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Citizenship and Visa Status

Colombia (J-1 Visa)

Education

Ph.D. Economics, The Ohio State University, 2019 (expected)
Dissertation: "Essays in Heterogenous Agent Monetary Economics"
Committee: Professors Julia K. Thomas (chair), Aubhik Khan, Kyle Dempsey
M.A. Economics, The Ohio State University, 2014
M.A. Economics, Universidad de los Andes, Colombia, 2011
B.A. Economics, Universidad Javeriana Cali, Colombia, Graduated with Honors, 2009

Teaching and Research Fields

Primary fields: Macroeconomics, Monetary Economics
Secondary fields: Computational Economics, Econometrics

Publications

Bustamante, Christian and Hamann, Franz (2015). "Countercyclical Reserve Requirements in a Heterogeneous-Agent and Incomplete Financial Markets Economy." *Journal of Macroeconomics* 46: 55–70.

Research Papers

"Debt Overhang, Monetary Policy and Economic Recoveries After Large Recessions"
(Job Market Paper)

This paper explores why conventional monetary was so ineffective in mitigating the severity of the 2007 U.S. recession and unsuccessful thereafter in stimulating aggregate demand. Linking firm-level data with predictions from a model, I show that accounting for individual firms' debt structures is crucial in explaining why business investment fell so dramatically through the recession and remained low for several years, despite the Federal Reserve repeatedly cutting its target interest rate until conventional policy tools were exhausted. Using a sample of publicly traded firms, I establish that firms with greater long-term debt exposure experienced larger contractions and slower recovery in their investment expenditure. Next, I show that debt overhang episodes were unusually prevalent over the years following the onset of the recession, and particularly so among firms relying more heavily on long-maturing debt. To understand these microeconomic observations and their implications for aggregates, I develop a New Keynesian model where heterogeneous firms finance investment using defaultable nominal long-term debt and where the central bank faces an explicit zero lower bound constraint. There, the greater a firm's leverage, the higher its likelihood of experiencing a debt overhang episode following a large aggregate shock. Moreover, the severity debt overhang problems compounds with (1) an increased real value of debt, i.e., debt deflation, and (2) the monetary authority's inability to restore inflation once nominal interest rates reach the zero lower bound. Together, firms' long maturity debt positions and the binding zero lower bound are critical in driving a sluggish aggregate investment recovery.

"More Money for Some: Monetary Policy Meets a Rich and Persistent Household Wealth Distribution"

Open market operations (OMOs) are one of the most prominent instruments that central banks use in the implementation of monetary policy. In this paper, I study the implications of a non-degenerate distribution of money for the conduct of monetary policy through open market operations, while explicitly accounting for the persistent differences in assets and portfolios observed in the data. To do so, I build a general equilibrium search-theoretic model of money where frictions in decentralized trading render money essential. There, households save using both cash and illiquid short-term government bonds. Money and bonds are supplied by a unified fiscal and monetary authority, which manages the provision of public liquidity by means of open market operations. Both assets are valuable for agents as they can use money to obtain goods in decentralized market trades and bonds to partially self-insure against idiosyncratic liquidity shocks. I study the properties of the stationary equilibrium and show that individuals' inability to re-balance their portfolios right after experiencing a liquidity shock is the main driver of the observed heterogeneity in asset holdings and prices. Comparing stationary equilibria arising with differing provisions of liquidity, I analyze the relationship between liquidity, interest rates, and output. Preliminary results suggest that expansionary open market operations are successful in driving both higher nominal interest rates and increased economic activity.

"Non-Degenerate and Persistent Distributions in Search-Theoretic Models of Money"

Traditional models of money search rely on assuming quasi-linear preferences for tractability purposes. Despite this assumption being useful to obtain analytical results, it prevents the model of giving any insight on the distributional consequences of policies or additional frictions, something that might seem overly simplifying in an environment in which heterogeneity is a direct byproduct of decentralized trading. In this paper, I relax the quasi-linearity assumption in the Lagos-Wright environment and propose a numerical method to compute the stationary equilibrium and the stochastic equilibrium of the model. As opposed to other solution methods, the solution of stationary equilibrium does not require to simulate many agents over several periods and does not depend on non-parametric estimation techniques. The solution strategy presented here relies on non-linear methods and can be easily extended to higher dimensions in a fast and robust manner. Importantly, this approach can be paired with a backward induction scheme to solve the stochastic equilibrium of the model. Using these new methods, I revisit previous results in the literature associated with the welfare cost of inflation, and the short-run effects of changes in monetary policy in a context where persistent heterogeneity is fundamental for a sluggish transmission of monetary changes.

Research in Progress

"Protectionism, International Trade, and Inequality" (with Heejeong Kim)

Global trade tensions have risen with the U.S. imposition of tariffs on goods imported from several of its trade partners. When increasing trade barriers, policy-makers intend to boost domestic demand and employment, improving the welfare of domestic workers in import-intensive sectors. We develop a model within which to quantitatively evaluate the aggregate and welfare effects of increased barriers to trade, embedding the Eaton-Kortum (2002) model of Ricardian trade within a dynamic two-country, incomplete-markets framework with labor market frictions. Workers in our model economy are heterogeneous in both income and wealth. They face uninsurable income risk and work across a variety of sectors producing different goods. Sectors vary in the extent of foreign competition faced by domestic producers. Workers can choose to move to another sector, but incur fixed costs to do so. The model is quantitatively disciplined by a rich set of moments drawn from the cross-sectional distributions of income and wealth, alongside the bilateral trade distribution between the U.S. and Canada. Using this environment, we first study the responses of the U.S. and Canadian economies to tariff shocks, emphasizing their effects on inequality and employment. Next, we analyze the welfare consequences of tariff changes on different households as functions of their income, wealth and the degree of trade exposure in the sector they work.

Research Experience and Other Employment

2009-2013	Central Bank of Colombia, Economist, Macroeconomic Modeling Department
2009-2009	Colombian Banking Association, Economist, Department of Financial Research

Honors, Scholarships, and Fellowships

2018-2019	Dice Dissertation Fellowship, Department of Economics, The Ohio State University
2013-2014	University Fellowship, The Ohio State University

Teaching Experience, The Ohio State University

Fall 2015, 2016, 2017	Graduate Macroeconomic Theory I: Teaching Assistant for Professor Julia K. Thomas
Spring 2016, 2017, 2018	Graduate Macroeconomic Theory II: Teaching Assistant for Professors Stefania Albanesi, Sanjay Chugh and Kyle Dempsey
Spring, 2015	Principles of Microeconomics: Teaching Assistant for Professor Ida Mirzaie

References

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