

**DETERMINANTS OF INFLOWS OF FOREIGN
DIRECT INVESTMENT IN SELECTED
SOUTHEAST ASIAN COUNTRIES**

BY

**RAJAPAKSA PATHIRANNAHELAGE
RATHNASIRI RAJAPAKSA**

(EGA 00024)

**SUBMITTED TO THE FACULTY OF ECONOMICS AND
ADMINISTRATION, UNIVERSITY OF MALAYA IN PARTIAL
FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF ECONOMICS**

MARCH 2002

Perpustakaan Universiti Malaya



A511374613

Table of contents

		Page
List of tables		IV
List of figures		VI
Acknowledgements		VII
Abstract		VIII
Chapter 1	Introduction	1
1.1	Overview	1
1.2	Objectives of the study	6
1.3	Scope of analysis	8
1.4	Outline of the chapters	9
Chapter 2	Literature review	11
2.1	Introduction	11
2.2	The theories of capital investments	13
2.3	Foreign direct investment as capital accumulation	
	Progress	13
2.4	The theories of industrial organization of the firm	15
2.5	Monopolistic or oligopolistic behaviour of the firm	17
2.6	Costs and benefits of foreign direct investment	18
2.7	Determinants of foreign direct investment	21
2.8	Summary	23
Chapter 3	Theoretical outline: determinants of FDI inflows	25

	3.1	Overview	25
	3.2	Theory of comparative cost advantage	25
	3.3	Heckscher-Ohlin theorem	27
	3.4	MacDougall-Kemp model	29
	3.5	Dunning's eclectic analytical framework	29
	3.6	Model of determinants of FDI	30
	3.7	Summary	33
Chapter 4		Methodology	35
	4.1	Overview	35
	4.2	Model	36
	4.3	Research assumptions	36
	4.4	Data collection and analysis	38
	4.5	Stationary tests	39
	4.6	Test for multicollinearity	41
	4.7	Test for heteroscedasticity	43
	4.8	Statistical analysis	44
	4.9	Forecasting	46
	4.10	Conclusion	48
Chapter 5		Results and analysis	50
	5.1	Introduction	50
	5.2	An analysis of the selected variables	51
	5.2.1	FDI inflows	51
	5.2.2	Gross national product (GNP)	54

	5.2.3	Exchange rates	58
	5.2.4	Domestic investments	63
	5.2.5	Degree of openness	65
	5.3	Testing for stationarity of data series	66
	5.4	Testing for multicollinearity	68
	5.5	Testing for heteroscedasticity	72
	5.6	Estimation of the model: determinants of FDI	73
	5.7	Determinants of FDI and elasticities of FDI with respect to determinants	75
	5.8	Forecasts of inflows of foreign direct investment	78
	5.9	Policy suggestions	83
Chapter 6		Summary and conclusion	85
	6.1	Purpose of the study	85
	6.2	The issues analyzed	85
	6.3	Procedure of the study	86
	6.4	Findings of the study	86
	6.5	Policy suggestions	87
Appendices			89
Bibliography			95

List of tables

		Page
Table 5.1	Weighted averaged GDP deflator (1985=100) of Southeast Asia 1970-1999	52
Table 5.2	FDI inflows in constant prices (1985=100) U.S.\$ mil. in Southeast Asian region 1970-1999	53
Table 5.3	GNP (constant prices 1985=100) U.S.\$ mil. in Southeast Asia 1970-1999	55
Table 5.4	Change of GNP (constant prices) U.S.\$ mil. in Southeast Asia 1970-1999	57
Table 5.5	Exchange rates (number of units in local currency per U.S. dollar) in Southeast Asian countries 1970-1999	59
Table 5.6	Aggregated exchange rate for the region of Southeast Asia 1970-1999	61
Table 5.7	Variation of exchange rate (V(XR)) of the region of Southeast Asia 1970-1999	62
Table 5.8	Domestic investments (constant prices 1985=100) in Southeast Asia U.S.\$ mil. 1970-1999	63
Table 5.9	Domestic investments as a percentage of GNP, (I/GNP) (constant prices 1985=100) in Southeast Asia 1970-1999	64
Table 5.10	Degree of openness ((M+X)/GNP) in Southeast Asian region 1970-1999	65
Table 5.11	Results of unit root test for stationarity (ADF test)	67

Table 5.12	Estimated results of the preliminary model (equation 1)	69
Table 5.13	Estimated results of auxiliary regressions (equation 2-7)	70
Table 5.14	Variation inflation factors	71
Table 5.15	Estimated results of the modified model of determinants of FDI (equation 9)	73
Table 5.16	Estimation of elasticities of FDI inflows with respect to determinants	76
Table 5.17	Annual growth rates (%) of GNP, domestic investment, and exchange rate of Southeast Asian region 1970-1999	79
Table 5.18	Forecasts of GNP, domestic investments, and exchange rates in Southeast Asian region (U.S.\$ mil.) 2000-2005	81
Table 5.19	Forecasts of change of GNP (U.S.\$ mil.), domestic investment to GNP (%) and variation of exchange rate in Southeast Asian region (U.S.\$ mil.) 2000-2005	82
Table 5.20	Forecast of FDI inflows in Southeast Asia (U.S.\$ mil.) 2000-2005	83

List of figures

		Page
Figure 5.1	Trend in FDI inflows (constant prices) in Southeast Asia	
	1970-1999	54
Figure 5.2	Trend in GNP (constant prices) in Southeast Asia	
	1970-1999	56
Figure 5.3	Change in GNP in Southeast Asia	58

Acknowledgements

In the course of preparing this research paper within a short period of time, I cannot forget valuable assistance dedicated by several important people. First I should thank to Professor K.S.Jomo, University of Malaya who is my course coordinator, a famous economist and an author for giving valuable general advice in arranging this study and for helping me solve certain administrative problems. As a scholarship holder I had a very short period to complete my Masters degree programme. Hence I had to complete this research a quickly. Despite being very busy with tight schedules, Dr. Yap Su Fei, my supervisor of this study guided me well to complete this paper successfully within a very short period of time.

I would not have been able to follow this Masters programme including this research paper if the Malaysian government had not sponsored me under the Malaysian Technical Corporation Programme (MTCP) as an official aid granted to the Sri Lankan government. Therefore I must thank the Director General of the Department of Public Services in Malaysia and his staff members in the Training Division. I am also grateful to the Director General of the Department of Fiscal Policy and Economic Affairs of the General Treasury in Sri Lanka for nominating me to follow this course under a scholarship of MTCP.

Most difficult part I experienced in the course of this study was collecting data and information. In this task, I was greatly helped by His Excellency Daya Y. Liyanage, High Commissioner for Sri Lanka in Malaysia and Mr. A.H.M.P.Herath, First Secretary of the High Commission for Sri Lanka in Malaysia. I also should thank to Dr. Subarjo Joyosumarto, Executive Director of the South East Asian Central Bank-Research and Training Center in Kuala Lumpur and Dr. K.V.Ramani, Executive Programme Coordinator of The Asian and Pacific Development Center in Kuala Lumpur for giving a great support and advice for finding data for this study.

Finally I appreciate the great support given by Ms. Lulu who is a member of the administration staff of the Faculty of Economics and Administration in University of Malaya for fulfilling all the documentations in a very efficient manner.

Abstract

Southeast Asian countries experienced high growth of inflows of foreign direct investments in the past three decades. This study attempts to find the key factors that determine these inflows. In addition to that, the importance of such factors was investigated. Based on such findings, the future trend of FDI inflows to this region was also examined by forecasting.

In many studies on this subject, the significance of various factors determinants of FDI was evaluated using econometric models. Results of such studies are often varied. Differences depend on the characteristics of the economies and the time examined.

Using FDI inflows of the selected five countries of the Southeast Asian region as dependant variable, several key factors were set as independent variables in formulating the regression model, which was used to test the given hypotheses. According to the results realized from this analysis, the size of the market or the economy, domestic investments, and fluctuations of exchange rates are key influences in determining FDI inflows in this region. The exchange rate itself and the growth of GNP are not significant.

Further this study revealed that the most attractive factor in determining FDI is domestic investments. Domestic investments act as a complementary factor rather than a substitute for FDI in this region for the period concerned. Although fluctuations of exchange rates have negative effects as expected, this influence is not strong. Nonetheless, this should be taken into account by policy matters.

FDI inflows to this particular region were forecast applying the actual average growth rates of the exogenous values used in this model for the period from year 2000 to 2005. The results suggest a tremendous decrease in average growth rates of FDI inflows. These findings should draw the attention of policy makers towards changing FDI promotional policies, which emphasize towards stability of GNP growth, stable exchange rates and high domestic investments in this region.