

Research Statement

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November 1, 2020

I am a quantitative macroeconomist with interests in monetary economics and firm dynamics. My research seeks to better understand how the behavior of businesses affects business cycles and monetary policy. The primary tools that I use are quantitative general equilibrium models and micro-data.

Current Working Papers

In my job market paper, “*Entry, Variable Markups, and Business Cycles*,” I study how fluctuations in the creation of new businesses (“entrants”) amplify recessions. My paper focuses on the Great Recession, in which the number of entrants fell by one third. I study how this dramatic change affected employment and output in the economy at large.

To study the role of entry during the Great Recession, I quantify the effects of fluctuations in entry in a general equilibrium model of firm dynamics. In the model, a decrease in entry leads the market shares of large incumbent businesses to increase, and in response, they increase their markups and reduce their employment. I show in a panel dataset on firm behavior that this mechanism is quantitatively salient, and I calibrate the model to match evidence on firm behavior and the distribution of firm size and age from micro-data. I then show that a negative shock to entry in the model leads average markups to increase, the labor share of income to decrease, and output to be reallocated away from productive businesses and to unproductive ones. These changes lead to large contractions in employment. I show that the shock to entry generates an employment contraction that is double the employment contraction in a model without this mechanism.

I then use the model to answer two quantitative questions. First, how did the the large and persistent decline in entry during the Great Recession contribute to the contraction in employment? I show that the fall in entry led the average markup to increase by 70 basis points and generated a decline in aggregate employment of 3 percent. Second, in light of the significant increase in market concentration in the average industry over the past 30 years, I ask whether this mechanism has grown more important over time. I show evidence in panel data that large firms now increase their markups more in response to changes in their

market shares than they used to. When I incorporate this fact into the model, it implies that fluctuations in entry affect macroeconomic dynamics today more than they did 30 years ago.

In a recent working paper, “*Customer Search, Competition, and Monetary Non-Neutrality*,” I study how the ability of households to compare prices across stores affects price stickiness and the ability of monetary policy to stimulate output. I begin with a simple observation that is at odds with standard models of monopolistic competition: identical goods are often sold at different prices by many suppliers. I confirm this fact in a large dataset on prices at grocery stores across the US; there is significant dispersion in the price of the same good at different stores, even within the same city. I account for this fact in a quantitative model of imperfect information; in the model, households cannot observe prices at all stores. I show that introducing this mechanism into an otherwise standard model of sticky prices helps account for the dispersion in prices that I document in micro-data. It also increases price stickiness and so amplifies the effects of monetary policy on output.

Works in Progress

In closely related work, “*Monopoly Power, Sectoral shocks, and Monetary Non-Neutrality*,” co-authored with Simon Gilchrist and Adam Guren, we study the propagation of aggregate and sectoral shocks in a model that parsimoniously incorporates the effects of market power on dynamic pricing decisions. We begin by documenting in a dataset on prices at grocery stores in the US that large producers adjust their prices more frequently and by less on average than small producers. We then develop a novel shift-share instrument for producer-level demand by interacting their exposure to local markets with local house-price growth. We show large producers increase their prices by more in response to demand shocks than do small producers. These facts are consistent with a model in which (1) large producers have market power to set markups over marginal costs and (2) large producers face lower nominal rigidities than do small producers. We study both sectoral shocks and monetary policy in a New Keynesian model that incorporates both of these mechanisms, and show the market power of the monopolist amplifies both.

Future Research

Exciting avenues remain for research at the intersection of firm dynamics and macroeconomics. A recent empirical literature documents that in recessions, small firms’ revenues decrease by more than large firms’. These changes imply the market shares of large firms and market concentration increase in recessions. Two natural questions arise: What is the role of the increase in market concentration for the propagation and amplification of shocks?

And what drives these changes in the distribution of market shares over the business cycle?
I plan to study these questions using quantitative macroeconomic models that match the distribution of sales, markups, and employment over the business cycle.