HSU, Ke-Cheng (Clio)

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Professional Summary

PhD candidate in Economics at HKUST, specializing in digital markets and consumer behavior. Analyze large proprietary datasets, including e-commerce platform transactions and retail point-of-sale records; collect data at scale through web scraping, APIs, and AI-based OCR in Python. Build reproducible, testable analysis pipelines on AWS and HPC/SLURM; present results to non-specialist audiences through clear writing, data visualizations, and weekly HTML reports. Apply demand and pricing models, merger simulation, market entry/exit analysis, and firm-conduct identification to what-if questions on customer experience, platform design, and growth.

Education

The Hong Kong University of Science and Technology, Hong Kong

Doctor of Philosophy in Economics — Expected Graduation: June 2027

Focus: how digital markets and retail decisions affect shoppers and sellers.

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; graduated first in class (Academic Achievement Medal, top 1%).

Awards: University Scholarship (tuition and living allowance, 730K HKD, 2015–2019); Dean's List (2016–2019); Postgraduate Studentship (1.5M HKD); Red Bird PhD Award (40K HKD, 2022).

Experience

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

- Lectured the MSc Math Camp (rated 4.53/5); led tutorials for PhD and undergraduate economics courses (average rating 4.72/5).

Research Assistant for Prof. Benjamin Bernard, National Taiwan University — 2020

- Modeled a banking crisis as a negotiation between the regulator and banks' creditors; simulated when a promise not to bail out the banks is believable.

Projects

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

- Cleaned and organized monthly bookstore point-of-sale records into a relational database: panels of deliveries, sales, and returns by title, market, and month (tens of billions of records across 1,000+ stores), linked via standardized ISBNs and merged with local demographics and title information scraped from Amazon in Python.
- Built a dynamic model of how bookstores price and stock titles under uncertain demand and RPM, capturing stockouts and unsold returns (35–40% of Japanese books printed are discarded); estimated demand and supply with instrumental variables (2SLS), validated the estimates with Monte Carlo simulations, selected controls with LASSO, and implemented the model in C++.
- Showed through descriptive statistics and regressions that when titles stock out, shoppers switch to other titles or wait for restock rather than buying from other bookstores.
- Benchmarked the model against the standard static approach, which overstates seller costs by ∼20% because it ignores demand uncertainty and inventory decisions.
- Distilled results into weekly HTML reports with charts and tables for collaborators.

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

- Built and estimated a model of the full customer journey — purchase, return-shipping-insurance take-up, and return — using retailer switches between automatic and selective insurance adoption on Taobao (2017–2023; ∼62M RMB revenue; six apparel categories; ∼20–30% return rates).
- Developed a reproducible, version-controlled pipeline on AWS and HPC/SLURM (Python, R, C++): scraped product attributes and digitized product images with AI-based OCR; cleaned and linked orders, prices, insurance, and returns; estimated category-specific demand, consumer fit uncertainty, and return responses; accelerated simulations in C++; validated policy rankings (seller profit, consumer surplus, social welfare) with bootstrap tests.
- Identified a key trade-off: a stricter return policy curbs wasteful returns, but the resulting lower return rates make higher prices more attractive to sellers and can block valuable purchases; showed that providing return-shipping insurance to all shoppers works best in high-margin categories, letting each seller choose works better in low-margin ones (a ∼15–30 percentage-point gain), and a partial return penalty (discounted price plus ∼10–15% restocking fee) reaches ∼75–78% of the best-possible outcome outside dresses.
- Presented findings at the Asia-Pacific Industrial Organization Conference 2026, the Econometric Society Australasia Meeting 2026, and the China Economics Annual Conference Summer Forum 2026.

Skills

Languages: Mandarin (Native); Cantonese (Basic); English (Fluent); Taiwanese (Native).

Technical: Python, R, Stata, C++, Excel, Git; AWS, HPC/SLURM; relational databases; AI-assisted coding and testing.

Communication: Hall Tutor (conflict mediation and resident activities); Teaching Assistant Coordinator (coaching and evaluating a teaching team).

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