



UNIVERSITI PUTRA MALAYSIA

**TRADE, EXTERNAL SHOCK AND ECONOMIC GROWTH IN SELECTED
ASEAN AND SOUTH KOREAN ECONOMIES**

TAJUL ARIFFIN MASRON

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DOCTOR OF PHILOSOPHY
UNIVERSITY PUTRA MALAYSIA
2006



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By

TAJUL ARIFFIN MASRON

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in
Fulfilment of the Requirement for the Degree of Doctor of Philosophy**

December 2006



**DEDICATED TO:
MY PARENTS
AND
MY BELOVED WIFE
AND
SONS (FIRDAUS AND FARID)**

“Thanks for your loving care and endless encouragement”



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

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TAJUL ARIFFIN MASRON

December 2006

Chairman: Associate Professor Zulkornain Yusop, PhD

Faculty : Economics and Management

This study examines the impact of trade on economic growth through four main growth channels, namely private domestic investment (PDI), government spending (GOV), manufacturing value added (MVA) and foreign direct investment (FDI), taking into consideration the role of external shock, which is proxied by capital flight. It is particularly important because past studies indicate that trade and economic growth does not show a parallel co-movement, or in other words, high level of trade does not necessarily lead to high economic growth. By using five East Asian economies (i.e. Indonesia, Korea, Malaysia, The Philippines and Thailand) as case studies, autoregressive distributed lag (ARDL) estimation procedure is utilized in order to estimate the impact of trade on economic growth which covers period from 1970 to 2002. The indirect impact procedure is used so as to help us to determine through which channel trade will positively affect economic growth, vice versa. The indirect impact of trade on economic growth is calculated based on the study done by Wacziarg (2001).



Several important conclusions can be drawn from the study. The threat of capital flight (and thus negative external shock) is justified in this study. Capital flight could reverse the good prospect of economic growth as had been experienced by five East Asian economies during the 1997 economic crisis. In addition, the calculated indirect impact of trade on economic growth tells us the reason of why trade does not necessarily lead to high economic growth since the indirect impact does not necessarily positive and high through all channels. The main source of low positive or negative effect of trade on economic growth is because of inefficiency in resource allocation (proxied by channels of PDI and GOV) as well as low technological development (proxied by channels of MVA for domestic technological development and FDI for foreign technological diffusion) in East Asian, especially in the case of ASEAN economies. What is important to mention here is that without considering the indirect impact of trade on growth, we may face difficulty to magnify the positive impact of trade on economic growth since we are not guided as to what effort should be undertaken. Based on the framework in this study, we found that in order for ASEAN to emulate the success of Korea in developing its economy, ASEAN has to ensure that they are moving towards greater competitiveness by enhancing the level of efficiency as well as technological development.

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

**PERDAGANGAN, KEJUTAN LUARAN DAN PERTUMBUHAN EKONOMI DI
NEGARA TERPILIH ASEAN DAN KOREA SELATAN**

Oleh

TAJUL ARIFFIN MASRON

Januari 2007

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Kajian ini menguji kesan perdagangan antarabangsa ke atas pertumbuhan ekonomi melalui empat saluran pertumbuhan iaitu pelaburan persendirian domestik (PDI), perbelanjaan kerajaan (GOV), nilai tambah sector pembuatan (MVA) dan pelaburan langsung asing (FDI), mengambil kira peranan gangguan luaran yang di wakili oleh pembolehubah aliran modal keluar. Kajian ini penting terutamanya kerana kajian yang lepas telah menunjukkan bahawa perdagangan dan pertumbuhan tidak bergerak seiring, atau dengan lain perkataan, tahap perdagangan yang tinggi tidak semestinya membawa kepada pertumbuhan yang tinggi. Dengan memilih lima negara Asia Timur (Indonesia, Korea Selatan, Malaysia, Filipina and Thailand) sebagai kes kajian, kaedah kajian yang dipanggil autoregressive distributed lag (ARDL) digunakan bagi menentukan kesan perdagangan ke atas pertumbuhan ekonomi yang merangkumi tahun 1970 hingga 2002. Pendekatan tidak langsung digunakan kerana ia mampu membantu menentukan saluran di mana perdagangan akan memberikan kesan yang positif ke atas pertumbuhan, dan sebaliknya. Kesan tidak langsung perdagangan kepada pertumbuhan ekonomi akan

diukur berdasarkan kepada kajian yang dibuat oleh Wacziarg (2001). Beberapa penemuan penting daripada kajian ini dapat disimpulkan seperti berikut. Pertama, ancaman pengaliran modal asing keluar (dan seterusnya kesan kejutan luaran yang negatif) telah dibuktikan di dalam kajian ini. Pengaliran modal asing keluar mampu memelestakan jangkaan pertumbuhan ekonomi yang positif seperti yang telah dialami oleh lima negara Asia Timur pada krisis ekonomi 1997. Sebagai tambahan, kesan tidak langsung perdagangan ke atas pertumbuhan menunjukkan bahawa perdagangan tidak semestinya membawa kepada pertumbuhan yang tinggi kerana kesan tidak langsung tidak semestinya positif dan tinggi di semua saluran pertumbuhan. Sumber utama kesan positif yang rendah atau negatif perdagangan ke atas pertumbuhan ialah kerana agihan sumber kurang cekap (digambarkan melalui saluran PDI dan GOV) dan pembangunan teknologi yang rendah (dicerminkan melalui MVA bagi pembangunan teknologi domestik dan FDI bagi penyerapan teknologi luar) di Asia Timur, terutamanya ASEAN. Perkara yang penting ialah tanpa mengambil kira kesan tidak langsung perdagangan ke atas pertumbuhan ekonomi, kita mungkin mengalami kesukaran untuk meningkatkan kesan positif yang besar perdagangan ke atas pertumbuhan ekonomi kerana tidak terarah kepada bentuk usaha yang perlu dilaksanakan. Berdasarkan kepada rangka kerja di dalam kajian ini, didapati bahawa sebagai cabaran bagi ASEAN untuk mengejar kejayaan Korea Selatan dalam membangunkan ekonominya, ASEAN perlu memastikan agar mereka bergerak ke arah daya saing yang lebih tinggi dengan meningkatkan tahap kecekapan dalam kaedah pengeluaran dan juga pembangunan teknologi.

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I certify that an Examination Committee has met on to conduct the final examination of Tajul Ariffin Masron on her Doctor of Philosophy thesis entitled "Trade, External Shock and Economic Growth in East Asian-5" in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

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DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations, which have been acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or any other institutions.

TAJUL ARIFFIN MASRON

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LIST OF ABBREVIATIONS

| | |
|---------|--|
| A | Autonomous factor |
| ADB | Asian Development Bank |
| AIC | Akaike Information criterion |
| ASEAN | Association of Southeast Asian Nation |
| ARDL | Autoregressive Distributed Lag |
| BOPM | Balance of Payment Measure |
| CAD | Current Account Deficits |
| ECM | Error Correction Model |
| ECT | Error Correction Term |
| ED | External Debts |
| EFI | Economic Freedom Index |
| EG | Engle and Granger |
| EPconEP | Effective Protection conditional on Export Promotion |
| FDI | Foreign Direct Investment |
| FR | Foreign Reserves |
| GDP | Gross Domestic Production |
| GLS | Generalized Least Square |
| GNP | Gross National Production |
| GOV | Government Spending |
| ICOR | Incremental Capital Output Ratio |



| | |
|------|--|
| IMF | International Monetary Funds |
| INV | Investment |
| II | Indirect Impact |
| IP | Import Penetration |
| IS | Import Substitution |
| JJ | Johansen and Juselius |
| K | Capital |
| KPSS | Kwiatkowski, Phillips, Schmidt, and Shin |
| L | Labor |
| LBM | Lending Boom Measure |
| LDCs | Less Developed Countries |
| LM | Lagrange Multiplier |
| MNC | Multinational Corporation |
| MPC | Marginal Propensity to Consume |
| MVA | Manufacturing Value Added |
| NFDI | Net Foreign Direct Investment |
| NIEs | Newly Industrializing Economies |
| OECD | Organization of Economic Cooperation and Development |
| OI | Openness Index |
| OLI | Ownership, Location and Internalization advantage |
| OLS | Ordinary Least Square |
| PDI | Private Domestic Investment |



| | |
|--------|--|
| PP | Phillip and Perron |
| R&D | Research and Development |
| STD | Short-term debt |
| TDS | Total debt stock |
| TEX | Total exports of goods and services |
| TFP | Total factor productivity |
| TIM | Total imports of goods and services |
| UNCTAD | United Nations Conference on Trade and Development |
| US | United States |
| VAR | Vector Autoregression |
| VECM | Vector Error Correction Model |
| X | Intermediate input |
| Y | Output |

CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 Introduction

Rapid growth has become a hallmark of economic performance in Asia in the post-World War II period. Without exception this growth process has been characterized by openness to trade and rapid industrialization. Saving and investment rates have risen along with economic growth. The timing of the industrial take-off varied significantly within the region. For example, in the case of Indonesia, a number of new reforms and initiatives were taken after the ouster of President Sukarno in the mid-1960s. This continued in the next decade and a half before accelerating since 1983. Many of these reforms have been designed to improve economic efficiency, speed up the process of technological transfer, and accelerate economic growth.

Since the 1960s, East Asia has become richer than any other region in the world although the pace of growth may not be the same for all economies in the region. The western part of Asia grew at a lower pace than the eastern part. The most spectacularly performed economies are the 10 East Asian economies which consist of the Philippines, Malaysia, Thailand, Indonesia, Singapore, China, Hong Kong (Province of China), South Korea (henceforth, Korea), Taiwan Province of China (henceforth, Taiwan) and Japan. Among these economies, only the Philippines grew at the slowest rate of 2 percent per annum while the second tier of newly industrializing economies (NIEs)

