic environment. An attempt is made in this overview chapter to trace the recent FDI trends in Malaysia, to identify the major determinants that affect FDI flows into the country and to discuss the policy implications pertaining to FDI in the years to come.

II. Recent Trends

Admittedly, the analysis presented here is affected by the FDI data used. The FDI statistics, derived from MIDA (Malaysian Industrial Development Authority) sources, are not comprehensive as they exclude investments outside the promoted sectors and reinvestments undertaken by the existing units. The data largely relate to approved investments rather than actual investments. It appears that one-fifth of the projects approved during the 1980s remained unimplemented as of 31 December 1989 [Ariff (1991a)]. The actual attrition rate may well be lower, since some of the projects approved in the late 1980s may see the light of the day in the early 1990s. Be that as it may, it is fairly obvious that FDI statistics based on approvals overstate foreign equity participation in the various industrial sectors. Such shortcomings, however, do not impede the present efforts at broad-brush tracing of the FDI trends.

The character of FDI in Malaysia has undergone major changes over the years. In the 1960s foreign capital was particularly predominant in agriculture, mining and trade. At present it figures most prominently in manufacturing. Foreign share of capital in the corporate sector has declined from 61.7 per cent in 1971 to 24.6 per cent in 1988 [Ariff (1991a)], despite significant increases in foreign investment in absolute terms (Table 2). In any case, FDI has accounted for only a small proportion of capital inflows and gross domestic capital formation to the tune of 10.0 per cent and 1.0 per cent, respectively during 1977–85 [Rana (1987)].

The share of foreign equity in recent investment activities exceeds that reflected in the *stock* figures. Thus, foreign equity in new projects stood at 58.6 per cent (Table 3) compared with the 24.6 per cent share in the stock of capital in

TABLE 2
OWNERSHIP STRUCTURE IN CORPORATE SECTOR, 1971-88

	Foreign		Malaysian		Total
	M\$ Billion	%	M\$ Billion	%	M\$ Billion
1971	4.05	61.7	2.51	38.3	6.56
1975	8.04	53.3	7.04	46.7	15.08
1980	13.91	42.9	18.51	57.1	32.42
1985	20.27	26.0	57.69	74.0	77.96
1988	24.10	24.6	73.87	75.4	97.97

Source: Adapted from *Fourth Malaysia Plan 1981-85; Mid-Term Review of Fourth Malaysian Plan 1981-85; Fifth Malaysia Plan 1986-90; and Mid-Term Review of Fifth Malaysia Plan 1988-90*

TABLE 3
OWNERSHIP PROFILE OF APPROVED PROJECTS

	New Projects			Expansion/Diversification		
	1988	1989	1990	1988	1989	1990
<u>Proposed Called-up Capital</u>						
(M\$ Million)	3,349	4,062	9,251	121	541	428
Foreign (%)	58.6	73.8	64.6	40.0	74.9	58.9
Malaysian (%)	41.4	26.2	35.4	60.0	25.1	41.1
<u>Loans (M\$ Million)</u>	5,332	6,245	17,558	292	1,367	931
Foreign (%)	52.5	72.5	62.4	24.2	45.6	46.6
Malaysian (%)	47.5	37.5	37.6	75.8	54.4	53.4
<u>Total Investment</u>						
(M\$ Million)	8,681	10,307	26,809	413	1,908	1,359
Foreign (%)	54.8	74.0	63.2	28.8	53.9	50.5
Malaysian (%)	45.2	26.0	36.8	71.2	46.1	49.5

Source: MIDA

1988 (Table 2). It is of interest to note that wholly foreign-owned projects accounted for 28.6 per cent of the total equity, compared with the 5.5 per cent share accounted for by the wholly Malaysian-owned projects in 1990. It is noteworthy that wholly foreign-owned companies have a much higher equity-loan ratio than the average (Table 4).

The Malaysian economy has become increasingly integrated with the Asia-Pacific region through the FDI networks. As a matter of fact, the predominance of the Asia-Pacific as a source of FDI for Malaysia has increased in recent years