Wenqing Qian

EDUCATION

PhD in Survey and Data Science   *Exp. May 2028*
Institute for Social Research, University of Michigan, Ann Arbor, United States
Master of Science in Survey and Data Science   *May 2024*
Institute for Social Research, University of Michigan, Ann Arbor, United States
Bachelor of Science in Statistics   *June 2022*
School of Management, Fudan University, Shanghai, China

RESEARCH EXPERIENCE

Harmonization of 2015-2019 Life History Mail Survey (LHMS) data
University of Michigan   *May 2024-January 2025*

- Cleaned and aggregated 2019 Fall LHMS data with previous waves.
- Identified, scrutinized, and corrected duplicated and suspicious observations.
- Reorganized job history information across all available waves.

LHMS data quality assessment
University of Michigan   *January 2023-Present*

- Joint impacts of respondent and question characteristics on item nonresponse in self-administered surveys—evidence from the Life History Mail Survey

  - Developed a theoretical framework on the question-answer process and the mechanism of item nonresponse in self-administered surveys.

  - Fitted cross-classified mixed models to evaluate the effects of question and respondent characteristics on item nonresponse with LHMS data.

  - Explored different approaches to adjusting missing values by design.

- Respondent correlates of item missing rates in LHMS data

  - Developed rules to identify missing items in LHMS data based on questionnaire design and constructed indicators to measure the extent of missingness.

  - Conducted literature review on factors influencing item nonresponses.

  - Described and visualized missing patterns and their variation across survey waves, different sections of the questionnaire, and respondent groups.

  - Performed Kruskal-Wallis tests and Dunn's tests to investigate the correlation between item missingness and respondent-specific covariates.

  - Designed and fitted a beta regression model that integrated stability selection techniques to filter essential predictors and model item missing rates.

  - Evaluated the impacts of selected covariates on the data quality using marginal effects and formulated follow-up models based on previous results to assess potential interventions among inter-correlated predictors.

  - Wrote the manuscript for publication.

- Consistency check on LHMS data
  - Examined the consistency across related questions in LHMS and compared the congruity between LHMS data and other data products of the Health and Retirement Study.
  - Analyzed the variation in data consistency across respondent groups defined by characteristics of interest using Chi-squared tests.

Sequence analysis on residential movement based on data from LHMS

University of Michigan   *September 2022-January 2023*

- Cleaned and coded grid data about residential movements in LHMS into sequences using R.
- Carried out sequence analysis on residential movement data and performed clustering algorithm to investigate movement patterns.
- Conducted literature review on missing data imputation methods applicable to sequence data.

Demographics of Weibo users in China

Max Planck Institute for Demographic Research   *March 2021-September 2023*

- Carried out preparatory research on social media usage in China and algorithms applied by the Weibo Advertising Platform.
- Programmed a web crawler in Python to collect and organize user coverage estimates from the Weibo Advertising Platform. Collected and cleaned 2020 census data and the latest available socioeconomic data.
- Performed exploratory analysis and visualization on Weibo's penetration and user composition.
- Analyzed outliers and the correlation pattern between the demographics and socioeconomic statuses of Weibo users. Adopted compositional data analytic techniques to summarize the demographic characteristics of Weibo users.
- Conducted spatial analysis on the geographical distribution of penetration rates and sex ratios of Weibo users.

AWARD & FUNDING	Charles Cannell Fund in Survey Methodology	*April 2025*

POSTER PRESENTATION	Memory Issues in Retrospective Life History Surveys: Do Question Type and Topic Matter?	*November 2024*
	GSA 2024 Annual Scientific Meeting	Seattle, WA, US
	The Demographic Profile of Weibo Users	*April 2023*
	PAA Annual Meeting	New Orleans, LA, US
	The Demographics of Weibo Users in China	*June 2022*

SKILL &	**Technology skills:** R, Python, SQL, Java, MATLAB, SAS, SPSS
LANGUAGE	**Languages:** Mandarin (Native), English (Proficient), Japanese (Elementary)