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UNEMPLOYMENT, JOB VACANCY AND BEVERIDGE CURVE IN MALAYSIA, SINGAPORE AND THE PHILIPPINES

THIRUNAUKARASU SUBRAMANIAM

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UNEMPLOYMENT, JOB VACANCY AND BEVERIDGE CURVE IN MALAYSIA, SINGAPORE AND THE PHILIPPINES

By

THIRUNAUKARASU SUBRAMANIAM

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

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Dedication

‘No mention shall be made of coral or of crystal; the price of wisdom is above pearls’
‘The mouth of the righteous utters wisdom, and his tongue speaks justice’
‘For wisdom is better than jewels, and all that you may desire cannot compare with her’
‘The crown of the wise is their wisdom, but folly is the garland of fools’
‘To get wisdom is better than gold; to get understanding is to be chosen rather than silver’ ‘Wisdom gives strength to the wise man more than ten rulers that are in a city’
‘He who gets wisdom loves himself; he who keeps understanding will prosper’

To my COUNSELOR and TEACHER, who has been guiding me in writing this piece of work.

To AMMA and APPA, for the sacrifices all these years.

To my beloved wife ANNA, for being there through thick and thin of life.

To my beloved angels, PHOEBE, PRIYA, GABRIELLE and THERESA, hope this piece of work becomes an inspiration in your lives.

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

UNEMPLOYMENT, JOB VACANCY AND BEVERIDGE CURVE IN MALAYSIA, SINGAPORE AND THE PHILIPPINES

By

THIRUNAUKARASU SUBRAMANIAM

December 2007

Chairman: **Professor Ahmad Zubaidi Baharumshah, PhD**

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The macroeconomic objectives of an economy are maintaining a high economic growth, full employment, price stability, and balance of payments stability. As full employment or low unemployment is one of the objective of Malaysia, Singapore and the Philippines economy, this research will shed some light on how this objective can be achieved. The order of integration is first determined by using various unit root tests namely ADF Test and PP Test. Next, the appropriate cointegration method is used based on the order of integration. The estimation procedure employed in this study is Bounds Test Approach of ARDL-UECM popularised by Pesaran (2001). The Bounds Test of ARDL-UECM shows that Malaysia, Singapore and the Philippines display a steady state long-run equilibrium among unemployment and macroeconomic variables. The analysis using ARDL-UECM Approach displays a negative relationship for Malaysia between unemployment and job vacancy. In contrast, for Singapore and the Philippines, a positive relationship exist between unemployment and job vacancy. Using ARDL-UECM Approach, for Malaysia, job

vacancy rate, economic growth, and foreign direct investment are found to be important variables that determines unemployment. For Singapore, variables that are deemed important in determination of unemployment are economic growth and foreign direct investment but for the Philippines, government spending are found to be important. Several conclusions can be derived from this study. Firstly, only Malaysia seems to have fulfilled the Theory of Beveridge Curve. Both Singapore and the Philippines does not fulfill the Theory of Beveridge Curve. Secondly, FDI still plays a major role in reducing unemployment in Malaysia and Singapore but not in the Philippines. Thirdly, the government sector does not have any impact on unemployment in both Malaysia and Singapore but not in the Philippines.

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

PENGANGGURAN, KEKOSONGAN KERJA DAN KELUK BEVERIDGE DI MALAYSIA, SINGAPURA DAN FILIPINA

Oleh

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Objektif-objektif makroekonomi sesebuah ekonomi bertujuan untuk memastikan pertumbuhan ekonomi yang tinggi, mencapai tingkat guna tenaga penuh, kestabilan harga dan keseimbangan dalam imbangan pembayaran. Oleh kerana pengangguran yang rendah merupakan salah satu objektif ekonomi Malaysia, Singapura dan Filipina, kajian ini mendedahkan kebolehcapaian objektif tersebut. Tahap integrasi ditentukan dengan menggunakan ujian kepegunan ADF dan PP. Kemudian, pendekatan kointegrasi yang sesuai digunakan berdasarkan tahap integrasi yang diperoleh. Prosedur penganggaran yang digunakan dalam kajian ini ialah pendekatan 'Bounds Test' ARDL-UECM yang dipopularkan oleh Pesaran et.al (2001). 'Bounds Test' yang menggunakan pendekatan ARDL-UECM juga memperlihatkan kewujudan keseimbangan jangka panjang bagi negara Malaysia, Singapura dan Filipina antara pemboleh ubah pengangguran dengan pemboleh ubah makroeokonomi yang lain. Analisis dengan menggunakan pendekatan ARDL-UECM menunjukkan hubungan negatif antara pemboleh ubah pengangguran dan kekosongan kerja bagi Malaysia. Manakala, bagi Singapura dan Filipina, hubungan

positif wujud antara pemboleh ubah pengangguran dengan kekosongan kerja. Dengan menggunakan pendekatan ARDL-UECM, pemboleh ubah kekosongan kerja, pertumbuhan ekonomi dan pelaburan langsung asing merupakan pemboleh ubah penting yang menentukan kadar pengangguran di Malaysia. Bagi Singapura, pembolehubah yang penting dalam menentukan kadar pengangguran ialah pertumbuhan ekonomi dan pelaburan langsung asing. Manakala bagi Filipina pula, perbelanjaan kerajaan merupakan pemboleh ubah utama dalam menentukan kadar pengangguran. Beberapa kesimpulan boleh diutarakan hasil kajian ini. Pertama, hanya negara Malaysia sahaja telah memenuhi Teori Keluk Beveridge. Sementara, Singapura dan Filipina pula didapati tidak memenuhi Teori Keluk Beveridge. Kedua, pelaburan langsung asing memainkan peranan penting dalam mengurangkan kadar pengangguran di Malaysia dan Singapura, tetapi bukan bagi Filipina. Ketiga, sektor kerajaan tidak mempunyai kesan ke atas kadar pengangguran di Malaysia dan Singapura, tetapi keadaan sebaliknya wujud bagi Filipina.

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I certify that an Examinations Committee has met on 17th of December 2007 to conduct the final examination of Thirunaukarasu Subramaniam on his Doctor of Philospohy thesis entitled "Unemployment, Job Vacancy and Beveridge Curve in Malaysia, Singapore and the Philippines" in accordance with Universiti Putra Malaysia (Higher Degree) Act 1980 and Universiti Putra 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 duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

THIRUNAUKARASU SUBRAMANIAM

Date : 17th March 2008

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LIST OF ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
ADF	Augmented Dickey Fuller
ARDL-UECM	Autoregressive Distributed Lag –Unrestricted Error Correction Model
ECM	Error Correction Model
ELX	Electronic Labour Exchange
EPU	Economic Planning Unit
EU	European Union
FDI	Foreign direct investment
FRG	Federal Republic of Germany
FTZ	Free Trade Zone
GDP	Gross Domestic Product
GNP	Gross National Product
KPSS	Kwiatkowski –Phillips – Schmidt - Shin
LFPR	Labour Force Participation Rate
NAIRU	Non-Accelerating Inflation Rate of Unemployment
OLS	Ordinary Least Squares
IV	Instrumental Variable
NLS	Non-linear Least Squares
PP	Phillips-Perron
TSLS	Two Stage Least Squares
UR	Unemployment rate

VECM	Vector Error Correction Model
VR	Vacancy rate (Job)

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Southeast Asian economies are displaying structural change from agriculture to manufacturing and services sector. In the early stage of development, Southeast Asian economies were dependent on agriculture. Agriculture produced major export commodities such as rubber and paddy for many Southeast Asian economies. Eventually various transformations that took place in Southeast Asian economies reduced the dependence on agricultural and the focus of many Southeast Asian economies moved towards industrialization as a means to develop their economy. Malaysian economy for instance is highly dependent on manufacturing and services. Manufacturing sector contributes around 19.8 percent of total employment in Malaysia and services sector contributes around 65.1 percent of total employment in 2005. In terms of output, the contribution of manufacturing sector is more significant as it constitutes around 49.8 percent of total output. On the other hand, services sector contributes around 41.8 percent of total output. In Singapore, a rather opposite scenario can be seen. The services sector alone contributed around 78.5 percent of total employment in 2005 and the manufacturing sector contributed around 21.4 percent. In terms of output, services sector has a larger contribution (67.4 percent) compared to manufacturing sector which contributed around 32.5 percent of total output. In the Philippines, services sector's contribution is around 53.4 percent from total employment, followed by agriculture about 37.0 percent and manufacturing only a mere 9.3 percent in 2005. Even though

the contribution of manufacturing in terms of total employment is rather small, manufacturing sector constitutes about 32.6 percent of total output, services 53.0 percent and agriculture 14.4 percent of total output in 2005[1]. It is obvious that the focus of Malaysia, Singapore and the Philippines is shifting towards manufacturing and services sectors as a means to develop their economies. Some of the services sector that became the major thrust of Singapore, Malaysia and the Philippines include transport, storage and communication, wholesale and retail trade, hotels and restaurant and finance, insurance, real estate and business services.

Heavy reliance of Southeast Asian economies on primary sector in the early stage of their development caused uncertainty in the domestic economy. In 1950s, Malaysia encouraged import substitutions industry in order to reduce import. The main aims of this policy were to reduce unemployment and at the same time to reduce the imbalances in the balance of payment. By the late 1960s, there was a growing recognition that the easy stage of import substitution industrialization was coming to an end and that future prospects for industrial development depended upon the expansion of export-oriented industries (Athukorala and Menon, 1996). In 1960s and 1970s, labour intensive and export orientation industries were encouraged which increased the labour absorption capacity (Solehah, 1997). During this period, the manufacturing sector was diversified and at the same time, employment and linkages were created (Clarke et.al., 2002).

In 1968, the Malaysian Government enacted the Investment Incentives Act to promote manufacturing exports in response to the problem of internal market

[1] All data on the contribution of various sectors to employment and output were obtained from Key Indicators 2006, available at www.adb.org

saturation faced by manufacturing sector (Athukorala and Menon, 1995). Export-oriented foreign direct investment was further encouraged through the introduction of Free Trade Zone (FTZ) Act in 1971. The objectives of providing FTZ facilities to export-oriented industries are to enable them to enjoy minimum customs formalities and the duty free import of raw materials, component parts, machinery and equipment required in the production process, together with the minimal formalities in the export of their finished products (Clarke et. al., 2002). Eventually, the Malaysian Industrial Master Plan (1986-1995) was introduced to encourage the growth of manufacturing sector. With the heavy industrialization effort of the Government, the direct contribution of manufacturing to total employment increment between 1987 and 1994 was as high as 60 percent (Athukorala and Menon, 1996).

Singapore transformed from an entreport to an industrializing nation through re-orientation of its trade and industrialization policies. The rapid structural change that transformed Singapore into a newly industrialising economy happened within the manufacturing and services. In the 1960s and early 1970s, unemployment was the major economic problem in Singapore and an extensive industrialization programme was introduced to provide generous incentives for foreign investors to set up export-oriented labour-intensive industries (Tan, 1996 ; International Labour Organization, 2000). In the 1960s, the economic strategy focused on the expansion of low-skill, labour intensive manufacturing activities, but in the 1970s the focus shifted to the diversification of manufacturing sector to higher skill levels and higher value-added activities (Islam and Chowdhury, 1997; Low, 2005). By the early 1970s, this resulted in creation of a large number of jobs which contributed to the

tight labour market. Subsequently, the strategy of attracting direct foreign investment and multinational corporations (MNCs) brought in the needed expertise, technology, and markets (Kuo and Low, 2001)

In the Philippines, 1950s and 1960s saw a rapid growth of import substitution industry (Baldwin, 1975; Bautista and Power, 1982). One of the key elements of the import substituting industrialization strategy was the erection of strong import quota restrictions supplemented with high tariffs to protect industries at their infancy (Lim and Bautista, 2002). In 1960s, the export sector did not stimulate growth as there was difficulty in implementing export promotion strategy vis-a-vis reliance on volatile agricultural export markets and the lack of a manufacturing base for export. The shift from agricultural based economy to industrialization is aimed to balance the effect of declining primary sector, to reduce dependence on primary sector, to create employment and to increase domestic demand (Solehah, 1997). During this period, most of the industries were labour intensive.

The expansion of Philippines manufacturing took place behind heavily protected barriers until the late 1970s, resulting in an inefficient industry that was unable to weather the deterioration of foreign markets and contributed to the depression of 1983 (Galenson, 1992). As industries imported substantial inputs but were not largely export oriented, they contributed to periodic balance of payment crises which derailed the economic growth, which caused the industrialization process unable to contribute towards the generation of employment opportunities (Venida, 1998). In mid-1970s, export orientation measures were implemented causing the share of employment and exports in the manufacturing sector to dominate the traditional

sectors in the Philippines. In 1990s, through the economic reforms, the trade barriers were eased. Import restrictions were eliminated and tariff rates were reduced. Mid-1990s saw the opening up of the Philippines economy to foreign investment (Damooei and Tavakoli, 2006). But, foreign investment in the Philippines remains the lowest compared to other ASEAN countries.

The aims of import substitution policies at the initial stage of development of Malaysia, Singapore and the Philippines were meant to create employment and at the same time to minimize imbalances in the balance of payments of these countries. The pursuit towards export orientation policies in the later stage of the development of these countries were meant to generate foreign income earnings and at the same time to create employment opportunities by encouraging foreign investment. Thus, Malaysia, Singapore and the Philippines to a certain extent, displayed foreign investment led employment.

One of the macroeconomic goal of these economies is to reduce unemployment as unemployment gives rise to many other social and economic consequences that may retard the economic growth of these nations. Thus, import substitution policies and export orientation policies can be an important tool in reducing and eventually eliminating unemployment problem. Unemployment problem should be given proper attention as this will be a burden to a nation. Unemployment also represents a waste of resources in an economy.

Unemployment is a situation where one is not working and at the same time wants to work but there is no work available for him or her. Unemployed include both