Research Statement

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There are two core agendas in my research. The first focuses on the entrepreneurial activity in an economy. How heterogeneity in entrepreneur's decisions and outcomes can help inform us about the underlying productivity of entrepreneurs, the risk they face in operating their business, and how these factors might impact occupational choice, business investment, credit markets and the size distribution of firms. The second addresses a growing concern among economist associated with the recent decline, both within the U.S. and globally, in the share of income paid to workers (labor's share), and how changes in the age composition of the labor force have affected the decline.

Entrepreneurship: Entrepreneurship has long been a focus of economists. Recently, the macroeconomic literature on entrepreneurship has focused on the wealth accumulation of entrepreneurs to understand the high level of wealth inequality observed in the United States and other countries. The high accumulation of wealth by entrepreneurs is primarily motivated by the inherent riskiness of small businesses, as well as the costs of external financing. Understanding these motives have contributed to how policy, related to taxation, bankruptcy, and financing, can be used to encourage entrepreneurship. My current and planned work seeks to contribute to this understanding, focusing on the interactions between the insurance available to entrepreneurs (both from limited liability via incorporation and intra-household insurance through second earners), and their decisions on investment, debt, bankruptcy, and wealth accumulation.

It is vital to know the extent of the risks faced by entrepreneurs and the insurance available against them, to assess tax policy and personal bankruptcy reforms. [1] uses the incorporation decision of entrepreneurs, along with the cross-sectional differences in the size of businesses and wealth accumulation between incorporated entrepreneurs and their unincorporated counterparts, to inform us about the underlying risks faced by small business owners. Most of the literature models entrepreneurial risk as individual specific productivity shocks, where in the worst states of the world an entrepreneur who fully funds production via debt has non-negative net equity in her business. Our findings suggest that the downside risk faced by entrepreneurs is far more severe. That is, entrepreneurs face risk to the invested capital, which can drive net equity of a business negative. Furthermore, an entrepreneur is unable to self-insure against this type of risk through the accumulation of wealth, and therefore, must acquire insurance through incorporation. The inability for invested capital to provide insurance against downside risk is crucial in understanding the cross-sectional feature that incorporated entrepreneurs have higher net worth and operate at much larger scales.

Continuing to understand the insurance available to entrepreneurial households, [2] documents the degree of intra-household insurance that second non-business earners provide for entrepreneurial households. Using data from the Survey of Consumer Finance, we document the extent of intra-household insurance provided by second earners. Specifically, we find that on average non-business earnings from a spouse are nearly two-fifths of total household income, and are equal to three-quarters of the income coming from businesses owned and operated by the household. For households in which both partners work for the business, we find these households have no non-business earnings on average and their business income is 2.6 times higher than the business income of households with a non-business wage earner. Suggesting that households with higher productivity in the business choose to employ both spouses in the business, whereas lower productivity households retain one spouse which is attached to the labor market. In addition, households in which both spouses retain jobs outside of the business, the business income is under 10 percent of total household income. Suggesting that these businesses are either in their infancy, smaller consulting arrangements, or "hobby" businesses. Contrast to the literature which focus on the individual, we provide a theory of the joint occupational choice of spouses within a household to assess the importance of this form of insurance on occupation selection, business size, and wealth accumulation.

Extending our analysis of incorporation to cross-country variation in the size distribution of firms, [3] examines the costs of starting a business and incorporation and how they correlate with the size distribution of firms. Using cross-country data, we document that the relative size of corporations to unincorporated firms is positively correlated with costs of starting a business and incorporation. In addition, we find these costs are negatively correlated with incorporation rates and average size of firms. We develop a theory of incorporation and firm size distribution where firms facing increasing downside risk in their size and high costs of incorporation (which provides limited liability) choose to remain unincorporated and operate at a small scale. Our theory is consistent with the cross-country data, and we plan to use it to assess the impact of changing costs on the firm size distribution, output, and productivity.

Furthering this line of research, the next papers, [4] and [5], focus on small and medium sized enterprises (SMEs) and credit markets in Canada. [4] empirically measures the financial constraints of SMEs and assesses their impact on firm growth, profit, exit, and balance sheet composition. We will use two data sets from Statistics Canada: Survey on Financing of SMEs from 2000-2017 and the General Index of Financial Information (GIFI). The first consists of a representative sample of more than 20,000 firms, with data on industry, geography, firm size, age, and owner characteristics. The survey data is merged with the business registry and tax data of the GIFI which allows us to track the firm's balance sheet, financial statements, tax information, and loans and credit applications. Related work in [5] will use data from the Office of Superintendent of Bankruptcy in Canada, which contains the universe of incorporated-business legal insolvencies, to document stylized facts on the characteristics of insolvent businesses. In addition to business characteristics, we look at the type of insolvency procedure, the net asset and debt composition of the business, as well as, the type of lender, the industry and region that the business operates. Both projects and the richness of information in the data will help us shed light on the importance of financial constraints on SMEs and the efficiency of the financial and bankruptcy institutions in Canada.

Demographics and Labor’s Share: Recent work has documented a significant decline in labor's share over the past 30 years, both in the U.S. and globally. This decline is of importance for two reasons. First, prior to 1980, labor's share has been constant and many of the assumptions in modern macroeconomic theories are tied to this constancy. Second, a fall in labor's share may have important implications for income and wealth inequality. My work addresses the decline in labor's share in two complementary ways.

First, a potential explanation of the decline in labor's share is that, due to a fall in the price of investment goods, countries accumulate greater amounts of capital inputs relative to labor inputs. If capital and labor are substitutes in the production of final goods, then this capital deepening can lead to a fall in labor's share. The substitutability between capital and labor is pivotal. In [6], we estimate the elasticity of substitution from the correlation between trends in labor's share, investment prices, and consumption growth across countries. We find that a unitary aggregate elasticity of substitution between capital and labor is consistent with cross-country data. This implies that capital and labor are not gross substitutes, and that capital deepening *cannot* explain the decline in labor's share. Furthermore, we show that previous estimates using cross-country data are biased upwards (concluding capital and labor are substitutes) because they omitted a theoretically and empirically important variable related to consumption growth. Importantly, our finding reconciles the previous cross-country evidence with the existing literature using firm level data, the bulk of which estimate that capital and labor are not substitutes.

Second, while our estimates in the above paper suggest capital deepening cannot explain the decline in labor's share, the fact that is has fallen does demand explanation. In [7], we hypothesize that the recent aging of the population is important in understanding the fall in labor's share. Under general assumptions, we show that the age-distribution of earnings affects the labor's share when wages of a worker differ from the marginal product of labor. We provide a methodology to estimate the wedge between a worker's earnings and their productivity using available aggregated data on labor's share and earnings. Using sectoral data in the U.S., we estimate that a workers' earnings capture a smaller share of their marginal product as they age. A worker in her sixties receives about half of her marginal product relative to when she was in her twenties. We find that the recent aging accounts for 60 percent of the decline in U.S. labor's share. In addition, we find cross-country evidence which supports our hypothesis and that the global aging has contributed to 54 percent of the global decline in labor's share.

Building on the empirical results, [7] further provides micro-economic foundations for why workers capture less of their marginal product in earnings as they age. We extend the model of Postel-Vinay and Robin [8] to include an age-profile of job-to-job flows consistent with the empirical findings of Bjelland, et al. [9] and an age-profile of worker-specific labor productivity to match the empirical age profile of earnings. The decline in job-to-job transitions implies that older workers, while receiving higher wages and working at more productive firms, capture a smaller share of their marginal product than do younger workers. Specifically, we show that declining job-to-job transitions rates leads endogenously to an average earnings growth which is slower than labor productivity growth, and as a result, the earnings wedge is increasing in age.

The methodology developed in [7] is quite general and is not specific to age. [10] uses the approach to estimate the relative earnings wedge of men and women. We use the relative wages and earnings wedges to uncover the underlying productivity differences between men and women, and see how it has evolved over time as the gender gap in wages has fallen. Preliminary work using U.S. data suggests that women capture approximately 40 percent less of their marginal product than men. This relative earnings wedge, along with the falling gender wage gap, implies that the productivity of women was roughly 20 percent below men in the late 1980's, and has increased to roughly 10 percent above men by 2010.

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