1 Introduction

The unequal distribution of wealth, an extensively documented historical phenomenon, has intensified in recent years. This point is stressed in a recent article from the Institute for Policy Studies (IPS) which revealed that, in 2018, the total wealth of the poorest half of Americans was eclipsed by the combined wealth of the three wealthiest men in the nation. The IPS report further states that the combined wealth of the top five richest men on this list skyrocketed by a staggering 123% from March 2020 to October 2021[1].

Wealth inequality has also been a subject of considerable interest throughout history in various academic fields. The statistics literature, for instance, focused on linking the distribution of income to the observable skewness in wealth distribution. The economics literature went further by establishing microfoundations for individual wealth outcomes.

More recently, the macroeconomics literature on inequality has seen significant growth, with the distribution of wealth among households offering insight into how the economy as a whole responds to aggregate fiscal shocks.[2] This has been accomplished in large part due to the widespread adoption of models that abandon the traditional representative agent assumption.

The first departure from the representative agent framework entails positing an exogenously determined income process that generates a distribution of income among households. One can further assume that individuals face some level of potential unemployment in each period. In this revised setting, there is a precautionary savings motive for consumers. The availability of a riskless asset that partially insures against this income risk results in households choosing to hold different levels of market resources optimally. Krusell and Smith (1998)'s seminal work suggests that models assuming heterogeneity in individual income perform well in matching the aggregate capital stock but poorly in matching the distribution of wealth.

The next step towards moving beyond the standard representative agent framework is to assuming heterogeneity among households beyond the ex-post realizations of the stochastic process for income. This will lead to more households to optimally hold lower levels of wealth. Carroll, Slacalek, Tokuoka, and White (2017) accomplish this by performing a structural estimation of *ex-ante* heterogeneity amongst households which allows for the model's distribution of wealth to closely match the 2004 Survey of Consumer Finances (SCF) data on household wealth. The model with both ex-ante and ex-post heterogeneity does a much better job at matching observable inequality in the distribution of wealth.

[1]See Inequality.org articles data November 21, 2022: "Wealth Inequality in the United States" and "Updates: Billionaire Wealth, U.S. Job Losses and Pandemic Profiteers" (date accessed: March 27, 2023)

[2]Parker, Schild, Erhard, and Johnson (2022) note that "In sum, while on average the [economic impact payments] EIPs appear to have gone to many households with incomes that were unharmed by the pandemic, some of the EIPs, mainly in the first round, did support short-term spending for some households, primarily those with low ex ante liquid wealth and those reliant on income that could not be earned by working from home."

1.1 Contributions to the literature

It is worth noting that the time preference factor (β) is one of the key parameters that influences an individual's equilibrium target level of market resources, but it is not directly observable. Estimating differences in the rate of return to financial assets across households is possible, as this variable *is* directly observable. Empirical research has been conducted to estimate such differences, with a recent example being the work of Fagereng, Guiso, Malacrino, and Pistaferri (2020). They analyzed 12 years of administrative tax records on capital income and wealth stock for all taxpayers in Norway from 2004-2015 to estimate these rates of return.

Motivated by this recent evidence, this proposal provides (i) preliminary results and (ii) actionable extensions of a structural estimation exercise regarding ex-ante heterogeneity in the rate of return. Since the rate of return has a direct role in the wealth accumulation process, differences in returns to assets across households may be a compelling explanation for wealth inequality.

References

CARROLL, CHRISTOPHER, JIRI SLACALEK, KIICHI TOKUOKA, AND MATTHEW N. WHITE (2017): "The distribution of wealth and the marginal propensity to consume," *Quantitative Economics*, 8(3), 977–1020.

FAGERENG, ANDREAS, LUIGI GUISO, DAVIDE MALACRINO, AND LUIGI PISTAFERRI (2020): "Heterogeneity and Persistence in Returns to Wealth," *Econometrica*, 88(1), 115–170.

KRUSELL, PER, AND ANTHONY SMITH (1998): "Income and Wealth Heterogeneity in the Macroeconomy," *Journal of Political Economy*, 106(5), 867–896.

PARKER, JONATHAN A, JAKE SCHILD, LAURA ERHARD, AND DAVID JOHNSON (2022): "Economic Impact Payments and Household Spending During the Pandemic," Discussion paper, National Bureau of Economic Research.