HSU, Ke-Cheng (Clio)

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Professional Summary

PhD candidate in Economics at HKUST with strong statistical training in empirical industrial organization and market structure. Works with large proprietary datasets (e-commerce transactions and retail point-of-sale records), builds structural models, and estimates profit, welfare, and economic loss under counterfactual scenarios. Clear written and verbal communicator who structures complex ideas for non-specialists, delivers careful work to deadlines, and picks up new industries and methods quickly; collaborates in Mandarin and English. Leadership practice through teaching coordination and hall tutoring; open to multicultural manufacturing rotations. Hong Kong permanent resident. Seeking Defond Graduate Trainee Program 2027 — **Management Track** (July 2027 intake; available as early as February 2027).

Education

The Hong Kong University of Science and Technology, Hong Kong

Doctor of Philosophy in Economics Expected Graduation: June 2027 (ready for July 2027 intake)

Research interests: Empirical industrial organization and digital economics.

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 (top 1%); Postgraduate studentship (1.5M HKD); Redbird scholarship (40K HKD).

Experience

Research Assistant, National Taiwan University 2020

- Modeled crisis intervention as regulator–creditor negotiation; derived and simulated equilibrium predictions to support policy design.

Teaching Assistant & Lecturer, Department of Economics, HKUST 2020–present

- Lecturer for MSc Math Camp (4.53/5); TA for PhD and undergraduate economics (avg 4.72/5); present technical material clearly to non-specialist audiences.

Teaching Assistant Coordinator, Business School, HKUST 2025–2026

- Coordinated a cross-functional teaching team; coached TAs, set standards, and owned delivery quality—leadership practice for Management Track rotations.

Projects

Inventory and Pricing under Resale Price Maintenance (RPM) *(w/ K. Kawaguchi, HKUST; K. Kawai, U. Tokyo)*

- Built a dynamic oligopoly model of pricing and inventory under demand uncertainty and RPM, with equilibrium stockouts and unsold returns (35–40% of Japanese books printed are discarded); constructed title-by-market-by-month panels from monthly bookstore POS data (deliveries, sales, returns; tens of billions of records across 1,000+ stores), linked via standardized ISBNs and merged with local demographics and detailed title-level information scraped from Amazon in Python.
- Estimated demand and supply with instrumental variables (2SLS) and Hausman-style price instruments; validated the estimator with Monte Carlo on simulated equilibria; selected controls with LASSO and panel fixed effects; implemented iterative equilibrium simulation in C++.
- Compared the dynamic model against the classical static model and showed the static version overstates marginal cost by ∼20% once demand uncertainty and inventory decisions are ignored; uncovered stockout-driven intertitle and intertemporal substitution through weekly descriptive statistics, regressions, and figures.

Return Policy Design in E-Commerce *(Sole-authored Job Market Paper)*

- Sole-authored Ph.D. structural industrial-organization study: built and estimated a model of purchase, return-shipping-insurance take-up, and return under monopoly pricing, using within-retailer switches between automatic provision and selective adoption of return-shipping insurance on Taobao (2017–2023; ∼62M RMB revenue; six apparel categories; ∼20–30% return rates); scraped and OCR-digitized product attributes in Python.
- Developed an original welfare framework that decomposes losses into ex-ante purchase inefficiency and ex-post return inefficiency; recovered category-specific demand, fit uncertainty, and return responses via GMM with bootstrap inference; built a reproducible estimation pipeline on AWS and HPC/SLURM (Python, R, C++) with Monte Carlo validation of policy rankings for seller profit, consumer surplus, and social welfare.
- Documented a purchase–return efficiency trade-off and showed that a menu pairing a discounted price with a moderate (∼10–15%) restocking fee raises social welfare by about 2 million RMB (∼5%) and seller profit by about 1.2 million RMB relative to status-quo insurance policies, attaining ∼75–78% of first-best welfare outside dresses.

Skills

Languages: Mandarin (Native), English (Fluent), Cantonese (Basic).

Technical: Python, R, Stata, C++, MATLAB, Microsoft Excel, Word, PowerPoint, LaTeX, AWS, HPC/SLURM; MLE, GMM, bootstrap; analytical problem-solving, project reporting.

AI tools: Daily use of Copilot and Cursor for coding and drafting; every output verified before sharing.

Fit: Management Track; open to China / SEA / Europe exposure; 0–3 years early-career profile; right to work in Hong Kong.

References: Kei Kawai (UTokyo; Compass Lexecon), Kohei Kawaguchi (HKUST; UTokyo Econ Consulting), Pak Hung Au (HKUST).