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Heterogeneity and Persistence in Returns to Wealth

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Abstract

We provide a systematic analysis of the properties of individual returns to wealth using twelve years of population data from Norway's administrative tax records. We document a number of novel results. First, during our sample period individuals earn markedly different average returns on their financial assets (a standard deviation of 14%) and on their net worth (a standard deviation of 8%). Second, heterogeneity in returns does not arise merely from differences in the allocation of wealth between safe and risky assets: returns are heterogeneous even within asset classes. Third, returns are positively correlated with wealth: moving from the 10th to the 90th percentile of the financial wealth distribution increases the return by 3 percentage points - and by 17 percentage points when the same exercise is performed for the return to net worth. Fourth, wealth returns exhibit substantial persistence over time. We argue that while this persistence partly reflects stable differences in risk exposure and assets scale, it also reflects persistent heterogeneity in sophistication and financial information, as well as entrepreneurial talent. Finally, wealth returns are (mildly) correlated across generations. We discuss the implications of these findings for several strands of the wealth inequality debate.

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1 Introduction

Over time and across countries, the wealth distribution appears to be extremely skewed and with a long right tail: a small fraction of the population owns a large share of the economy's wealth. In the US, for example, the top 0.1% hold about 20% of the economy's net worth. Moreover, tail inequality seems to have more than doubled in the last three decades (Saez and Zucman, 2016).

What produces the long tail of the wealth distribution and its extreme skewness is the subject of intense research (see De Nardi and Fella, 2017 for an exhaustive critical appraisal of the literature). A traditional strand of literature started by Aiyagari (1994) has focused on the role played by idiosyncratic and uninsurable labor income (i.e., human capital) risk (see Castaneda et al., 1998; Huggett, 1996), or, more generally, heterogeneity in human capital (e.g., Castaneda et al., 2003), but with mixed success.¹ A different route, followed by Krusell and Smith (1998), has been to complement Bewley-Aiyagari models of earnings heterogeneity with heterogeneity in thriftiness, allowing individuals to differ in time discounting.² Differences in thriftiness, together with heterogeneity in earnings, can considerably improve the match between the wealth distribution generated by the model and that in the data. Discount rate heterogeneity has a certain appeal because of its intuitive realism. However, discount rates are hard to observe and their heterogeneity is thus difficult to assess. Furthermore, discount rate heterogeneity seems to miss one important feature of the data: the high incidence of entrepreneurs at the top of the wealth distribution. Entrepreneurship is usually associated with higher risk tolerance and idiosyncratic risk (entrepreneurs tend to hold very high stakes in their own company - see e.g., Heaton and Lucas, 2000; Moskowitz and Vissing-Jorgensen, 2002), rather than with higher than average discount factors. An alternative route followed in an attempt to match the thick tail in the distribution of wealth has been to explicitly allow for entrepreneurship and idiosyncratic returns to investment, as in Quadrini (2000) and Cagetti and De Nardi (2009; 2006).

While heterogeneity in returns to wealth can be plausibly linked to differences in entrepreneurs' ability (as in the seminal Lucas, 1978), it may arise from a variety of other

¹For instance, while the calibrated model of Kindermann and Krueger (2014) comes close to matching the distribution of wealth in the US, it requires the top 0.25% of income earners to earn 400 to 600 times more than the median earner - a value that appears in contrast with what is observed in the data, where the ratio of the income of the top 0.25% percent to the median is 34 at most (Benhabib and Bisin, 2018).

²Other authors emphasize the role of non-homothetic preferences, inducing the rich to save at higher rates than the poor (see e.g., De Nardi, 2004 and Carroll, 2002), or of changes in tax and transfer policies (Kaymak and Poschke, 2016).