Junyuan Chen

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CONTACT INFORMATION

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EDUCATION

University of California San Diego

PhD in Economics 2024 (Expected)

Committee: Valerie A. Ramey (Chair), Marc-Andreas Muendler, Johannes Wieland, Munseob Lee, Kanishka Misra

Candidate in Philosophy in Economics 2021

University of Minnesota - Twin Cities

BS in Economics, *summa cum laude*, High Distinction 2017
BA in Mathematics, High Distinction 2017

REFERENCES

Valerie A. Ramey	Professor	Stanford & UC San Diego	vramey@ucsd.edu
Marc-Andreas Muendler	Professor	UC San Diego	muendler@ucsd.edu
Johannes Wieland	Associate Professor	UC San Diego	jfwieland@ucsd.edu

FIELDS OF INTEREST

Primary Macroeconomics
(Inventories, Supply Chains, Marginal Propensity to Consume, Business Cycles)

Secondary International Trade

RELEVANT POSITIONS HELD

Research Assistant	Marc-Andreas Muendler	UC San Diego	2021–2023
Research Assistant	Johannes Wieland	UC San Diego	Summer 2019

JOB MARKET PAPER

"Supply Chain Frictions and the Dynamic Behavior of Durable Input Inventories" 2023

Abstract: The positive contemporaneous comovement between aggregate inventories and sales is a well-known stylized fact that guides the assessment of models and aggregate implications of inventory behavior. This paper highlights an overlooked feature that durable input inventory movements lag sales movements by around three quarters. This lagged comovement is discernible both in the unconditional cyclical components of data and in the impulse responses to identified aggregate shocks. To assess

its quantitative significance, I develop a tractable supply chain production problem that is capable of reproducing the lagged comovement. In this model, producers are required to order critical inputs from suppliers one quarter in advance and they occasionally adjust their optimal order sizes based on forecasts of their own future sales subject to information frictions. I embed the production problem into a multisector New Keynesian model with input-output relations. Following a monetary shock, relative to a counterfactual scenario in which the inventory-sales comovement is fully synchronized, the estimated model demonstrates dampened responses of aggregate output over the first year but more gradual recovery over later horizons due to the reduced sensitivity of user cost of capital with respect to real interest rate changes.

WORKING PAPERS

"Dynamic Adjustment to Trade Shocks" 2023
with Carlos Góes, Marc-Andreas Muendler and Fabian Trottner

Abstract: Global trade flows and supply chains adjust gradually to shocks. Empirical estimates of the trade elasticities for the short run are about half as large as those for the long run, suggesting the presence of substantive adjustment frictions. We develop a tractable framework that provides microfoundations for dynamic trade adjustment and rationalizes reduced-form estimates of horizon-specific trade elasticities. The model features staggered sourcing decisions and nests the Eaton-Kortum model as a limiting case in the long run. We calibrate the model to horizon-specific trade elasticities and use it to quantify the welfare impact of the 2018 US-China trade war. Relative to the Eaton-Kortum benchmark, staggered sourcing decisions considerably exacerbate losses from the trade war, with cumulative welfare losses being three times larger in the short run and 70% larger in the long run. Third countries such as Mexico can suffer welfare losses in the short run but attain welfare gains in the long run.

RESEARCH IN PROGRESS

"Industrial Linkages and the Transmission of Downstream Shocks: 2023
An Empirical Exploration with a New Instrumental Variable"

Abstract: How are sales of an industry affected when sales of its immediate downstream industries fluctuate? Related studies have relied on exogeneity of shocks hitting the final demand and the Leontief inverse for identification. A limitation of such an approach is that the magnitude of the resulting estimates depend on both how industries respond to shocks and where they are placed in the production network. In this paper, I instead consider the possibility of directly estimating the sales responses of supplier industries to sales changes of their immediate customer industries. To overcome the identification challenge due to shocks passing from suppliers to customers, I construct a novel downstream demand instrument at the 4-digit SIC industry level by exploiting the compositions of intermediate inputs across customer industries and conduct estimation under a shift-share design. Preliminary results based on annual data suggest modest impact of sales fluctuations among customer industries on supplier industries. I plan to explore alternative monthly data that should provide additional insights in the near future.

POLICY-ORIENTED WORK

"Globalization and Prosperity Lab: cModel" 2022
with Carlos Góes, Marc-Andreas Muendler and Fabian Trottner

Abstract: cModel is the workhorse model behind the policy work conducted at the Globalization and Prosperity Lab at UC San Diego. It is a general equilibrium international trade model involving 170 industries across 44 countries connected via Eaton-Korton style trade for intermediate inputs and final goods. Simulation results from the cModel has been supporting the cBriefs for addressing pressing policy issues.

TEACHING EXPERIENCE

As Instructor

Department of Economics, UC San Diego

ECON 110B	Macroeconomics B	Summer I 2023

As Teaching Assistant

Department of Economics, UC San Diego

ECON 100A	Microeconomics A	Herbert Newhouse	Fall 2022
ECON 110A	Macroeconomics A	Titan Alon	Fall 2019
ECON 110A	Macroeconomics A	Maria Candido	Winter 2020, 2021
ECON 110B	Macroeconomics B	Maria Candido	Fall 2020
ECON 110B	Macroeconomics B	James Hamilton	Winter 2019
ECON 110B	Macroeconomics B	Fabian Trottner	Fall 2021
ECON 110B	Macroeconomics B	Juan Herreño	Spring 2022
ECON 111	Monetary Economics	Darrel Cohen	Winter 2023
ECON 146	Economic Stabilization	Darrel Cohen	Spring 2019, 2020, 2023

Rady School of Management, UC San Diego

MGTA 495	Web Data Analytics (Python)	Mohammad Rahman	Summer 2019

HONORS, AWARDS & FELLOWSHIPS

Advancement to Candidacy Fellowship	UC San Diego	2020
Graduate Student Summer Research Fellowship	UC San Diego	2018, 2019
Regents Fellowship	UC San Diego	2017
Phi Beta Kappa	UMN	2017
Douglas and Jane Gorence Endowed Scholarship (for economics major)	UMN	2016
Maximillian Lando Scholarship (for math major)	UMN	2016
Dean's List	UMN	2014–2017

SOFTWARE PACKAGES

Selected Packages in Julia Language

`SequenceJacobians.jl`
: Solve and estimate heterogenous agent models with sequence-space Jacobians

`LocalProjections.jl`
: Local projection methods for impulse response estimation

OTHER INFORMATION

Computer Skills	Julia (advanced), Python, Stata, Matlab, Bash, Git, GNU Make, LaTeX
Languages	English (fluent), Chinese (native)
Citizenship	China
Birth	1994, Shanghai China

Last Updated: November 11, 2023