HSU, Ke-Cheng (Clio)

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Professional Summary

PhD candidate in Economics at HKUST (Industrial Organization & Applied Micro). Experience in theoretical modeling, structural estimation, and policy-relevant empirical work on return policy design and inventory management. Proficient in R, Python, C++, Excel, and AWS; use LLM-assisted coding with output validation to deliver tractable, reproducible results under tight timelines. Seeking high-impact research roles.

Education

The Hong Kong University of Science and Technology, Hong Kong

Doctor of Philosophy in Economics Expected Graduation: June 2027

Research interests: Industrial organization and applied microtheory.

Master of Philosophy in Economics 2020–2022

CGA: 4.1/4.3.

Bachelor of Science in Mathematics and Economics, Minor in Actuarial Mathematics 2015–2019

CGA: 3.9/4.3.

Awards: Dean's List (2016–2019); University Scholarship (730K HKD); Academic Achievement Medal; Postgraduate studentship (1.2M HKD); Redbird scholarship (40K HKD).

Experience

Teaching Assistant & Lecturer, HKUST 2022–present

- Lecturer for Math Camp; TA for PhD Microeconometric Theory and undergraduate Information Economics and Macroeconomics.

Full-Time Research Assistant, National Taiwan University 2020

- Spearheaded theoretical modeling of crisis intervention as regulator–creditor negotiation; derived and validated results through simulation, informing policy design.

Projects

Return Shipping Insurance in E-commerce

- Built end-to-end pipelines on AWS and HPC (SLURM): relational DB for large transactional data; automated R reporting; LLM-assisted coding with validation (∼80 PRs / ∼2,000 commits in six months) for conference talks and a publishable paper.
- Estimated a consumer purchase–return and seller-pricing model with moment-based methods and constrained optimization (Monte Carlo pipelines in R, sped up using C++); scraping and OCR in Python (sped up using C++); used bootstrap to assess uncertainty of estimates and policy rankings.
- Quantified return trade-offs for a mid-sized Taobao apparel seller (∼60M RMB, 7 years; ∼20–30% returns): a discount + return-penalty menu can raise welfare by ∼30% vs retailer-paid return-shipping insurance and save >8M RMB under the preferred rule.
- Delivered policy guidance; presented at Econometric Society and China Annual Economic Forum: moderate restocking/return-penalty default (∼10–15%) when rules cannot be tailored; tighten returns in low-margin, high return-cost categories; keep lenient coverage where margins/salvage are high (e.g., dresses).

Inventory under RPM *(w/ K. Kawaguchi, HKUST; K. Kawai, U. Tokyo/UCLA)*

- Analyzed pricing and inventory under demand uncertainty and RPM; characterized inter-store and intertemporal substitution in a dynamic oligopoly with stockouts; estimated on chained bookstore data (1000+ stores); counterfactuals on environmental vs. pro-competitive trade-offs.
- Produced weekly visualizations/reports under short turnaround; applied k-means, PCA, LASSO, and panel fixed-effects regression.

Leadership & Extra-Curricular Experience

UG Hall I, Hall Tutor 2022–present

- Mediate conflicts and lead resident activities (orientation, workshops, career talks).

Teaching Assistant Coordinator 2025–present

- Coordinate GTAs and program staff; assess teaching and share resources.

Skills

Languages: Mandarin (Native), English (Fluent), Cantonese (Basic).
Technical: Python, R, C++, Excel, LaTeX, AWS; econometrics & structural estimation.
Tools: Cursor, Copilot (LLM-assisted coding with validation).