

Research Statement

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I am a Macroeconomist focused on Relative Prices, Household Consumption, and Inflation. My preferred research method is to leverage detailed micro-level data to examine the effects of macroeconomic shocks and government policies and then discipline these empirical findings using rigorous macroeconomic theory and quantitative models.

In my Job Market Paper, **Cyclical Demand Shifts and Cost of Living Inequality**, I examine the heterogeneous impacts of recessions on the price indices of low- and high-income households. I argue that higher inflation rates for low-income households is a feature of recessions. I match by hand micro-expenditure categories from the Consumer Expenditure Survey (CEX) with disaggregated price series from the Consumer Price Index (CPI). I use my constructed data set to establish two novel facts: (1) the products that low-income households buy more intensively (compared to high-income households) increase in price during recessions, and (2) the aggregate share of spending devoted to these products is counter-cyclical. I propose an original mechanism that explains these two facts: during recessions, households decrease their spending on luxury items (e.g., concerts, vacations) but continue buying necessities (such as groceries). This shift in demand and some curvature in the production possibilities frontier imply that macroeconomic shocks that lower aggregate expenditure also raise the relative prices of necessities. In a quantitative model calibrated to the United States, I find that a shock similar to the 2008 financial crisis increases the relative price index for households in the lowest income quintile by almost one percentage point compared to the price index of households in the highest income quintile.

Recessions are not the only macroeconomic force that can cause inflation to differ across households. In my working paper, **Household Inflation and Aggregate Inflation**, I start by constructing household level inflation rates using the CEX and CPI along with detailed barcode level data from a large representative survey of households. I find that inflation rates differ markedly across households. Next, I investigate how a household is affected by a “household” level inflation shock. I find that an inflation shock leads to a persistent increase in the household’s price index; I also find that households react by reducing their nominal consumption, similar to having been hit by a wealth shock. My findings suggest that household inflation shocks make it harder for households to smooth consumption. Finally, I find a robust correlation between the aggregate inflation rate and the cross-sectional dispersion of household inflation rates (this correlation is independent of the unemployment rate, which is the focus of my JMP). The correlation between inflation and inflation dispersion suggests that the same types of macroeconomic forces that increase inflation also increase the variance of household inflation shocks.

In the 2000s and 2010s, aggregate inflation has been more muted than analysis using the traditional Phillips curve would suggest. In ongoing work with Munseob Lee, **Measuring Welfare Gains from the Rise in Online Shopping**, we suggest that one reason for this fall in trend inflation is a fall in retail markups due to the emergence of online shopping. We construct Exact Price Indices (see Feenstra 1994) across cities and product groups using a scanner data-set that crucially includes both household online purchases and purchases from traditional retailers. We find a significant decrease in the price index of products/cities that had a higher increase in online shopping activity. This decrease comes exclusively through lower prices (rather than increased product variety). We combine our household-level scanner data-set with barcode level wholesale costs and argue that the fall in prices is due to lower markups. As a result, inflation could be higher in the coming decade as the rate of increase of online shopping slows and markups equalize.

My research also examines how governments can directly impact the business cycle. In ongoing work with Valerie Ramey and Johannes Wieland, **Micro MPCs and Macro Counterfactuals: The Case of the 2008 Rebates**, we reexamine marginal propensities to spend (MPC) out of tax rebates. While some past studies have found that households spend up to 70 percent of their rebate, we find that MPCs of that magnitude lead to unrealistic counterfactuals at the Macro level. To create counterfactuals, we use the literature's estimates of MPCs to calibrate a medium-scale New Keynesian model and use it to calculate the implied counterfactual path of consumption and other variables had there been no tax rebates. We also replicate past studies that estimate the micro-level MPCs and argue that some of their assumptions (such as random treatment timing) are implausible.

In future work, I will continue to examine the heterogeneous impacts of macroeconomic shocks. For example, I plan on using detailed wage micro-data to study the link between inflation and wage dispersion. I am especially interested in how wages respond for workers with less bargaining power. I am also interested in cyclical pricing dynamics in the housing market. I plan on leveraging micro-rental and home pricing data to answer how recessions affect the distribution of rental and housing prices. If recessions affect housing prices differently (e.g., in Urban centers v. Rural areas), do these relative price changes spill over into other parts of the economy?