Research Statement

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My research agenda is focused on models of the economy which can generate wealth distributions like the ones we see in real life. It is a longstanding observable fact that wealth holdings among citizens in any nation are highly skewed. Identifying which features of a household's decision problem over the life cycle are most important for wealth accumulation is an immediate step towards understanding why such inequality persists to this date. One important determinant of wealth accumulation is the rate of return earned on assets across periods, which is another main focus of my research agenda. Though it is difficult to measure, recent work suggests that there is substantial heterogeneity in these returns. If returns are important for wealth inequality, and there is a persistent component to returns, understanding the source of this persistent component may be a step in the direction of building more complex macroeconomic settings which generate realistic skewness in the distribution of wealth.

1 Wealth inequality and its determinants

My job market paper constructs a standard HA model of consumption-saving for households who are ex-post heterogeneous due to idiosyncratic labor income risk. Additionally, I allow for households to be heterogeneous ex-ante, as in the models by Kaplan and Violante 2022 and Carroll et al. 2017. Most such models assume that the rate of return is identical across households, which very recent work by Fagereng et al. 2020 has discovered evidence against.

Preliminary results of a simulated method of moments estimation show that such rate of return heterogeneity is sufficient to match measurements of inequality from the Survey of Consumer Finances. This result holds both for the baseline model where households solve an infinite horizon problem, and for a realistically calibrated life cycle version of the model.

The first notable difference is that, my paper models the uncertainty in labor income as a random walk, as opposed to an AR(1) process. The key implication of this modeling difference is that, the AR(1) specification leads to less uncertainty in earnings over the life cycle from the perspective of a household at the start of the horizon for which they are choosing an optimal consumption path. This will lead to less accumulation of wealth over the life cycle. In this way, the permanent income specification that I am

using will attempt to describe *as much* of the dispersion of wealth across households as possible with labor income uncertainty. The remaining dispersion in wealth across households which cannot be explained by differences in earnings will be attributed to returns heterogeniety, ultimately leading to more modest estimates of differences in returns acrosss households.

The second way in which may paper is different from the existing literature is that the life cycle version of my model is much richer in its calibration of earnings and mortality rates. Specifically, I use an earnings profile provided by Cagetti 2003, which distinguishes mean earnings not only by age but by education cohort. Furthermore, I use age-education dependent mortality rates provided by Brown, Liebman, and Pollet 2007, which is uncommon in this literature. Essentially, I distinguish between households demographically by more than just age by incorporating education levels. Doing so does provide another avenue to explain dispersion in wealth holdings across households. However, it is a limited role and some further ex-ante heterogeneity among households, such as time preferences or the rate of return, is still needed to match wealth moments precisely.

The literature documenting the persistent component in individual returns holds even when the share invested in risky assets is 0. With this in mind, I propose a simple model of the bank's optimization problem, where different banks offer different deposit rates based on the sensitivity of their deposits to changes in the market interest rate at their institution. The distribution of returns which best matches SCF data can then be used to back out an implied distribution of elasticities across the banks in the model. So, the estimates in this paper can be compared to the literature describing the variation in changes in bank deposits due to changes in the Fed funds rate at different banking institutions, like Drechsler, Savov, and Schnabl 2017.

2 Relationship between trust and the persistent component of returns

My job market paper shows that a single addition of model complexity beyond an uncertain labor income process (i.e. allowing households to earn different returns on their assets) is enough to generate wealth moments that are reasonably close to those measured by surveys. However, that paper does not take a stance on where the heterogeneity in returns comes from. The second chapter of my dissertation could provide motivation for a particular modeling choice which would endogenously generate differences in returns across households.

This paper is aimed at establishing an empirical relationship between a measure of trust and the rate of return computed using survey data.

Butler, Giuliano, and Guiso 2016 uses data from the European Social Survey to establish an empirical relationship between trust levels measured in the survey and income data for the households. In particular, the paper finds that there is a "right amount of trust". That is, the relationship between trust and income is humped shaped. An intermediate level of trust is associated with the maximal level of income.

Additionally, there is recent work by Daminato and Pistaferri 2024 which uses the PSID to compute a measure of returns to wealth. The expression they give for returns can be used to compute an analogous measure of returns using the Household Retirement Survey (HRS). Alongside a measure of trust found in the 2020 wave of the HRS, I estimate the statistical relationship between trust and returns. Not only am I able to replicate the hump-shaped relationship between trust and income that Butler, Giuliano, and Guiso 2016 find, but I find that it also holds for the constructed measure of returns in the HRS data.

From here, the next steps are to decompose these effects and see what factors explain trust in the data. We know that as people's backgrounds, as well as their history of interactions in the marketplace, can have an effect on how trusting they are. If some individuals are more likely to be exposed to environments were distrust is an optimal survival mechanism, this could play out in their lives in terms of economic performance. As we know, there is much heterogeneity in returns; in fact, I am able to use data from 2002-2022 in the HRS to plot the distribution of esitmated fixed effects as Fagereng et al. 2020 does. If this point about different levels of trust being optimal in certain environments (even prior to the individuals needing trust to make economic decisions) is true, and if trust matters for returns, then it may contributeto the dispersion in the persistent component of returns (assuming trust is constant).

In another direction, if this relationship between trust and returns does persist, allowing for households to differ in there trust levels in the standard heterogeneous agent macro setting would generate reasonable differences in returns. From there, the data on trust can be used to calibrate the model and a nice result would be that the subsequent returns heterogeneity would be able to match empirical wealth moments.