

	t_1	t_2	t_3
s_1	(8,6)	(-1,0)	(8,6)
s_2	(0,-1)	(5,5)	(0,0)
s_3	(8,6)	(0,-1)	(8,6)

Empirical Industrial Organization

ECON 688

Instructor Info



Yu-Wei Hsieh



Office Hrs: Thur. 10-12



KAP 318



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Course Info



Prereq: ECON 601, 603



Thursday



2:00-5:20 pm



KAP 164

Overview This course will equip you with modern econometric/computational/model building techniques to conduct empirical analysis in industrial organization. We will focus on empirical applications and implementations, rather than discussing deep econometrics issues; e.g., how to derive asymptotic distribution and inference for the identified set. We will mainly focus on different types of discrete choice models as an unified framework for empirical IO.

Required Texts

- [Tra03]

Grading Scheme

10% Class Participation/Attendance

40% Homework Assignments

50% Presentation

No-show for 3 times is equivalent to grade C.

Academic Conduct Plagiarism—presenting someone else's ideas as your own, either verbatim or recast in your own words—is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Section 11¹. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <http://policy.usc.edu/scientificmisconduct/>. Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity <http://equity.usc.edu/> or to the Department of Public Safety <http://capsnet.usc.edu/department/departmentspublicsafety/onlineforms/contactus>. This is important for the safety of the whole USC community. Another member of the university community—such as a friend, classmate, advisor, or faculty member—can help initiate the report, or can initiate the report on behalf of another person. The Center for Women and Men <http://www.usc.edu/studentaffairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the American Language Institute <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. The Office of Disability Services and Programs http://sait.usc.edu/academicssupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, USC Emergency Information <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

¹Behavior Violating University Standards <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriatesanctions/>

Class Schedule

MODULE 1: Demand Analysis

Week 1	Discrete-Choice Model and Logit Demand	
Week 2	Demand Estimation with Endogenous Regressors HW-1: Logit Demand Est.	[BLP95],[Nev00],[Ber94]
Week 3	Computational Method: Programming an Optimization Problem. Nested-Fixed Point Algorithm and MPEC Formulation HW-2: Some Optimization Exercises	[DFS12]
Week 4&5	Other Demand Models (Student Presentation)	[Fan13],[Gen07],[PSB02] [Dub04],[GV16],[CR03]

MODULE 2: Simultaneous-Move Discrete-Choice Models and Moment Inequality

Week 6	Discrete-Choice with Multiple Equilibria	[Tam03],[CT09]
Week 7	Computational Method: Moment Ineq. Models HW-3: Moment Ineq.&solve Nash Equilibria	[DHS17]
Week 8	Student Presentation	[FL17], [ISS18], [HHM12], [HP14]

MODULE 3: Simulation and Bayesian Method

Week 9	Importance Sampling, MCMC, and data augmentation	[Gel00], [CG95]
Week 10	ABC: Approximate Bayesian Computation HW-4: MCMC	[Cre+15],[CFB12],[BZB02],[BF10]

MODULE 4: Auction

Week 11	Classical Auctions	[GPV00],[HT03]
Week 12	Multi-Unit Auctions	[Kas11],[CHK13]
Week 13	Student Presentation	[HP08], [Reg14],[GL14],[CHS]
Week 14	Student Presentation HW-5: Auction	[HS03], [KS11],[DSV09],[MSK17]
Week 15	The Art of Structural Modeling	[FB95]

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