Li-Lin Liang, Ph.D., MSc, B.B.A

Associate Professor, Institute of Public Health, National Yang Ming Chiao Tung University (NYCU)

Deputy Director, Health Innovation Center, NYCU

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Education

Ph.D. London School of Economics and Political Science

• Major: Health Economics

MSc Imperial College London

• Major: Health Management

B.B.A National Taiwan University

Major: International Business

Current Employment

Associate Professor

• National Yang Ming Chiao Tung University, Institute of Public Health

Deputy Director

• Health Innovation Center, National Yang Ming Chiao Tung University

Supervisory Board

• Taiwan Health Economics Association

Evaluation Committee

Public Health & Social Medicine Division, Ministry of Science & Technology

Past Employment

Associate Professor

National Sun Yet-San University, Department of Business Management

Deputy Secretary-General

• Taiwan Health Economics Association

Assistant Professor

• National Sun Yet-San University, Department of Business Management

Post-doctoral fellow

• National Yang-Ming University, Institute of Hospital and Health Care Administration

The World Bank

Consultant

Research Fellow

• Peking University, China Centre for Health Economic Research

Assistant Professor

• Peking University, China Centre for Health Development Studies

Awards (recent 5 years)

- NYCU Significant Paper Award, 2023
- Annual Conference of National Evidence-based Healthcare, Bronze Award, 2023
- NYCU Faculty Recognition for Significant Academic Awards, 2022
- UK Alumni Award, The British Council, 2022
- Taiwan Evidence-Based Medicine Association (TEBMA) Best Paper Award, 2021
- Academic Merit Award, National Sun Yat-sen University, 2021
- FWCI Award, National Sun Yat-sen University, 2021
- Taiwan Research Highlight (GASE), Ministry of Science & Technology, 2020

Research Expertise

• Impact Evaluation; Health economics; Applied econometrics; Cross-country analysis

Research Interests

• COVID-19; Physical fitness; Provider payment systems; Integrated care; Health expenditures; Physician incentives; China Health Reform

Publication

*Corresponding author

- 1. Jui-fen Rachel Lu, <u>Li-Lin Liang*</u>. The role of digital health under Taiwan's National Health Insurance system: progress and challenges. *Health Systems & Reform*. (forthcoming)
- Chun-Ying Wu*, <u>Li-Lin Liang</u> (co-first with equal contribution), Hsiu J. Ho, Chen-Te Hsu, Hsiu-Tao Hsu, Chon-Kit Ao, Chen-Yi Wu, Yi-Hsian Lin, Yi-Fang Chuang, Yao-Chun Hsu, Yi-Ju Chen, Siew C. Ng*. Physical fitness and inflammatory bowel disease risk among children and adolescents in Taiwan. *JAMA Pediatrics*. 2023; 1;177(6):608-616.
- 3. <u>Li-Lin Liang*</u>, Huong Mai Le, Chun-Ying Wu, Chien-Yuan Sher, Alistair McGuire*. Human mobility increased with vaccine coverage and attenuated the protection of COVID-19 vaccination: A longitudinal study of 107 countries. *Journal of Global Health*. 2023; 13: 06009.
- 4. Po-Chun Lee*, <u>Li-Lin Liang</u>, Min-Hsin Huang, Ching-Yuan Huang. A comparative study of positive and negative electronic word-of-mouth on the SERVQUAL scale during the COVID-19 epidemic. *BMC Health Services Research*. 2022; 22:1568.
- Po-Chun Lee*, Ching-Yuan Huang, <u>Li-Lin Liang</u>, Min-Hsin Huang, Meng-Jun Hsu. The choice of Taiwanese college students to vaccinate against Severe Special Infectious Pneumonia COVID-19 based on the integrated theory of planning behavior. *Human Vaccines & Immunotherapeutics*. 2022; 18(7).
- 6. Vipin Saini, Li-Lin Liang*, Yu-Chen Yang, Huong Mai Le, Chun-Ying Wu. The

- association between dissemination and characteristics of pro-/anti-COVID-19 vaccine messages on Twitter: application of the Elaboration Likelihood Model. *JMIR Infodemiology* 2022; 2(1): e37077.
- 7. Polašek O, Wazny K, ..., <u>Li-Lin Liang</u>, ..., et al (including 67 co-authors). Research priorities to reduce the impact of COVID-19 in low- and middle-income countries. *Journal of Global Health* 2022; 12: 09003.
- 8. Cheng We, Chen-Te Hsu*, **Li-Lin Liang**. A review of the effects of physical activity and fitness on common diseases and medical expenditure of children and adolescents. *Quarterly of Chinese Physical Education* 2022; 36(2): 93-100 [In Chinese].
- 9. Teng-Li Lin, Yi-Hsuan Fan, Yi-Ling Chang, Hsiu J. Ho, <u>Li-Lin Liang</u>, Yi-Ju Chen*, Chun-Ying Wu*. Early-life antibiotic exposure associated with varicella occurrence and breakthrough infections: Evidence from nationwide pre-vaccination and post-vaccination cohorts. *Frontiers in Immunology* 2022;13.
- 10. <u>Li-Lin Liang</u>, Hsu-Sung Kuo, Hsiu J. Ho, Chun-Ying Wu*. COVID-19 vaccinations are associated with reduced fatality rates: evidence from cross-county quasi-experiments. *Journal of Global Health* 2021; 11: 05019
- 11. <u>Li-Lin Liang</u>, Chien-Tse Kao, Hsiu J. Ho, Chun-Ying Wu*. COVID-19 case doubling time associated with non-pharmaceutical interventions and vaccination: a global experience. *Journal of Global Health* 2021; 11: 05021
- 12. <u>Li-Lin Liang*</u>, A Dale Tussing, Nicole Huang, Shu-Ling Tsai. Incentives for physician teams: Effectiveness of performance feedback and payment distribution methods. *Health Policy* 2021; 125:1377-1384.
- 13. <u>Li-Lin Liang</u>, Ching-Hung Tseng, Hsiu J. Ho, Chun-Ying Wu*. Covid-19 mortality is negatively associated with test number and government effectiveness. *Scientific Reports* 2020; 10: 12567.
- 14. <u>Li-Lin Liang</u>, Nicole Huang, Yi-Jung Shen, Annie Yu-An Chen, and Yiing-Jenq Chou*. Do patients bypass primary care for common health problems under a free-access system? Experience of Taiwan." *BMC Health Services Research* 2020; 20, no. 1: 1050.
- 15. <u>Li-Lin Liang*</u>. Impact of integrated healthcare: Taiwan's Family Doctor Plan. *Health Policy and Planning* 2019; 34: ii56-ii66.
- 16. <u>Li-Lin Liang*</u>, A. D. Tussing. The cyclicality of government health expenditure and its effects on population health. *Health Policy* 2019; 123: 96-103.
- 17. Chen-Mei Hsu*, <u>Li-Lin Liang</u>, Yun-Te Chang, Wang-Chuan Juang. Emergency department overcrowding: quality improvement in a Taiwan medical center. *Journal of the Formosan Medical Association* 2019; 118(1, Part 1): 186-193.
- 18. <u>Li-Lin Liang</u>*. Do DRG-based payments incentivize hospitals to adjust output mix? The own-price and cross-price effects. *Health Economics* 2015; 24(4): 454-469.
- 19. <u>Li-Lin Liang</u>*, Andrew Mirelman. Why do some countries spend more for health? An assessment of sociopolitical determinants and international aid for government health expenditures. *Social Science & Medicine* 2014; 114: 161-168.
- 20. <u>Li-Lin Liang</u>*, J. C. Langenbrunner. The Long March to Universal Health Coverage: Outside

- Looking in. *Chinese Journal of Health Policy* 2013; 6 (2):1-3 [in Chinese].
- 21. Chen Gung*, <u>Li-Lin Liang</u>. Measuring health system efficiency: a cross-country comparison using non-parametric methods. *Chinese Journal of Health Policy* 2012; 5 (3): 61-66 [in Chinese].

Research Project

- **Li-Lin Liang** (PI). The Impact of Anti-contagion Policies and Behaviour on 2022-2025 the COVID-19 Pandemic; Variation in Pandemic Outcomes and Social Vulnerability Index; the Health Effects of COVID-19. Ministry of Science and Technology (111-2314-B-110-001-MY3).
- Li-Lin Liang (co-PI). COVID-19 Nonpharmaceutical Interventions,
 Vaccination and Mobility: Cross-country analysis. Research Center for
 Epidemic Prevention, National Yang Ming Chiao Tung University; Ministry
 of Science and Technology (111-2321-B-A49-007).
- Li-Lin Liang (co-PI). Nudge-based Interventions, Decision-Analytic
 2022-2025
 Modeling and Economic Evaluations: Prevention and Treatment of
 Hepatocellular Carcinoma. Ministry of Health and Welfare (MOE-SA-1100048299).
- **Li-Lin Liang** (co-PI). Student Physical Fitness, Healthcare Utilization and Health: Merging Physical Fitness and Health Insurance Data. Ministry of Education.
- **Li-Lin Liang** (PI). Strengthening Primary Care: Does Having a Family
 Doctor Improve Continuity of Care and Reduce Mortality? Ministry of
 Science and Technology (109-2410-H-110-016-MY2).
- **Li-Lin Liang** (PI). Integration, Incentives and Variation in Group

 Performance: Evidence from Taiwan Family Doctor Plan. Ministry of Science and Technology (108-2410-H-110-025-).
- **Li-Lin Liang** (PI). Is Pay-for-Performance or Family Doctor Plan More 2018-2019 Effective? An Evaluation of Multiple Programs with Overlapping. Ministry of Science and Technology (107-2410-H-110-072).
- **Li-Lin Liang** (PI). Impact of Phasing in DRG-Based Payment on Patient Outcome and Resource Utilization: A Long-Term Evaluation. Ministry of Science and Technology (106-2410-H-110-076).
- **Li-Lin Liang** (PI). Group-based P4P and Health Care Integration: Impact of Family Doctor Plan in Taiwan and Its Determinants. Ministry of Science and Technology (105-2410-H-110-053).
- **Li-Lin Liang** (PI). Regional Variation in Health Care and Doctors' Practice 2015-2016 Style: Evidence from Taiwan. Ministry of Science and Technology (104-2314-B-110-001-MY2).

Teaching

• National Yang Ming Chiao Tung University

- Undergraduate: Economics; Dialog on Health, Economics and Policy
- Postgraduate: Causal Inference and Impact Evaluation (English); Causal Inference and Longitudinal Modelling; Health Big Data Methodology (English); Applied Econometrics for Health Policy; Public Health Policy and Law Seminar; Graduate Seminar on International Health (English)

• National Sun Yat-sen University

- Undergraduate: Introduction to Business; Economics II (macroeconomics)
- Postgraduate: Health Economic Evaluation; Health Economics, Policy and Management; Advanced Health Economics; Advanced Statistics with Applications to Health Services Research; Hospital Operations Management

• Peking University

- Health System and Policy (English); Health Financing and Policy (English)