



UNIVERSITI PUTRA MALAYSIA

**DYNAMIC SECTORAL GROWTH AND EXPORT EXPANSION
DETERMINANTS: THE EVIDENCE FROM THE
ASIAN COUNTRIES**

EID ALI

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DETERMINANTS: THE EVIDENCE FROM THE
ASIAN COUNTRIES**

**By
EID ALI**

**Thesis Submitted in Fulfilment of Requirements for the Degree of Doctor of
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THIS WORK DEDICATED:



*TO THE MEMORY OF MY FATHER WHO PASSED AWAY
WHILE I AM PREPARING THIS RESEARCH.*



TO MY DEAREST MOM, SISTER AND BROTHERS.



**TO THOSE PEOPLE WHO GIVE ALL FOR THEIR
PRINCIPLES AND FOR THE FUTURE OF THE COMING
GENERATIONS IN MY WIDE ARAB WORLD**

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

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Eid Ali

August 2000

Chairman: Ahmad Zubaidi Baharumshah, Ph. D.

Faculty: Economics and Management.

This research work is an empirical analysis of the effects of the outward orientation policies on economic growth of four of the Asian NICs, namely Korea Singapore, Malaysia and Thailand. The first research matter dealt with the impacts of the government policies in export, financial and government sectors on the economic growth, and the second research matter addressed the determinants of the export expansion in the studied countries. Basically the liberalization policies implemented in the export, financial, and government sectors, argued to have favorable effects on the efficiency of these sectors. The argument suggests that the marginal factor productivity in these sectors should be higher due to the policies implemented in these sectors. Thus, to investigate the efficiency of these sectors, the researcher extended a framework developed by Feder (1983) using neoclassical production function approach. The basic idea behind this framework is that, dividing the economy into two sectors first the proposed efficient sector output and the second is the rest of an economy output. Specifying the production function with assuming that



the marginal factors productivity differential among an economy sectors allows testing for the efficiency differential among sectors.

The researcher extended the two-sector model to include a third sector, that extend the scope of the framework to be usable for investigating the axiomatic macroeconomic rule that macroeconomic policies do not work in isolation, and met the study objectives. The results of estimation of the three-sector model showed that, export, financial and government sectors are efficient and the marginal factor productivity in these sectors is enhanced over the time and with the stage of development. The results also show that, export sector is not the only dominant sector as it is found in the previous studies, but also financial and government sectors are important in determining the long run economic growth of the studied countries. In the second research issue, the researcher attempted to investigate whether the export expansion is a demand or supply determinant. Utilizing export's demand and supply systems, the researcher also incorporates the exchange rate volatility to the demand equation. The results showed that both export demand and supply are important in determining export expansion in the studied countries and over the study period. However, exchange rate volatility had adversely effects on the export demand.

The study utilized the last advancements made in the econometrics of the time series to ensure the robustness of the estimation of the models.



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

**PERTUMBUHAN SEKTOR DINAMIK DAN PENENTUAN
PERKEMBANGAN EKSPORT: BUKTI NEGARA-NEGARA ASIAN**

Oleh

EID ALI

August 2000

Pengerusi: Ahmad Zubaidi Baharumshah, Ph.D.

Fakulti: Ekonomi dan Pengurusan.

Kajian ini merupakan satu analisis empirikal terhadap kesan-kesan Dasar Orientasi ke Luar kepada pertumbuhan ekonomi bagi empat negara- negara NICs di Asia iaitu Korea, Singapura, Malaysia dan Thailand. Kesan- kesan dasar- dasar makroekonomi kerajaan yang dilaksanakan di dalam sektor eksport, kewangan dan kerajaan menjadi isu pertama dalam kajian ini dan penentu- penentu perkembangan eksport sebagai isu yang kedua.

Pada asasnya, dasar- dasar liberalisasi yang dilaksanakan dalam sektor eksport, kewangan dan kerajaan mempersoalkan tentang kesan yang baik yang diperolehi ke atas kecekapan sektor- sektor tersebut, maka dijangka bahawa sektor- sektor ini dicirikan oleh produktiviti marginal faktornya yang tinggi. Oleh itu untuk mengkaji kecekapan sektor- sektor ini, penulis memajukan satu rangkakerja yang telah dibuat oleh Feder(1983) dengan menggunakan

pendekatan Fungsi Pengeluaran Neoklasik. Ide asas pendekatan ini ialah, membahagikan ekonomi kepada dua sektor iaitu pertama; sektor yang cekap dan kedua; sektor-sektor yang lain di dalam sebuah ekonomi, kemudian mengkhususkan Fungsi Pengeluaran dengan mengambil kira Produktiviti Marginal Faktor di dalam setiap sektor. Kemudian dilanjutkan model dua sektor ini kepada sektor yang ketiga, kerana dipercayai bahawa dasar- dasar yang dilaksanakan dalam sebuah ekonomi sepatutnya berjalan bersama-sama. Keputusan penganggaran model ini menunjukkan sektor eksport, kewangan dan kerajaan adalah cekap dan produktiviti marginal dicapai melalui masa dengan pelbagai tahap kemajuan. Keputusan juga menunjukkan, sektor eksport bukan merupakan satu- satunya sektor yang dominan seperti yang ditemui dalam kajian- kajian yang lalu, tetapi sektor kewangan dan sektor kerajaan adalah penting di dalam menentukan pertumbuhan ekonomi jangka panjang di negara- negara tersebut.

Dalam isu kajian yang kedua pula, penulis mengkaji sama ada perkembangan eksport merupakan satu penentu permintaan atau penawaran. Dengan menggunakan sistem permintaan dan penawaran eksport, penulis juga memasukkan faktor turun naik yang tidak dijangka dalam kadar pertukaran ke atas persamaan permintaan untuk menganggar pekali- pekali persamaan permintaan dan penawaran yang konvensional dan kesan turun naik yang tidak dijangka ke atas permintaan eksport. Matlamat kajian ialah untuk mengenalpasti penentu- penentu perkembangan eksport dalam kajian ekonomi ini. Keputusan penganggaran menunjukkan kedua- dua permintaan dan

penawaran ekspor adalah penting untuk perkembangan ekspor dan keanjalan harga menjadi lebih baik melalui pelbagai tahap kemajuan.

Kajian ini menggunakan teknik- teknik ekonometriks sirimasa lanjutan untuk memastikan keteguhan penganggaran model- model ekonometriks. Data tahunan digunakan untuk tempoh tahun 1955 hingga 1997 untuk isu yang pertama dan data sukuan tahunan dari suku 1/1974 hingga 4/1998 untuk isu yang kedua.

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Any errors are solely mine.



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CHAPTER I

OVERVIEW OF THE STUDY

Introduction

The unprecedented economic growth of Newly Industrialising Economies (NIEs) (Hong Kong, Korea, Singapore, and Taiwan) after World War II had been widely discussed by both economists and political scientists. The focus was mainly on the superiority of export orientation strategy as a development strategy. However, the impressive economic performance and the catching-up achieved by the third generation NIEs (Malaysia, Thailand, Indonesia and Philippines) had renewed the interest on economic liberalisation and growth nexuses. Recent studies raised whether trade, financial and government sector liberalisation policies have dynamic effects on growth rates. Such studies have provided many explanations on the nature as well as the role of Export Orientation (EO) strategy in affecting economic growth. Based on the success of these economies in adopting the EO strategy, economists and policy makers have recommended developing countries both small and large to emulate the model of export promotion of the NIEs and Japan (see Page, 1989; Noland, 1997; Iscan, 1998; Greaney, 1999; Panagariya, 1999).

Despite the extensive debate on which trade strategy and other macroeconomic policies should developing economies adopt to emulate economic growth, theory suggests little about the dynamic economic growth. The empirical evidence on the export, financial and government liberalisation led growth

relation is inconclusive for both the developed and developing economies.

For instance, trade pessimists argued that Less Developed Countries (LDCs) trade expansion policies will adversely affecting economic growth due to unequal exchange between the LDCs and the DCs. However, others suggested that economic growth is generated by trade expansion. In other words, trade is the engine of economic growth of the LDCs. Kaldor (1971) argued that manufacturing output growth is demand determined, if the demand was low for manufacturing product, then the growth would be low. Moreover, Kaldor postulated that at earlier stages of growth the demand would come from agricultural sector or internal demand, in later stages it comes from exports. Later, Kaldor has changed his mind and argued that low growth primarily due to low exports demand.

Recently new arguments questioned whether the role of financial sector development and the government size have effects on the long run economic growth of the LDCs and the NICs. World Bank (1993) postulated that the fast growing Asian economies have relied on the development of the financial sector and the prudent government management of their economies. However, many scholars have attempted to test the effect of each sector on economic growth using different types of methods and countries. The results were inconclusive and mixed conclusions were obtained from empirical studies that have used different theoretical frameworks and methodologies.

The new development in the growth theory opens up for other possibilities such as testing efficiency of policies implemented in economy sectors. For instance, Grossman and Helpman (1990) and Romer (1986) have investigated dynamic effects generated from trade sector, such as learning by doing and economic scales. The new investigations were examining these effects in single sector; they found significant effects. Accordingly, this argument raised the questions about the growth process in LDCs, such as what made the economic growth in LDCs? Whether there is any thing to say about the efficiency of the macroeconomic policies?

Generally speaking, there has been no consensus on the fundamental linkage between export expansion, government size and financial sector development, and economic performance (Helleiner 1995; Rodrik 1995; Collins and Bosworth, 1996). However, some economists argued that if exports doing the economic growth of NICs, then what determine this export expansion while it's prices elasticities are low. The issues raise questions more than provide answers.

The research matter is concerned the economic growth of the NICs, where following the new growth theory, the roles of different liberalisation policy variables on the economic growth have been investigated. There are different views attempt to explain the impressive economic growth of these economies that have been adopted early and successfully the liberalisation strategies, such as the Asian NICs. The productivity is one of the main issues in this investigation, since long run growth cannot exist without productivity progress. Some economists

suggested that trade liberalisation is the source of the economic growth of the Asian countries, through enhancing productivity (Balassa 1978; Esfahani, 1991; Iscan 1998). However, others have emphasised the role of liberalisation policies on the human and physical capital accumulation apart of total factor productivity in inducing the Asian economic growth. Some scholars attempt to explain the Asian economic growth based on the liberalisation policies of the financial sector that generates the productivity progress (Odedkon, 1998 and 1999; Habibullah, 1999; Murinde and Eng 1994). While other researchers went beyond that by assuming that the government size in these economies have made their economic growth and affected the productivity levels (World Bank, 1993; Ram, 1986).

Statement of the Problem

The research problem is concerned the effects of the liberalisation policies implemented in the economy sectors on the economic growth of the Asian NICs namely Korea, Singapore, Malaysia and Thailand and the trade expansion sources. In this study, two main issues were investigated. The first issue concerned the contribution of trade, government and financial sectors liberalisation on the economic growth of the selected economies. The causality context and productivity contributions were the main issues of the three-sector model in long and short run economic growth. Previous studies have investigated separately the effect of each sector, however the results in general are not conclusive. The second issue concerned further investigation on the determinants of the export expansion in these countries. Trade pessimists argued that trade expansion in the