

2021 總體經濟計量模型研討會

Macroeconometric Modelling Workshop, MMW 2021

會議主題: 後疫情時代的經濟政策

日期: 12月1-2日(星期三, 四)

會場: 中央研究院經濟研究所

Organizing Committee:

林軒馳, 陳明郎, 陳恭平, 張俊仁, 楊子霆, 楊淑珺(召集人), 劉祝安, 謝志昇, 簡錦漢

Program Committee:

林軒馳, 紀鈞哲, 陳樂豈, 張俊仁, 張庭源, 楊子霆, 楊宗翰,
楊淑珺, 劉祝安, 鄭琬蓉, 謝志昇, 簡錦漢, 蘇俊華

(依據姓氏筆劃排序)

主辦單位: 中央研究院經濟研究所, 行政院主計總處

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■ 全院禁菸

■ 防疫規範

- 請確實遵守研討會相關防疫規範
- 進出會場須測量體溫並簡訊實聯制
- 體溫高於 37.5 度者，恕無法進入會場
- 進入各會場空間，敬請全程配戴口罩(自備)並適時維持社交距離

■ 無線網路

SSID: MMW2021 (無須密碼)

■ 線上直播頻道

YOUTUBE: 請搜尋「中研院經濟所」

FACEBOOK: 請搜尋「中央研究院經濟研究所」粉絲專頁

■ 投影片存置

請最晚於場次開始前 10 分鐘，至會議室存置報告檔案

■ 研討會晚宴 (BY INVITATION) (受邀參與晚宴者，請配戴名牌出席)

- 12 月 1 日 (星期三) 18:30-

地點: 六廚川客料理

【台北市大安區信義路三段 7 號 2 樓，地圖請參考 P.48】

★接駁車於 17:30 自經濟所大門發車★

議程簡表 Schedule at a Glance

12月1日, 星期三

8:30-	報 到	B 棟大廳
9:00-9:10	開幕致詞 朱澤民 蔡瑞胸(視訊) 陳恭平	慕寰廳
9:10-10:10	專題演講 I 蘇益仁 主持人: 朱敬一 新冠肺炎的疫苗(藥物)政策—由疫情的演變及國家治理談生醫產業發展	線上直播
10:10-10:30	大合照 暨 茶敘	B 棟大廳
10:30-12:15	論壇: 後疫情時代的經濟政策 吳聰敏 臺灣央行的過去與未來 與談人: 李怡庭, 李淳, 周雨田, 陳明郎 主持人: 吳中書 (依據姓氏筆劃排序)	慕寰廳 線上直播
12:15-13:45	午 餐	B 棟大廳
13:45-15:15	A1 疫情的經濟影響與政策評估 劉哲良 吳明澤 賴偉文 主持人: 葉俊顯	慕寰廳
	A2 計量理論與應用 賴宗志 廖仁哲 郭漢豪 主持人: 陳宜廷	B110
15:15-15:45	茶 敘	B 棟大廳
15:45-17:15	B1 臺灣經濟韌性與政策表現 彭思遠 李長泰 林虹妤 主持人: 張建一	慕寰廳
	B2 產業與貿易 陳奕帆 鄭宜玲 彭正浩 主持人: 彭信坤	B110
	B3 Financial and Economic Integrations *English Session* Joe Maganga Zonda Thi Mai Uyen Luong Minwoo Park 主持人: Chih-Sheng Hsieh	C101
	B4 總體和財務計量方法 殷壽鏞 葉錦徽 沈芻蕘 主持人: 劉祝安	C103
18:30-	晚 宴 (BY INVITATION)	

議程簡表 Schedule at a Glance

12月2日, 星期四

9:00-	報 到	B 棟大廳
9:30-10:30	<p>專題演講 II</p> <p>陳南光 → 吳中書 央行為何應該關注房價波動? 房地產與貨幣政策</p> <p>主持人: 許嘉棟</p>	慕寰廳
10:30-11:00	茶 敘	B 棟大廳
11:00-12:30	<p>C1</p> <p>政府政策與產業</p> <p>蔡致遠 楊子霆 陳建良</p> <p>主持人: 簡錦漢</p>	慕寰廳
	<p>C2</p> <p>應用總體</p> <p>賴正豪 林雪瑜 陳冠任</p> <p>主持人: 賴景昌</p>	B110
	<p>C3</p> <p>Macro Labor *English Session*</p> <p>Eunbi Ko Ziho Park Jhih-Chian Wu</p> <p>主持人: Been-Lon Chen</p>	C101
	<p>C4</p> <p>計量方法與實證</p> <p>林雅淇 楊子茵 賴宏彬</p> <p>主持人: 林金龍</p>	C103
	~~ 研 討 會 結 束 ~~	

專題演講 I 線上直播

12月1日, 星期三

09:10 – 10:10

主講人:

蘇益仁講座教授 (南臺科大生物與食品科技系)

新冠肺炎的疫苗(藥物)政策

—由疫情的演變及國家治理談生醫產業發展



大綱

- 新冠 COVID-19 疫情演變與國家治理
- 緊急疫情下的世紀性生技醫藥大突破
- 台灣在新冠疫情下的疫苗及藥物因應政策及檢討
- 疫情後的防疫及政經政策因應

專題演講 II

12月2日, 星期四

09:30 – 10:30

主講人:

吳中書董事長 (台灣金融研訓院)

房地產與貨幣政策



摘要

支持央行在執行貨幣政策時應考慮資產市場的論點認為：現行價格指數未能適當的反應消費成本；資產價格有助於通膨的預測；資產價格對民間消費具有財富效果，對民間投資具有 Tobin' s Q 效果，且存在金融加速效應。

持不同觀點的論點則認為資產價格波動大，且往往與實質經濟活動的關聯性不大；資產價格走勢很難估測，錯誤的因應反增加產出的波動度；即使資產對於干擾的傳遞效果扮演角色，貨幣政策中考量資產價格的好處並不顯著；價格穩定與金融穩定是互補的，貨幣當局穩定通膨與產出，也許可以穩定資產價格。

在現實社會中，房地產市場價格若過度飆漲，所可能造成長期財富分配的不均，對弱勢族群與年輕族群儲蓄與生活願景的可能負面衝擊，在擬定貨幣政策時，似乎是不得不考慮的因素。然而應如何考慮與因應則需更為整體、跨領域，與前瞻性的思維，更何況僅依賴央行是無法畢竟其功。

「後疫情時代的經濟政策」論壇 線上直播

12月1日, 星期三

10:30 – 12:15

引言人:

吳聰敏名譽教授 (國立臺灣大學經濟學系)

臺灣央行的過去與未來



大綱

- 台灣央行的貨幣政策
- 台灣央行的過去
- 未來

與談人: (依據姓氏筆劃排序)

李怡庭教授 (國立臺灣大學經濟學系)



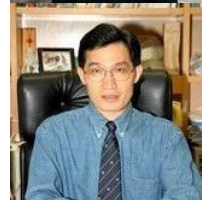
李淳資深副執行長 (中華經濟研究院 WTO 及 RTA 中心)



周雨田兼任研究員 (中央研究院經濟研究所)



陳明郎研究員 (中央研究院經濟研究所)



12月1日, 星期三

08:30 – 報到 B 棟大廳

09:00 – 09:10 開幕致詞 【線上直播】 慕寰廳

朱澤民 (行政院主計總處)
 蔡瑞胸 (美國芝加哥大學商學院) (視訊)
 陳恭平 (中央研究院經濟研究所)

09:10 – 10:10 專題演講 I 【線上直播】 慕寰廳

主持人: 朱敬一 (中央研究院經濟研究所)
 主講人: 蘇益仁 (南臺科大生物與食品科技系)
 新冠肺炎的疫苗(藥物)政策
 一由疫情的演變及國家治理談生醫產業發展

10:10 – 10:30 大合照暨茶敘

10:30 – 12:15 論壇: 後疫情時代的經濟政策 【線上直播】 慕寰廳

主持人: 吳中書 (台灣金融研訓院)
 引言人: 吳聰敏 (國立臺灣大學經濟學系)
 臺灣央行的過去與未來
 與談人:
 李怡庭 (國立臺灣大學經濟學系)
 李 淳 (中華經濟研究院 WTO 及 RTA 中心)
 周雨田 (中央研究院經濟研究所)
 陳明郎 (中央研究院經濟研究所)

(依據姓氏筆劃排序)

12:15 – 13:45 午餐

13:45 – 15:15 平行場次 A1~A2

A1 疫情的經濟影響與政策評估

慕寰廳

主持人: 葉俊顯 (中華經濟研究院)

COVID-19 對於臺灣觀光業的衝擊與因應措施之經濟分析

作者: *劉哲良 (中華經濟研究院), 葉俊顯

新冠肺炎是否惡化我國投資人非理性投資—以從眾效應為例

作者: *吳明澤 (中華經濟研究院), 許至廷

COVID-19 疫情下我國紓困振興措施的總體經濟效益分析

作者: 王健全, *賴偉文 (中華經濟研究院)

A2 計量理論與應用

B110 會議室

主持人: 陳宜廷 (國立臺灣大學財務金融學系)

Measuring Upward Income Mobility Without
Discretization Errors

作者: *Tsung-Chih Lai (賴宗志, 國立中正大學經濟學系)

A Nonparametric Consistent Test of Exogeneity in
Quantile Regression Models作者: *Jen-Che Liao (廖仁哲, 國立政治大學經濟學系),
Xiaojun Song

Shrinkage Estimations for Social Interactions Models

作者: *Hon Ho Kwok (郭漢豪, 國立臺灣大學經濟學系)

15:15 – 15:45 茶敘

15:45 – 17:15 平行場次 B1~B4

B1 臺灣經濟韌性與政策表現

慕寰廳

主持人: 張建一 (台灣經濟研究院)

後疫情時代臺灣經濟預測初探

作者: *彭思遠 (台灣經濟研究院)

各國經濟韌性之衡量與分析

作者: 胡均立, *李長泰 (台灣經濟研究院)

Good Luck or Good Policy?—如何在防疫與經濟之間取得平衡?

作者: *林虹妤 (台灣經濟研究院)

B2 產業與貿易

B110 會議室

主持人: 彭信坤 (中央研究院經濟研究所)

Labor Participation, Wage Income Inequality, and
Heterogeneous Welfare Gains from Trade作者: Pao-Li Chang, *Yi-Fan Chen (陳奕帆, 國立高雄
大學應用經濟學系), Wen-Tai HsuQuality Competition and Market-Share Leadership in
Network Industries作者: *Yi-Ling Cheng (鄭宜玲, 國立中山大學經濟學研
究所), Ya-Yuan Chan

產品良率、售後服務競爭與社會福利

作者: 許至乙, 林燕淑, 蔡崇聖, *彭正浩 (輔仁大學經濟
學系)

15:45 – 17:15 平行場次 B1~B4

B3 Financial and Economic Integrations

Room C101

(English Session)

Chair: Chih-Sheng Hsieh (Department of Economics,
National Taiwan University)

A Tide That Lifts Some Boats: Assessing the
Macroeconomic Effects of EU Enlargement

Authors: *Joe Maganga Zonda (國立東華大學經濟
學研究所), Chang-Ching Lin, Ming-Jen
Chang

FDI and Trade in ASEAN Countries: The Spatial
Econometrics Analysis

Authors: *Thi Mai Uyen Luong (國立中正大學國際
經濟所), Wen-Hsien Liu

Central Bank Currency Swap Lines: A Network
Perspective

Author: *Minwoo Park (朴民佑, 國立政治大學國際
經營與貿易學系)

15:45 – 17:15 平行場次 B1~B4

B4 總體和財務計量方法

C103 會議室

主持人: 劉祝安 (中央研究院經濟研究所)

Tests of Equal Accuracy for Nested Models with
Estimated Factors When N Is Small and Number of
Factors Is Misspecified

作者: Yi-Ting Chen, *Shou-Yung Yin (殷壽鏞, 國立
臺北大學經濟學系)

Dimension Reduction for Risk Management: An
Empirical Comparison of Alternative Methods

作者: *Jin-Huei Yeh (葉錦徽, 國立中央大學財務金融
學系), Shan-Ying Chu

Unified HAR Inference for Nonstationary Linear
Processes of Possibly Heavy-Tailed Noises

作者: Rongmao Zhang, *Chor-yiu (CY) Sin (洗芻蕘,
國立清華大學經濟學系), Shiqing Ling

18:30 – 晚宴 (BY INVITATION)

★接駁車於 17:30 自經濟所大門發車★

12月2日, 星期四

09:30 – 10:30 專題演講 II

慕寰廳

主持人: 許嘉棟 (中信金融管理學院)

主講人: 陳南光 (中央銀行) → 吳中書 (金融研訓院)

央行為何應該關注房價波動? → 房地產與貨幣政策

10:30 – 11:00 茶敘

11:00 – 12:30 平行場次 C1~C4

C1 政府政策與產業

慕寰廳

主持人: 簡錦漢 (中央研究院經濟研究所)

匯率? 對外直接投資? 關稅? 探究臺灣實質勞動生產力與
實質薪資脫鉤的政策因素

作者: *蔡致遠 (國立政治大學國際經營與貿易學系)

從電子發票資料看三倍券的效果

作者: *楊子靈 (中央研究院經濟研究所), 連賢明, 曾中
信, 黃詩涵, 周德宇

兩岸經濟合作架構協議(ECFA)政策成效評估

作者: *陳建良 (國立暨南國際大學經濟學系), 管中閔

11:00 – 12:30 平行場次 C1~C4

C2 應用總體

B110 會議室

主持人: 賴景昌 (中央研究院經濟研究所)

名目匯率制度與實質匯率調整：非工業國家之實證研究

作者: 王彥惇, *賴正豪 (國立中正大學經濟學系), 吳致寧, 曾富民

Share Buybacks and the Effects of Corporate Tax Cuts

作者: Juin-Jen Chang, Chun-Hung Kuo, *Hsieh-Yu Lin (林雪瑜, 東海大學經濟學系), Shu-Chun S. Yang

Employment Protection, Temporary and Permanent
Employment Share, and Procyclicality of Labor

Productivity

作者: *Kuan-Jen Chen (陳冠任, 國立中山大學經濟學研究所), Ching-Chong Lai, Ting-Wei Lai

11:00 – 12:30 平行場次 C1~C4

C3 Macro Labor (English Session) Room C101

Chair: Been-Lon Chen (Institute of Economics,
Academia Sinica)

Labor Market Reallocation in a Directed Search Model

Author: *Eunbi Ko (高恩瑟, 國立臺灣大學經濟學系)

Import Competition and Firms' Internal Networks

Authors: Jay Hyun, *Ziho Park (朴至鎬, 國立臺灣大學
經濟學系), Vladimir Smirnyagin

Taiwan's Labor Wedge and Unemployment: Based on
a Labor Search and Matching Model

Author: *Jhih-Chian Wu (吳致謙, 國立政治大學經濟
學系)

C4 計量方法與實證 C103 會議室

主持人: 林金龍 (國立東華大學財務金融學系)

Macro-Financial Variables and Stock Return

Predictability by Machine Learning

作者: Tsung-Wu Ho, *Ya-Chi Lin (林雅淇, 逢甲大學經
濟學系)

數位時代寬頻網路與經濟成長之關連—以 OECD17 國為例

作者: 黃彥儒, *楊子茵 (國立臺北大學財政學系)

Persistent and Transient Inefficiency in Spatial

Autoregressive Panel Stochastic Frontier Model

作者: *Hung-pin Lai (賴宏彬, 國立中正大學經濟學系),
Kien C. Tran

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~~ 感謝您的出席參與~~

COVID-19 對於臺灣觀光業的衝擊與因應措施之經濟分析

*劉哲良 (中華經濟研究院)

葉俊顯 (中華經濟研究院)

本研究之主要目的在於以臺灣觀光產業做為研究標的，透過結合臺灣觀光衛星帳與投入產出模型，針對 COVID-19 疫情所導致的負面衝擊、以及臺灣政府所實施的各種紓困振興方案所帶來的正面影響進行經濟影響之模擬分析。依據模擬結果，2020 年臺灣觀光產業直接減損的產值達 6,111.65 億元；同時對臺灣總體 GDP 帶來 9,479.4 億元的減損影響。另一方面，由於臺灣及早的邊境管制作為，令境內觀光沒有受到太大限制。而政府所推出的各種旅遊振興方案，則是更為直接地扮演消費催化劑的角色，有效地提升了民眾對於觀光產品及服務的消費。依據本研究之推估結果，臺灣政府的紓困及振興方案，共為觀光產業提升了 724.44 億元的直接產值；配合產業關聯效果的傳遞，可為觀光產業相關上下游之生產鏈帶動近 1,202.74 億的訂單，並為總體經濟增加 1,073.24 億元的 GDP。整體而言，比較有無執行紓困振興措施的衝擊模擬結果，可發現在紓困振興措施實施後，共能夠降低觀光產業 12.2% 的產值訂單衝擊、13.1% 的 GDP 減損影響、以及減少 13.5% 的就業需求衝擊。

關鍵詞: COVID-19, 觀光產業, 紓困與振興措施, 經濟影響分析, 觀光衛星帳, 投入產出模型

* 為發表人

新冠肺炎是否惡化我國投資人非理性投資—以從眾效應為例

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許至廷 (國立中央大學財務金融學系)

本研究利用 Chang, Cheng and Khorana (2000) 之橫斷面報酬絕對離差 (CSAD) 對我國上市、上櫃市場股票交易投資人之從眾效應進行檢驗，並討論新冠肺炎對從眾效應所造成之邊際效果。結果發現無論我國上市、上櫃或是整體上市櫃股票市場均有明顯的從眾效應，且無論疫情前或疫情後均相同。但若討論疫情對惡化從眾效應之邊際效果而言，上櫃股票市場顯著，而上市股票市場並不顯著。

若以產業別之從眾效應觀之，在 16 個研究的產業別中，上市股票市場除了觀光業在疫情後從眾效應不顯著外，其他上市或上櫃產業均有顯著的從眾效應。在新冠肺炎對惡化從眾效應的邊際效果而言，上市股票市場有僅有 2 個產業顯著，而上櫃股票市場則有 7 個產業顯著，顯示新冠肺炎對於惡化從眾效應的效果依市場別與產業別而有所不同。

關鍵詞: 從眾效應, 新冠肺炎, 橫斷面報酬絕對離差

* 為發表人

COVID-19 疫情下我國紓困振興措施的總體經濟效益分析

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2020 年 Covid-19 疫情對我國經濟造成嚴重衝擊，在疫情期間內對於不同產業的影響也不盡相同，因此各產業之間勞動市場的人力需求也將呈現不同程度的變化。為緩解因疫情對國內經濟與勞動市場的衝擊，政府亦推行一連串紓困振興方案。本研究擬針對 Covid-19 疫情對臺灣總體經濟與就業市場的影響，以及政府採行一系列紓困振興措施之後，將對我國總體經濟與勞動市場所產生效果進行研析，並運用可計算一般均衡模型，首先設計疫情衝擊之政策情境，模擬未來可能對我國總體經濟與就業市場的影響；其次將我國所採行之紓困振興措施納入政策情境，並分析紓困振興措施之總體經濟效果，以做為未來政策研擬及評估的參考。

* 為發表人

Measuring Upward Income Mobility Without Discretization Errors

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In this paper, we develop a new measure of intergenerational upward mobility that can count every positive movement in the relative income positions of parents and children, a desirable feature that is not available in traditional mobility measures. Unlike Bhattacharya and Mazumder (2011), our measure avoids arbitrary discretization of parents' income distribution and is thus robust to income heterogeneity within the reference group of families. We present an easy-to-implement semiparametric estimation procedure for the proposed measure based on distribution regression. The asymptotic properties and the validity of multiplier bootstrap are also investigated. To obtain a single summary mobility index, we further aggregate the measure by weighing the income growth of the relatively poor more heavily than that of the relatively rich. The index is shown to conform to the axiomatic framework of Cowell and Flachaire (2018).

* Indicates presenter

A Nonparametric Consistent Test of Exogeneity in Quantile Regression Models

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School of Management, Peking University)

September 5, 2021

This paper proposes a new nonparametric test for exogeneity of explanatory variables in a semiparametric triangular quantile regression model using a control function. The proposed test is based on the observation that the control function is constant under the exogeneity null. Using the idea of Fan and Li (1996) and a transformation of quantile restrictions to mean restrictions under the null hypothesis (Zheng (1998)), the proposed test of exogeneity is constructed and its asymptotic properties are established. To improve inference accuracy, a simple wild bootstrap method is also suggested, with its theoretical justifications provided. A simulation study examines the finite-sample properties of the proposed test. For empirical illustration, using a data set from the 2001 U.S. National Household Travel Survey, we apply the proposed method by testing price endogeneity in the quantile demand for gasoline.

Keywords: Control functions, Quantile regression, Series estimation, Test for exogeneity, Wild bootstrap

* Indicates presenter

Shrinkage Estimations for Social Interactions Models

*Hon Ho Kwok

October 16, 2021

This paper intends to give an in-depth analysis of shrinkage estimations for social interactions models. Identification and consistent estimations for social interactions models have been well developed. The statistical properties of Instrumental, generalized method of moments (GMM), and maximum likelihood (ML) estimators were thoroughly analyzed in past few decades.

However, the properties of shrinkage estimators have yet been fully understood. This paper considers a general class of linear and “partially nonlinear” social interactions models, and its shrinkage estimators which are relatively computationally simple. The connection between consistent and shrinkage is developed.

This paper rigorously investigates the estimation quality, for example, in terms of mean squared errors (MSE) and prediction errors, and derives the mathematical conditions for acceptable quality.

Lastly, the theory developed in this paper would be extended to a decent model selection theory for social interactions models.

* Indicates presenter

後疫情時代臺灣經濟預測初探

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隨著全球政經情勢轉變及數位科技發展的日新月異，台灣經濟結構正在轉變，2020 年 COVID-19 疫情突如其來，並重創全球經濟，依據 IMF 統計 2020 年全球 GDP 成長率衰退 3.2%，為 1980 年以來最差的表現。然而台灣經濟一反過去跟隨全球經濟波動的走勢，2020 年逆勢成長 3.12%，為所有已開發國家中成長最高的國家，關鍵因素在於台灣出口的成長，2020 年第三季及第四季分別成長 3.33% 及 7.63%，比較台灣出口與全球經濟成長走勢，過去 2 年台灣出口成長明顯高於全球經濟，從各產品別出口之變化，可發現電子產品成長力道強勁是加速出口成長的主要動能，背後反應在美中貿易戰、數位經濟時代、COVID-19 疫情加快數位化及供應鏈分散風險變革等因素下台灣出口產業競爭力的提升。

過去台經院之總體計量模型主要以全球 GDP 作為預估出口的主要變數，然而面對出口結構的轉變，全球 GDP 已經無法完全解釋未來台灣出口，因而思考新增能反應數位經濟動能之變數，首先將可能之變數加入出口結構方程式，經過時間序列迴歸分析檢定、樣本內殘差檢定、樣本外經濟預測調校、情境分析 (Scenario Analysis) 之變數衝擊測試等流程，逐一篩選出合適之變數，同時定期召開專家顧問會，針對各變數之優劣及預測之結果深入討論，最後新增「美國那斯達克指數」，用該變數反應全球數位商品需求的增減，並使用情境分析 (Scenario Analysis) 模擬不同指數水準下之經濟成長率表現，做為經濟預測之主要依據。

* 為發表人

各國經濟韌性之衡量與分析

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本文透過評估 52 個樣本國家，有關經濟韌性在政府、企業、民眾等三大構面共 16 項指標，經由 DEA 方法計算 TFE 分數的方式，來衡量各國在面對 COVID-19 疫情下，經濟韌性的表現。評估結果顯示 52 個國家中，共有包含台灣在內的 23 個國家，整體經濟韌性表現在當時已無進一步改善空間，德國經濟韌性表現僅次於這 23 個國家排名第 24，澳洲與比利時緊接於德國之後，同屬 52 個國家中的前段班，而樣本國家中經濟韌性未達效率水準 50% 者為南非與希臘。同時，本文亦驗證建構之經濟韌性指標，較 IMD 世界競爭力指標、WEF 全球競爭力指標更為適合評估各國在 COVID-19 疫情下所展現的經濟韌性。

* 為發表人

Good Luck or Good Policy? —如何在防疫與經濟之間取得平衡？

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面臨 COVID-19 全球性衝擊，大多數國家政府在防疫的前提下，需要考慮如何兼顧經濟成長和社會穩定。本文嘗試透過台灣成功經驗來解釋政府、企業、民眾如何共同合作來處理 COVID-19 疫情危機與保持經濟成長的雙贏局面。首先，從三個不同的方向來說明政策影響與評估貢獻。一是即時性的防疫措施，台灣從 SARS 的經驗中吸取教訓，迅速採取一系列有效政策，包括邊境管制、高效率追蹤與隔離措施、普遍性口罩購買制度。二是產業能量靈活因應和消費替代。台灣生產廠商在政府協調與合作下，透過廠商的靈活應變能力，讓全民人人有口罩可以戴，提升民眾的防疫保護能力。此外，在考量疫情可控前提下，國內消費替代效果不僅是對經濟成長有高度貢獻更是可部分彌補國外觀光損失。最後，是蔡英文總統近年推行的台灣新經濟模式，有鑑於兩岸長期產業競爭關係，在中美貿易戰與疫情爆發之前，政府刻已規劃新經濟發展政策，引導台灣廠商分散產業風險，保持經濟發展能量。綜而言之，台灣可以兼顧防疫和經濟成長，其原因不僅是運氣，還有產業政策的有效調整和台灣經濟成長模式的轉變。

* 為發表人

Labor Participation, Wage Income Inequality, and Heterogeneous Welfare Gains from Trade

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October 9, 2021

We develop a general equilibrium trade model where households with skill heterogeneity choose between home production and working on the labor market. Unlike most of the trade literature, the labor supply is elastic and is heterogeneous across households. As a result, trade affects labor participation, income, and welfare differently across households. We show that, when home production and working are substitutes, households with lower skill levels experience higher proportional increase to their income, while households with higher skill levels experience higher proportional increase in welfare. We further show that elastic labor supply preserves the extensive margin of welfare gains from trade via changes in national income. We quantify the welfare gains with detailed Taiwanese firm- and house-hold level data, and show that the extensive margin contributes 8% of overall welfare gains.

* Indicates presenter

Quality Competition and Market-Share Leadership in Network Industries

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This paper examines the impact of network externalities on the product quality and network size of a differentiated duopoly where the costs of quality improvement are convex, and the market is partially covered. Our results show that, under quality-then-price competition, when the extent of network externalities increases, the intrinsic qualities of the high- and low-quality products both decrease, resulting in greater vertical product differentiation. Moreover, the network size of a high-quality product increases, whereas that of a low-quality product falls when the extent of network externalities is sufficiently large, resulting in a reversal in the leading position in terms of network size from a low-quality product to a high-quality product. In contrast, under quality-then-quantity competition, the intrinsic quality of a high-quality product falls and that of a low-quality product rises, resulting in a smaller vertical product differentiation. Further, while the network sizes of high- and low-quality goods both expand, the network size gap shrinks for sufficiently large externalities.

Keywords: Network externalities, Intrinsic quality, Vertical product differentiation, Network size

JEL Classification: D43, L13, L15

* Indicates presenter

產品良率、售後服務競爭與社會福利

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本文建構一個兩階段之售後維修模型，探討原廠獨占製造商之售後維修部門與副廠維修廠商間的競爭以及副廠維修服務品質提升對原廠利潤與社會福利之影響。我們假設前者所提供售後維修服務品質高於後者，結果顯示副廠的維修品質提升對於商品銷售量、原廠利潤及社會福利均存在非線性的關係。副廠維修品質提升一方面將會使原廠在售後服務市場更競爭，我們稱之競爭效果；而另一方面則會提升消費者購買商品的意願，我們稱之為商品銷售市場的品質提升效果。在商品之良率低時，競爭效果大於品質提升效果，副廠維修品質提升會降低原廠利潤與產出。反之，若商品良率高，則品質提升效果大於競爭效果，副廠維修品質提升有利原廠之利潤、產出與社會福利。

關鍵詞: 產品良率, 售後服務, 社會福利

JEL 分類代號: F13, F19

* 為發表人

A Tide That Lifts Some Boats: Assessing the Macroeconomic Effects of EU Enlargement

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Chang-Ching Lin (Department of Economics, National Cheng Kung University)
Ming-Jen Chang (Department of Economics, National Dong Hwa University)

This paper explores the macroeconomic effects of European Union (EU) enlargement on the thirteen new member states (NMS-13) and their EU-15 counterparts for the period 1993-2019 using a relatively novel technique—the synthetic control method. Overall, our estimates reaffirm the consensual verdict that EU enlargement has large and positive macroeconomic effects on the new entrants while unfavourable to the incumbents. Specifically, we estimate that by 2019, EU membership has, on average, induced approximately 30% higher per capita incomes in the NMS-13 relative to the unobserved counterfactual scenario that these countries did joining the Union. In the interim, per capita incomes in EU-15 have, on average, declined by approximately 15% as a result of the 2004 enlargement. This finding particularly supports the notion that the NMS-13 economies are en route to catching up with their EU-15 counterparts. Furthermore, EU membership largely stimulated cross-border trade in the NMS-13 which partly accounts for its observed effects in per capita incomes. Notwithstanding, the payoffs from EU enlargement are distributed in a very heterogenous fashion with some countries (i.e., Malta and Poland) emerging as "true winners" while others (i.e., Austria and the United Kingdom) "sore losers". Indeed, EU enlargement is a rising tide that lifts some boats and swamps some, albeit to different heights and depths.

Keywords: European union, Economic integration, Exports, Imports, Inflation, Per capita GDP, Synthetic control method

JEL Classification: C21, E30, E60, F15

* Indicates presenter

FDI and Trade in ASEAN Countries: The Spatial Econometrics Analysis

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Wen-Hsien Liu (Department of Economics and Institute of International Economics, National Chung Cheng University)

Using the ASEAN's FDI inflow and trade data for 21 years (1999-2019), we apply the spatial econometric model to examine the spatial effects on FDI inflow in ASEAN countries. Empirical results confirm the significant negative spatial impacts of export value and FDI of third-country on FDI in to the host country whereas import value has the significant inverse impacts. Furthermore, we apply the dynamic spatial econometric model and show the significant results of spatial impacts of time lagged export value, import value and FDI on FDI inflow in to ASEAN countries.

Keywords: FDI, International trade, Spatial Durbin model, Dynamic spatial model, Third-country effect

* Indicates presenter

Central Bank Currency Swap Lines: A Network Perspective

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(Department of International Business, National Chengchi University)

Aug 2021

Central bank swap lines are becoming a new norm for the global financial safety net. This paper studies whether network effects play a role when swap line providers choose swap line receivers. Using the data of European countries during the global financial crisis, we find that swap line providers indeed consider network effects during the decision process and share the risks of providing swap lines with other swap providers. To be specific, swap providers are more likely to extend its swap lines to another country if more countries can be reached through the receiver (indirect risk sharing) and less likely if the receiver already has a swap contract (direct risk sharing). Layers within the global swap network are formed due to this risk averse behaviors of swap providers.

* Indicates presenter

Tests of Equal Accuracy for Nested Models with Estimated Factors When N Is Small and Number of Factors Is Misspecified

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*Shou-Yung Yin (Department of Economics, National Taipei University)

In this paper, we investigate the validation of the tests of equal accuracy for nested models with estimated factors proposed by Gonçalves, McCracken and Perron (2017) under different conditions. More specifically, we first discuss the fixed N issue which has not been well discussed for understanding the equal accuracy among nested models. This issue belongs to the framework of high-dimension (T), small sample size (N) data sets, and we cannot derive the consistency of the estimated factors developed in the literature when N, T go to infinity. To overcome this difficulty, we provide the theoretical results that the empirical eigen-vectors can be treat as generated regressors when the angle between eigenvectors from the sample and the eigenvectors from the population is less than $\pi/2$, which suggests that these the tests of equal accuracy are valid. Second, we discuss the case when the number of factors is misspecified, especially when the number is overestimated. Asymptotic properties can be established by showing that the factors corresponding the overestimated numbers of eigenvalue are orthogonal to the true eigenvectors (factors). Therefore, under the null hypothesis, the test is also valid. Simulation results show that for different N 's and different specifications of the number of factors, the sizes are under control, and the powers are satisfied. We apply the test on showing that the factor from a cross-section of exchange rates can improve the individual forecast of exchange rate.

Keywords: Factor model, Equal accuracy, Fixed N data

* Indicates presenter

Dimension Reduction for Risk Management: An Empirical Comparison of Alternative Methods

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Modern risk management tools, such as value at risk, expected shortfall, are built upon modelling the tail part of the profit/loss distribution of financial assets returns. While asset pricing has emerged from more than two decades of different versions of factor model over a zoo of factors, it is yet unclear how effective these pricing factor proxy variables are in modelling the tails rather than the mean part of the distribution. As most factor models focus on conditional mean function and identify factors via dimension reduction or regularization approaches, it is thus interesting to examine how are those constructed factors performing in risk managing purposes. Motivated by the many potential rational/behavioral; Macro-economic/microstructural variables, we consider a couple of factor models via dimension reduction techniques in big dependent data such as PCA, partial least square, and partial quantile regression. These techniques are specifically and practically useful in particular when the dimension of proxy variables, outweigh the number of observations. We found partial quantile regression, which properly incorporates the information from the dependent variable, performs much better than PCA in in-sample or out-of-sample in defining VaR with equity data. Moreover, we also demonstrate a new proposed weighting scheme in forming factors that can largely enhance the information content about tail and thus the tail forecasting performance.

Keywords: Dimension reduction, Risk management, Tail behavior, Value at risk, Expected shortfall

JEL Classification: C22, C55, G01, G32

* Indicates presenter

Unified HAR Inference for Nonstationary Linear Processes of Possibly Heavy-Tailed Noises

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October 11, 2021

Over the last twenty years there has been an interest in non-stationary time series with infinite-variance noises. Using the probability theories developed in Zhang, Sin and Ling (2015), and those developed in Zhang and Chan (2021), we devise a residual-based block bootstrap (RBB) procedure for inference on non-stationarity. Unlike the wild bootstrap (WB) procedure suggested in Cavaliere, Georgiev, and Taylor (2018), this procedure is heteroscedasticity- and autocorrelation-robust (HAR), while it also allows for heavy-tailed noises. The limiting distributions of the Dickey-Fuller (DF) test is first shown, under (i) various tail index; and (ii) conditional heteroscedasticity. We then propose an m -out-of- n RBB which can be applied to both finite-variance and infinite-variance cases. Intensive simulation studies compare the RBB with the WB, the conventional DF test, the Phillips-Perron (PP) test, and the ADF-GLS test. We close this paper with empirical examples time series with infinite-variance noises. In sum, this paper provides a general treatment of nonstationary linear processes with GARCH/IGARCH noises.

Keywords: Dickey-fuller (DF) test, Heavy-tailed noises, Heteroscedasticity- and autocorrelation-robust (HAR), Residual-based block bootstrap (RBB), Tail index, Wild bootstrap (WB)

JEL Classification: C22, C12, C15

* Indicates presenter

匯率？對外直接投資？關稅？ 探究臺灣實質勞動生產力與實質薪資脫鉤的政策因素

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本研究主要以理論與實證模型釐清台灣實質勞動生產力與實質薪資脫鉤的政策因素。利用 1996 年至 2015 年製造業下各中類行業資料，我們發現在組成實質勞動生產力與實質薪資差的三個因素中，勞動份額與薪資占受僱員工報酬份額主要解釋各中業間不隨時間變動的差異；而消費與產出相對價格下跌解釋了行業內跨時間的變動。因此，前兩項主要通過各中類行業勞動人口份額的增減影響加總數值，我們稱之為組成效果；後者則是透過各行業生產力薪資差改變影響，我們稱作成長效果。就樣本時間內，製造業生產力薪資差擴大主要來自成長效果的貢獻。

進一步，為探討匯率與關稅政策如何影響產出價格，本文建立獨占性廠商選擇商品品質貿易模型並形成迴歸式。實證顯示加入世界貿易組織與進口平均關稅下降造成實質勞動生產力與實質薪資差在樣本時間內擴大；而在樣本時間內進口關稅的下跌與出口有效匯率相對升值則使得差距減少。此實證結果符合模型之預測。我們也發現對中國大陸投資造成產出價格下跌而中間財出口比例增加對產出價格的影響則不顯著。

關鍵詞: 薪資, 勞動生產力, 匯率, 對外直接投資, 關稅

JEL 分類代號: F12, F13, F14, F15

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從電子發票資料看三倍券的效果

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本文主要針對疫情期間受損程度最高之幾項內需產業·如綜合零售業及餐飲業等產業·探討「振興三倍券」發放後·受政策影響之 2020 年(實驗組)與影響外之 2019 年(對照組)·其銷售額是否產生差異。本文採用財政部 2019 至 2020 年台灣每日電子發票資料·以鄉鎮資料為觀察值·使用差異中之差異分析法與事件研究法·了解「振興三倍券」實施期間所帶來的新增消費·以及政策效果的持續時間。實證結果顯示·我們發現三倍券政策在不同產業之效果顯著持續約 6 至 10 週;此外·我們利用差異中之差異法推估政策實施後綜合零售業及餐飲業之每週平均銷售額顯著增加 4.6% 與 9.9%·推算其因發放三倍券所帶動的新增消費分別為 228 億元及 91 億元·顯示三倍券帶動至少 300 億元的新增消費。綜合以上·說明「振興三倍券」對刺激銷售額之增長存在正面影響·短期內具促進消費的效果。

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兩岸經濟合作架構協議(ECFA)政策成效評估

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本研究評估 2011 年開始實施的兩岸經濟合作框架協議 (ECFA) 政策效果採用財政部關務署 2007 至 2018 年的貿易統計原始資料，以進出口物價指數計算實質貿易額，藉由差異中差異 (difference-in-differences) 模型，以 HS code 四位數的「節」為可比較基礎，計算 ECFA 之下早收清單相對於非早收清單的實質進出口增量。結果發現：一、ECFA 帶動兩岸貨品貿易的實驗效果加總為正，規模大概佔我對中國大陸同類出口總額的 5% 到 10%，以及我從中國大陸同類進口總額的 4.2% 到 4.5%。二、我對中國大陸進出口的實驗效果，就總值和比例來說都是出口大於進口，顯示 ECFA 對兩岸貿易的效果並不對稱。從淨出口來看，ECFA 的政策效果佔我對陸同類淨出口的 5.4% 到政策影響力隨時間經過深化且擴大，成效不容忽視。三、ECFA 帶動我對陸出口增加，同時取代部分對港出口，反映兩岸三地貿易條件改變後的進出口消長；討論 ECFA 成效時，必須同時關注陸港兩地才能有完整觀察。本研究是 ECFA 相關文獻中少數採用嚴謹模型概念對個體資料進行政策成效的評估提供有別於以往的實證分析結果。

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名目匯率制度與實質匯率調整：非工業國家之實證研究

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本文探討實質匯率調整與名目匯率制度間之關聯是否支持 Friedman 假說。實證結果指出在非工業及非工業且非石油輸出組織國家中實質匯率調整隨匯率制度愈具彈性而變快，且在 5% 顯著水準下，調整速度在固定與浮動匯率制度間之差異顯著，此外實證結果具穩健性，實證結果支持 Friedman 假說。

關鍵詞: 實質匯率調整, 名目匯率制度, Friedman 假說

JEL 分類代號: F31, F32, C33

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Share Buybacks and the Effects of Corporate Tax Cuts

Juin-Jen Chang, Chun-Hung Kuo, *Hsieh-Yu Lin, and Shu-Chun S. Yang

Rising share buybacks in the U.S. since mid-1980s have raised concern about their impact on corporate investment and growth. Meanwhile, empirical evidence shows that corporate tax cuts become less expansionary after mid-1980s. We construct a general equilibrium model with endogenous share buybacks to study corporate tax effects. Like typical models, a corporate tax cut increases investment. The magnitude, however, is smaller relative to the case in which buybacks using tax cut windfall are disallowed. Rising buybacks, therefore, can be a contributor for the diminished macroeconomic effects of corporate tax cuts. The welfare gains from the tax cut, however, is bigger when buybacks are allowed. With buybacks, non-shareholders also benefit from the tax cut in terms of more income and consumption, but the income gap is further widened between the two types of agents from the tax cut, relative to the case without buybacks.

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Employment Protection, Temporary and Permanent Employment Share, and Procyclicality of Labor Productivity

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September 1, 2021

Using data from 36 OECD countries, we find that the extent of the procyclicality of average labor productivity (ALP) differs significantly across countries, and is positively correlated with the strictness of employment protection. To account for this salient feature, we build up a theoretical model in which aggregate employment is divided into temporary and permanent categories; the two groups of employment are highly substitutable in production and the latter is subject to firing costs. Our numerical results suggest that in our model the intensity of labor firing costs, which characterizes the strictness of employment protection in OECD countries, has positive effects on both the procyclicality of ALP and the share of temporary employment. Moreover, considering the possibility of hiring different types of workers as short-term substitutes contributes to a reduction in the relative volatility between output and aggregate hours worked, and hence a sharp decline in the procyclicality of ALP. The model can also explain why, with a higher intensity of labor firing costs, a firm has more incentives to hoard less-productive redundant workers when the economy experiences a negative total factor productivity shock.

Keywords: Employment protections, Procyclicality of labor productivity, Substitutability between temporary and permanent labor, relative volatility between output and employment, Labor hoarding

JEL Classification: E24, E32, J32

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Labor Market Reallocation in a Directed Search Model

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This paper shows that skill-biased technological change might cause the Beveridge curve to shift upward after the Great Recession. I demonstrate this result by constructing a directed search model with heterogeneous workers and firms. In the model, faster growth in jobs in which labor productivity is skill-biased (high-tech job) than in routine jobs with no skill-bias (low-tech job) encourages unskilled workers to apply for high-tech jobs with a higher probability than they did in the past. Since the unskilled worker's matching probability to the high-tech job is lower than that to the low-tech job, the technological progress slows down the aggregate job-finding process of the workers. Therefore, the Beveridge curve shifts upward. In this paper, I construct the model, characterize the equilibrium, and calibrate the model parameters before and after the Great Recession. The result suggests technological improvements complement non-routine, high-tech jobs after the recession. This results in a decrease in the average job-finding rate and an upward shift in the Beveridge curve.

Keywords: Directed search, Unemployment, Mismatch, Reallocation, Skill-biased technology, Upskilling, Beveridge curve, Matching efficiency

JEL Classification: E24, E32, J11, J24, J64

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Import Competition and Firms' Internal Networks

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First draft: October 2019

Current draft: July 2021

Using administrative data on U.S. multisector firms, we document a cross-sectoral propagation of the import competition from China ("China shock") through firms' internal networks: Employment of an establishment in a given industry is negatively affected by China shock that hits establishments in other industries within the same firm. This indirect propagation channel affects both manufacturing and non-manufacturing establishments, and it operates primarily through the establishment exit. We explore a range of explanations for our findings, highlighting the role of within-firm trade across sectors, scope of production, and establishment size. At the sectoral aggregate level, China shock that propagates through firms' internal networks has a sizable impact on industry-level employment dynamics.

Keywords: China shock, Import competition, Multisector firms, Multiproduct firms, Network propagation, Trade

JEL Classification: D22, F14, F40

* Indicates presenter

Taiwan's Labor Wedge and Unemployment: Based on a Labor Search and Matching Model

*Jhih-Chian Wu

This paper proposes a search and matching model for determining the sources of Taiwan's labor wedge and unemployment. We calibrate and estimate model parameters based on the Taiwan's data from the first quarter of 1981 to the fourth quarter of 2020. Based on the proposed model with the estimated parameters, we find that matching efficiency and workers' bargaining power account for more than half of the total fluctuations in Taiwan's labor wedge and unemployment. In contrast, the impact of job destruction on labor wedge and unemployment is small. Therefore, these results show the importance of labor search frictions in explaining Taiwan's labor market variables.

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Macro-Financial Variables and Stock Return Predictability by Machine Learning

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October 10, 2021
Very preliminary draft

Stock return predictability has been a long-standing puzzle in finance literature. Developments in information technology have promoted machine learning techniques, therefore our study aims to improve forecasting performance of return on Dow Jones industrial Average (DJIA), by adopting various machine learning models. We have the following innovations on machine learning: First, we use K-fold cross validation to search for the best hyperparameter and model settings, to avoid overfitting problem. Second, we report the distribution of forecasting performance for N times rolling out-of-sample periods, each time trained by K-fold cross validation, for generalization. However, it is surprised that all the standard time series models outperform machine learning models. The result is robust when comparing average forecasts on the previous two group of methods, and by both static and recursive forecasting. Machine learning is not as good as we think.

Keywords: Return predictability, Machine learning, Forecasting average, Dow Jones industrial average, Macro-financial fundamental

JEL Classification: G17, C45, C58

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數位時代寬頻網路與經濟成長之關連—以 OECD17 國為例

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近年來數位科技快速發展和智慧型手機的普遍使用，大幅改變企業經營和個人消費的模式。而此種數位化發展的關鍵因素，莫過於網路傳輸速度的加快和無線覆蓋率的提升，使資通產品的使用者得以隨時隨地高速連網，迅速上傳和下載大量資訊，因而能夠即時做出決策、完成交易和享受影音服務。Vu (2011) 認為資訊的快速傳輸，將可透過以下三個管道提高經濟成長率。其一，可強化技術擴散和創新。其二，可降低生產及管理成本，並提升企業與家庭的決策品質；其三，可誘發新的需求。在供給面和需求面的互動作用下，有效提高產出水準。而網路傳輸速度的提升，有賴於寬頻網路的基礎建設的布建，藉由提高連網便利性和降低連網成本，帶動消費者的普遍使用，進而實現促進經濟成長的目標。

本研究擴充 Katz and Callorda (2018) 的聯立模型架構，探討 OECD 國家近十年來寬頻網路發展對經濟成長的影響。除分別探討行動寬頻與固網寬頻的經濟成長效果外，更將二者間的互動關係納入考量，討論存在此互動關係下的經濟成長效果。

關鍵詞: 寬頻普及率, 數據流量, 經濟成長, 產業集中度

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Persistent and Transient Inefficiency in Spatial Autoregressive Panel Stochastic Frontier Model

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In this paper, we extend the four-component stochastic frontier model to allow for global spatial dependence via the endogenous spatial autoregressive variable. Our proposed model is more general than the model considered by Glass et al. (2016) in the sense that we include a random effect as well as a permanent efficiency component. With the SAR specification, our model is able to capture the asymmetric efficiency spillovers and also decompose the persistent/transient inefficiencies into direct and indirect efficiencies. Moreover, we also investigate the marginal effects of the exogenous variables on the persistent/transient efficiency. We suggest a maximum simulated likelihood method to estimate the frontier parameters of the model and predict the efficiencies using the simulated estimator. Monte Carlo simulations reveal that the suggested estimator performs well in finite samples. An empirical application is considered to illustrate the usefulness of our proposed model and method.

Keywords: Maximum simulated likelihood, Stochastic frontier, Spatial autoregressive, Persistent inefficiency, Transient inefficiency
JEL Classification: C23, C51, D24, E23

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