政府支出與經濟成長之長期關係研究:

分量單根檢定之應用

學生:游雅萍 指導教授:李政峰 博士

國立高雄應用科技大學金融資訊所

摘要

政府支出與經濟成長兩者之間存在著何種關係是許多學者與政府相關部門所關心的議題。因為政府支出是否能促進經濟成長(凱因斯學說),或是隨著經濟成長使政府支出不斷增加(華格納法則),這其中的關係一直沒有明確的結論。近年來因各國政府皆利用擴大財政支出來振興經濟成長,但卻引發了2009年底歐債危機的爆發。故政府部門想利用政府支出的擴張來促進經濟成長的復甦是否為好的財政政策亦或是埋下了另一個危機?這就是本文欲探討的。

本文研究的國家為:菲律賓、泰國、馬來西亞、中國、美國、丹麥與葡萄牙。研究期間除了葡萄牙為1977年至2010年外,其他國家皆為1970年至2010年。在研究方法上,首先進行Johansen共整合檢定,實證結果為:除了泰國以外,其它國家的政府支出與GDP之間皆具有長期均衡關係。接著從短期因果關係檢定結果可得:菲律賓、泰國與中國支持華格納法則;馬來西亞、丹麥與美國支持凱因斯假說;而葡萄牙皆不符合。最後,使用Koenker and Xiao (2004)所提出的分量單根檢定法來探討在不同分量上的政府支出所得比。實證結果顯示:菲律賓、泰國、馬來西亞與丹麥在高分量時,均數復歸的能力較佳,在低分量時則不具恆定;而葡萄牙、美國與中國則在低分量時,較有均數復歸的能力,在高分量時則不具恆定。

關鍵字: 政府支出、經濟成長、華格納法則、分量單根、共整合、因果關係檢定

A study of the long relationship between government

expenditure and economic growth:

Evidence from the quantile unit root test

Student: Ya-Ping You

Advisors: Dr. Cheng-Feng Lee

Institute of Finance and Information

National Kaohsiung University of Applied Sciences

Abstract

What kind of issues between government spending and economic growth,

concerned bγ many scholars and relevant government

departments .Since government expenditure can promote economic growth

(the Keynesian Theory), or government expenditure is continued increasing

with the economic growth (Wagner's Law). The above statement relationship

has been no clear conclusion. In recent years, governments are used to expand

fiscal expenditure to revive economic growth but it lead to the outbreak of the

debt crisis in Europe by the end of 2009. Government departments want to use

the expansion of government spending to promote the recovery of economic

growth is good fiscal policy or planted another crisis? The study is discussing

this problem.

This article investigates the countries about that Philippines, Thailand,

Malaysia, China, the United States, Denmark and Portugal. The study period is

from 1970 to 2010. At first, we use Johansen's cointegration test. The

empirical results show that there is a relationship between government

expenditure and GDP in the long-run equilibrium except Thailand. Second, the

П

results of the granger causality test show that Philippines, Thailand and China

support Wagner's Law; Malaysia, Denmark and American support the

Keynesian hypothesis; while Portugal is neither in line with. Finally, the study

use the quantile unit root test (QUR) method (Koenker and Xiao (2004)) to

explore the different quantile of government spending-income ratio. The

empirical results show that Philippines, Thailand, Malaysia and Denmark in the

high quantile, the mean reversion of the ability is better, but there is not a

constant in the low quantile; then Portugal, the U.S. and China in the low

quantile get more mean reversion effects, but in high component are not

constant.

Keywords: Government expenditure; Economic growth; Wagner's Law;

Cointegration; Granger-causality test; Quantile unit root test

Ш

目錄

| 摇 | 旬 要 | . I |
|---|--------------------|-----|
| 目 | 錄 | . I |
| 昌 | 月目錄 | ΙΙΙ |
| 表 | 是目錄 | ΙV |
| 第 | 亨一章 緒論 | . 1 |
| | 第一節 研究背景與動機 | . 1 |
| | 第二節 研究目的與範圍 | . 2 |
| | 第三節 研究架構 | . 4 |
| 第 | 5二章 文獻探討 | . 6 |
| 第 | 5三章 研究方法 | 14 |
| | 第一節 研究步驟流程 | 14 |
| | 第二節 傳統單根檢定 | 15 |
| | 第三節 共整合檢定 | 18 |
| | 第四節 Granger 因果關係檢定 | 21 |
| | 第五節分量單根檢定 | 23 |
| 第 | 宫四章 實證結果與分析 | 27 |
| | 第一節資料來源與基本統計特性 | 27 |
| | 第二節單根檢定結果 | 36 |
| | 第三節共整合檢定結果 | 38 |
| | 第四節因果關係檢定結果 | 40 |
| | 第五節 分量單根檢定結果 | 42 |
| 第 | 5五章 結論 | 49 |
| 參 | 《考文獻 | 51 |
| | 中文部分 | 51 |

| ++ 1 | 部分 | | | | | | | | | | | | | | | | | 1 | _ 1 |
|------|--------|------|-------|------|------|-------|------|-------|------|------|---|------|------|-------|-------|-------|------|---|-----|
| ガマ | 717 | | | | | | | | | | | | | | | | | | าไ |
| X | ול יום | | _ | | | _ | | _ | | | _ | | | _ | _ | _ | | | ,,, |

参考文獻

中文部分

李政峰,2011,「失業率的不對稱行為:共變量分量單根檢定的證據」,行政院國家科學委員會執行中計畫,報告編號 100-2410-H-151-018。

何育承(2009),政府支出與產出:台灣、香港、南韓、新加坡之實證研究,南華大學管理經濟學系碩士論文。

陳韻婷(2009),OECD 國家財政支出與經濟成長之間的因果關係,大葉大學國際企業管理學系碩士論文。

莊希豐、蔡宗豪(1998),政府支出與經濟成長應用於亞太地區,企銀季刊,21卷, 4期,頁93-106。

孫克難(1997),台灣地區政府支出成長之政經因素分析,財稅研究,29卷,4期,頁 1-20。

英文部分

Ahsan, S. M., Kwan, C. C., and Sahni, B. S., (1996). Cointegration and Wagner's Hypothesis: Time Series Evidence for Canada, Applied Economics, 28, 1055 – 58.

Alberto J., (2010), Government Expenditure and National Income in Mexico: Keynes versus Wagner, Applied Economics Letters, 17, 887–893.

Chang, T., (2002), An Econometric Test of Wagner's Law for Six Countries, Based

on Cointegration and Error-Correction Modeling Techniques, Applied Ecnomics, 34, 1157-1169.

Dogan E., and Tang T.C., (2006), Government Expenditure and National Income: Causality Tests for Five South East Asian Countries, International Business and Economics Research Journal, 5, 49-58

Gupta, S.P., (1967), Public Expenditure and Economics Growth: A Time-Series Analysis, Public Finance, 22, 423-461.

Goffman, I.J., (1968), On the Empirical Testing of Wagner's Law: A Technical Note, Public Finance, 23, 359-364.

Huang, C.J., (2006), Government Expenditures in China and Taiwan: Do They Follow Wagner's Law? Journal of Economic Development, 31, 139-148.

Islam, A.M., (2001), Wagner's Law Revisited: Cointegration and Exogeneity Tests for the USA, Applied Economics Letters, 8, 509-515.

Karagianni, S., Pempetzoglou M., and Strikou S., (2002) Testing Wagner's Law for the European Union Economies. Journal of Applied Business Research, 18, 107-117.

Loizides, J., and Vamvoukas, G., (2005). Government Expenditure and Economic Growth: Evidence from Trivariate Causality Testing, Journal of Applied Economics, 8, 125-152.

Mann, A.J., (1980), Wagner's Law: An Econometric Test for Mexico, National Tax Journal, 33, 189-201.

Peacock, A., and Scott, A., (2000), The Curious Attraction of Wagner's Law, Public Choice, 102, 1-17.

Pradhan, R. P., (2007). Causal Nexus between Government Expenditure and Economic Growth: Evidence from SAARC Counties, Decision, 34, 27-50

Singh, B., and Sahni, B.S., (1984), "Ausality Between Public Expenditure and National Income, The Review of Economics and Statistics, 66, 630-644.

Satish VERMA and Rahul ARORA (2010). Does the Indian Economy Support Wagner's Law? An Econometric Analysis. Eurasian Journal of Business and Economics, 3, 77–91

Tang, C. F., (2008). Wagner's law Versus Keynesian Hypothesis: New Evidence from Recursive Regression-Based Causality Approaches, ICFAI Journal of Public Finance, 6, 29-38.

Wagner, A., (1883), Three Extracts on Public Finance, in R.A. Musgrave and A.T. Peacock (eds)(1958), Classics in the Theory of Public Finance, London: Macmillan.

Wahab, M., (2004). Economic growth and government expenditure: Evidence from a new test specification. Applied Economics, 36, 2125-213

Wagner, R.E., and Weber, W.E., (1977), Wagner's Law, Fiscal Institutions and the Growth of Government National Tax Journal, 30,59-68