

PIETRO EMILIO SPINI
ECONOMICS DEPARTMENT
UNIVERSITY OF CALIFORNIA, SAN DIEGO

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CONTACT INFORMATION

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EDUCATION

University of California, San Diego, California

Ph.D. in Economics, 2022 (expected)

Committee:

Yixiao Sun (Co-chair)
Kaspar Wuthrich (Co-Chair)
James D. Hamilton
Jeffrey Clemens
Margaret E. Roberts

Cornell University, Ithaca (NY)

M.S. in Applied Economics, 2016

Bocconi University, Milan (Italy)

B.A. Economics and Management, 2013
(Summa cum Laude, Valedictorian)

REFERENCES

Yixiao Sun	UC San Diego	yisun@ucsd.edu	(858) 534-4692
Kaspar Wuthrich	UC San Diego	kwuthrich@ucsd.edu	(858) 534-3383
James D. Hamilton	UC San Diego	jhamilton@ucsd.edu	(858) 534-5986
Melissa Famulari	UC San Diego	mfamulari@ucsd.edu	(858) 534-3878

FIELDS OF INTERESTS

Econometrics, Economic Theory, Public Economics

WORKING PAPERS

“Robustness, Heterogenous Treatment Effects and Covariate Shifts”
(Job Market Paper)

Abstract: *This paper studies the robustness of estimated policy effects to changes in the distribution of covariates. Robustness to covariate shifts is important, for example, when evaluating the external validity of (quasi)-experimental results, which are often used as a benchmark for evidence-based policy-making. I propose a novel scalar robustness metric. It quantifies the magnitude of the smallest covariate shift needed to invalidate a claim on the policy effect (for example $ATE \geq 0$) that is supported by the (quasi)-experimental evidence. My metric links the heterogeneity of policy effects and robustness in a flexible, nonparametric way and does not require functional form assumptions. I cast the estimation of the robustness metric as a de-biased GMM problem. This approach guarantees a parametric convergence rate for the robustness metric while allowing for machine learning-based estimators of policy effect heterogeneity (e.g. lasso, random forest, boosting, neural nets). I apply my procedure to the Oregon Health Insurance experiment to study the robustness of several measures of health-care utilization and financial strain to a shift in the distribution of*

context-specific covariates, which are likely to differ across US states. I find that the effect on outpatient visits is the most robust among the metrics of health-care utilization considered.

“Making Money: Existence and Determination of Commodity Money in General Equilibrium”
(with Ross M. Starr)

Abstract: *The classic Arrow-Debreu (1954) general equilibrium model cannot sustain or account for the existence of money. This lacuna arises because each household and firm faces a single budget constraint summarizing revenue and expense in all commodities. Money, a carrier of value between transactions, has no function when all credits and debits are rolled into a single expression. A trading post model of $N \geq 3$ commodities and transaction costs generates $\frac{1}{2}N(N - 1)$ separate budget constraints with distinct bid and ask prices. General equilibrium, market-clearing prices and transactions at each trading post, exists under conventional continuity and convexity conditions. Commodities acquired by an agent at one trading post and disbursed at another constitute commodity money.*

“Thick Market Externality and Concentration of Money” (with Ross M. Starr)

Abstract: *A thick market external effect is applied to a trading post model of $N \geq 3$ commodities with transaction costs and distinct bid and ask prices. We state and prove an existence theorem for general equilibrium with external effects in the trading post model. Media of exchange occur endogenously as liquid commodities, characterized by a narrow bid/ask price spread. The thick market externality can lead to concentration of the endogenously determined media of exchange towards an equilibrium with a single medium. In a class of examples, we show that if the households have sufficiently heterogeneous tastes relative to the size of the economy, the monetary equilibrium leads to higher consumption than the barter equilibrium.*

RESEARCH IN PROGRESS

“Generalized Robustness Test: Coefficient Stability across Causal Specifications”

Abstract: *This project focuses on the exercise of comparing coefficients across regression specifications, broadly known as robustness checks, a very popular tool in applied economic research. The econometric literature has proposed to formalize this coefficient stability exercise in linear models by turning robustness checks into a robustness test. Unfortunately, for available procedures, a rejection in their proposed test may be due to either a failure in the notion of robustness or to a failure of the linearity of the model, making the robustness test non-specific. I bypass this difficulty by proposing a semi-parametric test based on linear sieve estimators that allows for non-linearity and is specific to the testing the coefficient stability.*

“MTE under Misspecification” (with Julian Martinez-Iriarte)

Abstract: *This paper studies the implication of a fraction of the population not responding to the instrument when selecting into treatment. We show that, in general, the presence of non-responders biases the Marginal Treatment Effect (MTE) curve and many of its functionals. Yet, we show that, when the propensity score is fully supported on the unit interval, it is still possible to restore identification of the MTE curve and its functionals with a appropriate re-weighting.*

TEACHING EXPERIENCE

As instructor at UC San Diego

Econometrics 120A Summer Session I, Summer Session 2 2020 (4.8/5 Student Evaluations)

As teaching assistant at UC San Diego

Econometrics 120A	Prof. Maria Candido
Econometrics 120B	Prof. Gordon Dahl
Econometrics 120C	Prof. Kaspar Wuthrich, Prof. Yixiao Sun, Prof. Mun Pyung O
Econometrics 220B (PhD Core)	Prof. James D. Hamilton

RELEVANT POSITIONS HELD

Lecturer (Assistant Professor) of Economics	University of Bristol	Fall 2022
Research Assistant	UCSD (Prof. Ross Starr)	2018-2021
Research Assistant	UCSD (Prof. Kaspar Wuthrich)	2019
Graduate Summer Research	UCSD (Prof. Yixiao Sun)	2017

GRANTS

Graduate Summer Research	2017, University of California, San Diego.
Regents Fellowship	2016, University of California, San Diego.
Citizen's Climate Lobby (gift), with PI: Jennifer Ifft	2015-2016, Cornell University, Ithaca

HONORS AND AWARDS

Graduate Student Research Seminar Best Presentation Award. 2021, University of California, San Diego
Economics Associate-In Excellence Award. 2020, University of California, San Diego.
Economics TA Excellence Award. 2018, 2019, University of California, San Diego.
AAEA Outstanding Master Thesis Award (Honorable Mention). 2017, American Agricultural Economics Association.
NAREA Master Thesis Award (1st Place). 2017, Northeast Agricultural and Resource Economic Association.

PROFESSIONAL ACTIVITIES

Seminars and Presentations

UCSD Graduate Student Seminar	2019, 2020, 2021
UCSD Econometrics Lunch Seminar	2018, 2019, 2021
UCLA Summer Institute in Computational Social Science	2019
Washington University (St. Louis) Annual Economics Graduate Student Conference	2021
Econometric Society Winter Meeting	2021
University of Warwick	2022
Econometric Institute at Erasmus University Rotterdam	2022
University of Amsterdam	2022
NYU Abu Dhabi	2022
University of Surrey	2022
University of Bristol	2022
Philadelphia Federal Reserve Bank	2022
University of Victoria	2022

Service

First Generation College Student in Economics Panel	2018
Liaison for of UCSD's Undergraduate Economics Association	2017-present

LANGUAGES

Italian (Native), English (Fluent), Spanish (Fluent), French (Intermediate)

PROGRAMMING SKILLS

Python, R, LaTeX, MATLAB, Stata