My research interests are in macroeconomics and labor economics, with a current focus on the macroeconomic and distributional consequences of firm heterogeneity. I use a combination of empirical analysis and quantitative modeling to answer questions in two major research agendas. The first studies the heterogeneous effects of employer composition on labor market outcomes, particularly by race or by gender. The second addresses the heterogeneous responses of firms to financial shocks and the implications for policymakers.

Firm heterogeneity in the labor market

My job market paper, "Firm Heterogeneity and Racial Labor Market Disparities," studies how employer composition contributes to the volatility of the Black-white employment gap over the business cycle. I build on existing microeconomic research showing that Black workers are more likely to work for large firms and that one reason for this sorting pattern is differences in the professional networks people have access to. Firms face imperfect information in the hiring process and one way they alleviate this is using information from existing employees, which disproportionately benefits the majority group. I build on this work by studying the macroeconomic implications through empirical analysis of employment transitions by race and firm size over the business cycle and a quantitative model with information frictions in the labor market and firm and worker heterogeneity. I find that changes in the hiring gap at large firms contribute most to the worsening of the racial employment gap during downturns and that information frictions play a key role in this pattern.

The empirical contribution of my paper is documenting differences in employment transitions by race and firm size over the business cycle. I use the Survey of Income and Program Participation (SIPP) to construct monthly data on employment status that is specific to the type of employer: large firm, small firm, government, or self-employment. These data also allow me to control for individual characteristics like age, gender, education, typical occupation/industry, state, and urban status. I show that when the headline unemployment rate is one percentage point higher, the rate at which non-employed Black workers find jobs falls by an additional six basis points relative to white workers, and that this entire gap is coming from large firms. To interpret this result, I use a decomposition framework to show that changes in the hiring gap at large firms contribute two basis points to the overall worsening of the employment gap, which is the largest negative contribution of any of the transition rates.

The model contribution of my paper is embedding heterogeneous information frictions that vary by both worker and firm type in a general equilibrium model with endogenous wages. The key intuition is that firms have noisier information about minority workers, which leads them to hire fewer workers from this group. This friction is more severe at small firms, creating the pattern we see in the data that Black workers are more likely to work for large firms. To evaluate the business cycle implications, I consider a permanent negative shock to aggregate productivity. The direct effect of this shock is that the increased availability of job seekers enables firms to be more selective about who they hire, leading to a worse hiring gap for minority workers at both types of firms. The overall effect is more severe at large firms because differences in marginal recruiting costs lead large firms to have a bigger market share in the matching market and to be more sensitive to general equilibrium effects on wages. The quantitative model captures 21% of the average hiring gap, with a more severe gap at small firms, and 67% of the worsening in the hiring gap over the business cycle, with most of the effect coming from large firms.

Going forward, I will push this research agenda further by using administrative data linking workers and firms. I have an early-stage project with Erin Gibson, Gustavo González, and Leticia Juarez examining the relationship between labor market power and the gender wage gap. Higher concentration of employment at a few large firms could lead to more gender equity in wages if workers have fewer outside options to generate bargaining power. On the other hand, it could worsen gender gaps if there is heterogeneity by gender in the labor supply elasticities that determine wages. We plan to embed both channels in a general equilibrium oligopsony model to quantify the effects. We will be able to combine rigorous model analysis with robust empirical work using administrative employer-employee data from Chile.

Firm heterogeneity and financial shocks

In addition to labor market heterogeneity, the second area of my research agenda is focused on risk aversion. In work with Matias Moretti, Pablo Ottonello, and Diego J. Perez, we study the macroeconomic transmission of fluctuations in the global risk premium to open economies. We start with a small open economy model in which heterogeneous firms face endogenous default risk and finance their investment with risky debt. The credit is provided by risk-averse foreign investors who are subject to exogenous fluctuations in their required premium for risk. The model generates two channels through which the global risk premium may affect economic activity. First, the risk premium directly affects firms' financing costs and investment decisions. Second, the risk premium indirectly affects activity through feedback between firms' policies, domestic aggregate demand, and the adjustment of the real exchange rate. Given that risk-free firms are unaffected by the price of risk, the model suggests that we can measure the relative magnitude of these two channels using differential firm responses by level of risk: risky firms will be affected by both channels whereas risk-free firms will only be affected by the indirect channel.

Informed by the model, we study the heterogeneous effects of changes in the risk premium by firm default risk. First, we construct a novel measure of the global risk premium using balance sheet and asset price data from firms across countries. The measure captures major global financial turmoil and is correlated with other measures used in the literature, such as the VIX. Next, we combine our measure of the global risk premium with firm-level data to study the impact of changes in the price of risk on firms' investment. Our analysis suggests that an increase in the risk premium is associated with a decline in the capital stock of the average firm, with a stronger decline at riskier firms.

We use these and other moments in our quantitative model analysis, which we solve using global methods for both the aggregate and idiosyncratic blocks. We find that risky firms are the most responsive to changes in the risk premium both through direct and indirect channels. Finally, we will use our model as a laboratory to analyze how government policies can stabilize fluctuations in the global risk premium. Our preliminary analysis suggests that the relative magnitudes of the direct and indirect channels are important for determining the effectiveness of general versus targeted stabilization policies.

Going forward, I am interested in continuing this research agenda in its own right and also connecting it to my other research. For example, I think there is much to learn about how firms' risk and the pass-through of financial shocks affects workers' career trajectories, and how this varies across countries. In earlier research, I showed that children whose parents experienced negative labor market events like layoffs or displacements went on to earn less and choose less risky occupations in adulthood. Thus,

heterogeneity in exposure to firm risk can have intergenerational consequences as well. So far I have studied one aspect of this heterogeneity through firm size, but I would like to extend this further with new data and model techniques.