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CONTACT INFORMATION

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EDUCATION

- PhD in Economics, University of Southern California, December 2006
- MA in Economics, University of Southern California, May 2003
- MBA in Finance (with *Beta Gamma Sigma* Honor), California State University, Los Angeles, June 2000
- MA in Economics, National Taiwan University, June 1995
- BA in Economics, National Taiwan University, June 1993

WORK EXPERIENCE

Administrative Appointments

- Director, PhD in Public Health Studies, College for Public Health and Social Justice, Saint Louis University, July 2024–present

Academic Appointments

- Professor (with tenure), Department of Health Management and Policy, Saint Louis University, July 2025–present
- Associate Professor (with tenure), Department of Health Management and Policy, Saint Louis University, August 2014–June 2025

- 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 courses and assisting departmental administration), Department of Economics, National Taiwan University, August 1997–July 1998

Non-Academic Experience

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

PUBLICATIONS

Journal Articles

1. Chen, C. B., McComas, A. M., **Liu, E.**, & Villegas, Jorge. (2025). Gender disparities in lung cancer and social determinants of environmental risk: A geospatial analysis across Illinois counties. **Accepted**, *Frontiers in Public Health*.
2. **Liu, E.** (2025). Empowering informed choices: Advancing health insurance literacy in a complex and costly system. *Health Literacy Research and Practice*. 9(4), e117–e121. <https://doi.org/10.3928/24748307-20250612-02>
3. Liu, X., Gillepie, G., Gaynor, M., & **Liu, E.** (2025). Evaluation and implications of generative AI in health administration education. *Journal of Health Administration Education*, 41(2), 351–367.
4. Loux, T., Bafageeh, F., **Liu, E.**, & Raybon, N. (2025). Examining the financial paradox of dental insurance: Higher out-of-pocket costs for individuals without private health insurance? *Journal of Public Health Dentistry*. <https://doi.org/10.1111/jphd.12681>
5. Liu, X., He, L., Alanazi, E., **Liu, E.**, Goss, A., & Gumireddy, L. (2025). Assessing the accuracy and explainability of using ChatGPT to evaluate the quality of health news. *BMC Public Health*, 25(1), 2038. <https://doi.org/10.1186/s12889-025-23206-0>

6. Hwang, Y. L., Hwang, J. J., Chen, K., Chow, T. K. D., & **Liu, E.** (2025). Healthcare Access and Quality Among Adolescents with Co-Morbid Chronic Pain and Obesity: Insights from a National Survey. *The Journal of Pain*, 29(Supplement), Article 105112. <https://doi.org/10.1016/j.jpain.2025.105112>
7. Hwang, J. J., **Liu, E.**, Groenewald, C., & Grucza, R. (2025). Assessing the efficacy of multimodal approaches in chronic pain management. *The Journal of Pain*, 29(Supplement), Article 105111. <https://doi.org/10.1016/j.jpain.2025.105111>
8. **Liu, E.**, Bach, A., Gumireddy, L., & Hwang, J. J. (2025). A Study of the Connection Between Health Insurance Literacy and Health Status: Evidence from the US Healthcare Reform Monitoring Survey. *Journal of Community Health*, 50(1), 178–186. <https://doi.org/10.1007/s10900-024-01407-9>
9. Lin, X., Cai, M., Pan, J., **Liu, E.**, Wang, X., Song, C., Wei, J., Lin, H., & Pan, J. (2024). PM_{2.5} chemical components are associated with in-hospital case fatality for acute myocardial infarction in China. *Ecotoxicology and Environmental Safety*, 284, Article 116898. <https://doi.org/10.1016/j.ecoenv.2024.116898>.
10. Enard, K. R., Gillespie, K. N., **Liu, E.**, Walter, M., Howard, S. W., Syberg, K., & BeLue, R. (2024). Refocusing competencies for healthcare management early careerists: The SLU MHA competency model update. *Journal of Health Administration Education*, 41(4), 631–652.
11. Wiltshire, J., Sampson, C. J., **Liu, E.**, Debose, M. M., Musey, P. I. & Elder, K. (2024). Affordability, mistreatment, perceived racism, and distrust in the healthcare system among Black American women aged 45 and over. *AIMS Public Health*, 11(4), 1030–1048. <https://doi.org/10.3934/publichealth.2024053>.
12. 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, Article 115731. <https://doi.org/10.1016/j.ecoenv.2023.115731>.
13. **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, Article 1605788. <https://doi.org/10.3389/ijph.2023.1605788>

14. 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, Article 1194375.
<https://doi.org/10.3389/fpubh.2023.1194375>

15. **Liu, E.**, Dean, C. A., & Elder, K. (2023). The impact of COVID-19 on vulnerable populations. *Frontiers in Public Health*, 11, Article 1267723.
<https://doi.org/10.3389/fpubh.2023.1267723>

16. **Dean, C. A.†**, **Liu, E.†**, 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, Article 1142603.
<https://doi.org/10.3389/fpubh.2023.1142603> († denotes shared first authorship)

17. 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>

18. 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*, 35(26), 10458–10465.
<https://doi.org/10.1080/14767058.2022.2128665>

19. 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, Article 1604846. <https://doi.org/10.3389/ijph.2022.1604846>

20. 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, Article 134773.
<https://doi.org/10.1016/j.chemosphere.2022.134773>

21. 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

22. 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>

23. 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>

24. Liang, Z., Yang, Y., Yi, J., Qian, Z., Zhang, Z., McMillin, S. E., Liu, E., Lin, H., & Liu, G. (2021). Maternal PM_{2.5} exposure associated with stillbirth: A large birth cohort study in seven Chinese cities. *International Journal of Hygiene and Environmental Health*, 236, Article 113795.
<https://doi.org/10.1016/j.ijheh.2021.113795>

25. 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, Article 113814.
<https://doi.org/10.1016/j.socscimed.2021.113814>

26. 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>

27. 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>

28. 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>

29. 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>

30. 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), Article 1557988320943359. <https://doi.org/10.1177/1557988320943359>

31. Cai, M., **Liu, E.**, Zhang, R., Lin, X., Rigdon, S. E., Qian, Z., BeLue, R., & Chang, J.J. (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>

32. 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), Article e0226562. <https://doi.org/10.1371/journal.pone.0226562>

33. 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_{2.5} 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>

34. 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 PM₁ 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>

35. 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>

36. 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), Article 1930. <https://doi.org/10.3390/ijerph15091930>

37. 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>

38. 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>

39. 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>

40. 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>

41. 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>

42. 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>

43. 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(7), Article e015884. <http://dx.doi.org/10.1136/bmjopen-2017-015884>

44. 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).

45. **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>

46. 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), Article 1009.
<https://www.jscimedcentral.com/public/assets/articles/healtheducation-1-1009.pdf>

47. **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>

48. 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>

49. 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>

50. **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.

51. **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.
52. **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*)
53. **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>
54. **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 17th International Conference on Pacific Rim Management of Association for Chinese Management Educators*, C14-1–C14-7.

WORKING PAPERS

1. Li, W., Jin, H., **Liu, E.**, Wu, D. C., & Balezentis, T. (2025). *Does the development of the digital economy improve personal health status in cities? Evidence from middle-aged and older adults in an emerging economy*. Manuscript under review, *BMC Public Health*.
2. Bhavsar, A., **Liu, E.**, Li, W., & Wu, D. C. (2025). *What drives trust in health insurance? Insights from a nationally representative U.S. survey*. Manuscript revised and resubmitted, *BMC Health Services Research*.
3. Hsieh, H., Yu, W., & **Liu, E.** (2025). *Trade with China and the slowdown in US labor productivity*. Manuscript under review, *Global Economy Review*.

WORK IN PROGRESS

1. Hwang, J. J., **Liu, E.**, & Groenewald, C. B. (2025). Investigating the prevalence and efficacy of multimodal pain management strategies for chronic pain.

2. Liu, E., Dean, C., & Elder, K. (2025). The unmet healthcare needs of vulnerable populations in the United States.

CONFERENCE AND SEMINAR PRESENTATIONS

Conferences

1. Bhavsar, A., & Liu, E. (2025, October). What drives trust in health insurance? Secondary analysis of a nationally representative US survey. AMA Research Challenge. <https://doi.org/10.48448/bm5a-ne82>
2. Hwang, Y.L., Hwang, J.J., Chen, K., Chow, T. K. D., & Liu, E. (2025, April-May). *Healthcare access and quality among adolescents with co-morbid chronic pain and obesity: Insights from a national survey* [Poster presentation]. Annual Scientific Meeting of the United States Association for the Study of Pain (USASP). Chicago, IL, United States.
3. Hwang, J.J., Liu, E., & Groenewald, C. B. (2025, April-May). *Assessing the efficacy of multimodal approaches in chronic pain management* [Poster presentation]. Annual Scientific Meeting of the United States Association for the Study of Pain (USASP). Chicago, IL, United States.
4. Liu, X., Gaynor, M., Gillespie, K., & Liu, E. (2025, March). *Evaluation and Implications of Generative AI in Health Administration Education* [Oral Presentation]. 20th AUPHA Academic Forum - HIMSS-25. Las Vegas, NV, United States.
5. Chen, K., Hwang, J. J., Hwang, Y. L., Chow, T. K. D., & Liu, E. (2024, October). *Investigating chronic pain and obesity as co-morbidities associated with physical health and access to quality healthcare among the adolescent population* [Poster presentation]. Region VI Conference of The Asian Pacific American Medical Student Association (APAMSA). Milwaukee, WI, United States.
6. Hwang, J.J., Liu, E., & Groenewald, C. B. (2024, October). *Investigating the prevalence and efficacy of multimodal pain management strategies for chronic pain* [Poster presentation]. Region VI Conference of The Asian Pacific American Medical Student Association (APAMSA). Milwaukee, WI, United States.
7. Bhavsar, A., Liu, E. (2024, April). *Exploring Trust in Health Insurance Providers: Demographic and Healthcare Factors Influencing Perceptions Among US Adults*. Senior Legacy Symposium, Saint Louis University, Saint Louis, MO, United States.

8. Balasubramaniam, D., & Liu, E. (2019, November). *Female empowerment and its implications for women's health care utilization in India* [Oral presentation]. 89th Annual Meeting of Southern Economic Association, Fort Lauderdale, FL, United States.
9. Liu, E., & Ashan, N. (2019, October). *Minimum wages and suicide rates in the US* [Oral presentation]. 56th Annual Conference of Missouri Valley Economic Association, Kansas City, MO, United States.
10. Hsieh, H., Yu, W., & Liu, E. (2019, October). *The rise in Chinese import competition and the fall in American productivity* [Oral presentation]. 56th Annual Conference of Missouri Valley Economic Association, Kansas City, MO, United States.
11. 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]. ISPOR Annual Conference, New Orleans, LA, United States.
12. Hsieh, H., Yu, W., & Liu, E. (2019, March). *The overlooked China shock: The negative impact of trading with China on labor productivity in the US* [Oral presentation]. 83rd Annual Conference of Midwest Economic Association, Saint Louis, MO, United States.
13. Hsieh, H., Yu, W., & Liu, E. (2019, March). *The overlooked China shock: The negative impact of trading with China on labor productivity in the US* [Oral presentation]. 15th International Conference of Western Economic Association International, Tokyo, Japan.
14. Hsieh, H., Yu, W., & Liu, E. (2018, November). *The overlooked China shock: The negative impact of trading with China on labor productivity in the US* [Oral presentation]. 55th Annual Conference of Missouri Valley Economic Association, Memphis, TN, United States.
15. Liu, E., & Hsieh, H. (2018, November). *Self-esteem and obesity among young adults* [Oral presentation]. 55th Annual Conference of Missouri Valley Economic Association, Memphis, TN, United States.
16. 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]. Annual Meeting and Exposition of American Public Health Association, Atlanta, GA, United States.

17. 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]. Annual Meeting and Exposition of American Public Health Association, Atlanta, GA, United States.
18. 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]. AcademyHealth Annual Research Meeting: Disparities Interest Group, New Orleans, LA, United States.
19. Liu, E. (2016, October). *Gas price and pedestrian fatality* [Oral presentation]. 53rd Annual Conference of Missouri Valley Economic Association, Saint Louis, MO, United States.
20. Liu, E. (2014, October). *Access to water and nutritional status: A study of school-aged children in India* [Oral presentation]. 51st Annual Conference of Missouri Valley Economic Association, Saint Louis, MO, United States.
21. Balasubramaniam, D., & Liu, E. (2013, October). *Childhood obesity a public health problem in the developing world: A study on India* [Oral presentation]. 76th International Atlantic Economic Conference, Philadelphia, PA, United States.
22. 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]. 9th Annual Conference of Asia-Pacific Economic Association, Japan.
23. 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]. 82nd Annual Meeting of Southern Economic Association, New Orleans, LA, United States.
24. 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]. 82nd Meeting of Southern Economic Association, New Orleans, LA, United States.
25. 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]. 81st Annual Meeting of Southern Economic Association, Washington, DC, United States.

26. 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]. 37th Annual Conference of Eastern Economic Association, New York, NY, United States.
27. Liu, E., Lo, T., & Hsieh, H. (2010, November). *Literacy and health: Evidence from the national assessment of adult literacy (revised version)* [Oral presentation]. 80th Annual Meeting of Southern Economic Association, Atlanta, GA, United States.
28. Liu, E., Lo, T., & Hsieh, H. (2010, October). *Literacy and health: Evidence from the national assessment of adult literacy* [Oral presentation]. 47th Annual Meeting of Missouri Valley Economic Association, St. Louis, MO, United States.
29. Liu, E., Yu, W., & Hsieh, H. (2010, October). *Cigarette taxes and respiratory cancers: New evidence from panel co-integration analysis* [Oral presentation]. 47th Annual Meeting of Missouri Valley Economic Association, St. Louis, MO, United States.
30. Liu, E., Yu, W., & Hsieh, H. (2009, November). *Panel co-integration analysis of cigarette taxes and health: The case of respiratory cancers* [Oral presentation]. 79th Annual Meeting of Southern Economic Association, San Antonio, TX, United States.
31. 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]. AcademyHealth Annual Research Meeting, Washington, DC, United States.
32. Shih, S. C. & Liu, E. (2007, July). *Intelligent decision support systems for aftermarket field service scheduling and condition-based maintenance* [Oral presentation]. 17th International Conference on the Pacific Rim Management of Association for Chinese Management Educators, Las Vegas, NV, United States.
33. Liu, E. (2007, April). *The treatment effects of full-time maternal employment on childhood obesity: Control function and matching estimators* [Poster presentation]. 18th Annual Conference of Illinois Rural Health Association, Effingham, IL, United States.

34. Liu, E., Hsiao, C., & Chou, S. (2005, July). *Maternal full-time employment and childhood obesity: Parametric and semi-parametric estimation* [Oral presentation]. 80th Annual Western Economic Association International Conference, San Francisco, CA, United States.
35. Liu, E. (2005, April). *Maternal full-time employment and childhood obesity* [Oral presentation]. 47th Annual Western Social Science Association Conference, Albuquerque, NM, United States.
36. Liu, E. (2005, January). *Maternal full-time employment and children's body mass index* [Oral presentation]. Annual Meeting of Allied Social Science Associations (ASSA), Philadelphia, PA, United States.

Seminars

1. Loux, T., Bafageeh, F., Raybon, N., & Liu, E. (2023, October). *Dental insurance and out-of-pocket dental expenses*. Advanced Health Data (AHEAD) Center, Saint Louis University, Saint Louis, United States.
2. Liu, E. (2022, December). *Health insurance literacy and avoidance of medical care among international students*. Sinquefield Center, Saint Louis University, Saint Louis, United States.
3. Liu, E. (2021, June). *Health insurance literacy: Its consequences and implications*. Department of Economics, Tamkang University, Taipei, Taiwan.
4. 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.
5. Liu, E. (2013, March). *Using national twin data to estimate peer effects on student test scores*. Department of Economics, Southern Illinois University at Carbondale, United States.
6. Liu, E. (2012, March). *Treatment evaluation*. Department of Economics, National Cheng Kung University, Tainan, Taiwan
7. 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.

8. 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.

9. 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 Investigator: Mike Markee, Echu Liu
 Consultant: Scott Karr

2. 2021: Saint Louis University (2021–2022) \$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
 Consultant: Echu Liu

GRANT APPLICATIONS UNDER REVIEW

1. 2025: Agency for Health Care Research and Quality (2026–2028) \$100,000
 Comparing crisis care models for suicidal youth: A patient-centered and economic perspective
 Principal investigator: Daniel Lin

Co-investigator: Echu Liu

SUBMITTED AND UNFUNDDED 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 US 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 Clinical Trial (2025)
Contemporary Economic Policy (2010)
Environmental Health Insight (2021)
Frontiers in Public Health (2022, 2025)

Health Policy (2024)
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)
Journal of Public Health (2025)
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)
Social Science and Medicine (2025)
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

Co-guest editor, *Global Health Economics and Sustainability*, 2024–2025

Editorial board, *Scientific Reports*, 2024–2025

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

Member, Health Analytics and Data Science Forum of the Association of University Programs in Health Administration (AUPHA), 2024

Session chair and discussant, Missouri Valley Economic Association, 56th Annual Conference, October 2019

Session chair and discussant, Missouri Valley Economic Association, 55th Annual Conference, November 2018

Session chair and discussant, Missouri Valley Economic Association, 53rd 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, 22nd International Conference on Pacific Rim Management of the Association for Chinese Management Educators, July 2012

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

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

Educational Service

Saint Louis University

Department

Coordinator, Second Year Comprehensive Exam, 2022–present

Member, Second Year Comprehensive Examination Committee, 2017

Member, Search Committee, Non-Tenure-Track Faculty, 2018

Member, Search Committee, Tenure-Track Faculty, 2022, 2019, 2014–2015

Chair, Tenure and Promotion Committee, 2018–2022

Member, Tenure and Promotion Committee, 2017–2018

Chair, Workload Policy Committee, 2018

Member, Curriculum and Competency Committee, 2014–2016; 2017–2022; 2025 – present

Member, Task Force for Competencies and Outcome Measures of Undergraduate Program, 2016

College

Grader, PhD Written Exam, 2018–present

Member, Workload Policy Committee, 2017–2018

Judge, Research Symposium, 2016

Moderator and Judge, Public Health Scholar Bowl, 2016

Member, Search Committee, Director for Institute for Global Health and Well-being, 2016

Member, Faculty Manual Committee, 2016–2017

Member, Tenure and Promotion Committee, 2016–2017

Member, Cultural Committee, 2014–2016

University

Dissertation Fellowship Selection Committee, 2025–present

Faculty Senator, 2023–present

Member, Budgeting and Finance Committee, Faculty Senate, 2021–present

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

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

Judge, 24th Annual Graduate Research Symposium, 2018

Southern Illinois University Carbondale

Program

Member, Search Committee, Instructor for Health Care Management, 2013

Chair, Faculty Search Committee, On-Campus Programs in Health Care Management, 2009

Member, Faculty Search Committee, Off-Campus Academic Programs in Health Care Management, 2006–2014

School

Member, Search Committee, Instructor for Radiologic Sciences, 2014

Member, Search Committee, Director of School of Allied Health, 2013

Member, Assessment Committee, 2013–2014

Member, Search Committee, Instructor for Physical Therapist Assistant, 2013

Member, Search Committee, Instructor for Mortuary Science and Funeral Service, 2013

Member, Search Committee, Instructor for Anatomy, Medical Terminology, and Physiology, 2012

Member, Assessment Tool Committee, 2011–2012

Member, Research Paper of the Year Committee, 2007–2014

Member, Dental Hygiene Faculty Search Committee, 2007

Member, Committee of College Credit for Prior Work Experience, 2006–2014

College

Member, Strategic Planning Committee, 2012–2014

Member, Honors Day Committee, 2011–2014

Member, PhD Program Committee, 2010–2012

University

Advisor, Taiwanese Student Association, 2008

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

THESIS/DISSERTATION ADVISOR AND COMMITTEE

Advisors

Saint Louis University

Satinder Kaur, Doctor of Philosophy in Public Health, 2024

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

Alysaa Coleman, Doctor of Philosophy in Public Health, committee member, 2024–2025

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 Carbondale

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 had on them both academically or personally. Reinert Center, Saint Louis University, 2021

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

Thank you, You Made a Difference: Recognized as a faculty member 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, 18th 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