

## Echu Liu

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### CONTACT INFORMATION

Department of Health Management and Policy  
College for Public Health and Social Justice  
Saint Louis University  
3545 Lafayette Ave  
Saint Louis, MO 63104-1314  
Office: (314) 977-1304  
Fax: (314) 977-1674  
E-Mail: [echu.liu@slu.edu](mailto:echu.liu@slu.edu)

### EDUCATION

- Ph.D. in Economics, University of Southern California, December 2006
- M.A. in Economics, University of Southern California, May 2003
- MBA in Finance (with *Beta Gamma Sigma* Honor), California State University, Los Angeles, June 2000
- M.A. in Economics, National Taiwan University, June 1995
- B.A. in Economics, National Taiwan University, June 1993

### WORK EXPERIENCE

#### Academic

- Associate Professor (with tenure), Department of Health Management and Policy, Saint Louis University, August 2014–present
- Associate Professor of Health Care Management (with tenure), School of Allied Health, Southern Illinois University Carbondale, July 2012–August 2014
- Assistant Professor of Health Care Management, School of Allied Health, Southern Illinois University Carbondale, August 2006–June 2012
- Visiting Assistant Professor, Department of Economics, National Cheng Kung University, Tainan, TAIWAN, June 2010–July 2010

- Full-time Teaching Assistant (responsible for teaching and assisting departmental administration), Department of Economics, National Taiwan University, August 1997–July 1998

#### Non-Academic

- Second Lieutenant, Infantry Platoon Leader, Taiwan Army, July 1995–May 1997

### **PUBLICATIONS**

#### Journal Articles

1. Lin, X., Cai, M., Tan, K., **Liu, E.**, Wang, X., Song, C., Wei, J., Lin, H., & Pan, J. (2023). Ambient particulate matter and in-hospital case fatality of acute myocardial infarction: A multi-province cross-sectional study in China. *Ecotoxicology and Environmental Safety*, 268, 115731. <https://doi.org/10.1016/j.ecoenv.2023.115731>.
2. **Liu, E.**, Arledge, S., Cai, M., Tao, D., & Li, W. (2023). Health insurance literacy and medical care avoidance among international students: A case study. *International Journal of Public Health*, 68, 1605788. <https://doi.org/10.3389/ijph.2023.1605788>
3. Li, W., Zhu, K., **Liu, E.**, Peng, W., Fang, C., Hu, Q., & Tao, L. (2023). The impact of healthcare industry convergence on the performance of the public health system: A geospatial modeling study of panel provincial panel data from China. *Frontiers in Public Health*, 11:1194375. <https://doi.org/10.3389/fpubh.2023.1194375>
4. **Liu, E.**, Dean, C. A., & Elder, K. (2023). Editorial: The impact of COVID-19 on vulnerable population. *Frontiers in Public Health*, 11:1267723. <https://doi.org/10.3389/fpubh.2023.1267723>
5. **Dean, C. A.<sup>†</sup>**, **Liu, E.<sup>†</sup>**, Enard, K. R, Qian, Z., & Elder, K. (2023). Factors associated with food insecurity among the chronically ill population during the COVID-19 pandemic in the United States. *Frontiers in Public Health*, 11:1142603. <https://doi.org/10.3389/fpubh.2023.1142603> († sharing first authorship)
6. Cai, M., Wei, J., Zhang, S., Liu, W., Wang, L., Qian, Z., Lin, H., **Liu, E.**, McMillin, S. E., Cao, Y., & Yin, P. (2023). Short-term air pollution exposure associated with death from kidney diseases: A nationwide time-stratified case-crossover study in China from 2015 to 2019. *BMC Medicine*, 21 (32), <https://doi.org/10.1186/s12916-023-02734-9>

7. Sun, J., Yang, R., Xian, H., Zhang, B., Lin, H., Xaverius, P., Yang, S., Dong, G., Howard, S. W., LeBaige, M., Peng, A., **Liu, E.**, Zheng, T., Zhou, A., & Qian, Z. (2022). Association between maternal family history of hypertension and preterm birth: Modification by noise exposure and multivitamin intake. *Journal of Maternal-Fetal & Neonatal Medicine*.  
<https://doi.org/10.1080/14767058.2022.2128665>
8. Cai, M., **Liu, E.**, Bai, P., Zhang, N., Wang, S., Li, W., Lin, H., & Lin, X. (2022). The chasm in percutaneous coronary intervention and in-hospital mortality rates among acute myocardial infarction patients in rural and urban hospitals in China: A mediation analysis. *International Journal of Public Health*, 67, 1604846. <https://doi.org/10.3389/ijph.2022.1604846>
9. Wang, X., Qian, Z., Zang, Z., Cai, M., Chen, L., Wu, Y., Li, H., **Liu, E.**, McMillin, S. E., & Lin, H. (2022). Population attributable fraction of lung cancer due to genetic variants, modifiable risk factors, and their interactions: A nationwide prospective cohort study. *Chemosphere*, 301, 134773.  
<https://doi.org/10.1016/j.chemosphere.2022.134773>
10. **Liu, E.**, & Arledge, S. (2022). Individual characteristics and demographics associated with mask-wearing during the COVID-19 pandemic in the United States. *Asian Journal of Social Health and Behavior*, 5(1), 3-9.  
[https://journals.lww.com/shbh/fulltext/2022/05010/individual\\_characteristics\\_and\\_demographics.2.aspx](https://journals.lww.com/shbh/fulltext/2022/05010/individual_characteristics_and_demographics.2.aspx)
11. **Liu, E.**, & Chang, S. (2022). Self-esteem and weight status of young adults: Findings from a pilot study. *Journal of Education and Health Promotion*, 11, 263.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9621350/pdf/JEHP-11-263.pdf>
12. Dean, C. A., **Liu, E.**, Wiltshire, J., & Elder, K. (2022). Underlying factors of health insurance use among Blacks and Hispanics with ambulatory care sensitive conditions. *Journal of Ambulatory Care Management*, 45(2), 114-125.  
<https://doi.org/10.1097/JAC.0000000000000407>
13. Liang, Z., Yang, Y., Yi, J., Qian, Z., Zhang, Z., McMillin, S. E., **Liu, E.**, Lin, H., & Liu, G. (2021). Maternal PM<sub>2.5</sub> exposure associated with stillbirth: A large birth cohort study in seven Chinese cities. *International Journal of Hygiene and Environmental Health*, 236, 113795.  
<https://doi.org/10.1016/j.ijheh.2021.113795>

14. Li, W., **Liu, E.**, Balezentis, T., Jin, H., & Streimikiene, D. (2021). Association between socioeconomic welfare and depression among older adults: Evidence from the China Health and Retirement Longitudinal Study. *Social Science and Medicine*, 275, 113814. <https://doi.org/10.1016/j.socscimed.2021.113814>
15. Cai, M., Zhang, B., Yang, R., Zheng, T., Dong, G., Lin, H., Rigdon, S. E., Xian, H., Hinyard, L., Xaverius, P. K., **Liu, E.**, Burroughs, T. E., Jansson, D. R., LeBaige, M. H., Yang, S., & Qian, Z. (2021). Association between maternal outdoor physical exercise and the risk of preterm birth: A case-control study in Wuhan, China. *BMC Pregnancy and Childbirth*, 21, 206. <https://doi.org/10.1186/s12884-021-03678-9>
16. Wiltshire, J., **Liu, E.**, Dean, C. A., Colato, E. G., & Elder, K. (2021). Health insurance literacy and medical debt in middle-aged Americans. *Health Literacy Research and Practice*, 5(4), e319-e332. <https://doi.org/10.3928/24748307-20211102-01>
17. Tang, Y., Bloom, M. S., Qian, Z., **Liu, E.**, Jansson, D. R., Vaughn, M. G., Lin, H., Xiao, L., Duan, C., Yang, L., Xu, X., Li, Y., Zhu, L., Dong, G., & Liu, Y. (2021). Association between ambient air pollution and hyperuricemia in traffic police officers in China: A cohort study. *International Journal of Environmental Health Research*, 31(1), 54-62. <https://doi.org/10.1080/09603123.2019.1628926>
18. Su, Y., Liu, W., Dong, G., Qian, Z., Gurram, N., **Liu, E.**, Cummings-Vaughn, L. A., Howard, S. W., Vaughn, M. G., Jansson, D. R., Zhang, C., Wang, J., & Liu, Y. (2020). Investigation of simple, objective, and effective indicators for predicting acute paraquat poisoning outcomes. *Toxicology and Industrial Health*, 36(6), 417-426. <https://doi.org/10.1177/0748233720933522>
19. Dean, C. A., Wiltshire, J., **Liu, E.**, Amamoo, M. A., Colato, E. G., & Elder, K. (2020). Confidence in understanding health insurance and challenges paying medical bills among men in the United States. *American Journal of Men's Health*, 14(4), 1557988320943359. <https://doi.org/10.1177/1557988320943359>
20. Cai, M., **Liu, E.**, Zhang, R., Lin, X., Rigdon, S. E., Qian, Z., BeLue, R., & Chang, JJ. (2020). Comparing the performance of Charlson and Elixhauser comorbidity indices to predict in-hospital mortality among a Chinese population. *Clinical Epidemiology*, 12, 307-316. <https://doi.org/10.2147/CLEP.S241610>

21. Liu, R., Bloom, M. S., Wu, Q., He, Z., Qian, Z., Stamatakis, K. A., **Liu, E.**, Vaughn, M., Lawrence, W. R., Yang, M., Lu, T., Hu, Q., & Dong, G. (2019). Association between depressive symptoms and poor sleep quality among Han and Manchu ethnicities in a large, rural Chinese population. *PLoS ONE*, *14*(12), e0226562. <https://doi.org/10.1371/journal.pone.0226562>
22. Zhang, L., Yang, Y., Li, Y., Qian, Z., Xiao, W., Wang, X., Rolling, C. A., **Liu, E.**, Xiao, J., Zeng, W., Liu, T., Li, X., Yao, Z., Wang, H., Ma, W., & Lin, H. (2019). Short-term and long-term effects of PM<sub>2.5</sub> on acute nasopharyngitis in 10 communities of Guangdong, China. *Science of the Total Environment*, *688*(20), 136-142. <https://doi.org/10.1016/j.scitotenv.2019.05.470>
23. Yang, B., Guo, Y., Bloom, M. S., Xiao, X., Qian, Z., **Liu, E.**, Howard, S. W., Zhao, T., Wang, S., Li, S., Chen, D., Ma, H., Yim, S. H., Liu, K., Zeng, X., Hu, L., Liu, R., Feng, D., Yang, M., Xu, S., & Dong, G. (2019). Ambient PM<sub>1</sub> air pollution, blood pressure, and hypertension: Insights from the 33 Communities Chinese Health Study. *Environmental Research*, *170*, 252-259. <https://doi.org/10.1016/j.envres.2018.12.047>
24. Ai, S., Qian, Z., Guo, Y., Yang, Y., Rolling, C. A., **Liu, E.**, Wu, F., & Lin, H. (2019). Long-term exposure to ambient fine particles associated with asthma: A cross-sectional study among older adults in six low- and middle-income countries. *Environmental Research*, *168*, 141-145. <https://doi.org/10.1016/j.envres.2018.09.028>
25. Cai, M., **Liu, E.**, & Li, W. (2018). Rural versus urban patients: Benchmarking the outcomes of patients with acute myocardial infarction in Shanxi, China from 2013 to 2017. *International Journal of Environmental Research and Public Health*, *15*(9), 1930. <https://doi.org/10.3390/ijerph15091930>
26. Li, W., **Liu, E.**, & BeLue, R. (2018). Household water treatment and the nutritional status of primary-aged children in India: Findings from the India Human Development Survey. *Globalization and Health*, *14*, 37. <https://doi.org/10.1186/s12992-018-0356-7>
27. Cai, M., **Liu, E.**, Tao, H., Qian, Z., Fu, Q., Lin, X., Wang, M., Xu, C., & Ni, Z. (2018). Does a medical consortium influence the health outcomes of hospitalized cancer patients? An integrated care model in Shanxi, China. *International Journal of Integrated Care*, *18*(2): 7, 1-10. <https://doi.org/10.5334/ijic.3588>

28. Hu, L., Qian, Z., Bloom, M. S., Nelson, E. J., **Liu, E.**, Han, B., Zhang, N., Liu, Y., Ma, H., Chen, D., Yang, B., Zeng, X., Chen, W., Komppula, M., Leskinen, A., Hirvonen, M., Roponen, M., Jalava, P., Bai, Z., & Dong, G. (2018). A panel study of airborne particulate matter concentration and impaired cardiopulmonary function in young adults by two different exposure measurements. *Atmospheric Environment*, 180, 103-109.  
<https://doi.org/10.1016/j.atmosenv.2018.03.001>
29. Cai, M., **Liu, E.**, Tao, H., Qian, Z., Lin, X., & Cheng, Z. (2018). Does level of hospital matter? A study of mortality of acute myocardial infarction patients in Shanxi, China. *American Journal of Medical Quality*, 33(2), 185-192.  
<https://doi.org/10.1177/1062860617708608>
30. Bao, W., Qian, Z., Geiger, S. D., **Liu, E.**, Liu, Y., Wang, S., Lawrence, W. R., Yang, B., Hu, L., Zeng, X., & Dong, G. (2017). Gender-specific associations between serum isomers of perfluoroalkyl substances and blood pressure among Chinese: Isomers of C8 Health Project in China. *Science of the Total Environment*, 607-608, 1304-1312.  
<https://doi.org/10.1016/j.scitotenv.2017.07.124>
31. Hu, L., Qian, Z., Dharmage, S. C., **Liu, E.**, Howard, S. W., Vaughn, M. G., Perret, J., Lodge, C. C., Zeng, X., Yang, B., Xu, S., Zhang, C., & Dong, G. (2017). Prenatal and postnatal exposure to pet ownership and lung function in children: The seven northeastern cities study. *Indoor Air*, 27(6), 1177-1189.  
<https://doi.org/10.1111/ina.12401>
32. Lin, X., Cai, M., Tao, H., **Liu, E.**, Cheng, Z., Xu, C., Wang, M., Xia, S., & Jiang, T. (2017). Insurance status, in-hospital mortality, and length of stay in hospitalized patients in Shanxi, China: A cross-sectional study. *BMJ Open*, 7, e015884.  
<http://dx.doi.org/10.1136/bmjopen-2017-015884>
33. Cai, M., Tao, H., **Liu, E.**, & Cheng, Z. (2017). Market competition and technical efficiency: An empirical study of hospitals in Henan and Jiangsu, China. *Chinese Hospital Management*, 37(6), 22-24. (in Chinese).
34. **Liu, E.**, Balasubramaniam, D., & Hunt, A. F. (2016). Does access to water matter? A study on the nutritional status of primary-aged children in India. *Journal of Public Health*, 38(4), e419-e424.  
<https://doi.org/10.1093/pubmed/fdv149>

35. Tung, M., & Liu, E. (2016). Sex education of Chinese students in America: A potential focus area for health educators and researchers. *JSM Health Education and Primary Health Care*, 1(2): 1009.  
<https://www.jscimedcentral.com/public/assets/articles/healtheducation-1-1009.pdf>
36. Liu, E. (2016). Propensity-score matching as a panacea for correcting self-selection bias in observational studies. *Journal of Epidemiology and Public Health Reviews*, 1(2). <http://dx.doi.org/10.16966/2471-8211.109>
37. Hsieh, H., Chou, S., Liu, E., & Lian, H. (2015). Strengthening or weakening? The impact of universal health insurance on intergenerational co-residence in Taiwan. *Demography*, 52(3), 883-904. <https://doi.org/10.1007/s13524-015-0387-0>
38. Chou, S., Liu, E., Lin, M., & Liu, J. (2015). Better peers, better scores? A study of twin junior high school graduates in Taiwan. *Applied Economics*, 47(32), 3462-3481. <https://doi.org/10.1080/00036846.2015.1016209>
39. Liu, E., Lo, T., & Hsieh, H. (2013). Health illiteracy and disparity in health status: An analysis of the national assessment of adult literacy. *International Journal of Economic Issues*, 6(1), 31-45.
40. Liu, E., Lo, T., & Hsieh, H. (2011). Literacy and health: Evidence from the national assessment of adult literacy. *International Journal of Applied Economics*, 8(1), 17-35.
41. Liu, E., Yu, W., & Hsieh, H. (2011). Cigarette taxes and respiratory cancers: New evidence from panel co-integration analysis. *Journal of Health Care Finance*, 37(3), 62-71. (Results cited in the September 15, 2011 issue of the *Harvard Business Review*)
42. Liu, E., Hsiao, C., Matsumoto, T., & Chou, S. (2009). Maternal full-time employment and overweight children: Parametric, semi-parametric, and non-parametric assessment. *Journal of Econometrics*, 152(1), 61-69.  
<https://doi.org/10.1016/j.jeconom.2009.02.003>
43. Liu, E., Rivers, P. A., & Sarevla, P. D. (2008). Does increasing cigarette excise tax improve people's health? The cases of heart attacks and stroke. *Journal of Health Care Finance*, 34(3), 91-109.

## Conference Proceedings

1. Shih, S. C., & Liu, E. (2007). Intelligent decision support system for aftermarket field service scheduling and condition-based maintenance. *Proceedings of 17<sup>th</sup> International Conference on Pacific Rim Management of Association for Chinese Management Educators*, C14-1-C14-7.

## **WORKING PAPERS**

1. Enard, K. R., Gillespie, K. N., Liu, E., Walter, M., Howard, S. W., Syberg K., & BeLue, R. (2024). Refocusing competencies for health care management early careerist: The SLU MHA competency model update. Under review at *Journal of Health Administration Education*.
2. Hsieh, H., Yu, W., & Liu, E. (2023). Trade with China and the slowdown in U.S. labor productivity. Under review at *Journal of the Knowledge Economy*.
3. Lin, X., Cai, M., Pan, J., Liu, E., Wang, X., Song, C., Wei, J., Lin, H., & Pan, J. (2023). Association between exposure to PM2.5 chemical components and in-hospital case fatality for acute myocardial infarction: A multi-province study in China. Under review at *Ecotoxicology and Environmental Safety*.

## **WORK IN PROGRESS**

1. Huang, J., Liu, E., & Groenewald, C. B. (2024). Investigating the prevalence and efficacy of multimodal pain management strategies for chronic pain.
2. Loux, T., Bafageeh, F., Raybon, N., & Liu, E. (2023). Dental insurance may result in higher out-of-pocket expenses for some individuals.
3. Liu, X., He, L., Alanazi, E. M., & Liu, E. (2023). Assessing the accuracy and explainability of using ChatGPT to evaluate the quality of health news.
4. Bhavsar, A., Liu, E. (2023). Exploring Trust in Health Insurance Providers: Demographic and Healthcare Factors Influencing Perceptions Among U.S. Adults.
5. Liu, E., Bach, A. (2023). Literacy in health insurance and its association with health status.
6. Liu, E., Dean, C., & Elder, K. (2023). The unmet health needs of vulnerable U.S. population.



## CONFERENCE AND SEMINAR PRESENTATIONS

### Conferences

1. Bhavsar, A., Liu, E. (2024, April). *Exploring Trust in Health Insurance Providers: Demographic and Healthcare Factors Influencing Perceptions Among U.S. Adults*. Senior Legacy Symposium, Saint Louis University, Saint Louis, MO.
2. Balasubramaniam, D., & Liu, E. (2019, November). *Female empowerment and its implications for women's health care utilization in India*. Oral presentation at 89<sup>th</sup> Annual Meeting of Southern Economic Association, Fort Lauderdale, FL.
3. Liu, E., & Ashan, N. (2019, October). *Minimum wages and suicide rates in the U.S.* Oral presentation at the 56<sup>th</sup> Annual Conference of Missouri Valley Economic Association, Kansas City, MO.
4. Hsieh, H., Yu, W., & Liu, E. (2019, October). *The rise in Chinese import competition and the fall in American productivity*. Oral presentation at the 56<sup>th</sup> Annual Conference of Missouri Valley Economic Association, Kansas City, MO.
5. Pollack, L., Wang, M., Liu, E., Colditz, G., & Chang, S. (2019, May). *Second primary obesity-related cancers in the United States, 1999-2016*. Poster presentation at ISPOR Annual Conference, New Orleans, LA.
6. Hsieh, H., Yu, W., & Liu, E. (2019, March). *The overlooked China shock: The negative impact of trading with China on labor productivity in the U.S.* Oral presentation at the 83<sup>rd</sup> Annual Conference of Midwest Economic Association, Saint Louis, MO.
7. Hsieh, H., Yu, W., & Liu, E. (2019, March). *The overlooked China shock: The negative impact of trading with China on labor productivity in the U.S.* Oral presentation at the 15<sup>th</sup> International Conference of Western Economic Association International, Tokyo, JAPAN.
8. Hsieh, H., Yu, W., & Liu, E. (2018, November). *The overlooked China shock: The negative impact of trading with China on labor productivity in the U.S.* Oral presentation at the 55<sup>th</sup> Annual Conference of Missouri Valley Economic Association, Memphis, TN.
9. Liu, E., & Hsieh, H. (2018, November). *Self-esteem and obesity among young adults*. Oral presentation at the 55<sup>th</sup> Annual Conference of Missouri Valley Economic Association, Memphis, TN.

10. Enard, K. R., Ganelin, D. M., King, M., Clare, B., & Liu, E. (2017, November). *Development and expansion of a patient navigation program to address barriers to primary care among safety-net patients*. Oral presentation at the Annual Meeting and Exposition of American Public Health Association, Atlanta, GA.
11. Enard, K. R., Ganelin, D. M., King, M., Clare, B., & Liu, E. (2017, November). *Using community health workers to navigate safety-net patients from emergency departments to primary care homes*. Oral presentation at the Annual Meeting and Exposition of American Public Health Association, Atlanta, GA.
12. Enard, K. R., Liu, E., & Clare, B. (2017, June). *Patient navigation to address barriers to primary care use: A report on experience from Houston, TX*. Poster presentation at the AcademyHealth Annual Research Meeting: Disparities Interest Group, New Orleans, LA.
13. Liu, E. (2016, October). *Gas price and pedestrian fatality*. Oral presentation at the 53<sup>rd</sup> Annual Conference of Missouri Valley Economic Association, Saint Louis, MO.
14. Liu, E. (2014, October). *Access to water and nutritional status: A study of school-aged children in India*. Oral presentation at the 51<sup>st</sup> Annual Conference of Missouri Valley Economic Association, Saint Louis, MO.
15. Balasubramaniam, D., & Liu, E. (2013, October). *Childhood obesity a public health problem in the developing world: A study on India*. Oral presentation at the 76<sup>th</sup> International Atlantic Economic Conference, Philadelphia, PA.
16. Hsieh, H., Chou, S., Lien, H., & Liu, E. (2013, July). *Crowding in or crowding out: The impact of universal health insurance on intergenerational co-residence*. Oral presentation at the 9<sup>th</sup> Annual Conference of Asia-Pacific Economic Association, JAPAN.
17. Balasubramaniam, D., & Liu, E. (2012, November). *Obesity a public health problem in the developing world: A study on school-going children in rural and urban India*. Oral presentation at the 82<sup>nd</sup> Annual Meeting of Southern Economic Association, New Orleans, LA.
18. Hsieh, H., Chou, S., Lien, H., & Liu, E. (2012, November). *Without crowding out the family- The effects of national health insurance on elderly living arrangements*. Oral presentation at the 82<sup>nd</sup> Meeting of Southern Economic Association, New Orleans, LA.

19. Liu, E., Lo, T., & Hsieh, H. (2011, November). *The causal effect of functional health literacy and health status: An analysis of adult literacy's national assessment*. Oral presentation at the 81<sup>st</sup> Annual Meeting of Southern Economic Association, Washington, DC.
20. Chou, S., Lin, M., Liu, E., & Liu, J. (2011, February). *Using national twin data to estimate the peer effects on children's educational outcomes*. Oral presentation at the 37<sup>th</sup> Annual Conference of Eastern Economic Association, New York, NY.
21. Liu, E., Lo, T., & Hsieh, H. (2010, November). *Literacy and health: Evidence from the national assessment of adult literacy (revised version)*. Oral presentation at the 80<sup>th</sup> Annual Meeting of Southern Economic Association, Atlanta, GA.
22. Liu, E., Lo, T., & Hsieh, H. (2010, October). *Literacy and health: Evidence from the national assessment of adult literacy*. Oral presentation at the 47<sup>th</sup> Annual Meeting of Missouri Valley Economic Association, St. Louis, MO.
23. Liu, E., Yu, W., & Hsieh, H. (2010, October). *Cigarette taxes and respiratory cancers: New evidence from panel co-integration analysis*. Oral presentation at the 47<sup>th</sup> Annual Meeting of Missouri Valley Economic Association, St. Louis, MO.
24. Liu, E., Yu, W., & Hsieh, H. (2009, November). *Panel co-integration analysis of cigarette taxes and health: The case of respiratory cancers*. Oral presentation at the 79<sup>th</sup> Annual Meeting of Southern Economic Association, San Antonio, TX.
25. Liu, E., Rivers, P. A., & Sarvela, P. D. (2008, July). *Does increasing cigarette excise tax improve people's health? The cases of heart attacks and stroke*. Poster presentation at AcademyHealth Annual Research Meeting, Washington, DC.
26. Shih, S. C. & Liu, E. (2007, July). *Intelligent decision support systems for aftermarket field service scheduling and condition-based maintenance*. Oral presentation at the 17<sup>th</sup> International Conference on the Pacific Rim Management of Association for Chinese Management Educators, Las Vegas, NV.

27. Liu, E. (2007, April). *The treatment effects of full-time maternal employment on childhood obesity: Control function and matching estimators*. Poster presentation at the 18<sup>th</sup> Annual Conference of Illinois Rural Health Association, Effingham, IL.
28. Liu, E., Hsiao, C., & Chou, S. (2005, July). *Maternal full-time employment and childhood obesity: Parametric and semi-parametric estimation*. Oral presentation at the 80<sup>th</sup> Annual Western Economic Association International Conference, San Francisco, CA.
29. Liu, E. (2005, April). *Maternal full-time employment and childhood obesity*. Oral presentation at the 47<sup>th</sup> Annual Western Social Science Association Conference, Albuquerque, NM.
30. Liu, E. (2005, January). *Maternal full-time employment and children's body mass index*. Oral presentation at the Annual Meeting of Allied Social Science Associations (ASSA), Philadelphia, PA.

#### Seminars

1. Liu, E. (2022, December). *Health insurance literacy and avoidance of medical care among international students*. Sinquefield Center, Saint Louis University, Saint Louis, USA.
2. Liu, E. (2021, June). *Health insurance literacy: Its consequences and implications*. Department of Economics, Tamkang University, Taipei, TAIWAN.
3. Liu, E. (2014, December). *Strengthening or weakening? The impact of universal health insurance on intergenerational co-residence*. Department of Economics, National Tsinghua University, Hsinchu, TAIWAN.
4. Liu, E. (2013, March). *Using national twin data to estimate peer effects on student test scores*. Department of Economics, Southern Illinois University at Carbondale, USA.
5. Liu, E. (2012, March). *Treatment evaluation*. Department of Economics, National Cheng Kung University, Tainan, TAIWAN.
6. Liu, E. (2010, March). *Cigarette taxes and respiratory cancers: New evidence from panel co-integration analysis*. Department of Economics, National Cheng Kung University, Tainan, TAIWAN.

7. Liu, E. (2009, March). *Maternal full-time employment and childhood obesity: Parametric, semi-parametric, and non-parametric assessment*. Department of Economics, University of Saskatchewan, CANADA.
8. Liu, E. (2006, January). *Maternal employment and childhood obesity*. Department of Economics, University of Saskatchewan, CANADA.

## **GRANTS RECEIVED**

1. 2024: Saint Louis University Applied Health Sciences Research Grant (2024-2025) \$19,640  
Post-operative home health and outpatient physical therapy utilization and outcomes relative to the cost in an episode-based alternative payment model  
Principal Investigators: Mike Markee and Echu Liu
2. 2021: Saint Louis University (2020-2021) \$1,000  
Health insurance literacy and the tendency to avoid health care among international students  
Principal Investigators: Echu Liu, Donghua Tao
3. 2019: Saint Louis University (2019-2020) \$1,000  
Nutrition, cooking, and budgeting: A pilot program for single parents with young children  
Principal investigators: Echu Liu, Whitney Linsenmeyer
4. 2016: Saint Louis University (2016-2017) \$1,000  
Self-esteem and weight status of young adults  
Principal investigators: Echu Liu, Meiling Tung
5. 2016: Robert Wood Johnson Foundation (2016-2017) \$50,000  
Examining the role of community health workers in navigating safety-net patients from emergency departments to primary care medical homes  
Principal investigator: Kimberly Enard  
Role: Consultant

## **SUBMITTED AND UNFUNDED GRANT APPLICATIONS**

1. 2023: Missouri Foundation for Health (2024-2027) \$396,553  
A longitudinal study of a health insurance literacy intervention's effectiveness  
Principal investigator: Echu Liu

2. 2022: Agency for Health Care Research and Quality (2022-2024) \$100,000  
Impact of social determinants of health in reducing potentially avoidable hospitalizations among minorities  
Principal investigator: Caress Dean  
Co-investigator: Echu Liu
3. 2021: Saint Louis University Beaumont Scholarship Research Award Program (2022-2023) \$9,123.56  
Impact of COVID-19 on the psychological health of the U.S. population with chronic diseases  
Principal investigator: Echu Liu
4. 2018: Chiang Ching-Kuo Foundation for International Scholarly Exchange Research Grants (2019 -2021) \$78,000  
Which came first, the chicken or the egg? The relationship between self-esteem and the likelihood of becoming overweight among young adults in Taiwan  
Principal investigator: Echu Liu  
Co-investigators: Shin-Yi Chou, Cheng-I Chu
5. 2016: SAMHSA HRSA Center for Integrated Health Solutions (2016 -2019)  
Improving student wellness through interprofessional school-based health (WISH) clinic  
Principal investigator: Anthony Breitbach  
Co-investigators: Kathrin Eliot, Kemba Noel-London  
Role: Other

## **REVIEWING ACTIVITIES**

### Referees for academic journals

American Journal of Managed Care (2020)  
Contemporary Economic Policy (2010)  
Environmental Health Insight (2021)  
Frontiers in Public Health (2022)  
Heliyon (2021, 2023)  
International Journal of Computational Intelligence Studies (2008)  
International Journal of Healthcare (2016, 2019, 2022)  
International Journal of Higher Education (2016, 2020)  
Journal of Agricultural and Resource Economics (2012)  
Journal of Developing Area (2011)  
Journal of Economic Insight (2010, 2015)  
Journal of Epidemiology and Public Health Reviews (2015, 2016)  
Journal of Health Economics (2012)

Journal of Labor Research (2016)  
OBM Neurobiology (2021)  
Open Journal of Social Science (2021)  
Pacific Economic Review (2015)  
Public Budgeting and Finance (2013, 2014)  
Qeios (2023)  
Singapore Economic Review (2014, 2020)  
Taiwan Economic Review (2007, 2010, 2011)

#### Textbook reviewer

*Health Care Operations and Supply Chain Management* by John Kros and Evelyn Brown, Jossey-Bass

*Understanding Health Care Economics*, Jones and Bartlett Learning

*Statistics for Health Care Professionals* by James E. Veney, John F. Kros, and David Rosenthal, Jossey-Bass

#### Reviewer of a textbook proposal

*Knowing Where to Mark the 'X'* by Sanjay Basu, Oxford University Press

#### Grant reviewer

Beaumont Faculty Development Fund, Saint Louis University, 2015

President's Research Fund, Saint Louis University, 2017

#### Conference abstract reviewer

American Public Health Association Annual Conference (2018)

### **TEACHING EXPERIENCE**

#### Courses taught at Saint Louis University

##### *Graduate courses:*

Health Economics (HMP 5200)  
Health Care Financial Management (HMP 5700)  
Special Study for Exams (HMP 5950)

*Undergraduate courses:*

Applied Biostatistics I (BST 3100)  
Business Sectors in Health Care (HMP 2100)  
Health Care Financial Management (HMP 4200)

Courses taught at Southern Illinois University Carbondale

Analysis and Evaluation of Health Care Services (HCM 375)  
Analysis of Issues in the Health Care Industry (HCM 401)  
Statistics for Health Professionals (HCM 365)  
Equipment and Materials Management in Health Facilities (Health Care Operations Management) (HCM 384)  
Health Care Management (HCM 381)  
Health Economics (HCM 382)  
Health Policy (HCM 320)  
Organization Behavior and Management in Health Care (HCM 364)  
Quality Management in Health Care Facilities (HCM 410)

Courses taught at the University of Southern California (as a Teaching Assistant)

*Graduate courses:*

Applied Econometrics (ECON 615)  
Economic and Financial Time Series I (ECON 613)  
Economic and Financial Time Series II (ECON 614)  
Probability and Statistics for Economists (ECON 514)

*Undergraduate courses:*

Introduction to Econometrics (ECON 414)  
Intermediate Microeconomic Theory (ECON 303)

**SERVICE ACTIVITIES**

Editorship

Editorial board, *Scientific Reports*, 2024-present

Associate editor, *Frontiers in Public Health*, 2023-present

Guest associate editor, *Frontiers in Psychology*, 2022

Review editor, *Frontiers in Public Health*, 2022-2023

Guest associate editor, *Frontiers in Public Health*, 2021-2022



Editor, *International Journal of Healthcare*, 2020-2023

Associate editor, *International Journal of Healthcare*, 2015-2020

### Professional Associations

Session chair and discussant, Missouri Valley Economic Association, 56<sup>th</sup> Annual Conference, October 2019

Session chair and discussant, Missouri Valley Economic Association, 55<sup>th</sup> Annual Conference, November 2018

Session chair and discussant, Missouri Valley Economic Association, 53<sup>rd</sup> Annual Conference, October 2016

Member, Technical Program Committee, International Symposium on Applied Engineering, Technical Management, and Innovation (AETMI), October 2013

Chair, Health Care and Hospital Management Track, 22<sup>nd</sup> International Conference on Pacific Rim Management of Association for Chinese Management Educators, July 2012

Chair, Health Care and Hospital Management Track, 21<sup>st</sup> International Conference on Pacific Rim Management of Association for Chinese Management Educators, July 2011

Member, Research and Education Committee, Illinois Rural Health Association, 2007–2008

### Educational Service

Faculty Senator, Saint Louis University, 2023–present

Coordinator, Second Year Comprehensive Exam, Department of Health Management and Policy, Saint Louis University, 2022–present

Member, Search Committee, Tenure-Track Faculty, Department of Health Management and Policy, Saint Louis University, 2022

Member, Budgeting and Finance Committee, Faculty Senate, Saint Louis University, 2021–present

Judge, Poster Session of Annual Graduate Research Symposium, Sigma Xi, Saint Louis University, 2019

Member, Search Committee, Tenure-Track Faculty, Department of Health Management and Policy, Saint Louis University, 2019

Chair, Program Committee, International Faculty and Staff Association, Saint Louis University, 2018–2019

Chair, Tenure and Promotion Committee, Department of Health Management and Policy, Saint Louis University, 2018–2022

Chair, Workload Policy Committee, Department of Health Management and Policy, Saint Louis University, 2018

Judge, 24<sup>th</sup> Annual Graduate Research Symposium, Saint Louis University, 2018

Grader, Ph.D. Written Exam, College for Public Health and Social Justice, Saint Louis University, 2018–present

Member, Search Committee, Non-Tenure-Track Faculty, Department of Health Management and Policy, Saint Louis University, 2018

Member, Comprehensive Examination Committee, Department of Health Management and Policy, Saint Louis University, 2017

Member, Tenure and Promotion Committee, Department of Health Management and Policy, Saint Louis University, 2017–2018

Member, Workload Policy Committee, College for Public Health and Social Justice, Saint Louis University, 2017–2018

Judge, Research Symposium, College for Public Health and Social Justice, Saint Louis University, 2016

Moderator and Judge, Public Health Scholar Bowl, College for Public Health and Social Justice, Saint Louis University, 2016

Member, Search Committee, Director for Institute for Global Health and Wellbeing, College for Public Health and Social Justice, Saint Louis University, 2016

Member, Faculty Manual Committee, College for Public Health and Social Justice, Saint Louis University, 2016–2017

Member, Tenure and Promotion Committee, College for Public Health and Social Justice, Saint Louis University, 2016–2017

Member, Task Force for Competencies and Outcome Measures of Undergraduate Program, Department of Health Management and Policy, Saint Louis University, 2016

Member, Cultural Committee, College for Public Health and Social Justice, Saint Louis University, 2014–2016

Member, Curriculum and Competency Committee, Department of Health Management and Policy, Saint Louis University, 2014–2016; 2017–2022

Member, Search Committee, Tenure-Track Faculty, Department of Health Management and Policy, Saint Louis University, 2014–2015

Member, Search Committee, Instructor for Radiologic Sciences, Southern Illinois University, 2014

Member, Search Committee, Director of School of Allied Health, Southern Illinois University, 2013

Member, Assessment Committee, School of Allied Health, Southern Illinois University Carbondale, 2013–2014

Member, Search Committee, Instructor for Physical Therapist Assistant, School of Allied Health, Southern Illinois University, 2013

Member, Search Committee, Instructor for Mortuary Science and Funeral Service, School of Allied Health, Southern Illinois University, 2013

Member, Search Committee, Instructor for Health Care Management, School of Allied Health, Southern Illinois University, 2013

Member, Strategic Planning Committee, College of Applied Sciences and Arts, Southern Illinois University, 2012–2014

Member, Search Committee, Instructor for Anatomy, Medical Terminology, and Physiology, School of Allied Health, Southern Illinois University Carbondale, 2012

Member, Assessment Tool Committee, School of Allied Health, Southern Illinois University Carbondale, 2011–2012

Member, Honors Day Committee, College of Applied Sciences and Arts, Southern Illinois University, 2011–2014

Member, Ph.D. Program Committee, College of Applied Sciences and Arts, Southern Illinois University, 2010–2012

Chair, Faculty Search Committee, On-Campus Programs in Health Care Management, School of Allied Health, Southern Illinois University Carbondale, 2009

Advisor, Taiwanese Student Association, Southern Illinois University Carbondale, 2008

Judge of Science Fair, Illinois Junior Academy of Science, 2007

Member, Research Paper of the Year Committee, School of Allied Health, Southern Illinois University Carbondale, 2007–2014

Member, Dental Hygiene Faculty Search Committee, School of Allied Health, Southern Illinois University Carbondale, 2007

Member, Faculty Search Committee, Off-Campus Academic Programs in Health Care Management, School of Allied Health, Southern Illinois University Carbondale, 2006–2014

Member, Committee of College Credit for Prior Work Experience, School of Allied Health, Southern Illinois University Carbondale, 2006–2014

## **THESIS/DISSERTATION ADVISOR AND COMMITTEE**

### **Advisor**

#### Saint Louis University

Stinder Kaur, Doctor of Philosophy in Public Health, 2024-present

Ruoyun Wang, Doctor of Philosophy in Public Health, 2022-present

Kemba Noel-London, Doctor of Philosophy in Public Health, 2016-2017.

## **Committee**

### Saint Louis University

Dajun Tian, Doctor of Philosophy in Public Health, committee member, 2023

David Oladele, Doctor of Philosophy in Public Health, ad hoc committee member, 2022

Zidong Zhang, Doctor of Philosophy in Public Health, committee member, 2021

Longwen Zhao, Doctor of Philosophy in Public Health, ad hoc committee member, 2021

Meiling Tung, Doctor of Philosophy in Education, committee member, completed December 2017

Michele Bierig, Doctor of Philosophy in Health Outcomes Research, ad hoc committee member, 2016

### Southern Illinois University

Ihung Li, Doctor of Philosophy in Education, completed December 2020

Saad Alqithami, Doctor of Philosophy in Computer Science, completed December 2016

Saad Alqithami, Master of Science in Computer Science, completed August 2012

### National Cheng Kung University

Chih-Yuan Chen, Master of Science in Economics, completed June 2010

Wei-Cheng Chen and Wan-Ju Kuo, Master of Science in Telecommunication Management, completed June 2009

Byambajargal Chuluunbaatar and Timothy-Ross O'Connor, International Master of Business Administration, completed June 2009

## HONORS AND AWARDS

Thank an instructor: Two e-mails from students expressing gratitude for my dedication to teaching and acknowledging the impact I have had on them academically or personally. Reinert Center, Saint Louis University, 2021

You Made a Difference: Recognized as one of the faculty members who contributed to the success of graduating seniors, according to the exit survey. Saint Louis University, 2017

You Made a Difference: Recognized as one of the faculty members who contributed to the success of graduating seniors, according to the exit survey. Saint Louis University, 2016

Research Paper of the Year Award, College of Applied Sciences and Arts, Southern Illinois University Carbondale, 2013–2014

Research Paper of the Year Award, School of Allied Health, Southern Illinois University Carbondale, 2013–2014

Research Paper of the Year Award, School of Allied Health, Southern Illinois University Carbondale, 2009–2010

Honorable Mention Award for Poster Presentation, 18<sup>th</sup> Illinois Rural Health Association Annual Conference, Effingham, IL, 2007

Outstanding Teaching Award, Department of Economics, University of Southern California, 2006

Doctoral Dissertation Fellowship, Chiang Ching-Kuo Foundation for International Scholarly Exchange (CCKF), McLean, VA, 2005–2006

Merit Fellowship, College of Letters, Arts, and Sciences, University of Southern California, 2004–2005

Best Second-Year Empirical Paper Award, Department of Economics, University of Southern California, 2002

Army Medal, Taiwan Army, 1997

Best Master's Thesis of the Year in the Human Resources Field, Taiwan Economic Association, 1995

Fellowship, Ministry of Education, Taiwan, 1993

Presidential Award (top 5% of the class), National Taiwan University, 1992

**PROFESSIONAL AFFILIATIONS**

Member, Health Care Financial Management Association

Member, Missouri Valley Economic Association

**PERSONAL INFORMATION**

Citizenship: Taiwan and the United States

Gender: Male

Month and Year of Birth: February 1972