Research Statement

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I am a quantitative macroeconomist with two broad areas of interest. A part of my research focuses on the interlinkage between gender differences and aggregate outcomes. In other papers, I investigate the role of skill and occupational choices on misallocation and inefficiency. To conduct my analyses, I use heterogeneous agent models, disciplined by household-level microeconomic data, which are solved using computational methods.

The first strand of my research explores the role of gender in affecting macroeconomic outcomes. In one of my papers, titled "Female Labor Supply and Jobless Recovery," I examine the extent to which a weakened trend in female labor force participation contributes to jobless recoveries in the recessions post-1990. I document that female labor force participation rose steadily over the U.S. post-war era until the late 1980s; since then, the upward trend has largely subsided. Concurrent with this leveling off, starting in 1990, recessions in the U.S. have featured jobless recoveries. This paper considers the connection between these two recent patterns, examining both empirically and through the lens of a general equilibrium macroeconomic model, the extent to which the weakened trend contributes to slower recoveries. My empirical analysis shows that young, married women with children were the primary drivers of aggregate employment recoveries prior to 1990. These findings inform the development of a theoretical model that I use to study the interaction between female and male labor supply at the household and aggregate level. My model predicts that post-1990 aggregate employment recoveries were significantly slower than pre-1990 recoveries due to the weakened trend for young married women with children and is thus consistent with my empirical evidence both in the aggregate and in which individual groups show these changes. Decomposing the relative contributions of several underlying factors responsible for this pre-1990s rise, the model predicts that the narrowing gender wage gap is the most important factor in the overall increase. However, until the mid-1980s, when the upward trend in female labor supply was the strongest, a reduction in the number of young children for married women was the most crucial factor. With this insight, I use my framework to discuss policy implications for mitigating jobless recoveries.

In a second paper (co-authored), titled "Gender, Marriage, and Portfolio Choice: Role of Income Risk," we investigate the source of gender and marital status differences in portfolio choices across U.S. households. Using the Panel Study of Income Dynamics (PSID) and the Survey of Consumer Finances (SCF), we find evidence that single female-headed households invest the least in risky assets, followed by single male-headed households. Further, married households invest the most in risky assets. Towards explaining these differences in portfolio allocations, we further document that women earn lower incomes and face higher individual income risk relative to men. To quantitatively investigate the importance of these gender differences in income profiles, we develop a two-asset incomplete market life-cycle model with heterogeneous households. Using the model, we show that the gender wage gap is important in explaining portfolio choice differences during the initial years of working life; however, higher income risk leads to lower risk-taking behavior by female-headed households afterward. We also show that dual-

earner households exhibit higher investment in risky assets compared to single-earning couples, which is consistent with our empirical findings, indicating a role for spousal insurance. In a related paper, "Female earnings and wealth accumulation," I study the effect of a rise in the female share of household earnings in the U.S. on the savings decisions of married households through increased spousal insurance. Since the rise in female participation in the U.S. was primarily driven by married women, the role of spousal insurance has changed over time, thus impacting the risk-taking behavior of couples. Through the lens of an overlapping generations model with two assets, I show that among couples where the share of female earnings is high, relative investment in risky portfolios is higher. As female earnings increase, investment in risky assets increases, leading to higher wealth accumulation by couples.

In another co-authored project, "Firm size and Female Employment," which is currently a work-in-progress, we study the firm-level determinants of female employment in India. India has experienced rapid economic growth since the 1990s. Simultaneously, there has been a dramatic increase in female education and a substantial fall in fertility. Despite these changes, female labor force participation (FLFP) rates have remained stable within a low 34-37% range during 1990-2005. This mismatch between increasing economic growth and declining FLFP in India presents a puzzle that many researchers have tried to answer. Surprisingly, there has been little research on firm-level determinants of female employment in India and elsewhere. Using the Annual Survey of Industries (ASI) data, we observe that the share of female employees in a firm rises as the size of the firm increases. A stylized fact about the Indian economy in terms of its firm-size distribution is that there is a dense concentration of micro-sized firms in the country. Therefore, the questions we raise in this project are two-fold: what are the underlying reasons that lead to more women employees working in larger firms, and what is the quantitative contribution of small firm size distribution to low female employment in India.

The second strand of my research examines market imperfections that lead to skill and occupational choices resulting in misallocation and inefficiency. In one of my papers, "Inefficiencies due to skill choice," I examine skill investment choices leading to inefficient outcomes due to search frictions. My work is motivated by the finding that in India, enrollment in an engineering degree contributes to around 25% of the total college enrollment; however, 60% of engineering graduates remain unemployed. I hypothesize that some college degrees, such as engineering, provide multiple job options, which may incentivize individuals to invest in them. However, this may lead to over-investment in this skill type, which eventually contributes to higher unemployment among engineers, owing to the search frictions present in the economy. I analyze this question using a two-sector two-skill search theoretic framework and find that this leads to inefficient outcomes under certain conditions. A government intervention that taxes individuals who invest in these skills and subsidizes workers who invest in skills that are more focused and hence have fewer job options can help to reduce this inefficiency.

For an ongoing project (co-authored) titled "Support prices, input subsidies and misallocation in Indian agriculture,", we recently received *the Structural Transformation and Economic Growth (STEG) research grant*. In this project we study the implications of agricultural price support programs (which offer a minimum price to producers of supported crops) and input (electricity and fertilizer) price subsidies, which are common to several low-income economies, for occupational choices and quantify the resulting misallocation of talent across the agricultural and non-agricultural sectors. These programs can distort cropping choices, sorting across sectors, and contribute to low agricultural productivity. As agriculture comprises a large share of employment in many developing economies, low agricultural productivity can help explain the income differences between rich and poor economies. We formalize this argument by

using an incomplete-markets general equilibrium model with two sectors and two cropping choices to understand the consequences of the various distortions to farm size and land use in the presence of agricultural risk. Unlike much of this literature, our analysis employs a dynamic model with agent heterogeneity by productivity and asset holdings to focus on specific distortions, viz., a minimum price that producers of certain crops can avail of or input price subsidies, in the context of India.

In future research, I want to explore the macroeconomic aspects of racial inequality. In one of my projects, I aim to quantify the effect of a rise in remote work during the pandemic on housing decisions and its implications for the racial wealth gap. This project is motivated by two stylized facts. Firstly, the share of households who are renters is highest among Black families. Therefore, rising house prices during the pandemic, followed by rising rental prices in the U.S., disproportionately impact Black families relative to others. Secondly, Black workers were less likely to work in jobs that allowed remote work during the pandemic as compared to other workers. Therefore, they were restricted in their residential location choices. With remote work persisting in the post-pandemic era, I want to study the resulting impact on racial wealth inequality.