

2023 總體經濟計量模型研討會

Macroeconometric Modelling Workshop, 2023

會議主題: 臺灣永續之路

日期: 11月27-28日 (星期一, 二)

會場: 中央研究院經濟研究所

Organizing Committee:

許育進, 陳明郎, 張俊仁, 楊淑琄, 劉祝安(召集人), 簡錦漢.

Program Committee:

紀鈞哲, 許文泰, 莊雅婷, 陳樂昱, 張俊仁, 張庭源,
楊子靈, 楊宗翰, 楊睿中, 楊淑琄, 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

目次 Table of Contents

| | | |
|-----------------------------|-------|-------|
| 委員會 Committees | | i |
| 一般訊息 General Information | | 1 |
| 議程簡表 Schedule at a Glance | | 2-3 |
| 專題講者 Keynote Speakers | | 4 |
| 論壇 Forum | | 5 |
| 議程 Conference Program | | 6-19 |
| 文章摘要 Presentation Abstracts | | 20-70 |
| 與會者名單 Participants | | 71-74 |
| 會後徵稿 Call for Papers | | 75 |

■ 全院禁菸

■ 無線網路

SSID: MMW2023 (無密碼)

■ 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)

- 11 月 27 日 (星期一) 18:00-

地點: 欣葉小聚南港店 02-2785-1819

【臺北市南港區經貿二路 166 號 1 樓 (中國信託金融園區 A 棟 1 樓)】



★ 接駁車於 17:40 自經濟所大門發車 ★

議程簡表 Schedule at a Glance

11月27日, 星期一

| | | |
|-------------|---|--|
| 09:00- | 報 到 | |
| 09:30-09:40 | 開幕致詞 | 許育進, 蔡瑞胸 慕寰廳 |
| 09:40-10:30 | 專題演講 I 主持人: 蔡瑞胸 | 龔明鑫 臺灣淨零轉型之策略思維 慕寰廳 |
| 10:30-10:50 | 大 合 照 暨 茶 敘 | |
| 10:50-12:30 | 論壇: 臺灣能源政策與永續發展 | 主持人暨引言人: 梁啟源 臺灣能源轉型與零碳政策之 問題與建議 與談人: 郭位, 黃宗煌, 溫麗琪, 蕭代基 (依據姓氏筆劃排序) 慕寰廳 |
| 12:30-14:00 | 午 餐 | |
| 14:00-15:30 | A1 低碳轉型探討 主持人: 葉俊顯 | 張軒瑜 吳俊彥 楊晴雯 慕寰廳 |
| | A2 經濟預測與永續發展 主持人: 陳明郎 | 林佑澄 蕭宇翔 吳俊毅 B110 |
| | A3 計量方法 I 主持人: 郭炳仲 | 殷壽鏞 翁新傑 洗芻蕘 C101 |
| | A4 *English Session* Issues in Spatial Economics Chair: Shin-Kun Peng | Han Yang Jing Li Wen-Tai Hsu C103 |
| 15:30-16:00 | 茶 敘 | |
| 16:00-17:30 | B1 經濟成長與政策 主持人: 林欣吾 | 譚瑾瑜 劉名寰 徐慶柏 慕寰廳 |
| | B2 環境, 社會和公司治理 (ESG) 主持人: 張靜貞 | 陳彥行 曾俊凱 高日明 B110 |
| | B3 計量方法 II 主持人: 蔡文禎 | 郭漢豪 陳由常 廖仁哲 C101 |
| | B4 Macroeconomics and Finance 主持人: 張晏誠 | 蕭湛東 陳睿霖 C103 |
| 18:00- | 研討會晚宴 (BY INVITATION) ★接駁車於 17:40 自經濟所大門發車★ | |

11月28日, 星期二

| | | | |
|-------------|---|---|------|
| 09:30- | 報 到 | | |
| 10:00-10:50 | 專題演講 II 主持人: 王伯輝 | 李敏 核能的愛恨情仇 | 慕寰廳 |
| 10:50-11:05 | 茶 敘 | | |
| 11:05-12:35 | C1 淨零政策分析 主持人: 楊淑琄 | 岳俊豪 陳佳楹 林師模 | 慕寰廳 |
| | C2 應用個體實證研究 主持人: 蔡崇聖 | 陳冠銘 石曜合 楊豐安 | B110 |
| | C3 財務數量方法與應用 主持人: 陳宜廷 | 曾毓英 林智勇 孫立憲 | C101 |
| | C4 *English Session* Trade and Wealth Distribution Chair: Wen-Tai Hsu | Kenneth Bicol Dy Yuta Watabe Ziho Park | C103 |
| 12:35-14:00 | 午 餐 | | |
| 14:00-16:00 | D1 臺灣供應鏈未來的機會與挑戰 主持人: 胡偉民 | 楊書菲 白宗城 陳馨蕙 葉國俊 | 慕寰廳 |
| | D2 應用個體實證 主持人: 謝志昇 | 朱建達 李浩仲 楊子靈 王瑞樺 | B110 |
| | D3 *English Session* Topics in Macro Chair: C.C. Yang | Terry Cheung Tsung-Hsien Li Eunbi Ko Beny Trias Oktora | C101 |
| | D4 生產力, 勞動, 不確定性衝擊 主持人: 賴景昌 | 鄭宜玲 林雪瑜 雷昆穎 林世揚 | C103 |

專題演講 I

11 月 27 日, 星期一

09:40 – 10:30

主講人:

龔明鑫 (國家發展委員會主任委員)

臺灣淨零轉型之策略思維



專題演講 II

11 月 28 日, 星期二

10:00 – 10:50

主講人:

李敏 (國立清華大學核子工程與科學研究所特聘教授)

核能的愛恨情仇



「臺灣能源政策與永續發展」論壇

11月27日, 星期一

10:50 – 12:30

引言人:

梁啟源 (國立中央大學管理講座教授)
臺灣能源轉型與零碳政策之問題與建議



與談人: (依據姓氏筆劃排序)

郭位
(香港城市大學榮休校長/中央研究院院士)



黃宗煌
(台灣綜合研究院顧問)



溫麗琪
(永豐環境管理顧問股份有限公司博士)



蕭代基
(中央研究院經濟研究所兼任研究員)



11月27日, 星期一

09:00 – 報到 B棟大廳

09:30 – 09:40 開幕致詞 慕寰廳

許育進 (中央研究院經濟研究所)

蔡瑞胸 (美國芝加哥大學商學院)

09:40 – 10:30 專題演講 I 慕寰廳

主持人: 蔡瑞胸 (美國芝加哥大學商學院)

主講人: 龔明鑫 (國家發展委員會)

臺灣淨零轉型之策略思維

10:30 – 10:50 大合照暨茶敘

10:50 – 12:30 論壇: 臺灣能源政策與永續發展 慕寰廳

主持人暨引言人: 梁啟源 (國立中央大學)

臺灣能源轉型與零碳政策之問題與建議

與談人: 郭位 (香港城市大學)

黃宗煌 (台灣綜合研究院)

溫麗琪 (永豐環境管理顧問有限公司)

蕭代基 (中央研究院經濟研究所)

(依據姓氏筆劃排序)

12:30 – 14:00 午餐

14:00 – 15:30 平行場次 A1~A4

A1 低碳轉型探討

慕寰廳

主持人: 葉俊顯 (中華經濟研究院)

臺灣國家層次碳社會成本推估: AR6 情境下的模擬分析

作者: 劉哲良, *張軒瑜 (中華經濟研究院), 葉俊顯

全球思考, 在地行動 – 溫室氣體排放減量進程與對策:
以臺灣電子產業為例

作者: *吳俊彥 (中華經濟研究院), 張可萱, 蘇嫻伊,
魏逸樺, 羅時芳

高齡化社會的包容性低碳運輸策略

作者: *楊晴雯 (中華經濟研究院), 張哲維

A2 經濟預測與成長

B110 會議室

主持人: 陳明郎 (中央研究院經濟研究所)

由社會保障覆蓋率看我國永續發展

作者: *林佑澄 (行政院主計總處)

驅動臺灣通膨與經濟成長的需求與供給因子

作者: *蕭宇翔 (中央銀行)

臺灣週頻經濟活動指標之建構

作者: *吳俊毅 (中央銀行), 朱浩榜

14:00 – 15:30 平行場次 A1~A4

A3 計量方法 I

C101 會議室

主持人: 郭炳伸 (國立政治大學國際經營與貿易學系)

Analyzing Taiwan's Exports and Imports Using
Various Dimension Reduction Techniques作者: *Shou-Yung Yin (殷壽鏞, 國立臺北大學經濟
學系), Lan-Ting HuangAsymptotic Normality of Series Estimators for
Semiparametric Mixed Frequency Regression
Models作者: Wen-Jen Tsay, *Hsin-Chieh Wong (翁新傑,
國立臺北大學統計系)On Weak Identification with Variable Selection for
High-Dimensional Reduced-Form Models作者: *Chor-yiu (CY) SIN (洗芻蕘, 國立清華大學經
濟學系)

14:00 – 15:30 平行場次 A1~A4

A4 Issues in Spatial Economics

Room C103

(English Session)

Chair: Shin-Kun Peng (Institute of Economics,
Academia Sinica/彭信坤, 中央研究院經濟研究所)

Globalization, Gender Wage Gap, and Female Labor
Force Participation

Authors: Terry Cheung, Paul Ko, *Han Yang
(Institute of Economics, Academia Sinica/楊宗翰,
中央研究院經濟研究所)

Are Cities Losing Innovation Advantages? Online
versus Face-to-Face Interactions

Authors: Ruben Gaetani, Naqun Huang, *Jing Li
(School of Economics, Singapore Management
University), Yanmin Yang

Land Use Distortion in a Spatial Economy

Authors: *Wen-Tai Hsu (Institute of Economics,
Academia Sinica/許文泰, 中央研究院經濟研究所),
Zheng (Michael) Song, Xin Zou

15:30 – 16:00 茶敘

16:00 – 17:30 平行場次 B1~B4

B1 經濟成長與政策

慕寰廳

主持人: 林欣吾 (台灣經濟研究院)

兩岸貿易結構變化趨勢及其影響與因應建議

作者: *譚瑾瑜 (台灣經濟研究院), 林巍

台北市熊好券政策之經濟效益分析

作者: 毛驥文, 彭思遠, *劉名寰 (台灣經濟研究院)

臺灣新創環境發展與政策回顧

作者: *徐慶柏 (台灣經濟研究院)

B2 環境, 社會和公司治理 (ESG)

B110 會議室

主持人: 張靜貞 (中央研究院經濟研究所)

Climate Change Awareness and Board Structure

作者: Sheng-Syan Chen, *Yan-Shing Chen (陳彥行,
國立臺灣大學財務金融學系), Yong-Jyun TuEffects of Mandatory ESG Disclosure: Talent Attraction,
Retention, and Innovation Efficiency作者: *Kevin Tseng (曾俊凱, 香港中文大學),
Rong (Irene) ZhongUnveiling the Dynamics of Climate Change Effects on
US Corn Yields: A Novel Approach for Measuring
Adaptation作者: Akira Hibiki, *Stanley Iat-Meng Ko (高日明,
日本東北大學), Yi-Chun Ko, Shinsuke Uchida

16:00 – 17:30 平行場次 B1~B4

B3 計量方法 II

C101 會議室

主持人: 蔡文禎 (中央研究院經濟研究所)

Extremum Estimators, Model Selection, and
Model Averaging作者: *Hon Ho Kwok (郭漢豪, 國立臺灣大學經濟
學系)

Two-Step Empirical Bayes Methods

作者: *Yu-Chang Chen (陳由常, 國立臺灣大學經
濟學系)Specification Analysis in Quantile Regression
Models with Control Functions作者: *Jen-Che Liao (廖仁哲, 國立政治大學經濟
學系), Xiaojun Song**B4** Macroeconomics and Finance

C103 會議室

主持人: 張晏誠 (國立臺灣大學財務金融學系)

Short-Term Momentum in Mutual Funds

作者: *Lawrence Hsiao (蕭湛東, 國立臺灣大學財務
金融學系)Financial Constraint of the Home-Builder and the
Housing Price Dynamics

作者: *Jui-Lin Chen (陳睿霖, 杜克大學)

18:00 – 研討會晚宴 (BY INVITATION)

★接駁車於 17:40 自經濟所大門發車★

11月28日, 星期二

09:30 – 報到 B棟大廳

10:00 – 10:50 專題演講 II 慕寰廳

主持人: 王伯輝 (龍門核能發電廠)

主講人: 李敏 (國立清華大學核子工程與科學研究所)

核能的愛恨情仇

10:50 – 11:05 茶敘

11:05 – 12:35 平行場次 C1~C4

C1 淨零政策分析 慕寰廳

主持人: 楊淑珺 (中央研究院經濟研究所)

半導體產業對全球節能減碳效益

作者: *岳俊豪 (工研院產科國際所), 陳佳楹

數位賦能協助產業邁向淨零目標

作者: *陳佳楹 (工研院產科國際所), 岳俊豪

How Can Green Investments in Emission-Intensive Industries Help Transform to Net Zero in Taiwan?

作者: *Shih-Mo Lin (林師模, 中原大學商學博士學位學程), Yu-Hsuan Fu, Daigee Shaw, Wen-Hsiu Huang

11:05 – 12:35 平行場次 C1~C4

C2 應用個體實證研究

B110 會議室

主持人: 蔡崇聖 (國立臺灣大學經濟學系)

When Love Hurts: the Impact of Intimate Partner
Violence on Later Life Outcomes

作者: Harrison Chang, Shiau-Fang Chao,
*Kuan-Ming Chen (陳冠銘, 國立臺灣大學
經濟學系), Ming-Jen Lin

Air Quality (Mis)Perception and Policy Preferences in
Taiwan

作者: Po-Ju Chang, *Yau-Huo (Jimmy) Shr (石曜合,
國立臺灣大學農業經濟學系)

Temperature and Risky Road Behaviors

作者: Hsing-Tzu Liao, Yau-Huo (Jimmy) Shr,
*Feng-An Yang (楊豐安, 國立臺灣大學農業
經濟學系)

11:05 – 12:35 平行場次 C1~C4

C3 財務數量方法與應用

C101 會議室

主持人: 陳宜廷 (國立臺灣大學財務金融學系)

壽險業資本監理

作者: 張士傑, *曾毓英 (國立政治大學風險管理與保險學系), 孟欣樺

Bans on Same-Sex Marriages and Social Performances of Firms

作者: Ning Tang, Iftekhar Hasan, *Chih-Yung Lin (林智勇, 國立陽明交通大學資訊管理與財務金融學系)

Detecting Changepoints in Gaussian Sequential Data Using Copula-Based Markov Chain Models in an Online Setting: Exploring the Application in Financial Time Series

作者: *Li-Hsien Sun (孫立憲, 國立中央大學統計研究所), Dong-Hua Kuo, Ming-Hua Hsieh, Chi-Yang Chiu

11:05 – 12:35 平行場次 C1~C4

C4 Trade and Wealth Distribution

Room C103

(English Session)

Chair: Wen-Tai Hsu (Institute of Economics, Academia Sinica/許文泰, 中央研究院經濟研究所)

A General Equilibrium Assessment of Global Emission and Economic Impacts: Stimulating Climate Action through the EU's Carbon Border Adjustment Mechanism

Authors: *Kenneth Bicol Dy (Institute of Economics, Academia Sinica/李金全, 中央研究院經濟研究所), Han Yang

Multinationals, Trade and Emissions

Authors: *Yuta Watabe (IDE, JETRO Institute of Developing Economies/渡部雄太, 日本貿易振興機構亞洲經濟研究所), Joschka Wanner

The Credit Channel of Housing Wealth Shock Propagation

Author: *Ziho Park (Department of Economics, National Taiwan University/朴至鎬, 國立臺灣大學經濟學系)

12:35 – 14:00 午餐

14:00 – 16:00 平行場次 D1~D4

D1 臺灣供應鏈未來的機會與挑戰

慕寰廳

主持人: 胡偉民 (國立政治大學財政學系)

從進口原物料脆弱風險檢視臺灣產業韌性

作者: *楊書菲 (中華經濟研究院區域發展研究中心),
彭俊能, 陳馨蕙

臺灣永續之路: 企業執行永續減碳的動機, 進程暨現況

作者: *白宗城 (達勝科技, 中華採購與供應管理協會),
陳馨蕙, 簡錦漢Dynamics of Youth Overseas Employment under
Pandemic and Geopolitical Risks: New Insights from
the Case of Taiwan作者: Ya-Chi Lin, *Shin-Hui Chen (陳馨蕙, 中華經濟
研究院), Huan-Kai Tseng, Yu-Tzung Chang,
Kuo-Chun Yeh, Chung-Cheng Pai

俄烏戰爭衝擊對能源價格及歐元區經濟整合之影響

作者: *葉國俊 (國立臺灣大學國家發展研究所),
林雅淇

14:00 – 16:00 平行場次 D1~D4

D2 應用個體實證

B110 會議室

主持人: 謝志昇 (國立臺灣大學經濟學系)

Spatial Differentiation and Entry: Evidence from
Retail Gasoline Market in Taiwan

作者: *Jian-Da Zhu (朱建達, 輔仁大學經濟系)

The Effect of Compensation on Turnover: Evidence
from Employer-Employee Administrative Data

作者: Yu-Chun Cheng, Hsing-Wen Han,

*Hao-Chung Li (李浩仲, 國立政治大學經濟
學系), Wen-Chieh Lee, Tzu-Ting YangThe Effect of Capital Gains Taxation on Housing
Sales: Evidence from Taiwan作者: Shian Chang, *Tzu-Ting Yang (楊子霆,
中央研究院經濟研究所), Jian-Da ZhuThe Effect of Paid Parental Leave Benefits on
Fertility: Regression Kink Design Evidence from
Administrative Data in Taiwan作者: *Ruei-Hua Wang (王瑞樺, 國立臺灣大學
經濟學系), Tzu-Ting Yang

14:00 – 16:00 平行場次 D1~D4

D3 Topics in Macro

Room C101

(English Session)

Chair: C.C. Yang (Institute of Economics, Academia Sinica/楊建成, 中央研究院經濟研究所)

Economic Integration, Decoupling and Labor Share

Authors: *Terry Cheung (Institute of Economics, Academia Sinica/張庭源, 中央研究院經濟研究所), Han Yang

The Role of Marital Status for the Evaluation of Bankruptcy Regimes

Authors: *Tsung-Hsien Li (Institute of Economics, Academia Sinica/李宗憲, 中央研究院經濟研究所), Jan Sun

Demographic Change, Superstar Firms and Labor Share

Authors: Terry Cheung, *Eunbi Ko (Department of Economics, National Taiwan University/高恩琵, 國立臺灣大學經濟學系)

Automatic Stabilizer of Non-Balanced Budget Policy: Bayesian Variable Selection on Flexible Framework Model Using Real-Time Data

Authors: *Beny Trias Oktora (Department of Economics, National Dong Hwa University), Ming-Jen Chang

14:00 – 16:00 平行場次 D1~D4

D4 生產力, 勞動, 不確定性衝擊

C103 會議室

主持人: 賴景昌 (中央研究院經濟研究所)

Entry, Productivity, and Quality Innovation Under
Network Externalities

作者: *Yi-Ling Cheng (鄭宜玲, 國立中山大學經濟學
研究所)

Sectoral Wage Rigidity

作者: Juin-Jen Chang, Wen-Den Chen,
*Hsieh-Yu Lin (林雪瑜, 東海大學經濟學系)

Labor Share and Income Inequality: Inequality
between-Skill Groups

作者: Juin-Jen Chang, Chun-Hung Kuo, *Kun-Ying
Lei (雷昆穎, 國立清華大學經濟學系),
Chia-Ying Liu

Financial Frictions and Uncertainty Shocks

作者: *Shih-Yang Lin (林世揚, 國立臺灣大學經濟學
系), Yi-Chan Tsai, Po-Yuan Wang

~~ 感謝您的出席參與 ~~

臺灣國家層次碳社會成本推估: AR6 情境下的模擬分析

劉哲良, *張軒瑜, 葉俊顯

(中華經濟研究院)

碳社會成本 (social cost of carbon · SCC) 為氣候變遷因應措施執行成效評估脈絡下、最常使用的貨幣化指標。此一指標立基於損害成本觀點，計算每額外增加一單位碳排放所帶來之衝擊、並進一步以貨幣化方式來表示損害的大小；反之，亦可應用於衡量每減少一噸溫室氣體排放所帶來的效益。碳社會成本的模擬是一個動態分析的過程，須結合國際升溫情境之推估結果來進行與時俱進地的更新，方得以能夠配合各項環境條件的進展來進行模擬分析。聯合國氣候變遷第六次評估報告 (AR6) 自 2021 年開始陸續發布，其中提供了最新的升溫情境定義及長期推估；配合 AR6 推估結果來進行碳社會成本之更新，將有其必要性。因此，本研究主要目的，即是依循國際整合評估模型所揭示的架構及流程，配合 A6 升溫情境之臺灣降尺度結果及相關本土化參數來進行臺灣國家層次碳社會成本的模擬分析，以提供做為後續氣候相關政策的評估及決策支援之用。

關鍵詞: 國際層次碳社會成本, 聯合國氣候變遷第六次評估報告, 成本效益分析, 整合性評估模型

JEL 分類代號: Q54, Q56

* 為發表人

全球思考，在地行動 — 溫室氣體排放減量進程與對策： 以臺灣電子產業為例

*吳俊彥, 張可萱, 蘇嫻伊, 魏逸樺, 羅時芳
(中華經濟研究院)

因應國際減碳趨勢與國家政策情境，本研究以臺灣電子業的類別一與類別二碳排放作為研究範疇，搭配能源查核與抵換專案資料所建構的產業溫室氣體減量成本曲線，以及產業觀點的減碳策略配比資訊，藉此刻畫產業淨零排放路徑設定。資料指出電子業的碳排高度集中在主要大廠，儘管其碳排密集度與其它產業或它國相比皆呈現相對較低，但廠商仍面臨來自國際客戶端與政府部門的減碳壓力。由於臺灣電子業近年仍處於擴廠與營運成長階段，我們考慮產業在短中長程所面臨的挑戰，以制定符合臺灣電子業特性且可行的碳排減量進程與對策。我們的分析結果指出廠商除了透過持續自主減碳之外，也應該擴大再生能源的使用，並積極帶動供應鏈減碳行動，以期能於 2050 年落實淨零目標。

關鍵詞: 淨零碳排, 電子產業, 排放路徑

JEL 分類代號: Q58, Q56, D22

* 為發表人

高齡化社會的包容性低碳運輸策略

*楊晴雯, 張哲維

(中華經濟研究院)

聯合國在 2015 年啟動的「2030 永續發展目標」中為永續包容式運輸埋下明確的任務，即 2030 年以前為所有人提供安全、可負擔、易於使用及永續的交通運輸系統。於是包容式運輸在 COP27 大會中成為實現公正轉型的關鍵解決方案。我國亦於 2023 年提出淨零排放目標關鍵戰略，並以運具電動化與低碳化以及綠色運輸生活為主要戰略。惟以主動運輸為前導的國際包容運輸策略，在我國的社會與經濟結構發展下，能否在國內當前的低碳運輸戰略下被完整考量，在面對即將於 2025 年邁入超高齡社會的前景下，我國如何在包容成長與淨零目標間取得平衡，為本文主要探討重點。分析結果顯示，隨著年齡增加，對於汽機車等私人運輸的依賴程度會降低，取而代之為步行與自行車等非機動運具，但仍有超過三成的高齡者仰賴機車代步。在此趨勢下，即使在沒有淨零戰略的推動下，運輸部門溫室氣體排放也可能因為人口的逐漸減少以及高齡化，而在 2038 年之後開始下降。然而高度依賴機車代步的高齡者、以及超過三成的主動運輸者都可能面臨移動環境的安全疑慮。因此，交通建設資源需要考慮在運具電動化及交通運輸環境設計與建設間重新安排。

關鍵詞: 低碳運輸策略, 高齡化, 社會包容

JEL 分類代號: Q54, Q56, J14

* 為發表人

由社會保障覆蓋率看我國永續發展

*林佑澄

(行政院主計總處)

人類永續發展的追求涉及經濟成長、社會包容及環境保護等諸多層面，且彼此交互影響，難以單由部分面向努力即達到目標。聯合國所定的 17 項永續發展目標 (Sustainable Development Goals, SDGs) 及眾多指標就是為了督促各國能全方位的投入。就 SDGs 第 1 個核心目標 (Goal) 「消除各地一切形式的貧窮」來看，是希望各國依國情發展合適的社會保障制度，強化不利處境者的經濟安全及照顧服務，除可提高這些族群因應衝擊的能力，亦有助國家整體生產力的提升。本報告將介紹我國「SDGs 1.3.1 最低限度社會保障覆蓋 (至少受到一項社會給付保障) 人口」指標的建立，並由社會保障覆蓋率觀察我國永續發展狀況。

* 為發表人

驅動臺灣通膨與經濟成長的需求與供給因子

*蕭宇翔

(中央銀行經濟研究處)

2023 年 9 月

隨 COVID-19 疫情趨緩，各國陸續解除管制措施，全球需求快速復甦，而供應鏈瓶頸與俄烏戰爭導致供給面緊縮，全球通膨因而持續攀升，臺灣亦不例外。為了解需求面與供給面的變化如何影響臺灣通膨與經濟成長，本文採用結構式因子模型，設定符合供需理論的符號限制，認定總合需求與總合供給因子。根據本文估計的需求與供給因子可知，2021 年臺灣 CPI 通膨率快速攀升係同時反映需求快速的擴張，以及供給緊縮的問題；2022 年臺灣通膨居高不下則主要反映供給持續的緊縮，需求擴張程度則是明顯趨緩，並逐漸轉為緊縮。需求與供給因子同時下滑也使得臺灣於 2022 年第 1 季起步入景氣收縮期，經濟成長持續趨緩，臺灣央行因而面臨在穩定物價與協助經濟成長兩個目標間取舍的難題。本文實證亦顯示，當央行緊縮貨幣政策，需求因子會顯著地緊縮，供給因子則無顯著反應；而當全球供應鏈壓力上升，供給因子的反應則是明顯大於需求因子。供需因子的反應與預期相符。

* 為發表人

臺灣週頻經濟活動指標之建構

*吳俊毅, 朱浩榜
(中央銀行經濟研究處)

為了即時刻劃當前的經濟情勢，本文參照 Eraslan and Gotz (2021)的做法，編製臺灣的「週頻經濟活動指標」(weekly economic index, WEI)。目前國內的景氣指標多屬月頻指標，故本文之 WEI 是國內首個週頻率的景氣指標。再者，國內文獻多以政府發布之剛性資料(hard data)作為編製依據，而本文則同時利用剛性資料與網路資訊之軟性資料(soft data)，以期涵蓋更廣泛的資料面向。

本文的樣本期間為 2005 年 1 月至 2021 年 12 月。在編得 WEI 後，本文檢視臺灣 WEI 與重要經濟事件的對應性，並利用計量方法分析 WEI 與國內經濟活動之關係，發現 WEI 具有良好性質。實證結果彙整如下：(1) WEI 與國內重要經濟事件具有良好的對應關係，顯示 WEI 具有捕捉臺灣經濟活動變化的能力；(2)利用混合頻率 Granger 因果檢定，可知在樣本期間內，WEI 具有當期 GDP 及民間消費、輸出等重要組成項目成長率之預測資訊；(3)若以本土 COVID-19 疫情衝擊、全國升至三級警戒之 2021 年第 2 季作為 WEI 在即時預報(nowcast)上之應用範例，則可透過 MIDAS 模型，發現 WEI 確實具有刻劃當季經濟與民間消費成長率的能力，有助即時掌握景氣變化。

* 為發表人

Analyzing Taiwan's Exports and Imports Using Various Dimension Reduction Techniques

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

This study employs various dimension reduction methodologies to analyze and forecast Taiwan's exports and imports. By applying advanced techniques such as principal component analysis (PCA), the least absolute shrinkage and selection operator (LASSO), the three-pass regression filter (3PRF), and boosting regression, we aim to uncover underlying relationships within the export and import data. Our research delves into the dynamics of Taiwan's international trade, offering valuable insights for policymakers, economists, and businesses alike. Through a comprehensive examination of historical data and the application of dimension reduction approaches, this study provides a multifaceted perspective on Taiwan's trade performance, contributing to more informed decision-making and strategic planning in the global marketplace.

* Indicates presenter

Asymptotic Normality of Series Estimators for Semiparametric Mixed Frequency Regression Models

Wen-Jen Tsay (Institute of Economics, Academia Sinica)

*Hsin-Chieh Wong (Department of Statistics & Fintech and Green Finance Center,
National Taipei University)

An innovative mixed frequency analysis, based on data sampled at different frequencies, called Mixed Data Sampling, or MIDAS, regression models, was proposed previously to construct a new time series for matching the length of the lower frequency dependent variable. However, the advantages of regression models with mixed sampling frequencies are relatively far from clear. We derive the asymptotic properties of an ordinary least squares (OLS)-based method for conducting mixed data-sampling analysis, interestingly leading to the consistent property and asymptotic normality of the long-run impact. To do so, we use a Vandermonde matrix to approximate the unknown weighting function (or unweighted scheme) for the MIDAS regression model, enabling us to compute and achieve dimension reduction in practice easily.

Keywords: Semiparametric regression, MIDAS model, Vandermonde matrix, Consistent, Asymptotic normality

* Indicates presenter

On Weak Identification with Variable Selection for High-Dimensional Reduced-Form Models

*Chor-yiu (CY) SIN

(College of Technology Management, National Tsing Hua University)

This paper considers the following reduced-form model:

$$x_t = \pi' z_t + u_t, \quad t=1, \dots, n,$$

n is the number of observations, x_t and u_t are 1×1 , π and z_t are $p_n \times 1$, and $p_n = o(\exp n)$ is the number of instruments. Under hard/strong sparsity, and denoting the number of non-zero coefficients by $s_n \rightarrow \infty$, we assume the concentration parameter:

$$\mu^2 := \sum_{t=1}^n \pi' E(z_t z_t') \pi \geq C n s_n^{1-2\tau},$$

where $0 < C < \infty$, and

$$\tau > 1/2, \quad s_n = o\left(\left(\frac{n}{\log p_n}\right)^{\frac{1}{2\tau}}\right).$$

We first derive the asymptotic theory of EOGA+EHDIC (extended orthogonal greedy algorithm + extended high-dimensional information criterion) which selects \widehat{k}_n instruments from p_n of them.

Focusing on $k = p_n \leq \delta n$, $0 < \delta < 1$, Mikusheva and Sun (2022, *REStud*) consider a JIVE (Jackknife instrumental variable estimator) and devise a pre-test for weak identification. They prove the asymptotic size of the related Wald test is no greater than 15%, when the nominal size is 5%. We devise a Wald test of this kind with $k = \widehat{k}_n$ instruments. Independent realization data (sample-splitting data in i.i.d. cases) are used, while dependent observations are also considered.

Keywords: "Beta-min" condition, Concentration parameter, EOGA+HDIC, Independent realization, JIVE, Many weak instruments

JEL Classification: C12, C36, C55

* Indicates presenter

Globalization, Gender Wage Gap, and Female Labor Force Participation

Terry Cheung

Paul Ko

*Han Yang (Institute of Economics, Academia Sinica)

We study how globalization through international trade affects the narrowing of gender wage gap and the increase in female labor force participation. Equipped with sectoral domestic productivity shocks and trade shocks, we develop a quantitative trade model that leads to the expansion of the services sector. As female workers have more presence in the services sector than male workers, the rise in the services sector leads to a rise in relative female wages and female labor force participation. Our quantitative analyses show that trade-induced structural change is just as important as domestic-driven structural change (asymmetric productivity shocks) in explaining the rise in female employment and the narrowing of the gender gap in wages in the past decades.

* Indicates presenter

Are Cities Losing Innovation Advantages? Online versus Face-to-Face Interactions

Ruben Gaetani (University of Toronto)

Naqun Huang (Nanjing Audit University)

*Jing Li (School of Economics, Singapore Management University)

Yanmin Yang (Nanjing Audit University)

October 16, 2023

How did COVID-19 affect the innovation advantages of dense locations? Using data on the universe of U.S. patent applications, we find that the density premium in the production of novel inventions declined by 18.5%-22.9% in 2020-2021 relative to its pre-pandemic level. Smartphone data on local mobility suggest that the drop in the frequency of local interactions can explain a significant portion of this effect. While COVID-19 resulted in a temporary setback in the innovation advantages of dense locations, the role of urban density in facilitating the exchange and recombination of ideas is unlikely to be persistently replaced by online communication.

Keywords: Innovation, Density, Cities, Novelty

JEL Classification: D83, O18, O31

* Indicates presenter

Land Use Distortion in a Spatial Economy

*Wen-Tai Hsu (Institute of Economics, Academia Sinica)
Zheng (Michael) Song
Xin Zou

We quantify how the urban land use distortion affects welfare in China. We rigorously verify that land for residential use is more costly than industrial use in China, and such residential premium is sizable compared with the United States, Singapore and Taiwan. Based on a spatial equilibrium model, we formulate the annualized residential premium as a joint outcome of urban structure and land use distortion, where both components are quantitatively important. This framework allows for a multiple of counterfactual experiments. We find that the removal of land use distortion in a hypothetically free land market generates welfare gain of around 2.08%. When land by use reallocated to equalize residential land premium to the extent observed in the United States, we amplify the welfare gain to 2.14%.

* Indicates presenter

兩岸貿易結構變化趨勢及其影響與因應建議

*譚瑾瑜 (台灣經濟研究院), 林巍

本文主要目的為探討 2010 年以來兩岸貿易結構變化趨勢及其影響。使用資料主要分別來自「中華民國財政部貿易統計」、「中華民國主計總處」、「經濟合作暨發展組織 (OECD) 之全球附加價值貿易 (Trade in Value Added, TiVA) 資料庫」。本研究擬以 2021 年 11 月甫公布之最新附加價值貿易計算方式，首先透過比較 2010 年至 2018 年以附加價值貿易計算方式與傳統貿易計算方式之差異，分析兩岸貿易結構變化及兩岸貿易依存之現況。其次，依照 OECD 之行業標準，從產業別的角度，分就製造業及非製造業進行分析，觀察產業別兩岸貿易結構變化，並列舉兩岸進出口主要業別。再者，分析美中貿易戰對於兩岸貿易結構變化之影響，透過對照美中貿易戰中美國貿易代表署對中國大陸課徵之關稅清單，探討其對兩岸進出口主要產業之變化情形。

研究結果顯示，若以國內附加價值貿易計算我國出口到中國大陸的金額時，一般貿易口徑下我國對中國大陸的出口金額普遍存在明顯高估情形，尤其在美中貿易戰後更為明顯。至於依賴度部分，一般貿易口徑下對中國大陸的出口依賴度實際上被低估；在進口方面，臺灣對中國大陸的依賴度相對穩定，無明顯高估或低估。

同時，在美中貿易戰變化下，關稅清單對兩岸產業貿易造成不同程度之影響。其中，電腦、電子產品及光學製品製造業，對中國大陸不僅出口金額上呈現顯著增長，依賴度上也有所提升；但化學原料和化學製品出口金額與依賴程度皆呈現下降，帶來負面影響。因此，面對當前國際多變局勢，我國應持續關注兩岸產業競合發展情勢，擘劃新經濟發展策略以因應未來挑戰。

* 為發表人

台北市熊好券政策之經濟效益分析

毛驥文, 彭思遠, *劉名寰
(台灣經濟研究院)

本研究目的為分析「台北熊好券 2.0」之使用情形與成效評估。為振興受嚴重特殊傳染性肺炎 (COVID-19) 疫情影響的臺北市商家，臺北市政府接續 2021 年推動的「台北熊好券」政策，於 2022 年推動「台北熊好券 2.0」政策，針對臺北市旅宿、餐飲與零售、藝文、運動及市集等相關業者進行補貼，並在原有的 5 種券之外，另新增了農好券。期待能刺激民間消費，提升與營造臺北市產業執行數位轉型的意願與氛圍。

本研究透過問卷調查及經濟模型進行分析，問卷調查顯示民眾和合作店家對於「台北熊好券」整體政策滿意度分別為 91.5% 和 90.5%。在經濟效益方面，總體方面「台北熊好券 2.0」政策在短期內對全國實質 GDP 之貢獻約為 0.0034%，平均每 1 元「台北熊好券」預算帶動實質 GDP 增加 1.296 元；在帶動臺北市產值效果方面，「台北熊好券」政策投入 5.84 億元，約可帶動臺北市整體產業產值 10.96 億元，產值乘數約 1.88 倍。

此次民眾和合作店家對「台北熊好券」政策更為熟悉，皆使本次政策推動的效率與效益有明顯提升。民眾不再透過問卷大量反應希望發放紙本及不該使用 APP，反而是希望持續舉辦熊好券活動，顯示民眾對於透過 APP 使用熊好券的意願和能力已有顯著改善。合作店家也更熟悉「台北通 APP」的使用方式，在整體政策及核銷流程滿意度也顯著提升。

關鍵詞: 消費券, 數位票券, 總體分析, 產業關聯

JEL 分類代號: E2, L52, P36

* 為發表人

臺灣新創環境發展與政策回顧

*徐慶柏 (台灣經濟研究院研究六所)

世界經濟論壇(WEF)《2023 全球風險報告》將未來的全球風險收斂至經濟面、環境面、地緣政治面、社會面、與科技面等五大關鍵面向；對於危機的處理，透過政府對法規、標準的設立，搭配各式補貼與減稅措施，可產生立即性影響。然而，風險的產生會隨著人類活動的改變及自然災害的衝擊而改變，政府政策難以靈活做出調整，且在資源有限下，人力、物力、與資金的投入可能都會遇到巨大的挑戰。因此，對於危機處理除政府支持外，如能引導民間的參與，可能是「永續性」對抗風險的解決方案之一。

在眾多的的企業中，具有科技突破及商業模式創新能力的「新創企業」，具有發現問題、解決問題並兼顧獲利的特質；與大型企業不同，能快速失敗、快速試誤以進行靈活性調整，對於「黑天鵝」與「黑犀牛」問題的解決（或部分解決，減輕衝擊）能發揮一定的作用。例如：疫情期間的線上會議解決方案，Zoom 在科技大廠（如：Google Meet、Microsoft Teams、Cisco Webex）環伺之下仍占有一定影響力；太空科技獨角獸公司 SpaceX 的星鏈 Starlink 聯網服務，在烏克蘭對抗俄羅斯入侵中，成為烏克蘭武裝部隊和政府的一個重要工具。由此可見新創企業透過科技運用，能對人類發展過程中的方方面面產生巨大影響；各國政府對於創新創業的高度重視，自是理所當然。然而要形成一個強大的創業生態系，方能產生源源不絕的新創企業。

最為世界所知名的矽谷，是一個開放式創新的創業生態系；而矽谷的創新始於二戰後，由於美國國防部和情報界製造晶片和系統都位於該地區，因此而獲得「矽谷知名」；後續在 1960 年和 1970 年代吸引科技公司在 Palo Alto、Sunnyvale、Mountain View 和 North San Jose 等地區發展，進而形成一個大型科技聚落，而產生包羅萬象的科技與商業化應用已是後話。有鑑於矽谷的成功，各國無不想透過政策引導與資源的挹注，期望能透過創新創業提升國家經濟與整體競爭力。國際調研機構 StartupBlink 於 2018 年 8 月 27 日所發布的研究報告指出，透過對全球 954 個城市和 125 個國家/地區進行分析與排名排名，可發現「政府支持力度越高的國家，在創業生態系統排名中排名更高」。

有鑑於政府政策引導對於各個國家以及創業生態系發展的重要性，本研究嘗試透過對近年政府改善新創環境的做法進行盤點，並透過公開資料彙整我國創業生態系重要元素發展的現況，包括：新創企業家數、早期投資趨勢、主要投資者概況以及創育機構表現等資訊，透過進一步的數據分析以提出未來改善創業生態系的政策作法。除此之外，也希望透過本研究的進行，能吸引更多的學者投入創新創業對經濟影響的相關研究。

* 為發表人

Climate Change Awareness and Board Structure

Sheng-Syan Chen (Department of Finance, National Taiwan University)

*Yan-Shing Chen (Department of Finance and Center for Research in Econometric Theory and Applications, National Taiwan University)

Yong-Jyun Tu (Department of Finance, National Taiwan University)

October 2023

Using the adoption of the Paris Agreement in 2015 as an exogenous shock on the awareness of the climate change risks, we find that U.S. firms with high carbon emissions respond to the public's call by appointing directors with climate change-related experience and expertise (CC directors). The presence of CC directors is followed by an improvement in firms' environmental and emission management and a reduction in emissions. Capital market participants react favorably to the incoming of CC directors. CC directors obtain more board seats and receive higher compensation from high-emission firms. These findings suggest that directors' expertise or experience is value-relevant.

Keywords: Climate change risk, Board of directors, Climate governance, Paris Agreement

JEL Classification: G32, G34, Q54, Q56

* Indicates presenter

Effects of Mandatory ESG Disclosure: Talent Attraction, Retention, and Innovation Efficiency

*Kevin Tseng

(School of Business, Chinese University of Hong Kong;
College of Management and Center for Research in Econometric Theory and
Applications, National Taiwan University)

Rong (Irene) Zhong

(College of Business Administration, University of Illinois at Chicago)

August 22, 2023

This study provides novel evidence on whether and how mandatory ESG disclosure affects the incentives and productivity of knowledge workers. Using granular global patent-inventor data covering patents invented by 551,874 inventors and the staggered adoption of mandated ESG disclosure across 40 countries from 2002–2019, we find that knowledge workers are more likely to be attracted to and retained by firms that comply with an ESG disclosure mandate, leading to more efficient and higher quality innovation. Consistent with ESG mandates enabling firms to credibly convey their implicit commitments to stakeholders, we find that the effect is more pronounced when mandated ESG disclosure is well enforced, knowledge workers are less protected by employment legislation, and their firms have better ESG performance. Subsequently, firms become more efficient at innovation and experience greater value enhancement. Broadly, our study highlights a talent attraction and retention channel through which corporate disclosure promotes sustainable economic growth.

Keywords: Mandatory ESG disclosure, Knowledge worker, Holdup, Implicit contract, Innovation efficiency, Agency cost

* Indicates presenter

Unveiling the Dynamics of Climate Change Effects on US Corn Yields: A Novel Approach for Measuring Adaptation

Akira Hibiki (Graduate School of Economics and Management, Tohoku University)

*Stanley Iat-Meng KO (Graduate School of Economics and Management, Tohoku University)

Yi-Chun Ko (Asian Growth Research Institute)

Shinsuke Uchida (Graduate School of Economics, Nagoya City University)

This study employs a unique approach to assess the effects of climate change on US corn yields, emphasizing short-term and long-term impacts while quantifying adaptation. Leveraging a comprehensive dataset encompassing corn production and weather data, we challenge conventional assumptions by introducing time and county-varying coefficients that reveal the dynamic nature of adaptation. Our findings indicate that past temperatures significantly shape farmers' expectations, influencing their adaptive strategies. Specifically, we identify a negative impact of hot temperatures, which diminishes in the presence of higher past temperatures, reflecting adaptation. We simulate the effects of a 2°C temperature increase, uncovering substantial short-term negative impacts that attenuate over the long term. Our research not only advances understanding of climate change adaptation in agriculture but offers valuable insights for policymakers addressing climate challenges in the agricultural sector.

Keywords: Adaptation, Climate change, Short-term and long-term effects, US corn yields

JEL Classification: Q11, Q15, Q51, Q54

* Indicates presenter

Extremum Estimators, Model Selection, and Model Averaging

*Hon Ho Kwok

November 15, 2023

This paper aims at developing a unified theory of consistent estimation under misspecification, model selection, and model averaging for regression and social interaction models. First, the unified theory is based on prediction errors. The consistent and asymptotically normal estimators are nonlinear least squares estimators derived from in-sample prediction errors. The model selection and averaging criteria are derived from out-of-sample prediction errors. These are generalizations of Mallows Cp. Second, we develop two types of model averaging: averaging over predicted values (prediction averaging) and over parameters (parameter averaging). Third, the proposed methods are motivated by the estimation quality and model uncertainty problems in social interaction models. The model selection methods are used for selecting networks, variables, and conditional mean specifications. The model averaging methods are used for deriving predicted values and parameter estimates of lower variances and mean squared errors.

* Indicates presenter

Two-Step Empirical Bayes Methods

*Yu-Chang Chen

(Department of Economics, National Taiwan University)

Empirical Bayes (EB) methods are widely utilized in economics for estimating individual and group-level fixed effects across diverse contexts, including teacher value-added measures, hospital qualities, and neighborhood effects. While estimates generated by EB are often incorporated into other statistical analyses like regression models, the econometric properties of these two-step procedures have not been thoroughly investigated. This paper addresses this knowledge gap through two key contributions. First, we introduce a unified framework for two-step EB methods that applies to both linear and non-linear models, offering insights into their frequentist properties and assessing their robustness against model mis-specification. Second, we undertake a critical evaluation of commonly-used two-step EB methods in existing empirical research. Our analysis demonstrates that these methods can introduce a systematic bias, particularly in non-linear models.

* Indicates presenter

Specification Analysis in Quantile Regression Models with Control Functions

*Jen-Che Liao

(Department of Economics, National Chengchi University)

Xiaojun Song

(Department of Business Statistics and Econometrics,
Guanghua School of Management, Peking University)

September 17, 2023

This paper proposes nonparametric consistent tests for correct specifications in a quantile regression model with a control function. Specifically, our tests include the specification test of a parametric conditional quantile function, the specification test of a parametric control function, and the test of exogeneity of explanatory variables. Using a transformation of quantile restrictions to mean restrictions under the null hypothesis (Zheng (1998)), the proposed tests are constructed based on the mixed residuals that combine the null and alternative models. The asymptotic properties of the proposed tests are established. To improve inference accuracy, we suggest a simple wild bootstrap approach, with its theoretical justifications provided. A simulation study examines the finite-sample properties of the proposed tests. For empirical illustration, we apply the proposed methods to testing quantile Engel curves with endogenous total expenditure.

Keywords: Control functions, Quantile regression, Series estimation, Specification tests, Wild bootstrap

* Indicates presenter

Short-Term Momentum in Mutual Funds

*Lawrence Hsiao

(Department of Finance, National Taiwan University)

Funds with higher returns in the previous quarter continue to outperform in the subsequent month. This short-term continuation in performance cannot be explained by the market, size, value, momentum, profitability, investment, or expected growth factors. We find that earnings momentum accounts for this short-term momentum in funds. That is, winner funds in the past quarter continue to outperform because they hold relatively larger positions in stocks with positive earnings surprises in the recent past. Motivated by this result, we propose a return-based procedure to infer whether an active manager has fundamental skills - the capability of predicting firms' forthcoming earnings surprises.

* Indicates presenter

Financial Constraint of the Home-Builder and the Housing Price Dynamics

*Jui-Lin Chen

(Department of Economics, Duke University)

November 1, 2023

This paper examines the construction decision of home builders under financial constraints and their impact on housing prices in response to changes in interest rates. I develop a model that considers standard heterogeneous households making choices in consumption and housing with different housing supply setups: fixed housing supply or houses built by home builders. I show that in a fixed housing supply equilibrium, housing prices decrease as interest rates increase because higher rates discourage housing demand. However, in a home-builder equilibrium, the housing price may increase with an increase in interest rates due to the time-to-build property and financial constraints that discourage home builders from constructing. This is consistent with empirical evidence indicating a negative correlation between housing start growth and real interest rates, as well as the housing price comovement with a lag in housing starts. It also provides a rational explanation for the post-COVID housing price patterns, which cannot be achieved by solely considering the housing demand. Therefore, housing price dynamics will exhibit differing patterns when interest rates change, depending on whether one considers fixed and variable housing supply setups or fixed and adjustable mortgage rate systems.

* Indicates presenter

半導體產業對全球節能減碳效益

*岳俊豪, 陳佳楹
(工研院產科國際所)

「台積電每用 1 度電生產半導體，可幫世界省下 4 度電」是 2021 年台積電 ESG 報告書上的焦點故事。半導體產業是臺灣的關鍵產業，半導體晶片的特色是價高質精，但生產過程也會耗費大量的水電資源，故半導體產業的資源投入與產出效益值得進一步探討。工研院產科國際所參考美國能源效率經濟委員會 ACEEE 手法，估算 ICT 產業所產生的數位賦能應用，包括智慧製造、智慧交通等，可為全球總用電節省約 11.8%，再透過全球半導體聯盟 GSA 等研究，拆解臺灣半導體產業的節電貢獻。本研究說明以數位賦能協助全球淨零減碳，將使臺灣的半導體跨國供應生態與全球的消費生態緊密結合，成為共創共榮的產業關鍵夥伴。

關鍵字: 數位賦能, 節能效益, 人工智慧

* 為發表人

數位賦能協助產業邁向淨零目標

*陳佳楹, 岳俊豪
(工研院產科國際所)

數位浪潮席卷全球，在全球數據需求快速增長下，網路通訊的使用對於能源需求的影響亦成為關注重點。本研究以追蹤資料模型，針對 1990~2019 年全球 158 國數據進行分析，探討網路通訊技術應用對全球碳排放量的影響。經研究發現，網路使用對全球碳排放量有顯著的正向影響效果。然而，透過引入國家特徵，進一步比較網路使用是否對不同類型的國家帶來不一樣的影響，本研究發現數位賦能所帶來的減碳效益已在數位程度高的國家顯現。

* 為發表人

How Can Green Investments in Emission-Intensive Industries Help Transform to Net Zero by 2050 in Taiwan?

*Shih-Mo Lin (PhD Program in Business, Chung Yuan Christian University)
Yu-Hsuan Fu (Institute of Economics, Academia Sinica)
Daigee Shaw (Institute of Economics, Academia Sinica)
Wen-Hsiu Huang (Department of Public Finance, Feng Chia University)

This study aims to fill the gap of the shortage of economic incentives to help the R&D and deployment of low-carbon technologies and NETs (negative emission technologies) in emission-intensive industries (i.e., iron & steel, petrochemicals, cement) to meet the 2050 net zero pledge in Taiwan. This study applies the E3ME-FTT model, linked with the two-factor learning curve of low-carbon technologies and NETs in emission-intensive industries, to assess how carbon pricing and green investment in emission-intensive industries can affect the development of the technologies to help 2050 net-zero transformation in Taiwan. The two factors of the learning curve are learning-by-doing and learning-by-researching.

Based on these two factors, we distinguish two types of green investments. The first type is the investment in reducing GHG emissions and removing GHG stock. This type of investment would have a learning-by-doing effect. Since reducing and removing are the emitters' obligations according to the principle of internalizing externalities, the GHGs reduced and removed are private goods. The second type is the investment in R&D of low-carbon technologies and NETs to generate innovative knowledge, which is generally a public good. The R&D investment would have a learning-by-researching effect and spillover effect. The funding for green investments can come from the public or private sectors.

The results suggest that green investments can help reduce emissions, remove more carbon stock in the air, and positively affect GDP and industrial output. For green investment in GHG reduction and removal, GDP and industrial output perform better if the funding for green investment comes from the private rather than the public sector. For green investment in R&D, industrial output performs better if the funding comes from the public sector. The carbon tax revenue can be a crucial source for government green investments.

Keywords: Net-zero, Green investment, R&D, Learning curve, Carbon pricing, Revenue-neutral recycling

* Indicates presenter

When Love Hurts: the Impact of Intimate Partner Violence on Later Life Outcomes

Harrison Chang (University of Toronto)

Shiau-Fang Chao (National Taiwan University)

*Kuan-Ming Chen (National Taiwan University)

Ming-Jen Lin (National Taiwan University)

August 6, 2023

We study the impact of Intimate Partner Violence (IPV) on various aspects of the victims' lives throughout the course of violence, including their marital decisions, labor market performance, fertility rate, and mental health. Our data consists of the universe of administratively reported IPV cases primarily from hospitals, police, and helplines in Taiwan from 2012 to 2018. We use later-reporting victims as control groups under a staggered event-study framework. Among all victims who eventually report IPV to the officials, we find (i) the probability of divorce increases for both men and women after the report but not at the violence onset; (ii) women's employment rate decreases after the onset of violence, but an incremental positive effect follows after reporting, particularly among young women; (iii) reduction in additional childbirth after reporting regardless of the victim's gender; (iv) rising depression outpatient-visits after violence and reporting among women.

* Indicates presenter

Air Quality (Mis)Perception and Policy Preferences in Taiwan

Po-Ju Chang (National Taiwan University)

*Yau-Huo (Jimmy) Shr (National Taiwan University)

Air pollution is currently the foremost environmental risk to human health globally. In Taiwan, the majority of citizens indeed consider air pollution as the most serious environmental problem, and improving air quality has consistently been a central issue in policies concerning the nation's sustainable development. However, little is known if public concerns and policy debates are grounded in the scientific reality of the current state of air quality, despite air quality's long-term improvement since monitoring data became available. Using a nationwide survey, we first document a stark discrepancy between the empirical truth and citizens' air quality perceptions. More than two-thirds of the respondents underestimate the actual air quality in their home cities or counties; moreover, nearly 90% of the respondents are unaware of the recent improvement in air quality. Using a recentered treatment approach, we find suggestive evidence that exogenous short-term variations in air quality influence public perceptions, which is consistent with the availability heuristics. We then employ an information experiment to explore how the dissemination of accurate information about recent air quality improvements affects citizen support for an air quality enhancement initiative and the approval ratings of governmental authorities. Our results show that the information increases the willingness-to-pay for the initiative by more than 20% and that the information treatment effect is more pronounced among respondents who hold the most substantial misperceptions regarding air quality improvements. Additionally, we find the information increases the approval rates for both local and central governments in addressing the air pollution issues. The findings highlight that distrust in governmental authorities can distort welfare analysis and misguide policy decisions.

* Indicates presenter

Temperature and Risky Road Behaviors

Hsing-Tzu Liao (National Taiwan University)

Yau-Huo (Jimmy) Shr (National Taiwan University)

*Feng-An Yang (National Taiwan University)

An emerging literature has documented heat-induced unlawful behaviors. Using administrative traffic violation records and high-resolution weather data in Taiwan from 2008 to 2020, we investigate the impacts of temperature on traffic violations. The results show that elevated temperatures increase traffic violations and that the effects are stronger on days with average temperature exceeding 28°C. Furthermore, we find that the impact of temperature is more pronounced among motorcycle and scooter riders than among car drivers, suggesting that climate control systems in cars provide protection during high-temperature conditions; this finding also indicates the costs of temperature extremes are disproportionately borne by individuals with lower socio-economic status. Our results are robust to various model specifications and checks. Our supplementary analysis using data from Taipei City shows little evidence of avoidance behaviors that road users reduce trips on hot days.

* Indicates presenter

壽險業資本監理

張士傑, *曾毓英 (國立政治大學風險管理與保險學系), 孟欣樺

2023/8/3

現行資本監理採風險資本額制度(RBC)·將於 2026 年適用保險資本標準(ICS)·因適格資本認定和風險資本計提標準嚴格·壽險業資本適足率將顯著下降。當壽險公司觸及監理門檻時·主管機關將採取監理干預措施·本研究建立預期效用模型分析監理干預對壽險公司資產配置與保單持有人影響。結果顯示:(1)同時採行限縮風險投資和限期增資監理干預措施對保單持有人效用最高·而國外資產可增加保單持有人效用。(2)保單合約期間越長·保單預定利率越高·保單持有人效用越高·而監理干預標準提升與壽險公司財務槓桿比越高·將降低保單持有人效用。

關鍵詞: 清償能力, 資產配置, 監理干預, 增資, 效用

* 為發表人

Bans on Same-Sex Marriages and Social Performances of Firms

Ning Tang (School of Business, Jiangnan University)

Iftekhar Hasan (Fordham University, Bank of Finland and University of Sydney)

*Chih-Yung Lin (Department of Information Management and Finance,
National Yang Ming Chiao Tung University)

We use staggered state laws in the US to investigate whether bans on same-sex marriages affect firms' social performances. We find a significant decrease in social pillar scores for firms headquartered in states that have adopted such laws (treatment firms) relative to other firms. Specifically, we discover that bans break the firm's commitment to the community, evade its product responsibility, neglect its workforce, and pay less attention to human rights. This drop is more pronounced for treatment firms in states with more social organizations. We also provide direct evidence that the number of positive social events for treatment firms experience a significant drop after the adoption of the bans. These bans also have a negative spillover effect on the firm's ESG score. We thus conclude that the bans could be a good excuse for firms not to improve their ESG.

Keywords: Same-sex marriage, Social performances, ESG score, Environmental and governance scores

JEL Classification: I38, K38, G34, G41

* Indicates presenter

Detecting Changepoints in Gaussian Sequential Data Using Copula-Based Markov Chain Models in an Online Setting: Exploring the Application in Financial Time Series

*Li-Hsien Sun (Graduate Institute of Statistics, National Central University)
Dong-Hua Kuo (Graduate Institute of Statistics, National Central University)
Ming-Hua Hsieh (Department of Risk Management and Insurance,
National Chengchi University)
Chi-Yang Chiu (Division of Biostatistics, Department of Preventive Medicine,
University of Tennessee Health Science Center)

September 13, 2023

Online changepoint detection involves determining if there are changes in a sequential data structure over time. Addressing the dependence structure is crucial in analyzing time series data. To address this, we propose a copula-based Markov chain model that uses the Clayton copula and Gaussian distribution as the marginal distribution. To overcome the limitations of the independence-based conjugate structure, we incorporate the Markov chain Monte Carlo (MCMC) method for online changepoint detection. Simulation experiments demonstrate that our proposed model outperforms competitors in terms of precision and mean absolute error (MAE) across various scenarios. In empirical studies, we apply our model to analyze the daily log returns of the S&P 500 Index, the Nikkei 225 Index, and the FTSE 100 Index during significant events like the 2008 financial crisis and the 2020 COVID-19 pandemic. The results successfully capture the structural changes in these real-world applications.

Keywords: Online changepoint detection, Bayesian inference, Serial dependence, copula, Markov model

* Indicates presenter

A General Equilibrium Assessment of Global Emission and Economic Impacts: Stimulating Climate Action through the EU's Carbon Border Adjustment Mechanism

*Kenneth Bicol Dy, Han Yang
(Institute of Economics, Academia Sinica)

Before the European Union (EU) implemented the Carbon Border Adjustment Mechanism (CBAM), multiple studies analyzed its projected economic and environmental impacts. These focused primarily on CBAM's capacity to reduce carbon leakage and safeguard the competitiveness of EU exports. Yet, CBAM holds a broader objective: to instigate change in regions without abatement—an impact that has been mostly overlooked in the current literature. This paper uses a general equilibrium trade model, which incorporates endogenous carbon emissions, carbon taxes, and tariffs, to assess the potential impacts of CBAM on real income and carbon emissions worldwide. We delve beyond immediate impacts to examine CBAM's capacity to incentivize non-abating nations to participate in carbon pricing initiatives. This requires finding the carbon price that maximizes the real income of non-abating countries in response to EU CBAM, and evaluating its global equilibrium effects. Our findings reveal that when CBAM effectively prompts cooperation from non-abating countries, the total effect results in a -1.88% reduction of global carbon emissions, compared to an immediate effect causing a -0.36% reduction. Interestingly, the total effect of CBAM is over five times its immediate effect, underscoring its potential effectiveness in addressing the global climate challenge.

* Indicates presenter

Multinationals, Trade and Emissions

*Yuta Watabe (IDE, JETRO Institute of Developing Economies)
Joschka Wanner

International economic integration is increasingly characterized by multinational production (MP). The environmental implications of this shift are unclear as different forms of multinational activity affect emissions in different ways, both for production and transportation. MP may reduce pollution by transferring cleaner technology abroad or exacerbate it by outsourcing dirtier production to foreign countries with pollution-intensive technologies. In terms of transportation emissions, MP may substitute trade, reducing the emissions from shipping, or enhance trade and accelerate pollution from transportation. We provide a quantitative general equilibrium framework that brings together MP, international trade, and carbon emissions from production and transportation. As the available data on MP and emission does not fully identify multinational activity and emissions, we consider the range of calibrated models compatible with the data and accordingly report result intervals for all counterfactual scenarios considered.

* Indicates presenter

The Credit Channel of Housing Wealth Shock Propagation

*Ziho Park

(Department of Economics, National Taiwan University)

Using data on seven million US establishments' credit scores during the Great Recession, I find that the housing net worth shock led to the declines in credit scores of US firms. Importantly, I find two patterns that are contrasted with Mian and Sufi (2014) where they reject credit supply channel. First, credit scores decline not only in non-tradable industries but also in tradable industries. Second, such a negative credit effect is larger for younger and smaller establishments, consistent with the idea that young and small establishments tend to rely more on business owners' collateral. My findings therefore resurrects credit supply channel that has been rejected by an important strand of the literature. Lastly, I do not find that counties with more local banks experience a sharper decline in credit scores, inconsistent with bank collapse channel but is not inconsistent with collateral collapse channel.

* Indicates presenter

從進口原物料脆弱風險檢視臺灣產業韌性

*楊書菲(中華經濟研究院區域發展研究中心),彭俊能(財團法人電信技術中心),陳馨蕙(中華經濟研究院)

美中貿易戰、COVID-19 疫情對全球造成嚴重供需失衡與價格波動，使各國意識到供應鏈中斷可能對國家安全及產業發展造成衝擊。在戰略安全考量下，去風險化 (De-risking) 思維興起，逐一針對進口原物料品項盤點斷供之可能性與預警，已成為各國近年重要經濟與國家安全策略。然而，過往文獻對於進口原物料的斷供風險與評估甚少有意義性判斷標準與量化之分析，更缺少針對國家戰略產業所需進口物資進行逐品項之全面檢視。OECD-WTO TIVA 資料庫統計臺灣產業在全球價值供應鏈參與程度超過六成，故本研究以臺灣 2017-2022 年的進口貿易統計 HS 6 位碼海關稅則月資料進行盤點，共計有 5,195 個產品項目，對應 25 個進口來源，合計共 921 萬筆資料。參考歐盟 2022 「供應鏈預警通知監測系統」(Supply Chain Alert Notification monitoring system, SCAN) 逐項檢視進口集中度情況與價量資訊。鑒於歐盟 SCAN 方法缺乏客觀評估之價量異常與斷供量化標準，且忽略進口原物料與價量依其產業供需有其季節性 (Seasonality) 或隨時間出現結構性改變，如美中貿易紛爭、疫情以及地緣政治興起的 2018-2022 年間，進口物料價量可能因政策改變而有短暫或長期變化至一個新水平(Level Shift)的狀況。有鑑於此，本研究首先利用多季節趨勢分解 (Multiple Seasonal Trend decomposition; MSTL)模型將各進口產品的價量逐一建構時間序列模型。將序列初步分解為趨勢項(trend)、季節項(seasonal)與剩餘項 (remainder)，再透過 MSTL 的迭代法估計出季節性成分並進一步調整序列的趨勢項。其次，透過 Friedman's super smoother 程序估計出調整後趨勢項的估計值，並以此品項價量時間序列模型估計值與實際值的差異來判斷實際值中是否存在異常值，並進一步以異常值的高低來區分為進口價量值的正向異常值或負向異常值。相對歐盟與 SCAN 以同期間價量異常之判定方法，本研究更細膩考量了貿易品項價量間或許存在交互變異與時間上的落差，降低異常值標準設定上的誤判機率。當進口價格出現正向異常波動且進口量出現負向異常波動的產品視為目前正面臨較高斷鏈可能性；若價格與量皆呈現正向異常波動且進口集中度快速趨向於單一來源，則該產品需求可能有結構性攀升情勢，應列入未來可能斷供或過度依賴單一來源之預警品項。最後，本計畫再依照產業別將模型檢定出價量波動異常的品項進行分類，依異常發生頻率與進口集中度建立安全風險評估矩陣(Safety Risk Assessment Matrix)，以供產官學檢視各產業關鍵原物料斷鏈風險，儘早針對關鍵物資進行去中心化布局與調整，增加產業韌性，以維持國家戰略物資安全與產業穩定。

關鍵詞: 進口脆弱性, 供應鏈斷鏈, 韌性, 風險評估矩陣, 多季節趨勢分解

* 為發表人

臺灣永續之路：企業執行永續減碳的動機，進程暨現況

*白宗城(達勝科技, 中華採購與供應管理協會), 陳馨蕙(中華經濟研究院), 簡錦漢(中央研究院經濟研究所)

永續 (Sustainability) 浪潮興起已成為全球話題。從 2004 聯合國「WHO CARES WINS」提出環境治理 (Environmental)、社會治理 (Social) 以及公司治理 (Governance) 三大面向 (簡稱 ESG)，到 2015 年聯合國「2030 永續發展目標」(Sustainable Development Goals, SDGs) 擬訂 17 項核心目標，ESG 與 SDGs 成為全球不分國籍、區域或企業共同推動永續的軸線。其中，SDGs 目標 13 氣候變遷行動，更是從各國政府的推動方針延伸到企業的減碳、減排使命，再加上臺灣金融管理委員會要求上市櫃公司 2023 年起陸續於年報揭露碳盤查結果、Apple 要求供應鏈 2030 年達成中和，以及 2023 年將試行之歐盟《碳邊境調整機制》(Carbon Border Adjustment Mechanism, CBAM) 與美國的《清潔競爭法案》(Clean Competition Act, CCA) 等，皆為企業於後疫情時代不得不面對的新賽局 (NEW GAMES)。從供應鏈角度思企業淨零路徑與落實推動 ESG 永續範疇的行動方案，已經成為建構企業韌性的重要議題與挑戰。然而，臺灣逾 98% 企業為中小企業，在供應鏈永續浪潮下面臨不知如何切入的焦慮中，如何尋求解方，轉風險為機會是企業不得不思考的議題。有鑑於此，為合理反映臺灣各產業永續減碳的動機、進程暨現況，本研究以上市、上櫃、興櫃公司，輔以天下製造業 1000 大企業與中華中信 5000 大企業為代表性母體，依照各產業對國內生產毛額的貢獻度進行分層抽樣之問卷調查。在前述抽樣基礎下，全體製造業中高達 28.7% 受訪企業回報「完全未或無計劃投入」永續減碳相關工作；37.9% 企業「計畫投入但尚未有明確方向或尚未採行」，僅 33.4% 受訪企業回報「已採取相關永續減碳工作或策略」，且主要策略為「成立永續/減碳小組」、「組織溫室氣體盤查」與「盤查產品生命週期 (產品碳足跡)」。從根本端投入「減碳永續人才培養」、「搖籃到搖籃的產品設計/ Cradle to Cradle 零廢設計」以及「與企業夥伴建立共享庫存」則較少企業採行，甚至勾選比例僅個位數。非製造業更僅有 16.9% 已採取減碳相關工作或策略，且做法侷限在「成立永續/減碳小組」、「行政辦公部門節能減碳減廢」與「更換高效節能設備」。最後，臺灣企業主要因「企業形象/公共關係」以及「客戶要求」而投入永續減碳相關工作，四成左右企業不明白投入永續減碳對自己營收或營運成本的影響程度。製造業與非製造業皆有三成業者認為投入永續減碳工作會帶來成本之增加，且營業成本平均預期將攀升 3~4%，僅分別有 8% 與 10.2% 企業預期營業收入將增加，且增加幅度為 0.81% 與 1.23%。前述調查資料顯示，臺灣永續轉型之路還漫長，不少企業認為投入永續減碳工作是負擔，而非增加營收或轉型之機會。如何提供企業永續減碳之誘因，制定相關產業永續減碳作業流程方向以降低執行成本與企業焦慮，可能是未來推動永續轉型政策重要面向之一。

關鍵詞: 永續, 永續發展目標, 碳邊境調整機制, 供應鏈, 韌性

* 為發表人

Dynamics of Youth Overseas Employment under Pandemic and Geopolitical Risks: New Insights from the Case of Taiwan

Ya-Chi Lin (Department of Economics, Feng Chia University)

*Shin-Hui Chen (Division of Taiwan Economy, Chung-Hua Institution for Economic Research)

Huan-Kai Tseng (Department of Political Science, National Taiwan University)

Yu-Tzung Chang (Department of Political Science, National Taiwan University)

Kuo-Chun Yeh (Graduate Institute of National Development, National Taiwan University)

Chung-Cheng Pai (Supply Management Institute, Taiwan)

Taiwan's brain drain has been a significant concern under global supply chain reconstruction and the outflow of talent can be a problem for the future domestic economic growth. Based on the 3674 valid questionnaires conducted in 2015 and 2022 respectively, the binary logit model is applied to investigate the dynamics of Taiwan's youth overseas employment and the pull and push drivers of the youth labor and the talent movement. Specifically, we observe the intention and motivations of Taiwanese to work abroad and returning home. Preliminary results showed that no clear evidence to support Taiwan's brain drain in the case of high tech and financial sectors employees with high education levels before 2016. Personal considerations, including salary, broadening international vision and career bottlenecks, supported Taiwan's youth and talent to seek employment in China. Second, the 2022 survey showed that workers with a master or doctoral degree tend to have a higher intention to work overseas, while overseas workers with higher education levels have less intention to move back to Taiwan. Moreover, most of Taiwan's overseas employees experienced working in China, while the 2022 survey showed a substantial shift in the workers' choice and the pull factors from destination areas under the US-China trade conflicts and the pandemic. The preference priority of the youth labor and the talent for working in China decreased sharply and the preference priority for working in U.S. increased. Finally, the driving factor for young people and talent to seek employment overseas included better pay, industry potential development, and increased living and working experience. While responsibilities for taking care of aging parents or children is the one mainly pull back factor for oversea employee to return home, expect for short-term expatriate. Taiwan's brain drain alerts us that more policy efforts should be made.

Keywords: Brain drain, Geopolitical risks, Pandemic, Youth overseas employment

* Indicates presenter

俄烏戰爭衝擊對能源價格及歐元區經濟整合之影響

*葉國俊 (臺灣大學國家發展研究所)

林雅淇 (逢甲大學經濟學系)

俄烏戰爭下俄國因西方制裁減少天然氣輸出，歐洲能源價格上漲陰霾仍存。IMF (2022) 指出，各國能源市場、配比、交易型態、管制及政策措施不同，對零售能源價格影響程度有別，進而使各國通膨產生顯著差異，部份國家曾逾 10%，故相繼提出不同因應措施，反致歐元區整合指標分歧擴大。本研究即在檢視前述情勢對歐元區整合的負面效應：首先以長期公債殖利率為指標，採變異數收斂法 (sigma-convergence test) 檢視歐元區整合；其次應用追蹤資料回歸模型，檢視各國能源價格對通膨與長期公債殖利率影響程度。據此評估 2022 年歐盟推出 REPowerEU、電價與用電管制成效，以及美國「降低通膨法」後的政策調整建議。

關鍵詞: 經濟整合, 歐元區, 變異數收斂檢定, 能源價格, 俄烏戰爭

* 為發表人

Spatial Differentiation and Entry: Evidence from Retail Gasoline Market in Taiwan

*Jian-Da Zhu

(Department of Economics, Fu Jen Catholic University)

November 2023

Preliminary draft. Please do not quote or cite.

This study utilizes data from the retail gasoline market in Taiwan to investigate how new entrants determine their locations, aiming to either increase or decrease spatial differentiation compared to incumbents. The results indicate that gasoline stations adopting a new brand tend to position themselves more close to those associated with the incumbent brand. This finding aligns with the max-min theory, suggesting that firms opt to maximize differentiation in one dimension while minimizing it in another. Furthermore, it is observed that firms operating multiple stations (chain stores) are more likely to locate close to independent firms with a single station in the market. This may be attributed to upstream refineries offering gasoline to chain stores at lower prices compared to those extended to independent stations.

* Indicates presenter

The Effect of Compensation on Turnover: Evidence from Employer-Employee Administrative Data

Yu-Chun Cheng (Department of Economics, Cornell University)

Hsing-Wen Han (Department of Accounting, Tamkang University)

*Hao-Chung Li (Department of Economics, National Chengchi University)

Wen-Chieh Lee (Department of Economics, National Chengchi University)

Tzu-Ting Yang (Institute of Economics, Academia Sinica)

We compare workers' turnover rate among Taiwanese firms before and after the expensing employee stock bonus (EESB) reform 2008. The change in employee compensation is retrieved from the employer-employee's tax return administrative dataset. The results show that EESB has negatively impacted workers' compensation by significantly reducing the value of workers' stock bonuses after 2008. Specifically, we quantified the relationship between employees' compensation and mobility decisions and found those highest 10% paid workers suffered the most by exhibiting 50% more quitting likelihood which is equal to the -1.32 elasticity of quitting to annual compensation reduction of in total compensation.

* Indicates presenter

The Effect of Capital Gains Taxation on Housing Sales: Evidence from Taiwan

Shian Chang (Department of Economics, National Taiwan University)

*Tzu-Ting Yang (Institute of Economics, Academia Sinica)

Jian-Da Zhu (Department of Economics, Fu Jen Catholic University)

September 2023

This paper examines the impact of the 2016 tax reform in Taiwan on the housing market, specifically focusing on the transition from transaction-based taxes to capital gains taxes. Before the reform, real estate transaction taxes were determined by the transaction price, whereas post-reform, they were based on capital gains. This study uses a regression discontinuity design to quantify the effects of the tax reform. The results show that this reform led to a reduction in capital gains, indicating a "lock-in" effect for homeowners. For transactions with a holding period of less than two years, the capital gains compared to the original purchase price dropped from 30% to 10%. This change is mainly because the initial purchase price went up, which implies that some homeowners who bought their properties at a lower price chose not to sell them.

* Indicates presenter

The Effect of Paid Parental Leave Benefits on Fertility: Regression Kink Design Evidence from Administrative Data in Taiwan

*Ruei-Hua Wang (Department of Economics, National Taiwan University)
Tzu-Ting Yang (Institute of Economics, Academia Sinica)

This study investigates the causal effects of paid parental leave benefits on fertility decisions. The parental leave policy in Taiwan provides benefits calculated as 60% of average insured salaries from the six months preceding the leave, with a maximum threshold. Utilizing administrative data, we employ a regression kink design to estimate the impacts of discontinuous changes in the benefit schedule on childbirth. Our findings reveal that a 1% increase in the replacement rate leads to a 0.64% rise in women's fertility, while the impact on men's fertility remains insignificant.

Keywords: Fertility, Paid parental leave, Regression kink design
JEL Classification: J13, J16, J18

* Indicates presenter

Economic Integration, Decoupling and Labor Share

*Terry Cheung, Han Yang
(Institute of Economics, Academia Sinica)

This article investigates the declining labor share in the global economic landscape, a trend that has caught the attention of both academics and policymakers. The primary focus is on trade-induced capital accumulation, a process fueled by the growing accessibility of capital resources and the widespread adoption of capital-intensive technologies. Building on the Rybchinski theorem, the article posits that the increased allocation of resources to capital inherently increases the adoption of more capital-intensive technology, and reduces labor's share of income. Our analysis reveals that trade shocks account for 34% of this global reduction, while TFP shocks contribute to 50% of the decline.

* Indicates presenter

The Role of Marital Status for the Evaluation of Bankruptcy Regimes

*Tsung-Hsien Li (Institute of Economics, Academia Sinica)
Jan Sun

The consumer finance literature has emphasized the importance of income and expense risk for the evaluation of bankruptcy regimes. Single and married households differ in the risks they face. In this paper, we build the first quantitative consumer default model that explicitly models singles and couples. We calibrate our model to the United States in 2019 and estimate expense shocks separately for single and married individuals. Our calibrated model generates large differences in bankruptcy rates across marital status as in the data. We examine how the preferred degree of bankruptcy leniency differs between singles and couples. There are several channels at work: Differences on the income side between singles and couples cause couples to prefer a stricter bankruptcy regime due to the intra-household insurance channel. However, increased risk for couples due to divorce and on the expense side outweighs the first channel. The net effect is that couples prefer more lenient bankruptcy than singles. Our findings suggest that marital status is important to take into account for the evaluation of bankruptcy regimes.

* Indicates presenter

Demographic Change, Superstar Firms and Labor Share

Terry Cheung

*Eunbi Ko (Department of Economics, National Taiwan University)

We investigate the interplay between the aging workforce and the expansion of firm size in the United States since 1980. During this period, the average age of employees has risen, older workers' share of total earnings has significantly increased, and firms have grown in size, giving rise to superstar firms. Accompanying these shifts, we observe a decline in labor share. Our hypothesis posits that as workers age, their labor market dynamism diminishes, giving employers increased bargaining power in setting wages. Additionally, the augmented market power of larger firms creates a disconnect between worker productivity and earnings. Consequently, the aging of the workforce amplifies this wage-productivity gap on average, leading to a reduced share of total income being allocated to labor.

* Indicates presenter

Automatic Stabilizer of Non-Balanced Budget Policy: Bayesian Variable Selection on Flexible Framework Model Using Real-Time Data

*Beny Trias Oktor, Ming-Jen Chang
(Department of Economics, National Dong Hwa University)

17th September, 2023

In this paper, we study the automatic stabilizers of Australia, Canada, Japan, the UK, and the US. These countries without balanced budget policy, that aims to estimate fiscal policy i.e. its cyclically of automatic stabilizers impact on economic cycle using ex-post and real-time data. Applying balance budget, government should rely on its fiscal policy instruments into automatic stabilizer against varied economic conditions. Our main contribution is to examine how cyclically of automatic stabilizers effects on economic cycle using high dimensional environment as assurance to form sparse model. By employing Bayesian variable selection in a time-varying parameters (TVP) model, we focus on the estimating for selection of unrestrained variables. Markov Chain Monte Carlo (MCMC) estimates posterior using the non-centered parametrization as baseline, and interweave into the centered parameterization known as Ancillarity-Sufficiency Interweaving Strategy (ASIS). We find model selection by Log Predictive Density Scores (LPDS) confirmed that automatic stabilizers is omitted from the model in Japan and the US while it remains in the model selection of the rest of the countries. The result is robust under various prior specification.

Keywords: ASIS, Automatic stabilizer, Bayesian, Elastic net, LASSO adaptive, LPDS, TVP, Real-time data

JEL Classification: E62, H30, H61, H62

* Indicates presenter

Entry, Productivity, and Quality Innovation Under Network Externalities

*Yi-Ling Cheng
(National Sun Yat-sen University)

This paper examines an economy with network externalities and product compatibility, where a large number of firms with heterogeneous productivity and quality innovation are under monopolistic competition with free entry. When network externalities increase, efficient firms with sales volume thrive, leading to higher quality innovation, output, prices, and markups, while inefficient firms suffer. This shift results in the exit of the most inefficient firms, boosting the industry's average productivity. Greater network externalities increase demand, attracting more entrants and increasing total output without necessarily expanding product variety. On the other hand, higher compatibility increases entrants, variety, and output but doesn't affect industry productivity or individual firm behavior. Compatibility allows inefficient firms to benefit from efficient firms' network size. Regarding consumer surplus, full incompatibility initially increases it with growing externalities, but high compatibility can reduce it, especially when externalities are already high. Furthermore, we compare market equilibrium with the welfare-maximizing scenario, where the social planner regulates entry but can't control firms' conduct. Full incompatibility leads to insufficient entry, weaker firm selection, and higher product quality and firm size in equilibrium. With high compatibility and low externalities, there can be excessive entry, stricter firm selection, and lower product quality and firm size than the optimum.

Keywords: Entry, Productivity, Network externalities, Product compatibility, Quality innovation

JEL Classification: D43, L13, L15

* Indicates presenter

Sectoral Wage Rigidity

Juin-Jen Chang (Institute of Economics, Academia Sinica)

Wen-Den Chen (Department of Economics, Tunghai University)

*Hsieh-Yu Lin (Department of Economics, Tunghai University)

Wage adjustment (rigidity) is crucial for the effects of monetary and fiscal policies. This paper systematically examines the upward and downward wage adjustment durations and identifies the underlying factors that cause wage rigidity. By classifying the 14 U.S. industries into two categories, we find that the durations of wage adjustment are longer in the goods-producing sector than in the service-producing sector. The wage adjustment durations are longer for the non-tradable goods sector, compared to the tradable goods sector. Overall, downward wage adjustment is slower than upward wage adjustment. Findings reveal that union density, firm size, and capital intensity contribute to the sectoral difference in wage rigidities.

* Indicates presenter

Labor Share and Income Inequality: Inequality between-Skill Groups

Juin-Jen Chang, Chun-Hung Kuo, *Kun-Ying Lei, Chia-Ying Liu

This paper proposes a theoretical explanation for the empirical trends regarding labor income share, income inequality, and their nexus. Findings reveal that capital-biased technological advancements serve well as a potential explanation for the distribution trends when we perform two decompositions by skill level and income source. Inequality between-skill groups plays a key role in shaping the nexus between labor share and income inequality. Soaring between-group Ginis, on the one hand, lead to a divergence in the labor income share between high-skilled and low-skilled workers, resulting in a decline in overall labor shares and, on the other hand, lead labor income inequality to increase hand in hand with aggregate income inequality. Consequently, a decline in labor's share translates into a rise in income inequality, as empirically observed.

Keywords: Labor share, Income inequality between-skill groups, Capital-skill complementarity

JEL Classification: D31, D33, O33, O41

* Indicates presenter

Financial Frictions and Uncertainty Shocks

*Shih-Yang Lin, Yi-Chan Tsai, Po-Yuan Wang

November 3, 2023

This study investigates the consequences of uncertainty shocks in an economy characterized by entrepreneurs and impatient households who encounter financial frictions. These constraints necessitate the use of durable assets, such as housing or physical capital, as collateral to mitigate repayment uncertainties. As uncertainty rises, both impatient households and entrepreneurs require a higher risk premium for holding housing and capital used as collateral. Consequently, this results in a reduced demand for utilizing these assets as collateral to secure external loans. Specifically, the reduced demand for housing leads impatient households to reallocate their expenditures from housing to consumption, resulting in a decrease in their labor supply. Simultaneously, the reduced demand for capital as collateral for borrowing leads entrepreneurs to decrease their investment. Our model adeptly replicates positive correlations among key aggregate variables, aligning with empirical observations even in the absence of nominal rigidities. Moreover, it successfully reproduces the positive correlation between labor supply and household debt. Notably, our model demonstrates a substantial output response compared to models incorporating nominal rigidities. This research contributes to our understanding of how financial constraints shape macroeconomic dynamics during times of heightened uncertainty and provides valuable insights for policymakers and economists.

Keywords: Uncertainty, DSGE, Financial friction

JEL Classification: E21, E32, E44

* Indicates presenter

與會者名單 Participants

| | |
|-------------------|---------------------|
| Beny Trias Oktora | 國立東華大學經濟學系 |
| Jing Li | 新加坡管理大學經濟學院 |
| Yuta Watabe | 日本貿易振興機構亞洲經濟研究所 |
| 王伯輝 | 龍門核能發電廠 |
| 王瑞樺 | 國立臺灣大學經濟學系 |
| 白宗城 | 達勝科技, 中華採購與供應管理協會 |
| 石曜合 | 國立臺灣大學農業經濟學系 |
| 朱建達 | 輔仁大學經濟系 |
| 朴至鎬 | 國立臺灣大學經濟學系 |
| 吳俊彥 | 中華經濟研究院 |
| 吳俊毅 | 中央銀行 |
| 李宗憲 | 中央研究院經濟研究所 |
| 李金全 | 中央研究院經濟研究所 |
| 李浩仲 | 國立政治大學經濟學系 |
| 李敏 | 國立清華大學核子工程與科學研究所 |
| 冼芻蕘 | 國立清華大學經濟學系 |
| 岳俊豪 | 工研院產科國際所 |
| 林世揚 | 國立臺灣大學經濟學系 |
| 林佑澄 | 行政院主計總處 |
| 林欣吾 | 台灣經濟研究院 |
| 林師模 | 中原大學商學博士學位學程 |
| 林雪瑜 | 東海大學經濟學系 |
| 林智勇 | 國立陽明交通大學資訊管理與財務金融學系 |
| 紀鈞哲 | 中央研究院經濟研究所 |
| 胡偉民 | 國立政治大學財政學系 |

與會者名單 Participants

| | |
|-----|-----------------|
| 孫立憲 | 國立中央大學統計研究所 |
| 徐慶柏 | 台灣經濟研究院 |
| 殷壽鏞 | 國立臺北大學經濟學系 |
| 翁新傑 | 國立臺北大學統計系 |
| 高日明 | 日本東北大學 |
| 高恩琵 | 國立臺灣大學經濟學系 |
| 張俊仁 | 中央研究院經濟研究所 |
| 張庭源 | 中央研究院經濟研究所 |
| 張晏誠 | 國立臺灣大學財務金融學系 |
| 張軒瑜 | 中華經濟研究院 |
| 張靜貞 | 中央研究院經濟研究所 |
| 梁啟源 | 國立中央大學 |
| 莊雅婷 | 中央研究院經濟研究所 |
| 許文泰 | 中央研究院經濟研究所 |
| 許育進 | 中央研究院經濟研究所 |
| 郭位 | 香港城市大學 |
| 郭炳伸 | 國立政治大學國際經營與貿易學系 |
| 郭漢豪 | 國立臺灣大學經濟學系 |
| 陳由常 | 國立臺灣大學經濟學系 |
| 陳佳楹 | 工研院產科國際所 |
| 陳宜廷 | 國立臺灣大學財務金融學系 |
| 陳明郎 | 中央研究院經濟研究所 |
| 陳冠銘 | 國立臺灣大學經濟學系 |
| 陳彥行 | 國立臺灣大學財務金融學系 |
| 陳睿霖 | 杜克大學 |

| | |
|-----|-----------------|
| 陳樂豆 | 中央研究院經濟研究所 |
| 陳馨蕙 | 中華經濟研究院 |
| 彭信坤 | 中央研究院經濟研究所 |
| 曾俊凱 | 香港中文大學 |
| 曾毓英 | 國立政治大學風險管理與保險學系 |
| 黃宗煌 | 台灣綜合研究院 |
| 楊子靈 | 中央研究院經濟研究所 |
| 楊宗翰 | 中央研究院經濟研究所 |
| 楊建成 | 中央研究院經濟研究所 |
| 楊書菲 | 中華經濟研究院區域發展研究中心 |
| 楊淑琄 | 中央研究院經濟研究所 |
| 楊晴雯 | 中華經濟研究院 |
| 楊睿中 | 國立臺灣大學經濟學系 |
| 楊豐安 | 國立臺灣大學農業經濟學系 |
| 溫麗琪 | 永豐環境管理顧問股份有限公司 |
| 葉俊顯 | 中華經濟研究院 |
| 葉國俊 | 國立臺灣大學國家發展研究所 |
| 雷昆穎 | 國立清華大學經濟學系 |
| 廖仁哲 | 國立政治大學經濟學系 |
| 劉名寰 | 台灣經濟研究院 |
| 劉祝安 | 中央研究院經濟研究所 |
| 蔡文禎 | 中央研究院經濟研究所 |
| 蔡崇聖 | 國立臺灣大學經濟學系 |
| 蔡瑞胸 | 美國芝加哥大學商學院 |
| 鄭宜玲 | 國立中山大學經濟學研究所 |

與會者名單 Participants

| | |
|-----|--------------|
| 蕭代基 | 中央研究院經濟研究所 |
| 蕭宇翔 | 中央銀行 |
| 蕭湛東 | 國立臺灣大學財務金融學系 |
| 賴景昌 | 中央研究院經濟研究所 |
| 謝志昇 | 國立臺灣大學經濟學系 |
| 簡錦漢 | 中央研究院經濟研究所 |
| 譚瑾瑜 | 台灣經濟研究院 |
| 蘇俊華 | 中央研究院經濟研究所 |
| 龔明鑫 | 國家發展委員會 |

■ 《臺灣經濟預測與政策》期刊 徵稿啟示

- 《臺灣經濟預測與政策》為中央研究院經濟研究所發行的學術期刊。
- 收錄於 TSSCI、ProQuest、EBSCO 等國內外重要的文獻索引資料庫，以及美國經濟學會編輯之經濟文獻索引 (EconLit)。並於 2017 年、2019 年及 2022 年科技部人文社會科學研究中心「臺灣人文及社會科學期刊評比暨核心期刊收錄」中，獲評為經濟學門第一級期刊。

★「總體經濟計量模型研討會」特刊徵稿 ★

歡迎您將本次研討會中發表之論文，於會後投稿至《臺灣經濟預測與政策》期刊之「總體經濟計量模型」特刊。

徵稿期限至 2024 年 3 月 15 日截止。

投稿之論文將依《臺灣經濟預測與政策》期刊編輯辦法進行。

★ 長期徵稿 ★

《臺灣經濟預測與政策》竭誠歡迎學界朋友投稿經濟相關領域之實證研究，尤其歡迎與經濟預測或政策研究相關之投稿。同時，除與學術研究相關之外，也誠摯歡迎實務分析之文章投稿。

本刊致力於促進臺灣經濟政策或預測相關研究之發展，並期望成為政府單位在制訂或討論政策時的重要參考。因此，本刊於評估投稿文章的貢獻時，並不僅由學術創新或貢獻作為單一的審查依據，同時也注重文章在政策、預測與相關實務上的意義。投稿文章長度不限，同時歡迎短文投稿。

- 《臺灣經濟預測與政策》期刊網址

<https://www.econ.sinica.edu.tw/TEFP>

- 線上投審稿系統網址

<https://journal.econ.sinica.edu.tw/TEFP>

