



UNIVERSITI PUTRA MALAYSIA

A THREE-GAP ANALYSIS OF MALAYSIAN ECONOMY

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By

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To My Family, Mother, Brothers and Sister.

Especially to My Wife Noha and Our Babies. ...

With

Love, Respect and Gratitude

Marwan



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of requirements for the degree of Doctor of Philosophy.

A THREE-GAP ANALYSIS OF MALASIAN ECONOMY

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Malaysia, setting out to transform its economy through industrialisation to become a fully developed country by 2020 must provide for all of the resources required as best as it can. The key question pertaining to economic growth goal in Malaysia is the present and future configuration of the resource gap constraints which can be influenced by factors such as reliability of foreign capital inflow, strength of crowding in and crowding out effects, and the imperatives of the constraints on the process of economic development.

This thesis attempts to elucidate the above mentioned structural questions, to identify their solutions as well as to examine the extent of macroeconomic constraints faced by Malaysia as it undertakes economic transformation. Two as well as three-gap approaches have been utilised to identify the dominant resource constraints limiting the target growth and to estimate the future resource requirements needed to achieve the pre-determined target. Particular attention is given to the impact of foreign transfers on



the rate of growth in potential output. In addition, the study will examine the saving behaviour of the Malaysian economy. This will be done using the multivariate co-integration approach followed by an error-correction modelling to investigate the saving behaviour in a dynamic framework.

The empirical findings of the saving analyses indicate that maintaining a stable macroeconomic condition is critical for mobilising savings, encouraging domestic investment and laying the foundations for sustained economic growth. Among the macro variables exports and tax level appear to be more significant in explaining the saving rate in Malaysia. A number of other variables including interest rate, dependency ratio and rate of growth are also important. The dependency ratio has been found to exert a negative effect on rate of saving. The empirical results have confirmed the adverse effect of foreign direct investment (FDI) on savings, suggesting that strategies aimed at reducing the FDI (and thus debt burden) would help to raise domestic saving.

The results of two-gap analysis tends to conform with that expounded by the Neo-structuralists which claims that the dominant constraint in most developing countries is foreign exchange gap caused primarily by structural disequilibrium or macroeconomic imbalances. The estimation and projections carried out have led to be the inference that the trade constraint has tended to be more binding than the saving constraint. In the three-gap analysis, a sustainable growth of 6.5 per cent per annum would require an investment ratio of 28 per cent, while an 8 per cent of annually would growth require 35 per cent investment ratio over the period 1995-2000. With no

change in the ratio of interest payments to potential output, 5.58 per cent of foreign saving (around RM 5 billion) per year would be required for an 8 per cent growth and a 4.1 per cent (around RM 3.2 billion) annual increase would be required for a 6.5 per cent growth rate annually over the period 1995-2000.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

ANALISA TIGA LOMPANG EKONOMI MALAYSIA

Oleh

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Malaysia, dalam persediaannya untuk mentransformasi ekonominya melalui penindustrian bagi menjadi sebuah negara serba maju menjelang tahun 2000 perlu menyediakan segala sumber yang diperlukan sebaik mungkin. Persoalan mengenai matlamat pertumbuhan adalah berkaitan dengan kewujudan lompong sumber semasa dan juga masa depan, yang mana dipengaruhi oleh faktor-faktor seperti aliran modal asing, kesan saingan modal dalaman, dan lain-lain faktor pengaruh.

Tesis ini bertujuan menghuraikan persoalan-persoalan struktur di atas, mengenalpasti penyelesaiannya serta meneliti bentuk dan tahap batasan yang dihadapi oleh ekonomi Malaysia dalam melaksanakan transformasi ekonomi. Model-model dua dan tiga lompong telah digunakan bagi mengenalpasti batasan-batasan utama yang menghadkan pertumbuhan dan menilai keperluan sumber bagi mencapai sasaran tersebut. Penekanan akan diberikan kepada penilaian impak pindahan asing terhadap



pertumbuhan potensi output. Selain daripada itu, kajian ini juga akan meneliti gelagat tabungn ekonomi Malaysia. Ini akan dilakukan dengan menggunakn ko-integrasi multivariat diikuti dengan permodelan pembedulan kesilapan untuk menyiasat gelagat tabungan dalam rangka yang dinamik.

Penemuan-pememuan empirikal berasaskan analisa tabungan menunjukkan bahawa pewujudan kondisi makroekonomi yang stabil adalah kritikal bagi menggemblengkan tabungan, menggalakkan pelaburan domestik dan menyediakan asas pertumbuhan yang berdaya tahan atau mampan. Di antara angkubah-angkubah makro eksport dan tahap cukai adalah signifikan bagi menerangkan kadar tabungan di Malaysia. Beberapa angkubah lain termasuk kadar bunga, nisbah pergantungan dan kadar pertumbuhan juga adalah sama penting. Nisbah pergantungan didapati memberi kesan negatif terhadap kadar tabungan. Keputusan-keputusan empirikan mengesahkan berlakunya kesan kurang baik pelaburan langsung asing terhadap tabungan, mengesyorkan yang strategi-strategi bertujuan mengurangkannya (dan tanggungan hutang) boleh membatu meningkatkan tabungan domestik.

Keputusan-keputusan analisa dua lompong mengesahkan penemuan yang diperolehi oleh ahli-ahli strukturalis yang berpendapat bahawa batasan utama dalam negara-negara membangun adalah lompong tukaran asing yang disebabkan oleh ketidakseimbangan makroekonomi. Anggaran dan unjuran yang dijalankan telah membuktikan bahawa batasan perdagangan adalah lebih mengikat daripada batasan tabungan . Dalam analisa tiga lompong, pertumbuhan mampan pada kadar 6.5 peratus

setahun akan memerlukan nisbah pelaburan sebanyak 28 peratus, manakala pertumbuhan 8 peratus setahun akan memerlukan nisbah pelaburan sebanyak 35 peratus. Tanpa perubahan dalam nisbah pembayaran bunga kepada output potensi, sebanyak 5.58 peratus penjimatan asing (lebih kurang RM 5 bilion) setahun akan diperlukan untuk menyokong pertumbuhan 8 peratus, dan 4.1 peratus (lebih kurang RM 3.2 bilion) setahun akan diperlukan bagi menyokong pertumbuhan 6.5 peratus setahun bagi tempoh 1995-2000.

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TABLE OF CONTENTS

Page

DEDICATION.....	ii
ABSTRACT.....	iii
ABSTRAK.....	vi
ACKNOWLEDGEMENTS	viii
APPROVAL SHEETS.....	x
DECLARATION FORM.....	xii
LIST OF TABLES	xix
LIST OF ABBREVIATIONS.....	xxii

CHAPTER

I	OVERVIEW OF STUDY	
	Introduction	1
	Malaysia in the Context of Gap Models.....	8
	Statement of Problem.....	14
	Objectives of Study.....	18
	Significance of Study.....	20
	Organisation of Study.....	24
II	OVERVIEW OF MALAYSIAN ECONOMY	
	Malaysian Financial System	25
	 Introduction.....	25
	 Development of Financial System.....	26
	 Development of Foreign Exchange Market....	28
	 Role of Foreign Exchange Market	29
	 Development in the Capital Market.....	32
	Economic Reform.....	41
	Economic Performance.....	42
	Public Sector Financing	44



Sources of Government Revenue.....	49
External Trade.....	54
Trade Performance.....	54
Direction of External Trade	55
Trade Structure	56
Balance of Trade.	60
Capital Formation.....	62
Trend in Savings.....	64
Interest Rate and Monetary Policy.....	65
Inflation Trend	69
Malaysia External Debt	70
Foreign Direct Investment.....	75
Development Planning and Policy Regimes.....	78

III LITERATURE REVIEW

Domestic Resources in Economic Development

Introduction	80
Saving Concept.....	81
Mobilisation of Saving	83
Voluntary Saving.....	84
Involuntary Saving.....	85
Saving Theories.....	88
The Keynesian Saving Theory.....	89
Relative Income Theory.....	89
Permanent and Transitory Income Theory.....	91
The Life Cycle Theory.....	92
Internal Determinants of Gross Domestic Saving	
Keynesian Savings Functions (Income)	93
Population and its Growth.....	95
Rate of Growth of GNP.....	98
Inflation	99



	Interest Rate.....	102
	Taxation	105
	External Determinants of Gross Domestic Saving.....	
	Export	108
	Role of Export in Economic Growth.....	108
	Export and Saving.....	110
	Foreign Capital	115
	Relationship Between Foreign and Domestic Saving..	116
IV	EVOLUTION OF GAP MODELS	
	Introduction	127
	Definition of Resource Gaps.....	129
	Theoretical Framework	130
	Neo-classicists and One Gap Analysis.....	130
	Neo-structuralists and Multiple Gap Model	131
	Chenery-Strout Model	133
	Future Development of Chenery-Strout Model ...	136
	Recent Studies	138
	Reasons for Using Resource Gap Model.....	140
	Historical Aspect of Two Gaps on Malay Economy	141
	Extension of Two-Gap into Three Gap Model...	
	Introduction to Three-Gap Model.....	144
	Characteristics of the Model	145
	Properties of the Model	146
	Specification of the Model	150



V	METHODOLOGY.....	
	Estimation of Saving Behaviour	155
	Time Series Properties of Economic Variables.....	156
	Unit Root Test and Order of Integration.....	156
	Johansen-Juselius Multivariate Cointegration Test.....	158
	Error Correction Model (ECT).....	158
	Diagnostic Checking.....	160
	CUSUM, Breusch-Godfrey LM and ARCH Tests	
	Model Specification.....	161
	Estimation of Two Gap Model	
	Introduction.....	165
	Definitional Aspects	168
	Behavioural Relationship	168
	Target Rate of Growth in Investment Requirements,	
	Expected Domestic Saving, Saving Gap and Import	
	Requirements Forecast, Export Earnings and Foreign	
	Gap.....	
	Estimation of Three Gaps Model	
	Introduction.....	172
	Initial Economic Conditions	173
	Definitional Aspects	177
	Behavioural Relationships	178
	Projection of Three Gap Over Medium Term.....	183
	Data Sources and Situation.....	185
VI	ANALYSIS OF RESULTS	
	Analysis of Saving Behaviour.....	
	Introduction.....	186
	Empirical Results and Discussion.....	188
	Conclusions	195



Analysis of Two-Gap Model	197
Specification of Variables and Parameter Values...	198
Results of Saving Gap Analysis.....	200
Investment Requirements and Expected Saving	201
Results of Trade Gap Analysis.....	202
Import Requirements and Export Earnings	203
Projections Over 1965-1980.....	203
Projections Over 1981-1995.....	204
Performance Parameters.....	206
Analysis of Three Gap Model	
Introduction.....	217
Results of Three-Gap Model Analysis.....	218
Medium-Term Projections of Three Gap Model.....	220
Scenario Analysis.....	221
VII CONCLUSIONS AND POLICY IMPLICATIONS	
Introduction.....	230
Improvement of Economic Efficiency.....	237
Improvement in Balance of Payments.....	240
Policies to Stabilise Government Deficits	243
Policies to Stabilise External Debt	247
Scope for Further Research.....	253
REFERENCES.....	255
APPENDICES.....	273
BIODATA OF AUTHORS.....	280



LIST OF TABLES

Table		Page
2.1	Assets of Malaysian Financial System 1960-1996.....	29
2.2	Institutional Structure of Kuala Lumpur Foreign Exchange Market, 1993 and 1996.....	30
2.3	Daily Average Turnover in Foreign Exchange Market 1992 and 1995	31
2.4	Net Funds Raised by the Private Sector in Malaysia 1980-1996.....	33
2.5	Sectoral Share of Equity Market in Malaysia 1986-1996.....	38
2.6	Sectoral Share of Private Debt Securities Market in Malaysia, 1987-1996..	38
2.7	Funds Raised in Malaysian Capital Market 1985-1996.....	40
2.8	Malaysia: Real Gross Domestic Product 1985-1995.....	45
2.9	Malaysia: Size of Government Budget 1966-1990.....	46
2.10	Malaysia: Government Expenditure and Revenue 1967-1990.....	46
2.11	Malaysia: Government Expenditure and Financing 1985-1995.....	52
2.12	Malaysia: Government Revenue 1985-1995.....	53
2.13	Malaysia; External Trade 1970-1996.....	55
2.14	Direction of Malaysia's Trade by Major Market 1970-1996.....	57
2.15	Malaysia: Commodity Structure of Exports 1990-1996.....	58
2.16	Malaysia: Import by Economic Function 1990-1996.....	58
2.17	Malaysia's Trade Structure 1985-1995.....	59
2.18	Malaysia's: Commodity Exports 1985-1995.....	61
2.19	Malaysia's: Trade Balance by Major Market 1970-1996.....	62
2.20	Malaysia: Saving-Investment Balance 1966-1995.....	65



2.21	Key Interest Rates of Commercial Banks in Malaysia 1987-1996.....	68
2.22	Inflation Rates in Malaysia 1970-1995.....	69
2.23	Inflation Trend in ASEAN and Selected Countries 1965-1996.....	70
2.24	Malaysia: External Debt and Debt Servicing 1985-1996.....	73
2.25	Malaysia: Short and Long Term Debt 1970-1996.....	75
2.26	Malaysia: Foreign Direct Investment 1970-1996.....	77
2.27A.	Malaysia: Foreign Investment in Approved Projects by Industry.....	78
2.27B.	Malaysia: Foreign Investment in Approved Projects by Country.....	78
4.1	Quantitative Comparison of Different Studies on 1 and 2 Gap Models...	143
5.1	Identity Equations of the Three-Gap Model	172
5.2	Estimation Equations of the Three-Gap Model	172
5.3	Specification Variables of the Three-Gap Model.....	175
6.1	Unit Root Test of Saving Function.....	189
6.2	Diagnostic Checking of Saving Function.....	190
6.3	Johansen and Juselius' s Test for Multiple Cointegration Vectors.....	191
6.4	Results from Error-Correction Model.....	193
6.5	Values of Variables and Parameters Used to Project Malaysian Economy Over 1965-1980.....	199
6.6	Values of Variables and Parameters Used to Project Malaysian Economy Over 1986 – 1995.....	199
6.7	Projection of Imports, Exports and Foreign Gap to 2005 Using Target GNP Growth Rate of 8 Per cent in 1965-1980 Period.....	208
6.8	Projection of Saving, Investment and Saving Gap to 2005 Using Target GNP Growth Rate of 8 Per cent in 1965-1980 Period.....	209
6.9	Projection of Two Gap Using Target GNP Growth Rate of 6 Per cent in 1965-1980 Period.....	210



6.10	Projection of Import, Export and Foreign Gap to 2005 Using Target GNP Growth Rate of 8 Per cent in 1981-1995 Period.....	211
6.11	Projection of Saving, Investment and Saving Gap to 2005 Using Target GNP Growth Rate of 8 Per cent in 1981-1995 Period.....	212
6.12	Projection of Export, Import and Foreign Gap to 2005 Using Target GNP Growth Rate of 6 Per cent in 1981-1995 Period.....	213
6.13	Projection of Saving, Investment and Saving Gap to 2005 Using Target GNP Growth Rate of 6 Per cent in 1981-1995 Period.....	214
6.14	Change in Imports and Saving Stemming for 5 Per cent Change in Tax Rate in 1965-1980 Period.....	215
6.15	Change in Imports and Saving Stemming for 5 Per cent Change in Tax Rate in 1980-1995 Period.....	216
6.16	Equilibrium of Three-Gap Model Variables.....	218
6.17	Estimation Parameters of Three-Gap Model.....	219
6.18	Simulation of Growth Paths for Malaysian Economy.....	226



LIST OF ABBREVIATIONS

Q	Potential economic activity or full capacity output
U	Capacity utilisation
g	Growth rates of potential output
i	Investment
I _g	Government investment
I _p	Private investment
S _g	Government savings
Φ	Foreign savings
S _p	Private savings
π	Public sector borrowing requirement
J*	Foreign interest payments
M _r	Imports of raw materials and intermediate goods as proportion of potential output
M _k	Imports of capital goods as proportion of potential output
M ₀	Other imports, as proportion of potential output
X	Export
Na	Net aid
μ	Government shares in foreign interest payments
μ × j*	Public interest burdens
(1 - μ)	Private interest burdens
v *	Incremental capital – output ratio
m*	Incremental output – import ratio
LSAV	Log national saving
LPAC	Log Per capita income
LGRO	Log growth rate of GNP
LEXP	Log export
LFDI	Log foreign direct investment
LDEB	Log total debt
LDEP	Log dependency ratio
NIT	Nominal interest rate
LTAX	Log tax



CHAPTER I

OVERVIEW OF THE STUDY

Introduction

The past three decades had seen financial issues dominating the literature on development economics. Academic attention had shifted away from strategic development issues, such as balanced sectoral growth and international trade patterns, toward issues relating to financial progress and its effects such as the impact of international debt, inflation and real exchange rates on economic growth. The work of Bacha (1992), Taylor (1996), Calvo (1996), World Bank (1997), Nurhan (1999), William (1999) fall within this realm.

In the immediate post- World War I period development economists looked at finance as being essentially an issue of state-directed mobilisation of resources in order to support an increased rate of capital accumulation. An economy's ability to grow and develop depends, among other things, on its ability or determination to marshal resources and to channel them toward activities that expand its productive capacity. The expansion of productive capacity is fundamentally determined by the country's willingness to forgo current consumption and conversely to use the savings thus generated to finance capital expenditures.

After World War II, economists showed a renewed interest in the theory of economic development. The central issue was on growth and ways to increase the endowments of productive factors available to increase the annual production of goods