Jacob Orchard

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Contact

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Education

Ph.D. in Economics, University of California, San Diego, 2022 (expected).

M.A. in Economics, University of California, San Diego, 2017.

B.S. in Mathematics, B.A. in Economics, Brigham Young University, Provo, UT, 2016.

References

Valerie Ramey (Chair)	vramey@ucsd.edu	(858) 534-2388
Johannes Wieland	jfwieland@ucsd.edu	(858) 534-3383
Munseob Lee	munseoblee@ucsd.edu	(858) 534-1734

Field of Interest

Macroeconomics, Monetary Economics, Inequality

Fellowships, Grants, and Awards

Dissertation Fellow, Federal Reserve Board of Governors, Washington, D.C. Summer 2021 (Salary)

Washington Center for Equitable Growth Doctoral Grant, Washington D.C., 2019-2020 ($15,000)

CPhil Dissertation Grant, University of California San Diego, 2019-2020 ($9,000)

TA Excellence Award and Grant, University of California, San Diego, 2017-2018 ($500)

Data Grant, University of California, San Diego, 2018 ($5,000)

Graduate Student Summer Research Fellowship, University of California, San Diego, 2017 & 2018 ($6,000)

Regents Fellowship, University of California, San Diego, 2016-2018 ($30,000)

Job Market Paper

Cyclical Demand Shifts and Cost of Living Inequality

This paper examines the cyclical behavior of low-income versus high-income household price indices and documents two new facts: (1) during recessions prices rise more for products purchased relatively more by low-income households (necessities); (2) the aggregate share of spending devoted to necessities is counter-cyclical. I present a mechanism where adverse macroeconomic shocks cause households to shift expenditure away from luxuries toward necessities, which leads to higher relative prices for necessities. I embed this mechanism into a quantitative model which explains 72 percent of the cyclical variation in necessity prices and 57 percent of the cyclical variation in necessity shares. The results suggest that low-income households are hit twice by recessions: once by the recession itself and again as their price index increases relative to other households.

Refereed Publications

County-level racial prejudice and the black-white gap in infant health outcomes (with Joseph Price), *Social Science & Medicine* 181:191-198, 2017.

Research in Progress

Household Inflation and Aggregate Inflation

This project postulates that an additional cost of increased inflation is an increase in the cross-sectional dispersion of household-level inflation rates. Using scanner data and the Consumer Expenditure Survey, I construct novel measures of household-level inflation and show that households experience inflation at very different rates. An increase in a household's personal inflation rate leads to a persistent increase in their price index, and households respond to this shock by decreasing nominal consumption, which means that real consumption falls more than one-for-one; poor households are the least able to smooth their consumption in response to household inflation shocks. I find that inflation dispersion (the variance of household inflation rates) increases with the level of absolute aggregate inflation. This relationship is robust across time, methodology, and data.

Micro MPCs and Macro Counterfactuals: The Case of the 2008 Rebates (with Valerie Ramey and Johannes Wieland)

What are the aggregate implications of household-level estimates of the marginal propensity to spend out of tax rebates? Studies using household-level data have estimated marginal propensities to spend from tax rebates that are quite high, approaching 0.7 for the 2008 tax rebate. We estimate counterfactuals had there been no rebate by using the literature's estimates of MPCs to calibrate a medium-scale New Keynesian model to calculate the implied counterfactual path of consumption. Our counterfactual path shows a large dip in consumption in summer 2008 and then a rebound in the Fall–around the collapse of Lehman Brothers–a result we find implausible.

Measuring Welfare Gains from the Rise in Online Shopping (with Munseob Lee)

In the last two decades, online shopping has changed from a way to buy niche goods to one of the primary methods for retail and grocery purchases. How has this shift affected prices? Our project attempts to address that question using scanner data that records household in-store and online purchases. We exploit differential exposure to online shopping across product categories and cities and we find that a one percent increase in the online shopping share reduces Household's CES price-index by .3 percentage points; this fall comes entirely from a fall in continuing product prices rather than a change in the variety of goods available. We speculate that the rise of online shopping has increased retail competition, which has induced instore retailers to lower markups.

We confirm this speculation using a measure of retail markups from scanner-data and barcode level wholesale product costs, as well as confidential data on product prices and costs from a nationwide retailer.

The Effect of the Cook County, Illinois Tax on Sugar-Sweetened Beverages on Sugar Consumption and Welfare (with Zachary Goodman)

Do taxes on sweetened beverages decrease sugar consumption? We examine the effects of the largest experiment in sweetened beverage taxes (in Cook County, Illinois) and the only one revoked as of this writing. We combine household scanner data with barcode-level nutrition data, which allows us to observe household nutrient bundles during the tax in addition to purchases of taxed beverages. We find that while the tax is active, consumers decreased their sugar purchases from all sources by 14.9%, most of which is explained by decreases in sugar from regular soda and fruit drinks. We document significantly larger decreases in sugar purchases for households who live far from the Cook County border and households with high pretax levels of regular soda purchases. In the months following removal of the tax, we find that households returned to pretax-levels of sugar consumption. Finally, we develop a simple household model to weigh the welfare consequences of the tax's potentially positive health effects with the associated increase in consumer prices. We find that the tax increased the cost of living by approximately 2 cents per gram of sugar reduction.

Research Experience

Research Assistant, Dr. Valerie Ramey and Dr. Johannes Wieland, Department of Economics, UCSD, July 2019-Dec 2019 & Sep-Dec 2020

Research Assistant, Dr. Munseob Lee, Global Policy and Strategy, UCSD, March 2018-June 2019

Research Assistant, Federal Reserve Bank of New York, June 2015-August 2015

Research Assistant, BYU Economics and Math Departments, January 2014-August 2016

Teaching Experience

Instructor of Record

Intermediate Macroeconomics, BYU, Summer 2018

Teaching Assistant

PhD Macroeconomics (Business cycle), UCSD, Spring 2019 & 2021

Graduate International Trade, UCSD Global Policy School, Fall 2020 & 2021

Introduction to Macroeconomics, UCSD, Winter 2021

Intermediate Macroeconomics (Growth), UCSD, Spring 2018

Intermediate Macroeconomics (Business Cycle), UCSD, Winter 2018

Globalization, UCSD, Fall 2017 & Fall 2018

Intermediate Microeconomics, UCSD, Winter 2017 & Summer 2020

Advanced Econometrics, BYU, Winter 2016

Professional Service

Graduate volunteer for the “Summer Training Academy for Research Success" (STARS), Summer 2020

Economics Representative for the Graduate Student Association, University of California, San Diego, 2017-2018

Vice President Academics, Economic Student Association, Brigham Young University, 2015-2016

Personal

United States Citizen.

Languages: English (native), Portuguese (fluent), Spanish (intermediate)

Computer: STATA, Matlab, Python, LaTeX