

**Econ 281**  
**Special Topics in Economics**  
**Spring 2024**

**Instructors**

Juan Herreño

jherrenolopera@ucsd.edu

Office Hours: TBD (TBD)

Johannes Wieland

jfwieland@ucsd.edu

Office Hours: Tuesday 1:00pm - 2:00pm (SDSC 197E)

**Lectures**

Thursday from 12:30pm to 3:20pm

SSB 506.

**Class Website**

<https://github.com/johanneswieland/ECON281>

**Course Description:**

The modern macroeconomists is a jack of all trades. They must be comfortable with simple theoretical models, quantitative models, cross-sectional identification, and time-series identification. In this class we focus on cross-sectional identification and how to aggregate cross-sectional moments with simple theoretical or quantitative models. By the end of this class you should be familiar with identification arguments in the cross-section, challenges in aggregating cross-sectional moments, and solving standard heterogeneous agent models.

**Readings**

The syllabus includes more papers than we expect the typical student to read. Readings marked with \* are required.

**Idea Generation**

Idea generation is one of the most important part of the research process. The best time to start generating ideas was a year ago, the second best time is now. Each week we ask you to submit two research ideas related to the readings. These ideas can be about how to extend the paper, how to test the paper, or how to apply the paper to a different context. Idea generation is hard and most ideas are either not interesting, infeasible, or already done. This is normal! In our estimation around 95%+ of ideas are not worth pursuing. Knowing this, you should start the sampling process now and it is our job to help you triage your ideas.

Upload your ideas in a markdown document on GitHub by the end of Wednesday before class. Submit by giving us read access to your GitHub repository.

### **Class Project**

The paper should connect micro data with macro model, in line with the theme of the class. The paper does not have to be complete. It does need to be original in the sense that the main result(s) has not been previously documented in the literature.

The paper should contain two parts:

1. *A new micro data fact or causal effect.* Okay to build on (but not copy!) other work.
2. *A (simple) macro model that connects the micro data fact to macroeconomic outcomes.*

This part should have computational component (unless waived). We are not looking for pages of algebra but rather a way that tells us how important the micro fact is.

Exceptions to this structure are possible but must be approved by us in advance of the first submission deadline.

At the end of class you need to submit the paper and code. If we cannot replicate the paper figures and tables with one click or command, we will ask you to resubmit. Submit by giving us read access to your GitHub repository.

Paper deadlines:

1. 5/1/2022: Submit new micro data fact / causal effect. You submit by giving us read access to your GitHub repository.
2. Week 6: meeting for feedback. We may ask you to resubmit a new paper a week later.

3. 6/1/2022: Presentation in class.

4. 6/8/2022: Paper draft due.

### **Grading**

Idea submissions count for 24% of the grade. The first iteration for the class project will count for 10% of the grade. The presentation will count for 10% of the grade. The final draft will count for 36% of the grade. Class participation will count for 20%.

Class participation entails closely reading the \* papers on syllabus before class and participating in class discussion. If we judge that there is insufficient participation, then we will schedule a midterm and/or final to assign this grade.

### **Auditing**

We expect students who audit the class to submit ideas, participate in class, and do the required readings. If you want to submit your class project and get feedback on it, you need to take the class for grade.

## **1 Introduction to Empirics in Macroeconomics**

We will review core empirical concepts such as identification, causality, treatment effects. Then we will review types of structural and causal inference in empirical macroeconomics. This lecture will also contain advice on how to do research and how to organize empirical work.

### **Readings:**

\*Emi Nakamura and Jón Steinsson. Identification in macroeconomics. *Journal of Economic Perspectives*, 32(3):59–86, 2018

## **2 Identification with Regional Data with an Application to Fiscal Multipliers and Household Wealth Shocks**

Identification with macroeconomic data is notoriously difficult due to reverse causality, small samples, and endogenous responses of economic policy attempting to stabilize the economy. In this lecture we will give an introduction to how to approach this problem using more

disaggregated data, and measures of *shocks*, and heterogeneous *exposure* to those shocks, or shift-share designs in short. We will cover the identifying assumptions of shift-share designs, and new methods developed to solve them.

We will apply our knowledge of shift-share designs in order to study the empirical challenges of estimating the fiscal multiplier.

### **Readings:**

\*Paul Goldsmith-Pinkham, Isaac Sorkin, and Henry Swift. Bartik instruments: What, when, why, and how. *American Economic Review*, 110(8):2586–2624, 2020

\*Kirill Borusyak, Peter Hull, and Xavier Jaravel. Quasi-experimental shift-share research designs. *The Review of Economic Studies*, 89(1):181–213, 2022

\*Emi Nakamura and Jon Steinsson. Fiscal stimulus in a monetary union: Evidence from us regions. *American Economic Review*, 104(3):753–92, 2014

\*Atif Mian, Kamalesh Rao, and Amir Sufi. Household balance sheets, consumption, and the economic slump. *The Quarterly Journal of Economics*, 128(4):1687–1726, 2013

Kirill Borusyak, Peter Hull, and Xavier Jaravel. Design-based identification with formula instruments: A review. 2023

Rodrigo Adao, Michal Kolesár, and Eduardo Morales. Shift-share designs: Theory and inference. *The Quarterly Journal of Economics*, 134(4):1949–2010, 2019

Timothy J Bartik. *Who benefits from state and local economic development policies?* Kalamazoo, MI: WE Upjohn Institute for Employment Research. 1991 Kirill Borusyak and Peter Hull. Nonrandom exposure to exogenous shocks. *Econometrica*, 91(6):2155–2185, 2023

Atif Mian and Amir Sufi. What explains the 2007–2009 drop in employment? *Econometrica*, 82(6):2197–2223, 2014

### 3 Regional Aggregation I: Fiscal Multipliers, Household Wealth, and the Phillips Curve

Once we have recovered regional multipliers after increases in government expenditures or transfers, how can one recover the aggregate multipliers? In this lecture we will cover some of the papers that move from “open-economy” multipliers, into the aggregate multiplier. We will also cover regional aggregation of housing wealth shocks and estimates of the Phillips curve.

#### Readings:

\*Gabriel Chodorow-Reich. Geographic cross-sectional fiscal spending multipliers: What have we learned? *American Economic Journal: Economic Policy*, 11(2):1–34, 2019

\*Christian K Wolf. The missing intercept: A demand equivalence approach. Technical report, National Bureau of Economic Research, 2021

\*Greg Kaplan, Kurt Mitman, and Giovanni L Violante. The housing boom and bust: Model meets evidence. *Journal of Political Economy*, 128(9):3285–3345, 2020

\*Jonathon Hazell, Juan Herreno, Emi Nakamura, and Jón Steinsson. The slope of the phillips curve: evidence from us states. Technical report, National Bureau of Economic Research, 2020

Emmanuel Farhi and Iván Werning. Fiscal multipliers: Liquidity traps and currency unions. In *Handbook of macroeconomics*, volume 2, pages 2417–2492. Elsevier, 2016

Michael Woodford. Simple analytics of the government expenditure multiplier. *American Economic Journal: Macroeconomics*, 3(1):1–35, 2011

Adam M Guren, Alisdair McKay, Emi Nakamura, and Jón Steinsson. Housing wealth effects: The long view. *The Review of Economic Studies*, 88(2):669–707, 2021

Michael McLeay and Silvana Tenreyro. Optimal inflation and the identification of the phillips curve. *NBER Macroeconomics Annual*, 34(1):199–255, 2020

## 4 Regional Aggregation II and Household Aggregation

In this lecture we will cover regional cross-sectional identification and aggregation of an exchange rate shock and of a housing demand shock. We will then discuss the leading example of cross-sectional identification and aggregation at the household level: the response of consumption to exogenous income shocks.

### Readings:

\*Joshua K Hausman, Paul W Rhode, and Johannes F Wieland. Recovery from the great depression: The farm channel in spring 1933. *American Economic Review*, 109(2):427–72, 2019

\*James Cloyne, Clodomiro Ferreira, and Paolo Surico. Monetary policy when households have debt: new evidence on the transmission mechanism. *The Review of Economic Studies*, 87(1):102–129, 2020

\*Jonathan A Parker, Nicholas S Souleles, David S Johnson, and Robert McClelland. Consumer spending and the economic stimulus payments of 2008. *American Economic Review*, 103(6):2530–53, 2013

\*Kirill Borusyak, Xavier Jaravel, and Jann Spiess. Revisiting event study designs: Robust and efficient estimation. *Review of Economic Studies*, page rdae007, 2024

John Modragon and Johannes Wieland. Housing demand and remote work. 2022

Gabriel Chodorow-Reich, Gita Gopinath, Prachi Mishra, and Abhinav Narayanan. Cash and the economy: Evidence from india’s demonetization. *The Quarterly Journal of Economics*, 135(1):57–103, 2020

Gabriel Chodorow-Reich and Johannes Wieland. Secular labor reallocation and business cycles. *Journal of Political Economy*, 128(6):2245–2287, 2020

Clément De Chaisemartin and Xavier d’Haultfoeulle. Two-way fixed effects estimators with heterogeneous treatment effects. *American Economic Review*, 110(9):2964–96, 2020

Vasco M Carvalho, Makoto Nirei, Yukiko U Saito, and Alireza Tahbaz-Salehi. Supply chain disruptions: Evidence from the great east japan earthquake. *The Quarterly Journal of Economics*, 136(2):1255–1321, 2021

Andreas Fagereng, Martin B Holm, and Gisle J Natvik. Mpc heterogeneity and household

balance sheets. *American Economic Journal: Macroeconomics*, 13(4):1–54, 2021

Joshua K Hausman. Fiscal policy and economic recovery: the case of the 1936 veterans’ bonus. *American Economic Review*, 106(4):1100–1143, 2016

Jacob Orchard, Valerie Ramey, and Johannes Wieland. Micro mpcs and macro counterfactuals: The case of the 2008 rebates. 2022

Tullio Jappelli and Luigi Pistaferri. Fiscal policy and mpc heterogeneity. *American Economic Journal: Macroeconomics*, 6(4):107–36, 2014

Matthew D Shapiro and Joel Slemrod. Did the 2008 tax rebates stimulate spending? *American Economic Review*, 99(2):374–79, 2009

## 5 Household and Firm Aggregation

We have studied so far cases of aggregation of regional elasticities into national elasticities, the case of local GE effects. In this lecture we will study leading papers computing firm-level elasticities to economic shocks, and study how can one use these elasticities to learn about the national economy.

### Readings:

\*Kilian Huber. Disentangling the effects of a banking crisis: Evidence from german firms and counties. *American Economic Review*, 108(3):868–98, 2018

\*Gabriel Chodorow-Reich. The employment effects of credit market disruptions: Firm-level evidence from the 2008–9 financial crisis. *The Quarterly Journal of Economics*, 129(1):1–59, 2014

\*Juan Herreño. The aggregate effects of bank lending cuts. *Unpublished working paper, Columbia University*, 2020

\*Sylvain Catherine, Thomas Chaney, Zongbo Huang, David Alexandre Sraer, and David Thesmar. Quantifying reduced-form evidence on collateral constraints. *Available at SSRN 2631055*, 2018

Kilian Huber. Estimating general equilibrium spillovers of large-scale shocks. 2021

Atif Mian, Andrés Sarto, and Amir Sufi. Estimating general equilibrium multipliers: With application to credit markets. *Working Paper*, 2019

Daniel L Greenwald, John Krainer, and Pascal Paul. The credit line channel. Federal Reserve Bank of San Francisco, 2021 Kenan Huremovic, Gabriel Jiménez, Enrique Moral-Benito, Fernando Vega-Redondo, José-Luis Peydró, et al. Production and financial networks in interplay: Crisis evidence from supplier-customer and credit registers. 2020

## 6 HANK and TANK

In this lecture we will study the leading models of heterogeneity of the New Keynesian tradition. The Two-Agent New Keynesian Model (TANK) and the Heterogeneous Agent New Keynesian Model (HANK). We will compare the transmission mechanism in these models compared to the Representative Agent New Keynesian Model (RANK).

### Readings:

\*Greg Kaplan and Giovanni L Violante. A model of the consumption response to fiscal stimulus payments. *Econometrica*, 82(4):1199–1239, 2014

\*Greg Kaplan, Benjamin Moll, and Giovanni L Violante. Monetary policy according to hank. *American Economic Review*, 108(3):697–743, 2018

\*Davide Debortoli and Jordi Galí. Monetary policy with heterogeneous agents: Insights from tank models. 2017

\*Alisdair McKay, Emi Nakamura, and Jón Steinsson. The power of forward guidance revisited. *American Economic Review*, 106(10):3133–58, 2016

Iván Werning. Incomplete markets and aggregate demand. Technical report, National Bureau of Economic Research, 2015

## 7 The Sequence Space

We will learn how to write models in the Sequence Space, and learn a powerful tool to solve models with heterogeneity in discrete time with aggregate shocks.

### Readings:

\*Adrien Auclert, Matthew Rognlie, and Ludwig Straub. The intertemporal keynesian cross.



Technical report, National Bureau of Economic Research, 2018

\*Adrien Auclert, Bence Bardóczy, Matthew Rognlie, and Ludwig Straub. Using the sequence-space jacobian to solve and estimate heterogeneous-agent models. *Econometrica*, 89(5):2375–2408, 2021

## 8 Macroeconomics of Investment with Heterogeneity

In this lecture we will study how investment responses that are in line with the micro data impact the transmission of economic policy. We will discuss the challenges of incorporating heterogeneity in propensities to invest in macro models, the challenges of solving the models, and the implications this models have about the conduct of macro stabilization policy.

### Readings:

\*Thomas Winberry. Lumpy investment, business cycles, and stimulus policy. *American Economic Review*, 111(1):364–96, 2021

\*Rohan Kekre and Moritz Lenel. Monetary policy, redistribution, and risk premia. Technical report, National Bureau of Economic Research, 2021

\*Aime Bierdel, Andres Drenik, Juan Herreno, and Pablo Ottonello. Asymmetric information and capital accumulation. 2021

\*Pablo Ottonello and Thomas Winberry. Financial heterogeneity and the investment channel of monetary policy. *Econometrica*, 88(6):2473–2502, 2020

\*Sylvain Catherine, Thomas Chaney, Zongbo Huang, David Alexandre Sraer, and David Thesmar. Quantifying reduced-form evidence on collateral constraints. *Available at SSRN 2631055*, 2018

Pablo Ottonello. Capital unemployment. *Review of Economic Studies*, forthcoming, 2021

Isaac Baley and Julio Blanco. The long-run effects of corporate tax reforms. 2022

Yann Koby and Christian Wolf. Aggregation in heterogeneous-firm models: Theory and measurement. *Manuscript, July*, 2020

## 9 Macroeconomics of Consumption with Heterogeneity

In this lecture we will study how consumption responses that are in line with the micro data impact the transmission of economic policy. We will discuss the challenges of incorporating heterogeneity in MPCs in macro models, the challenges of solving the models, and the implications this models have about the conduct of macro stabilization policy.

### Readings:

\*Adrien Auclert, Matthew Rognlie, and Ludwig Straub. Micro jumps, macro humps: Monetary policy and business cycles in an estimated hank model. Technical report, National Bureau of Economic Research, 2020

\*Alisdair McKay and Johannes F Wieland. Lumpy durable consumption demand and the limited ammunition of monetary policy. *Econometrica*, 89(6):2717–2749, 2021

\*Alisdair McKay and Johannes F Wieland. Forward guidance and durable goods demand. *American Economic Review: Insights*, 4(1):106–22, 2022

\*David Berger, Konstantin Milbradt, Fabrice Tourre, and Joseph Vavra. Mortgage prepayment and path-dependent effects of monetary policy. *American Economic Review*, 111(9): 2829–78, 2021

## 10 Student Presentations

In this class you will present your class project. Format and time limit will be announced once we know the final enrollment of the class.