# Tinghan Zhang

## Contact Information


Koopmans Building K543
Department of Econometrics and Operations Research
School of Economics and Management, Tilburg University
Warandelaan 2, 5037 AB, Tilburg, NL

*Tel*: +31-(0)6 2186 3961
*E-mail*: t.zhang_2@tilburguniversity.edu
*Web*: https://tinghan-zhang.github.io/


## Research Interests

Empirical Industrial Organization, Quantitative Marketing, Applied Microeconometrics, Decision Science

## Education

**Tilburg University** — Tilburg, The Netherlands

*Ph.D. Candidate, Econometrics, School of Economics and Management* — *Sep. 2020 - 2026 (Pre-defense Scheduled)*

- Supervisors: Prof. dr. Tobias Klein, dr. Christoph Walsh

*Research Master, Economics, School of Economics and Management (Cum Laude)* — *Aug. 2018 - Aug. 2020*

**Renmin University of China** — Beijing, China

*M.S., Quantitative Economics, Hanqing Advanced Institute of Finance and Economics* — *Sep. 2015 - Jul. 2018*

*B.A., Economics and Mathematics, School of Economics* — *Sep. 2011 - Jul. 2015*

## Academic Experience

**Teaching Assistant, Tilburg University** — 2020 - 2024

*Econometrics 3, Research Master*

- Panel Data, Time Series

*Microeconometrics, Master*

- Treatment Effects, Survival Analysis, Structural Econometrics, Non-/Semi-parametric Estimation

**Research Assistant, Renmin University of China** — Jan. 2016 - Feb. 2017

Working for Prof. Guangliang Ye

**Visiting Researcher, Université de Genève** — Sep. 2016 - Jan. 2017

Host: Prof. Harold Hau

**Special Auditing Student, Kyoto University** — Sep. 2014 - Feb. 2015

Host: Prof. Go Yano

## Working Papers (click to view)

"**Estimating Sequential Search Models Based on a Partial Ranking Representation** (*Job Market Paper*)"


The growing availability of consumer search data offers opportunities to study search decisions using sequential search models. However, existing modeling approaches rely on the Optimal Search Rules (Weitzman, 1979), which link each decision to private evaluations of searched information, making the model computationally demanding to estimate and inflexible to extend. This paper demonstrates that optimal decision-making in a generalized sequential search process can be represented as a ranking of all feasible actions. This representation converts a multi-stage discrete choice problem into a single-stage ranking problem, eliminating dependencies across decisions. Based on this representation, I develop a practical simulation-based estimation strategy that significantly reduces the required simulation dimensionality, yielding a GHK-style simulator that is more accurate, more efficient, and much easier to implement than existing approaches. The proposed method also adapts naturally, under a set of formal conditions, to richer settings such as incomplete search data or search processes involving other information acquisition steps, like product discovery. The paper advances consumer search research by reducing technical complexity and enabling broader empirical applications.

"**Do I Really Want to Buy This? Preference Discovery and Consumer Search**" with Tobias Klein and Christoph Walsh

One of the most invoked assumptions in economics is that consumers know their preferences when making choices. Although theories and experiments in psychology and behavioral economics suggest that this may be unrealistic, there is relatively little evidence from the field on this question. In this paper, we use detailed clickstream data from a large Central Asian online platform to study the extent to which consumers learn about their preferences while searching for a smartphone. To quantify the speed at which this takes place and account for other factors, most notably that consumers obtain additional product information when they inspect product pages, we estimate a rich search model in which consumers learn about their willingness to pay each time they visit the checkout page. Consumers initially underestimate their price sensitivity and update it along the way. Taking this into account shows that consumers are more price sensitive than a standard search model would predict, and an intervention that prompts consumers to end their search early can lead to potential welfare loss.

"**Out of Sight, Out of Cart: A Structural Model for Recall-based Consumer Search**" (*New Draft Coming Soon*)

We present an empirical sequential search model in which consumers evaluate products based on the recall of previously searched information. Recall is often imperfect because of forgetting, decision pressure, and limited attention. We capture this imperfection through recall perturbations and the fading of recalled impressions, and we identify it through the increasing tendency to revisit products over time. The structure quantifies how imperfect recall shapes search and purchase actions and offers an estimable framework to analyze platform mechanisms that influence choices by reinforcing recall rather than by changing the information environment. These mechanisms include within-page advertising, interface prompts, pop-up reminders, and displays of previously inspected products. Using clickstream data from a large smartphone market, we estimate the structure and conduct counterfactual analyses. A reminder-oriented comparison column shifts search paths, raises sales, and improves consumer welfare. The findings underscore the role of imperfect recall in consumer search and provide managerial implications for platform strategy within consumers' search processes.

## Selected Work in Progress

"Better Price, Better Quality? Resolve the Endogeneity in Search Decisions"

"The Causal Impact of Recommender Clicks", with Shrabastee Banerjee and George Knox

"Search Cost, Risk, and Financial Institutions Merger," with Chenxi Wang

## Conferences and Seminars

2025: EMAC Doctoral Colloquium (Madrid); INFORMS Marketing Science Conference (Washington DC); 14th Consumer Search and Switching Costs Workshop (Hong Kong); EWMES 2025 (Nicosia, scheduled); APIOC 2025* (Brisbane); AMA 2025* (Chicago); EEA 2025* (Bordeaux)

2021-24: Tilburg Structural Econometric Lunch; Tilburg Graduate Students Society Seminar; Workshop on Digital Markets 2024

** Paper accepted but not able to present.*

## Honors and Awards

Tilburg University: Koopmans Scholarships, 2018 - 2020
Renmin University of China: Excellent Student Scholarships, 2015-2017
Renmin University of China: Excellent Graduate, 2018, 2015
Kyoto University: JASSO Scholarships, 2014

## Other Activities

**China Banking Regulatory Commission** Beijing, China
*Intern in Bureau of Policy Research* *Jun 2015 - Aug 2015*

**Tilburg Structural Econometrics Group** Tilburg, Netherlands
*Co-organizer of the Lunch Seminar Series* *Sep 2022 - Jun 2024*

## Technical Skills

**Languages**: Chinese (Native), English (Proficient), Japanese (Advanced)
**Research Software**: Matlab, Julia, Stata, R
**Application Software**: LaTeX, Jupiter Notebook, Git

## Contact Information of References

**Tobias J. Klein**
Department of Econometrics and OR
Tilburg University
T.J.Klein@tilburguniversity.edu

**Bart J. Bronnenberg**
Department of Marketing
Tilburg University
Bart.Bronnenberg@tilburguniversity.edu

**Christoph B. T. Walsh**
Department of Econometrics and OR
Tilburg University
C.B.T.Walsh@tilburguniversity.edu