Decory Edwards*

2026-02-20

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2 Literature Review

2.1 Trust

There are three strands of the trust literature of interest to this paper. First, this paper draws from the literature regarding the detereminants of trust. An example of this is Alesina and Ferrara 2000. Key takeaway is that the standard demographic control variables (age, race, education, gender) as well as living in a community with much heterogeneity in terms of either race or income.

This paper also seeks to contribute to the trust literature regarding the empirical relationship between measures of trust and economic performance. A notable example relevant for this paper is Guiso, Sapienza, and Zingales 2008 which finds that trust can lead to greater stock market participation.

A related work Guiso, Sapienza, and Zingales 2004 finds that measures of social capital and trust leads to greater use of financial instruments like checks, as well as poortfolio diversification away from holding cash and towards holding stocks and other assets.

A paper which serves as a key motivation for this work is Butler, Giuliano, and Guiso 2016. They find that the relationship between trust and income is humped shaped; an intermediate level of trust is associated with the maximal level of income.

Causal effects in the trust literature also inform this paper. Alsan and Wanamaker 2018 find that the 1972 public revelation of the Tuskegee Syphilis Study lead to lower trust in black males in medical institutions, ultimately leading to worse health outcomes over a lifetime.

Algan and Cahuc 2010 find that aggregate trust has a large positive causal effect on GDP per capita by showing that a measure of inherited trust by second generation immigrants in the U.S. is strongly correlated with aggregate trust in the origin country (and is persistent across generations).

2.2 Returns

An important work in the literature on empirical estimates of the rate of return is Fagereng et al. 2020 which characterizes the persistent component of returns for indivdiuals in Nowegian population data. This work also provides estimates of the distribution of returns within narrowly defined asset class, as well as for net wealth, which can serve as a useful benchmark for comparison.

Daminato and Pistaferri 2024 also documents the persistent component of returns in the PSID, and then use the data to calibrate an return-earnings process within a life cycle model of consumption-saving behavior.

3 Descriptive statistics

For the statistical analysis in this paper, I use the RAND Longitudinal version of the Household Retirement Survey (HRS) public data. I focus on the years 2002-2022; as this time horizon was filled with many economically relevant events (GFC, Covid), we can be creative regarding how to assess the accuracy of the data measured here. This is useful because, although there are many sources of income data to compare resuults to, there are less counterparts like this for return measures. The variables of interest fall into the categories: i) income, ii) wealth and portfolio composition, iii) returns, iv) trust, v) demographics, and vi) other controls.

3.1 Income

First, I use two measures of income: labor and total. Labor income is a narrow measure only capturing earnings and unemployment income. Total income is a more broad measure including retirement and capital income. First, it is clear that mean incomes are relatively flat over the period.

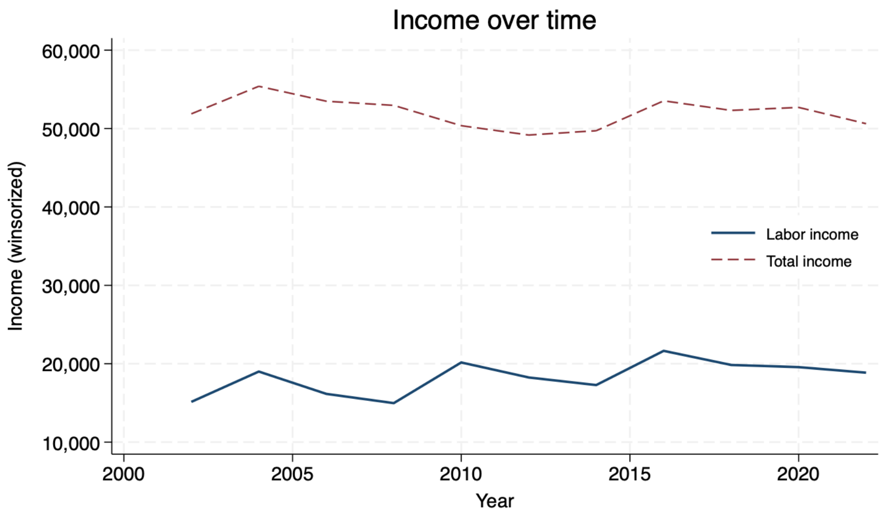

Figure 1: Income over time

Table 1: Mean income by year (real, winsorized)

Year	Labor income (mean $)	Total income (mean $)	Obs
2002	15,136	51,880	18,165
2004	19,003	55,399	20,129
2006	16,159	53,491	18,469
2008	14,976	52,959	17,217
2010	20,165	50,371	22,034
2012	18,250	49,179	20,554
2014	17,278	49,728	18,747
2016	21,644	53,540	20,912
2018	19,848	52,321	17,146
2020	19,568	52,703	15,723
2022	18,860	50,625	15,856

Real USD; winsorized at 1st and 99th percentile.

In particular, I pooled the observations of the survey together to get a sense of the distribution of incomes measured in the survey. This is captured by the table

Table 2: Income (real, winsorized): summary statistics

Variable	Obs	Mean	SD	P50	P95	Min	Max
Labor income (real, winsorized)	204,952	18,330	37,032	0	97,924	0	215,261
Total income (real, winsorized)	204,952	52,004	68,036	29,103	177,498	0	457,548

Real USD, winsorized; summary over person-years.

An important finding in the literature on earnings in the U.S. is that it is generally hump-shaped over the lifecycle. It is a good sign then that the following tables show

Table 3: Mean income by age group (2022)

Age (midpoint)	Labor income (mean $)	Total income (mean $)	Obs
25	0	11,355	2
30	32,109	88,034	8
35	19,995	60,832	28
40	25,892	47,446	95
45	36,852	63,806	233
50	43,923	69,039	1,286
55	38,022	62,014	2,285
60	28,186	55,429	2,924
65	14,749	46,994	2,641
70	6,732	43,629	2,204
75	3,487	43,556	1,401
80	1,464	39,318	1,421
85	528	37,903	871
90	519	39,476	361
95	0	46,538	79
100	0	14,517	16
105	0	11,112	1
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Five-year age bins (e.g., 50 = 50–54). Real USD, winsorized.

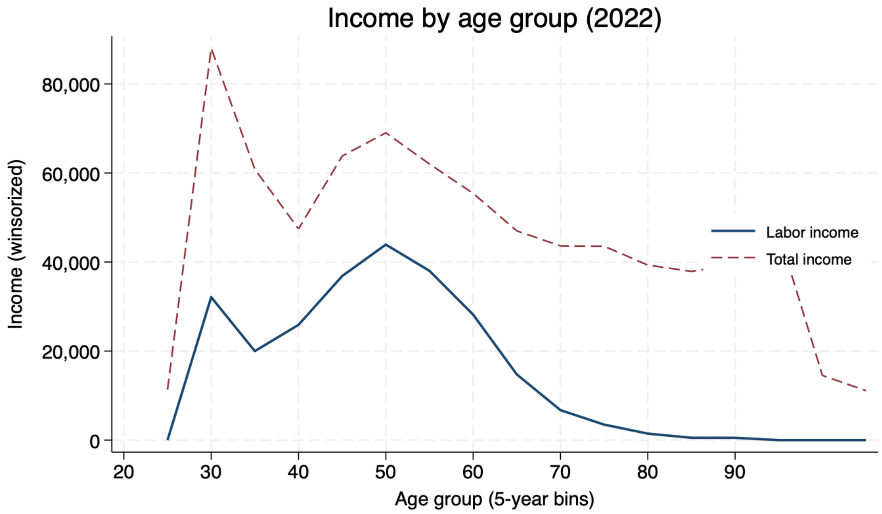

Figure 2: Income by age group (2022)

Another empirical finding in the literature on earnings is that on average individuals with more education earn higher income. The trend capture in the table suggests that the earnings data is in line with one would respect regarding earnings for a representative survey in the U.S.[1]

Table 4: Mean income by education group (real, winsorized)

Education	Labor income (mean \$)	Total income (mean \$)	Obs
no hs	6,075	23,987	44,654
hs	12,590	39,601	63,826
some college	20,298	53,483	47,390
4yr degree	32,779	82,578	24,820
grad	37,445	104,066	23,091

Real USD, winsorized. no hs = <12y; hs = 12y; some college = 13–15y; 4yr = 16y; grad = 17+y.

[1] Although the HRS oversamples older households, I use the provided the respondent-level weights for this interpretation of the summary statistics of the data.

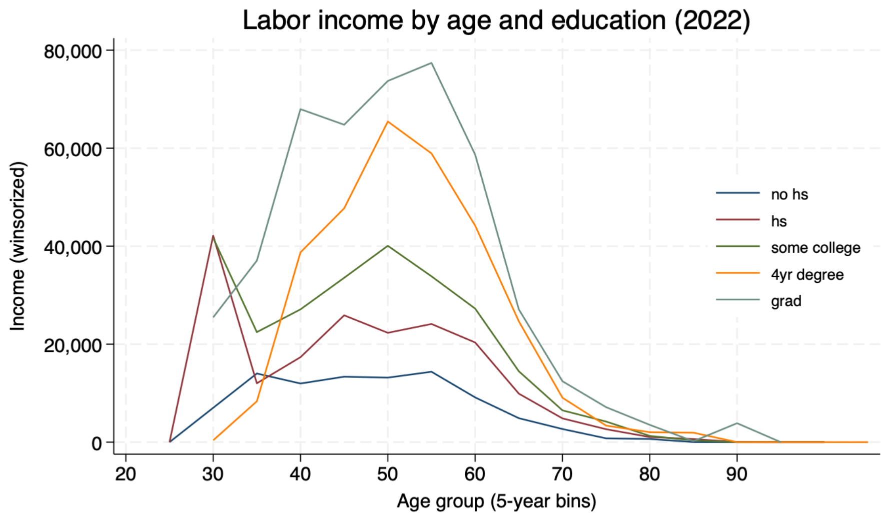

Figure 3: Labor income by age and education (2022)

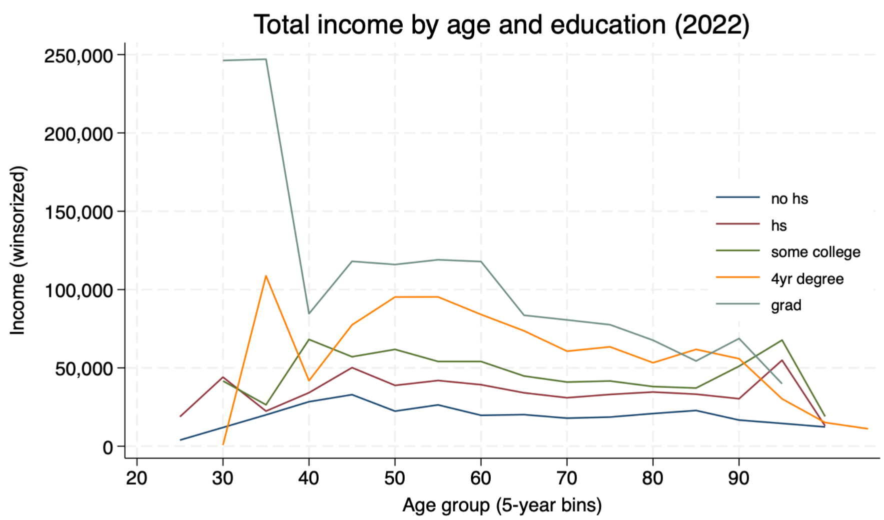

Figure 4: Total income by age and education (2022)

3.2 Wealth and asset class definitions

The HRS asks a number of questions aimed at measuring household wealth in the sample. I collect data on **interest income and dividends**, **capital gains**, **net investment flows**, and **previous period wealth holdings**, all of which are necessary to define the desired measure of household returns. Since population-level administration data on these objects for individual taxpayers is not available in the U.S., it is important to understand each component needed in the return calculation. This will help to determine whether or not our measured distribution of returns in this dataset is sensible.

3.2.1 Capital gains

The possible asset classes for which capital gains can be computed in the HRS are i) primary residences, ii) secondary residences, iii) other real estate, iv) private business, v) IRA/Keogh (or "retirement"), vi) stocks/mutual funds, vii) bonds, viii) checking/savings/money market, ix) cds/t-bills, x) vehicles, xi) other assets. The possible liabilities are i) mortgages on primary residence, ii) mortgage on secondary residence, iii) other home loans, and iv) total other debt.

Capital gains for each asset class are computed as the estimated change in valuation across survey waves. The general trend is that, these changes in valuation tend to move around alot over the period. That said, capital gains are generally higher at the end of the period than at the start of the period for most asset classes. This can be seen for capital gains to busines ownership, in figure

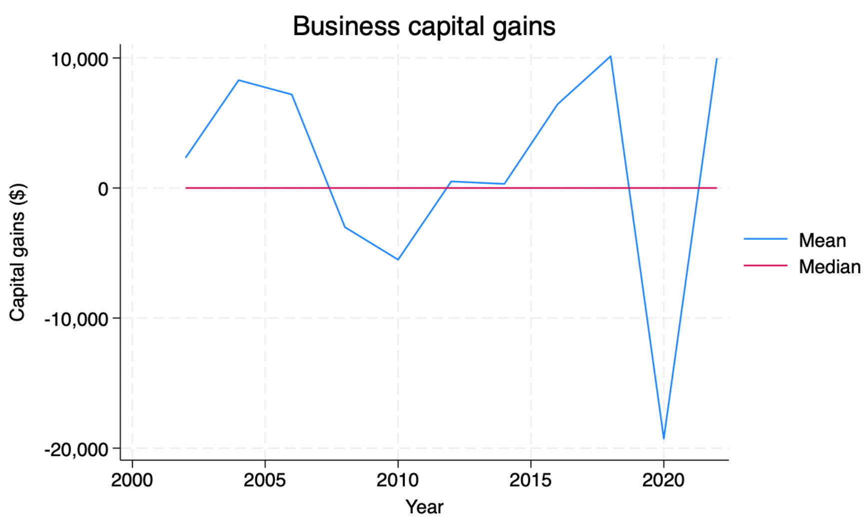

Figure 5: Capital gains: business, by year

The opposite is true for the bonds asset class: capital gains have generally fallen on average over the time period. This can be seen in the figure

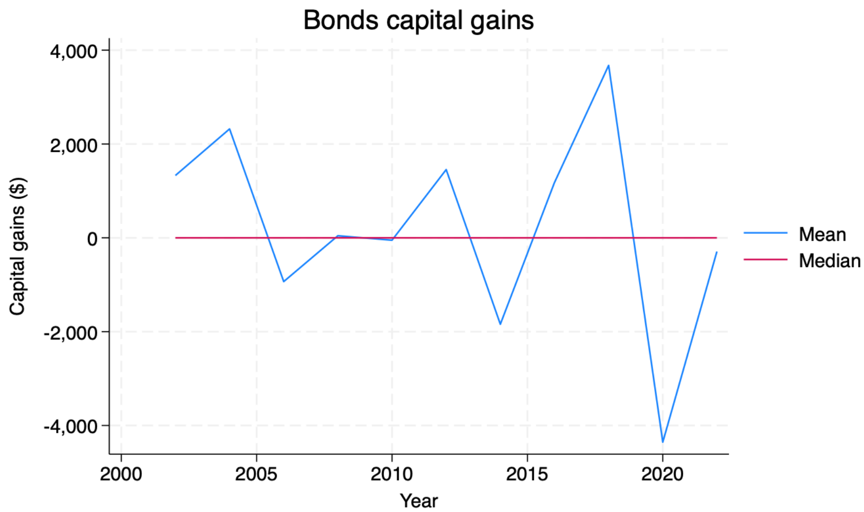

Figure 6: Capital gains: business, by year

Another feature that is apparent by taking a look at capital gains is that, most respondent hold no assets in a particular class. This can be seen by the vertical red line capturing a median of 0 for each wave of the survey. Residential assets generally are the bulk of individual portfolios, and yet the median is still 0 here in almost every wave. This is another sign that the data is sensible so far – large amount of non-participation despite evidence of returns is consistent with the empirically documented equity premium puzzle.

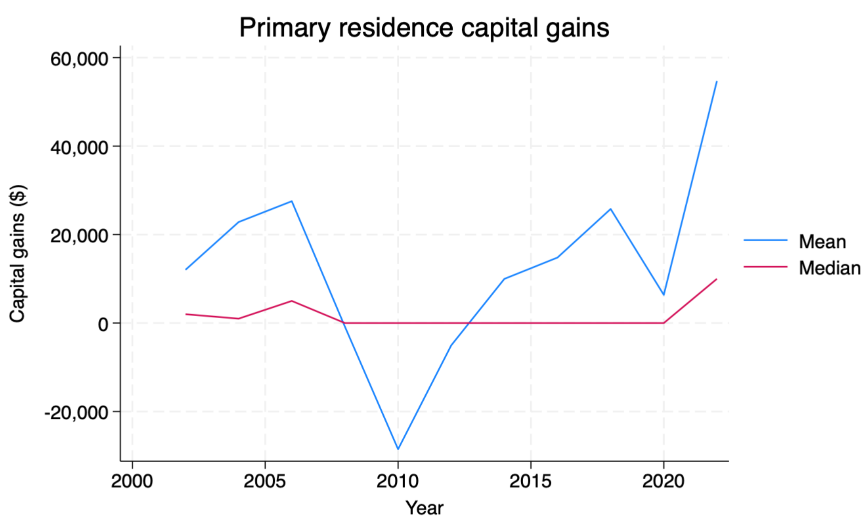

Figure 7: Capital gains: residential, by year

Notably, the dip in capital gain leading up to 2010 for primary residences, secondary residences, and real estate is also a good sign regarding how realibly measured the data is.

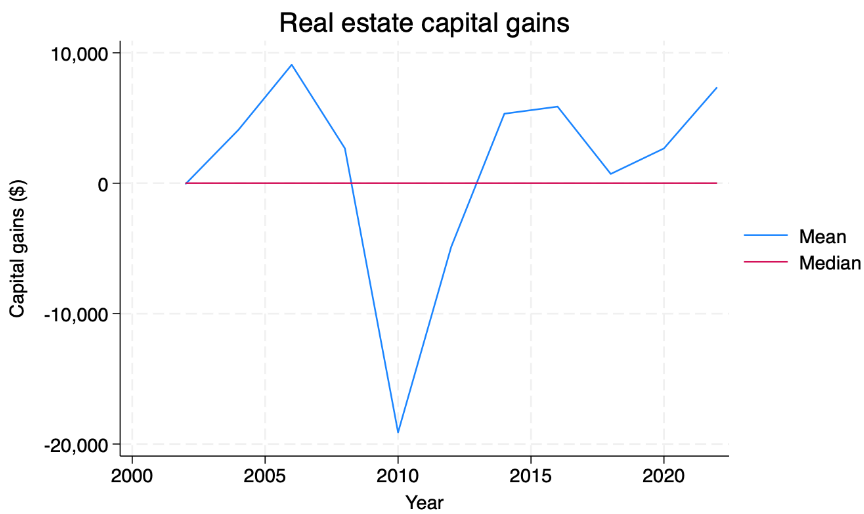

Figure 8: Capital gains: residential, by year

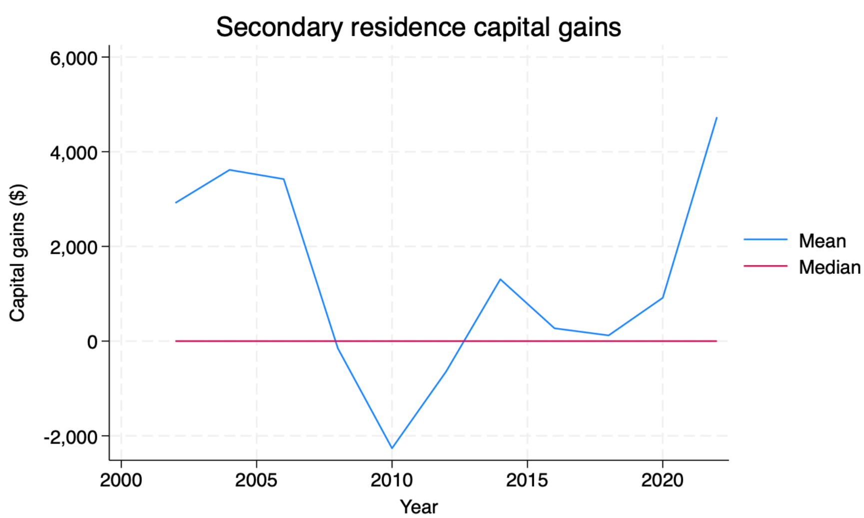

Figure 9: Capital gains: residential, by year

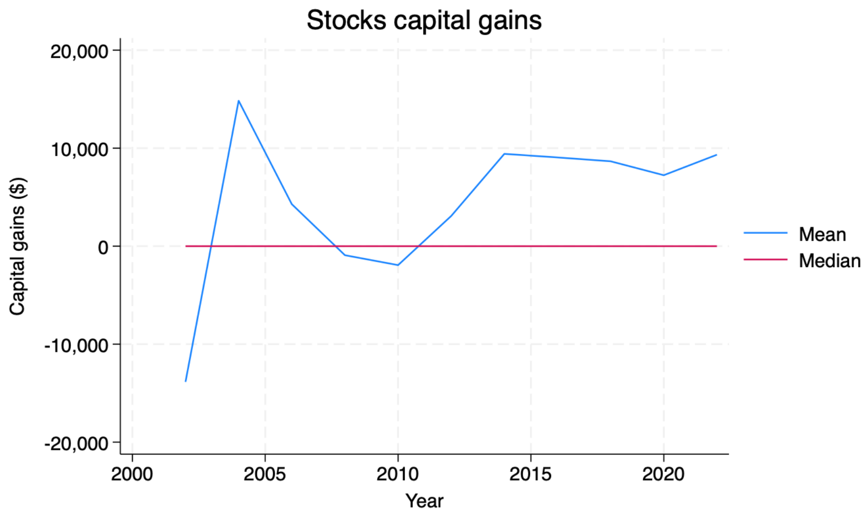

Figure 10: Capital gains: stocks, by year

3.2.2 Interest income and dividends

The HRS RAND longitudinal file has a distinctive way in which interest income and dividends received on these assets is measured. In particular, there is a variable which measures "household capital income received over the last calendar year, including business or farm income self-employment earnings, gross rent, dividend and interest income, trust funds or royalties, and other asset income". This particular feature of the data is the driving factor for the key modeling assumptions of this paper regarding measuring returns: asset classes are defined as narrowly as they can be given observation of interest income and dividends on those assets. For example, although we see capital gains for stocks, business, bonds, and real estate, we do not observe interest income or dividends on these assets individually. Thus, the narrowest asset class defined in this paper will be called "core" and will be comprised of these assets.

The RAND version of the data offers a number of variables measuring pension and annuity income as well as other forms of retirement income. I use this to construct a measure of returns to retirement assets and to define a broader notion of portfolio returns by considering returns to core and retirement assets. A key assumption is that there are no interest income or dividends earned on residential assets[2]. With this assumption, we can consider interest income and dividends on the entire portfolio as the same as interest income and dividends on the portfolio with just core and retirement assets. Thus, to compute a measure of returns to net wealth, I need to add in the remaining available capital gains per asset class (for those that receive no interest income).

[2]Or on any of the asset classes for which capital gains are available for.

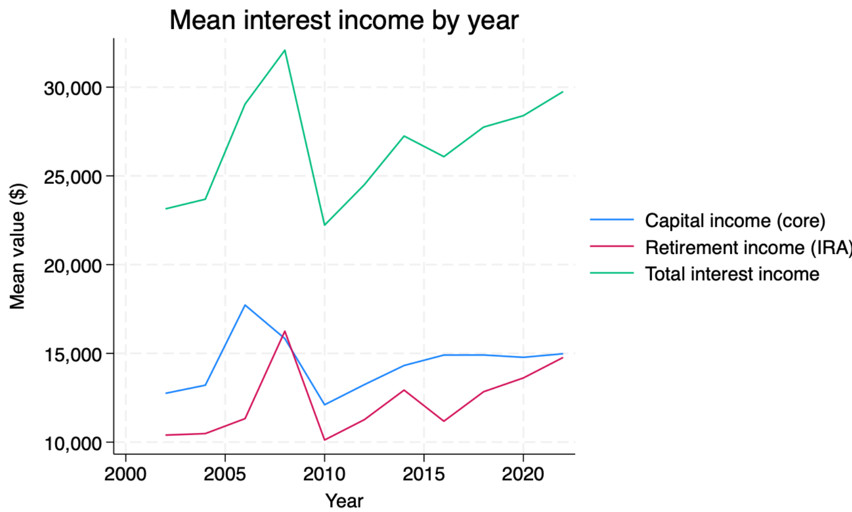

Figure 11: Interest income mean by year

3.2.3 Net investment flows

Net investment flows are vital in computing returns accurately because capital gains and interest income can miss other flows of value into a given asset class. In the HRS dataset, net investment flows are the only variable relevant to the returns calculation that RAND did not clean and process. For this reason, there are substantially less observation for this variable per asset class than the others. To work around this, I do two things. First, I process the net investment flow per asset class myself by using the associated flag variable (asking yes or no if an individual has "bought or sold since the previous wave") for each variable. Second, I assume that if an individual receives interest income on that asset class, but their flow in nonmissing, than the nonmissing flow to that asset class is treated as 0.[3]

With this in mind, I present a figure of net investment flows into the assets available in the dataset. As you can see, the magnitudes for flows into a given class are comparable. I use these flows to construct net investment flows into i) core assets, ii) retirement assets, iii) residential assets, iv) core+residential assets, and v) net wealth.

[3]Non-missing interest income (and capital gains) indicate participation within an asset class.

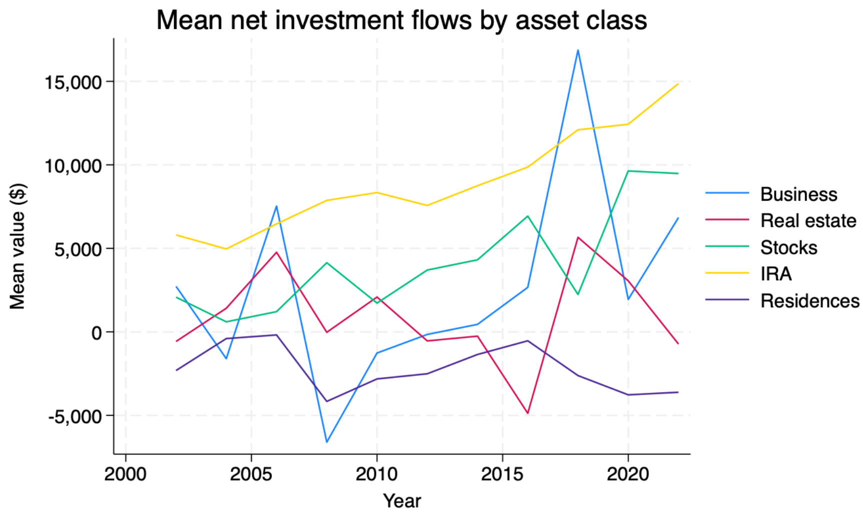

Figure 12: Flows by asset, mean by year

3.2.4 Wealth and inequality

After defining asset classes, I consider mean wealth within these narrowly defined asset classes for each year of the sample. Interestingly, retirement assets seem to perform the worst in terms of average returns. Core assets seem to offer the best performance, and all asset classes see a downward dive leading up to 2010 – historically accurate in the context of investment performance during the global financial crisis.

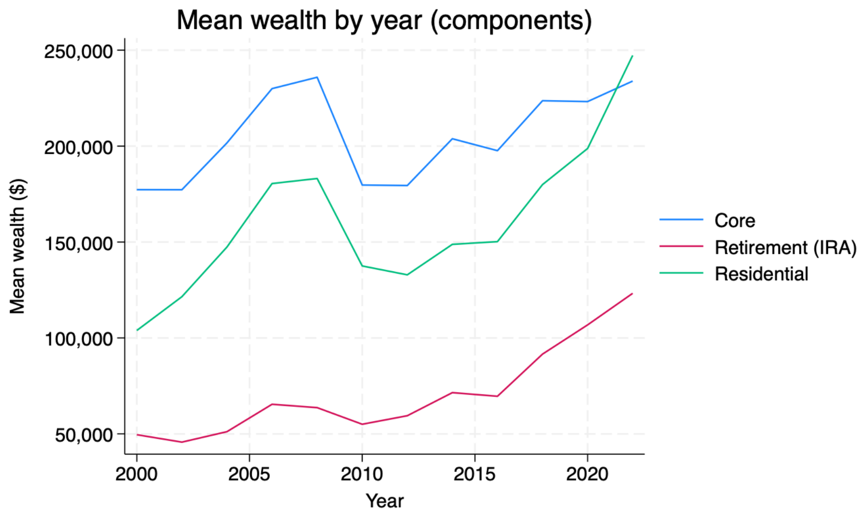

Figure 13: Wealth mean by year (components)

I turn attention to measures of wealth in the sample based on the portfolio definitions: i) net wealth in core assets, ii) net wealth in core and retirement assets, iii) total net wealth.

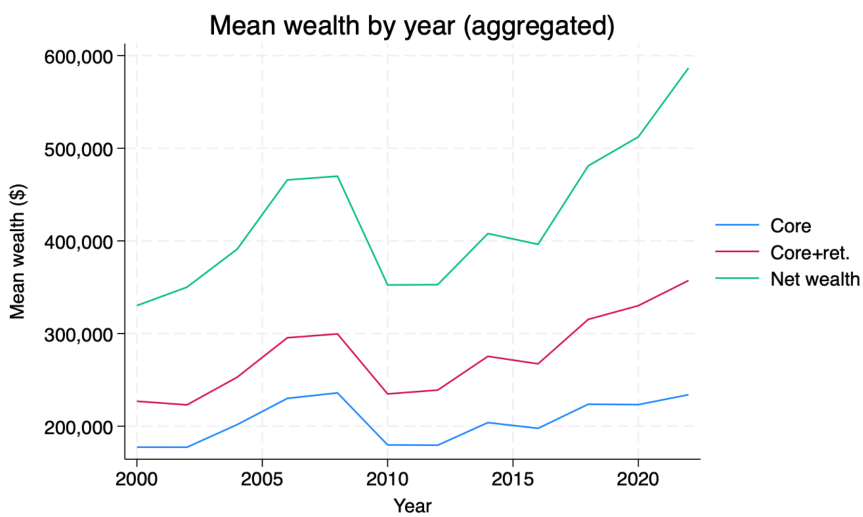

Figure 14: Wealth mean by year (aggregated)

I consider the distribution of these measures of income and wealth across respondents of the survey in the following figures. For income, the measure of labor income is significantly more unequally distributed than the measure of total income in the sample. This is likely an artifact of the sampling method of the HRS (older likely overrepresented and are towards the end of their working years).

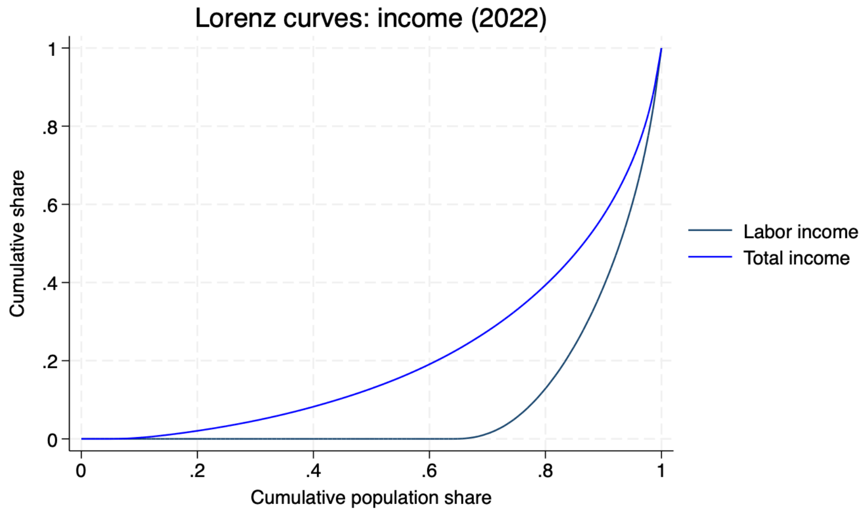

Figure 15: Lorenz: income (2022)

For wealth, holdings in core assets and retirement assets are more unequally distributed than holdings in residential assets. This is in line with common knowledge that home ownership is the most common form of asset ownership in the U.S.

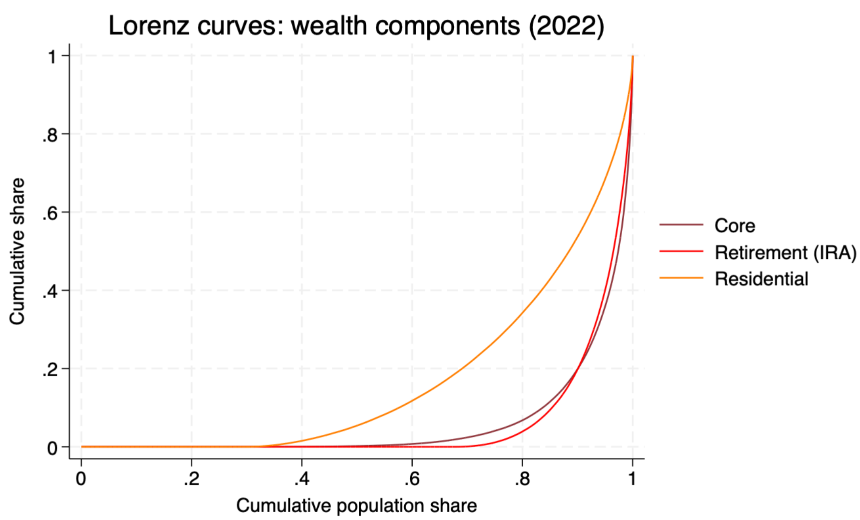

Figure 16: Lorenz: wealth components (2022)

Interestingly, the distribution of net wealth become less unequal when it is extended to incorporate retirement assets on top of core assets. this can be seen in the following figure .

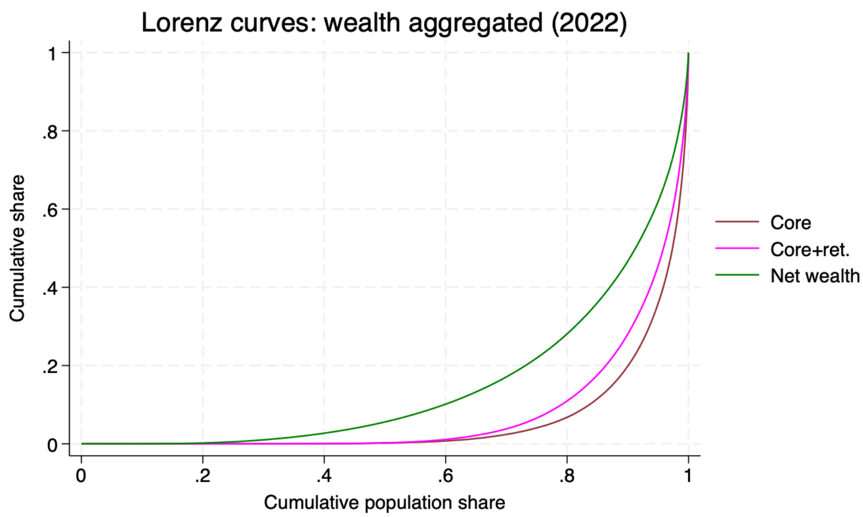

Figure 17: Lorenz: wealth aggregated (2022)

3.2.5 Portfolio composition

To describe the composition of portfolio during the period, I document mean portfolio shares for the relevant asset classes.

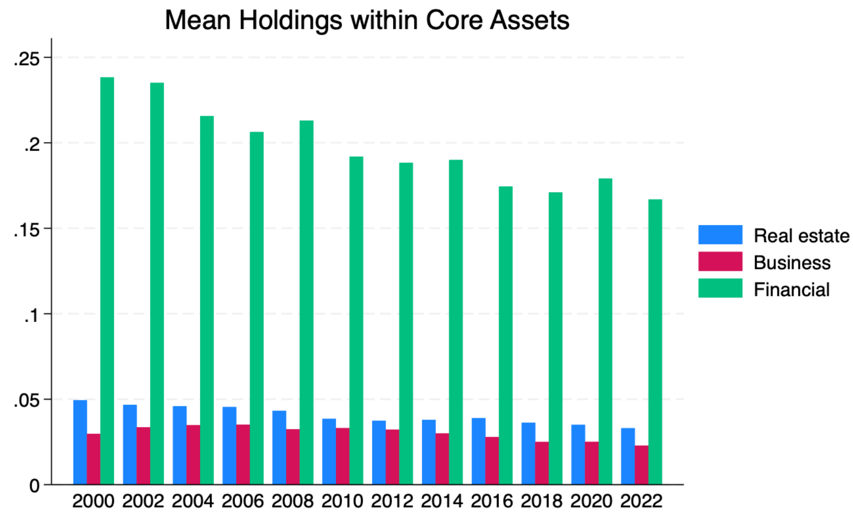

Figure 18: Mean holdings within Core assets, by year

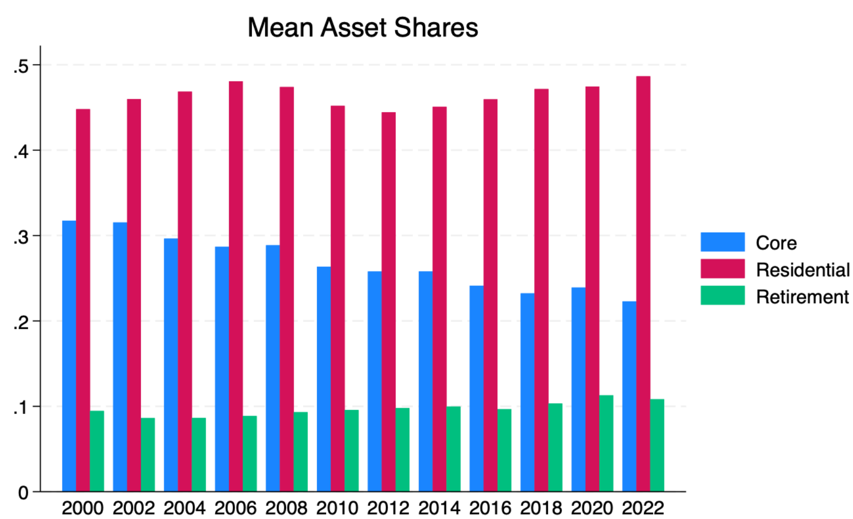

Figure 19: Mean Asset shares, by year

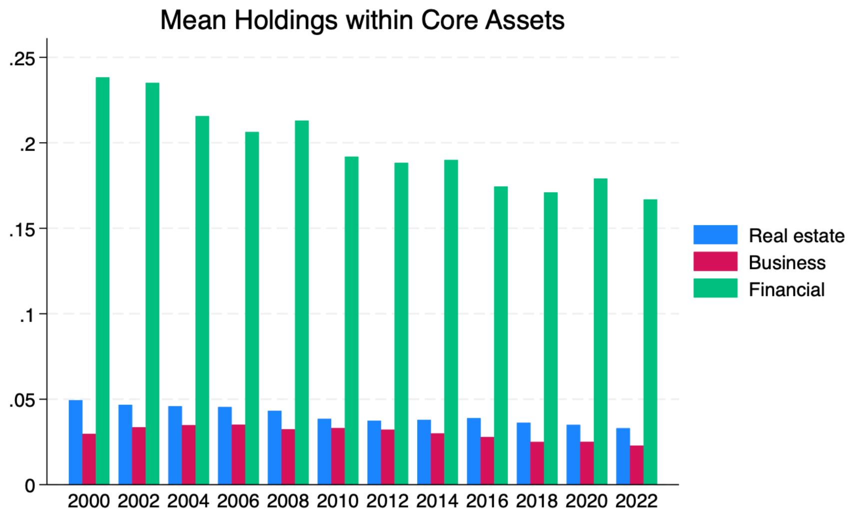

Figure 20: Mean holdings within Liabilities, by year

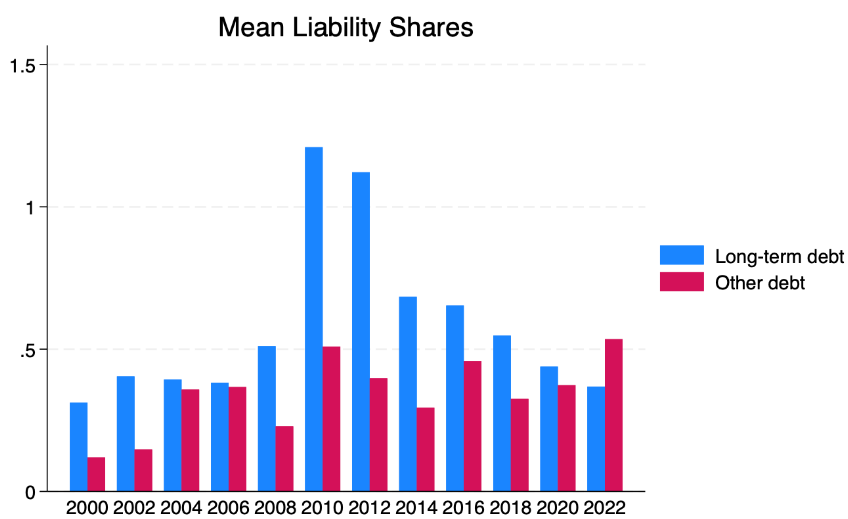

Figure 21: Mean Liability shares, by year

Investment behavior is likely to vary with income and wealth. Asset shares (core, residential, retirement) by percentile of labor income, total income, gross wealth, and net wealth (2022):

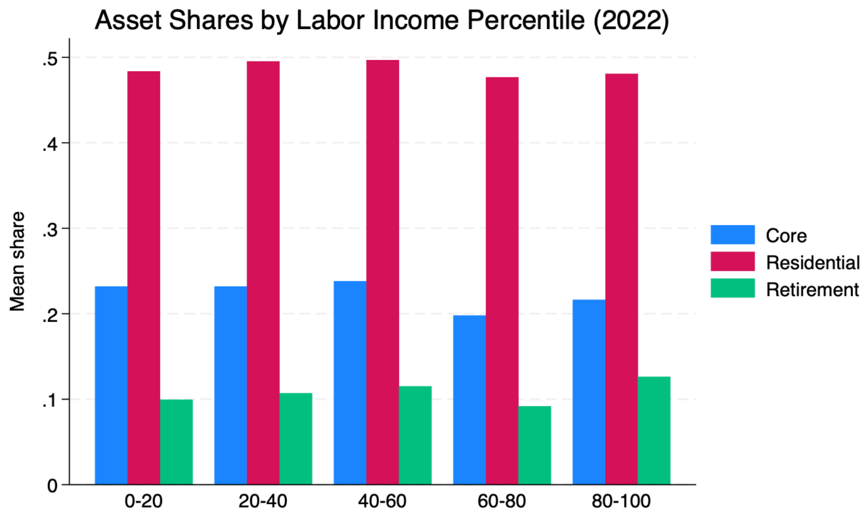

Figure 22: Asset shares by labor income percentile (2022)

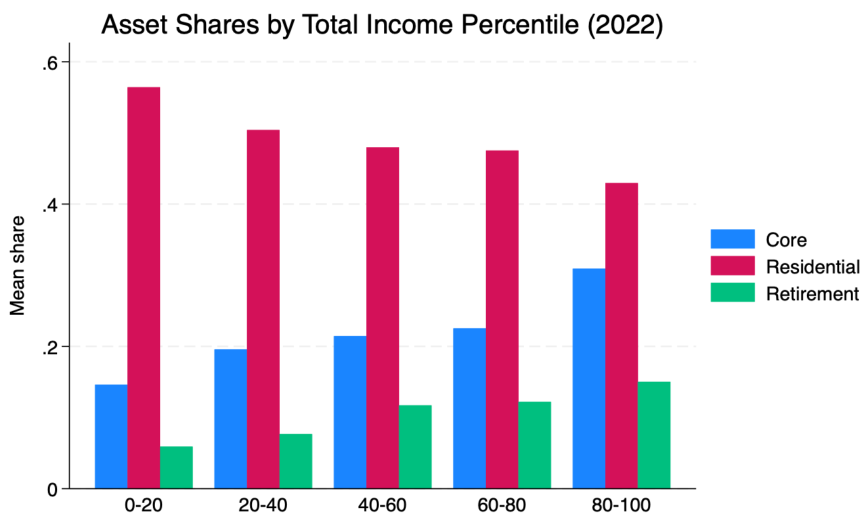

Figure 23: Asset shares by total income percentile (2022)

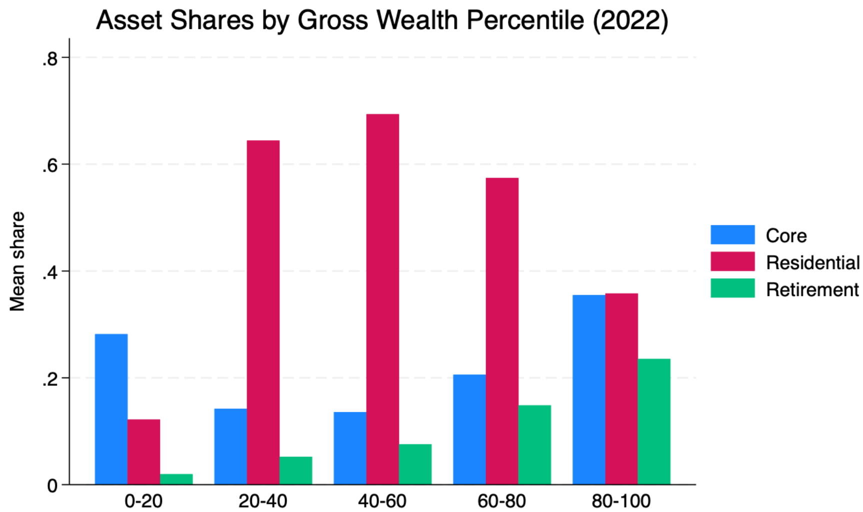

Figure 24: Asset shares by gross wealth percentile (2022)

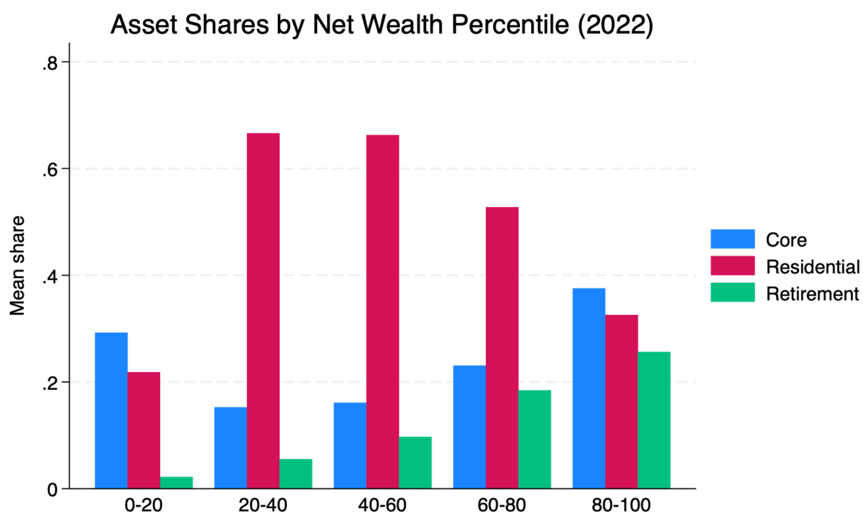

Figure 25: Asset shares by net wealth percentile (2022)

We can also look at the same breakdown by income and wealth percentiles but for the ratio of debt to gross assets. This is captured in the following figures .

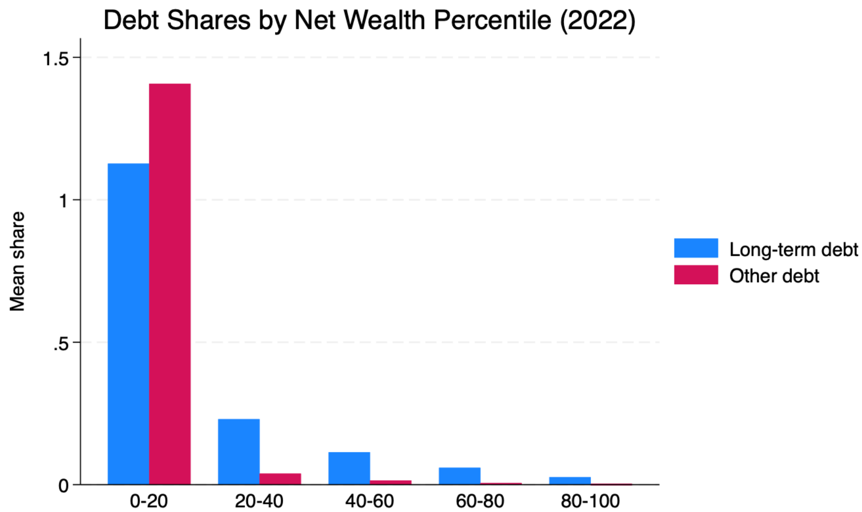

Figure 26: Debt shares by labor income percentile (2022)

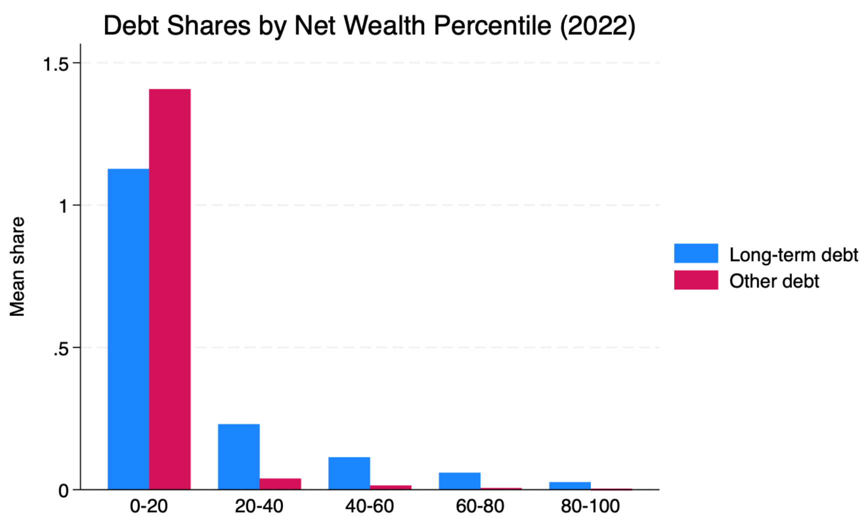

Figure 27: Debt shares by total income percentile (2022)

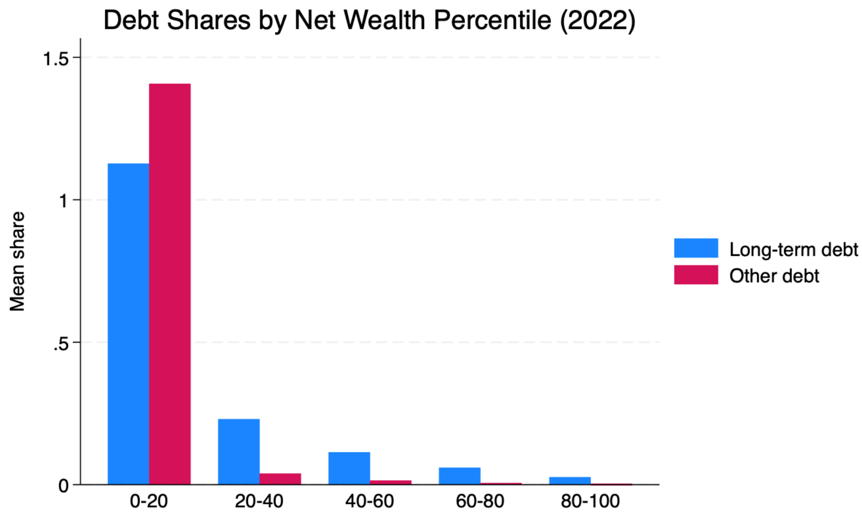

Figure 28: Debt shares by gross wealth percentile (2022)

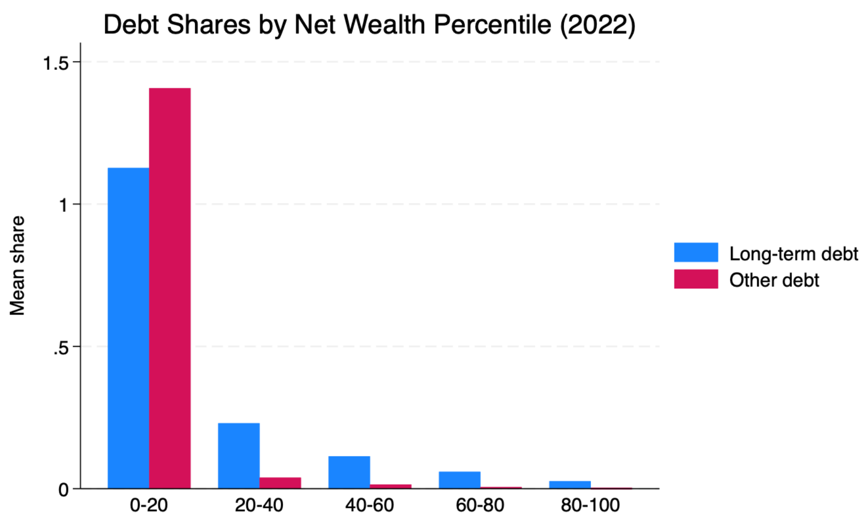

Figure 29: Debt shares by net wealth percentile (2022)

3.3 Returns

I follow recent literature using Norwegian administrative tax data at the population level and and using PSID in terms of the components used to construct a measure of returns. However, I take seriously the structure of the dataset I am working with(the HRS RAND longitudinal file) in defining the portfolio/asset class for which the returns are being accrued to. As mentioned before, core assets is the most narrowly defined asset class here because interest income and dividends does not disaggregate into the asset classes: stocks, bonds, private business, IRA/Keogh.

The following formula from Daminato and Pistaferri 2024 serves as motivation for the return measures defined using the HRS data:

$$r_t = \frac{y_t^c + cg_t - F_t - y_t^d}{A_{t-1} + .5F_t}$$

where y_t^c interest income and dividends, capital gains cg_t measured as the difference between reported stock across waves, F_t net investment flows, y_t^d payments on debt (in the RAND longitudinal file, the variables were mentioned are all in net terms so this variable was 0), and A_{t-1} total net wealth at beginning of previous period.

3.3.1 Narrow asset classes

Recall that we only see interest income and dividends for core assets and retirement assets. Since this is an important component of the returns calculation, we construct the narrowest return measure on core assets. To do so, I keep track of all asset classes captured in the capital gains variable[4] and aggregate the capital gains and net investment flows for this group of assets.

Returns to core assets are given by

$$r_{core,t} = \frac{y_{core,t}^c + cg_{core,t} - F_{core,t}}{A_{core,t-1} + .5F_{core,t}}$$

where $y_{core,t}^c$ is the interest income and dividents on the core assets, $cg_{core,t}$ are the capital gains on the core assets[5], $F_{core,t}$ are the net investment flows on core assets, and importantly, $A_{core,t-1}$ is the total value of the core assets in the previous period.

The rest of the return measures are defined similarly. In the HRS data, we can see income on retirement assets as well. This allows us to define a return measure for retirement assets:

$$r_{ret.,t} = \frac{y_{ret.,t}^c + cg_{ret.,t} - F_{ret.,t}}{A_{ret.,t-1} + .5F_{ret.,t}}$$

where $y_{ret.,t}^c$ is the interest income and dividents on the retirement assets, $cg_{ret.,t}$ are the capital gains on the retirement assets, $F_{ret.,t}$ are the net investment flows on retirement assets, and $A_{ret.,t-1}$ is the total value of the retirement assets in the previous period.

Based on the modules offered in a given wave of the survey, assume that there are no interest income or dividends to either primary and secondary residential assets, so that the interest income and dividends accrued to residential assets is 0 in a given period ($y_{ret.,t}^c$). With this in mind, returns to residential assets are defined as:

$$r_{res.,t} = \frac{cg_{res.,t} - F_{res.,t}}{A_{res.,t-1} + .5F_{res.,t}}$$

[4]Those asset classes are: other real estate, business/farm, stocks/mutual funds, bonds, checking/savings, and CDs/t-bills.

[5]where the capital gains for each asset class is $V_{i,t} - V_{i,t-1}$, where $V_{i,t}$ is the value of the asset (business or stock or real estate) for the i-th respondent in the t-th wave of the survey.

where $cg_{res.,t}$ are the capital gains on the residential assets, $F_{res.,t}$ are the net investment flows on residential assets (including improvement costs), and $A_{res.,t-1}$ is the total value of the residential assets in the previous period.

3.3.2 Broad asset classes

After defining returns for narrow asset classes (i.e. returns to a single asset), I also define return measure for portfolios (returns on multiple assets). The first is for returns to both core and retirement assets:

$$r_{coret.,t} = \frac{y^c_{coret.,t} + cg_{coret.,t} - F_{coret.,t}}{A_{coret.,t-1} + .5F_{coret.,t}}$$

where $y^c_{coret.,t}$ is the interest income and dividends on core and retirement assets, $cg_{coret.,t}$ are the capital gains on the retirement assets, $F_{coret.,t}$ are the net investment flows on retirement assets, and $A_{ret.,t-1}$ is the total value of the retirement assets in the previous period.

Returns to net wealth is given by

$$r_{net,t} = \frac{y^c_{net.,t} + cg_{net.,t} - F_{net.,t}}{A_{net.,t-1} + .5F_{net.,t}}$$

where $y^c_{net.,t}$ is the interest income and dividends on core and retirement assets, $cg_{net.,t}$ are the capital gains on all available asset classes in the survey, $F_{net.,t}$ are the net investment flows on assets for which it is relevant in the survey (stocks, bonds, business, IRA, residences, and real estate), and $A_{net.,t-1}$ is the total value of the available assets minus liabilities in the previous period[6].

I present the means for the return measures in the following figures. I group them by the returns at the asset level (core, retirement, residential) and at the portfolio level (core, core and retirement, net wealth).

[6] Mortgages on secondary residences are left out of the list of liabilities since it was an optional question in some waves of the survey.

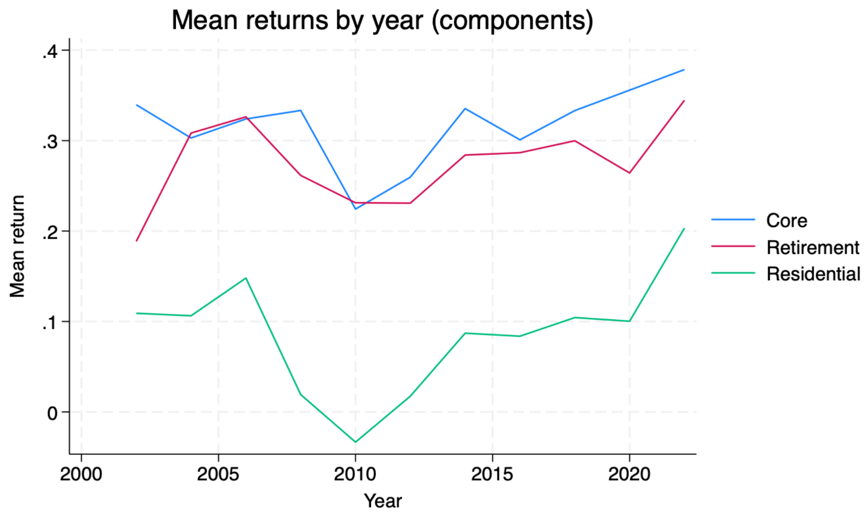

Figure 30: Returns mean by year (components)

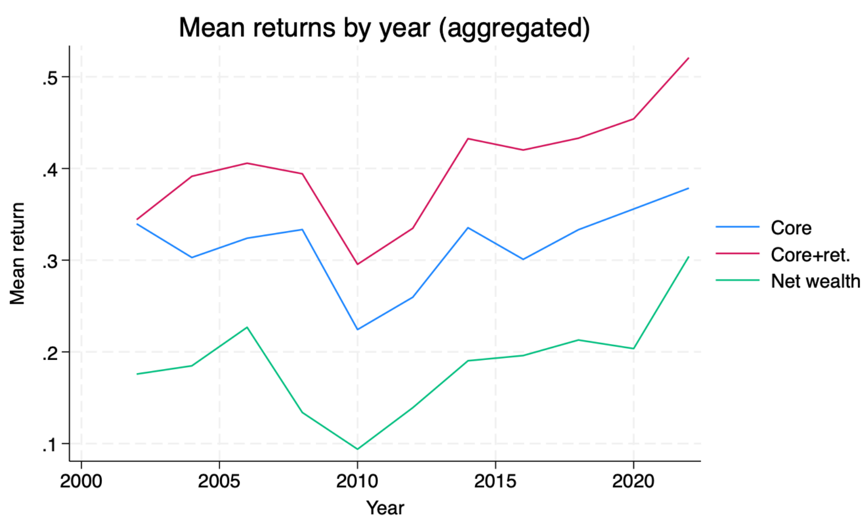

Figure 31: Returns mean by year (aggregated)

The following figures give a better idea of the distribution of the return measures across respondents.

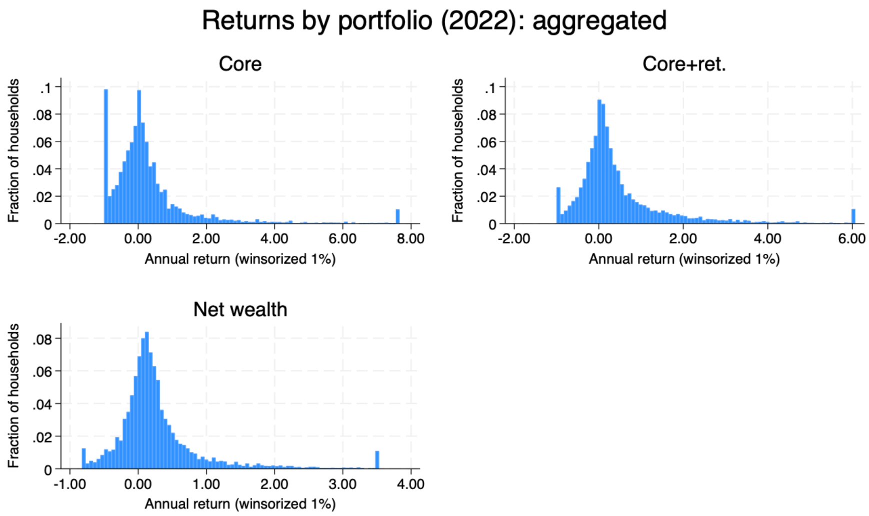

Figure 32: Returns histogram, aggregated (2022)

These are encouraging, as shape of this distribution closely resembles early estimates of the empirical distribution of individual realized returns in the Norwegian population data.

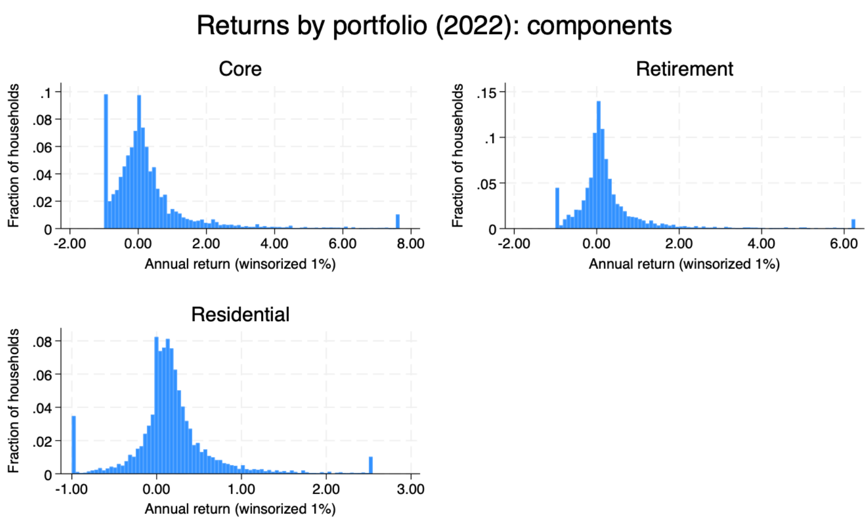

Figure 33: Returns histogram, components (2022)

3.4 Income and wealth

Income and wealth are understood to be positively correlated. To see this play out in the HRS data, I first look at mean labor income by wealth percentile. In ths figure, it is clear that a positive relationship seems to hold.

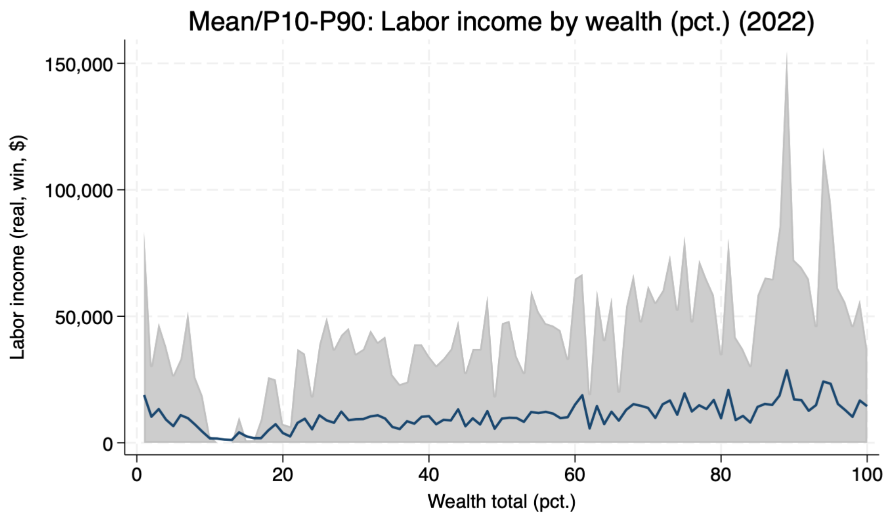

Figure 34: Labor income mean/P10-P90 by wealth percentile (2022)

The literature on income and wealth also documents significantly more inequality in the the upper tails of the wealth distribution than in the income distribution. The observations towards to top and bottom of the wealth distribution in the following figure seem to suggest a non-linear relationship between the variables.

Figure 35: Log labor income binscatter (2022)

I repeat this for the measure of total income and both patterns persist.

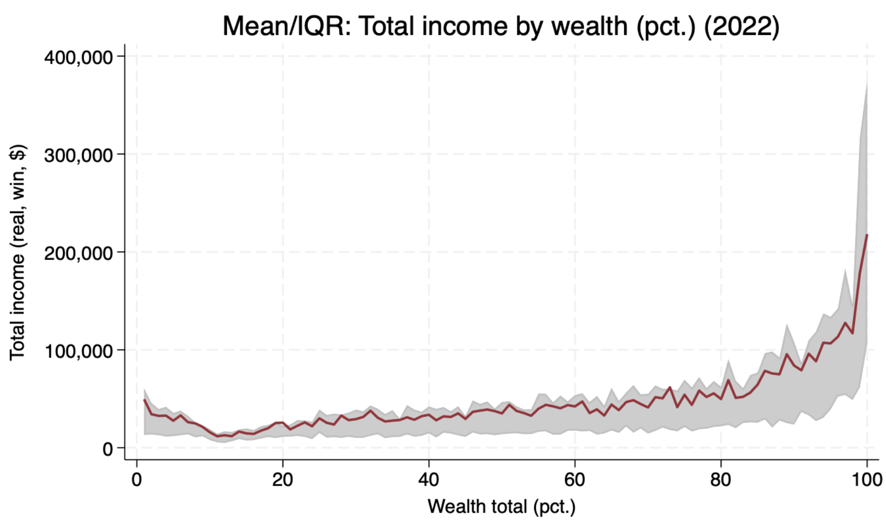

Figure 36: Total income mean/IQR by wealth percentile (2022)

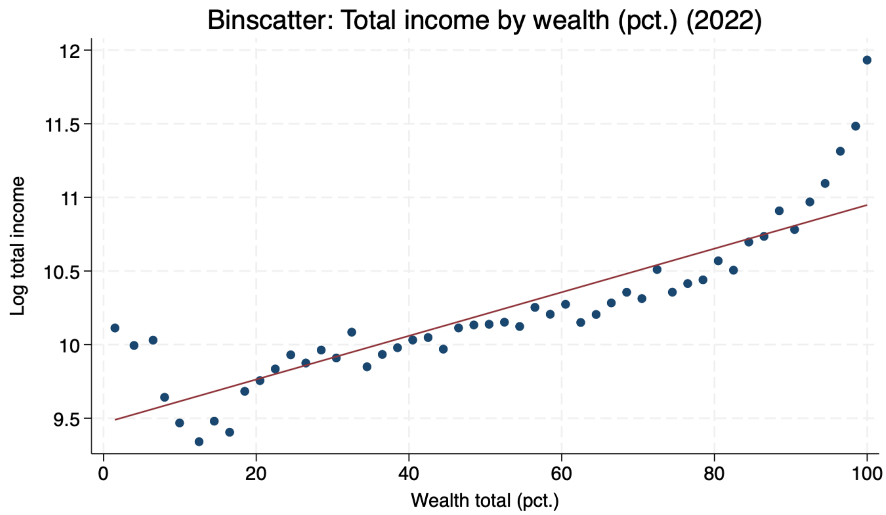

Figure 37: Log total income binscatter (2022)

3.5 Returns and wealth by portfolio

A positive relationship between wealth and returns has also been documented, referred to as *scale dependence*. In the next three figures, I show that there does seem to be a positive statistical relationship between the return measure (core, retirement, residential) and wealth.

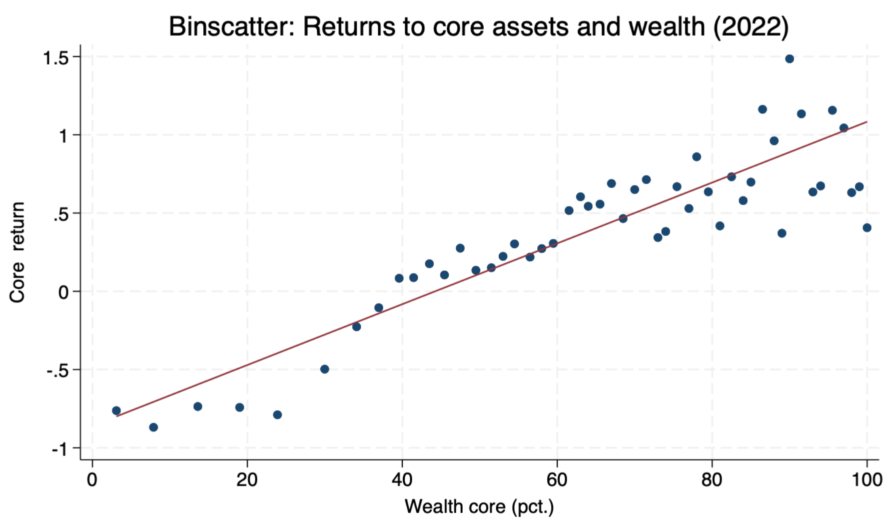

Figure 38: Core return binscatter (2022)

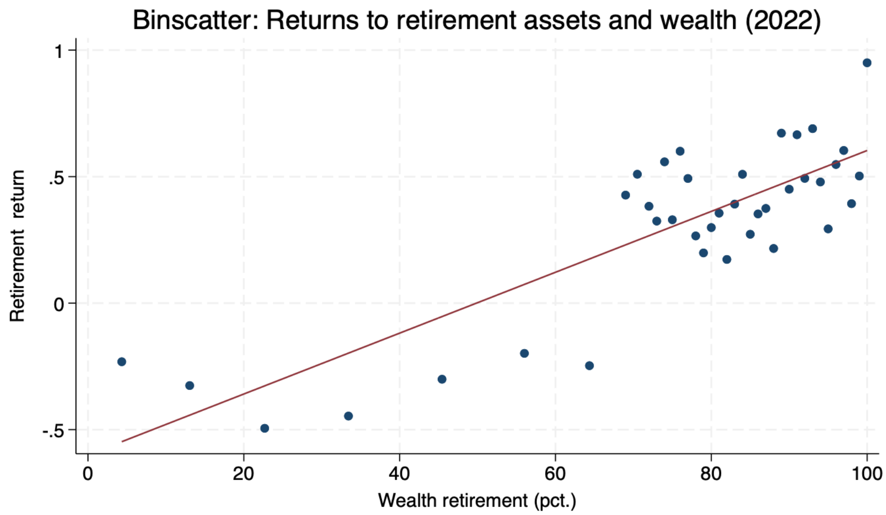

Figure 39: Retirement return binscatter (2022)

Figure 40: Residential return binscatter (2022)

I also show the positive statistical relationship between returns and wealth at the portfolio level, when comprised of core assets and retirement assets.

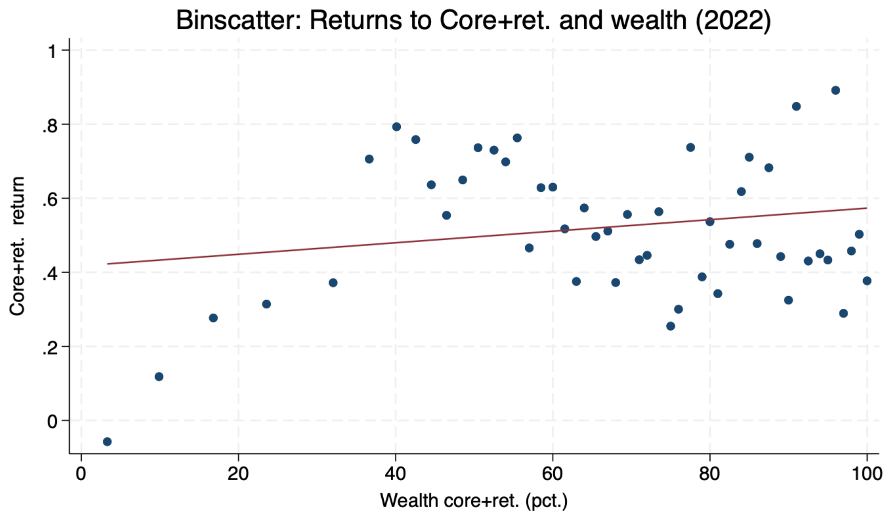

Figure 41: Core+IRA return binscatter (2022)

Interestingly, the relationship between wealth and returns to total net wealth does not appear positive. In fact, they correlation is slightly downward-sloping.

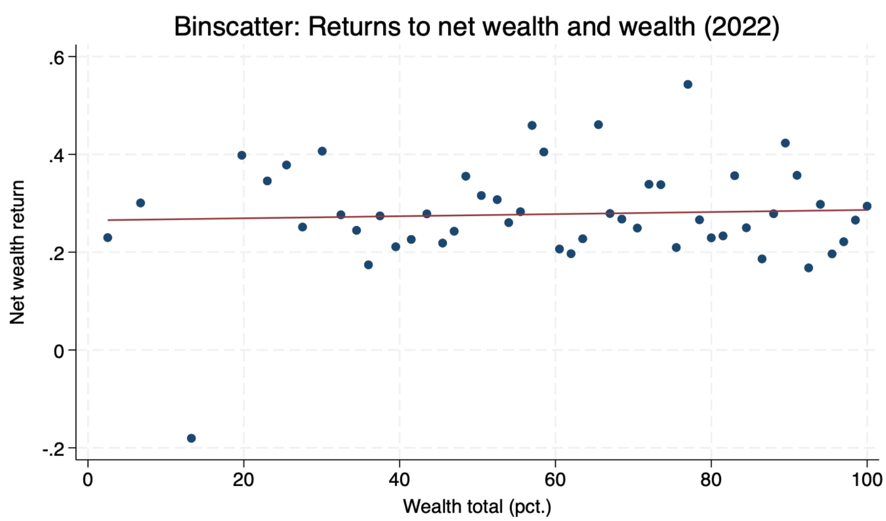

Figure 42: Net wealth return binscatter (2022)

3.6 Trust

I turn my attention to the suite of trust questions in "Section V: Modules" section of the 2020 HRS data. There are a total of 8 questions, asking respondents to say on a scale of 1-10 "how much do you trust people in general?" and of their trust in other features of American life relating to healthcare, finance, and media. These questions were only asked for a single year. Although this is an issue, because the panel structure of the HRS allows me to estimate the persistent component of returns, which is an important object in this literature. That said, in the pooled setting, we can assume that trust, like education, is fixed over time.[7]

I turn my attention to the correlations between the trust variables in figure . There is significant correlation between the trust measures.

Table 5: Trust variables correlation matrix

	General trust	Social Security	Medicare	Banks	Financial advisors	Mutual funds	Insurance	Media
General trust	1.00	0.30	0.26	0.37	0.33	0.36	0.39	0.21
Social Security	0.30	1.00	0.84	0.45	0.33	0.26	0.43	0.29
Medicare	0.26	0.84	1.00	0.41	0.31	0.26	0.38	0.27
Banks	0.37	0.45	0.41	1.00	0.55	0.43	0.46	0.27
Financial advisors	0.33	0.33	0.31	0.55	1.00	0.63	0.50	0.26
Mutual funds	0.36	0.26	0.26	0.43	0.63	1.00	0.41	0.26
Insurance	0.39	0.43	0.38	0.46	0.50	0.41	1.00	0.32
Media	0.21	0.29	0.27	0.27	0.26	0.26	0.32	1.00

Pairwise correlations between trust items (2020).

From here, I perform a principal component analysis and store the first two components for use in the statistical analysis. The loadings on each of the trust measures is given in figure .

[7] Literature on trust talks about how history of being cheated or treated fairly form individuals' trust over time. If this is true and at some point, one learns enough an forms their trust level, then a sample with an overrepresentation of older household is a reasonable environment to assume constant trust levels.

Table 6: Trust PCA loadings (first two components)

Trust item	PC1	PC2
General trust	0.3002	0.1808
Social Security	0.3835	-0.5451
Medicare	0.3657	-0.5680
Banks	0.3887	0.1014
Financial advisors	0.3844	0.3757
Mutual funds	0.3480	0.4309
Insurance	0.3786	0.0971
Media	0.2565	-0.0317

Principal components on trust variables (2020).

I am interested in the relationship between trust and economic performance as the literature is, however in my setting the measure of economic performance is the return to assets. If a hump-shaped relationship is reasonable for income, it is even more plausible for returns: there is an inherent (and possibly explicit) level of trust between borrower and lender when forming credit contracts.

That said, it is important to understand the nature of the trust measure in the HRS sample. I begin to do this by considering each trust measure conditional on race/ethnicity. There seems to be significant group variation in means.

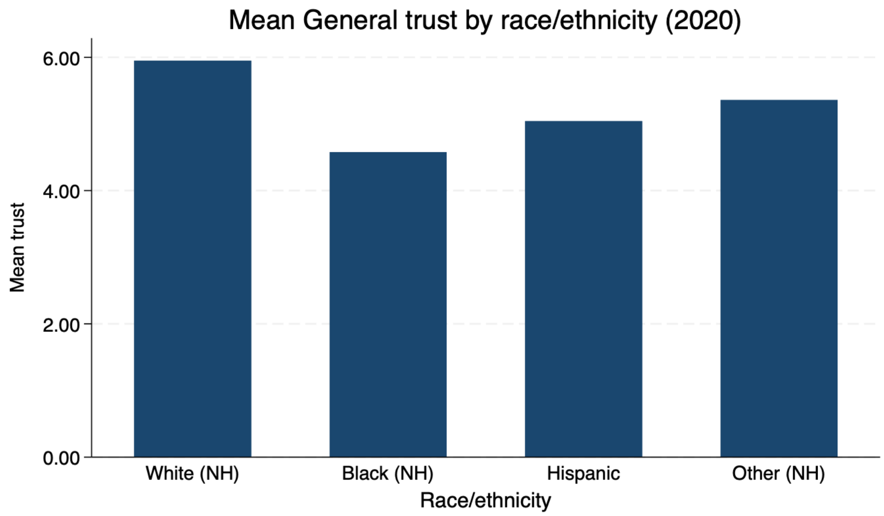

Figure 43: Mean general trust by race/ethnicity (2020)

3.6.1 Trust and income

As discussed before, the literature on trust and economic performance suggests there's a "right amount of trust". I want to see if this hump shaped relationship holds between the measures of trust and income in the HRS. After deflating and, more importantly, winsorizing labor income at the top and bottom 1%, the relationship seems to be hump shaped.

Income in the HRS is highly right-skewed and features a large mass at zero labor income (reflecting retirement and non-participation). In applied work, a common baseline is to use log(income) because it reduces the influence of extreme values and yields coefficients interpretable as semi-elasticities. However, $\log(\cdot)$ is undefined at zero (and problematic with negative values when they arise from measurement or netting conventions), so using log(income) in the HRS mechanically drops a large fraction of observations and can substantially change the visual and econometric relationship.

In our data, the corresponding scatter of log(income) versus trust changes markedly because so many observations have exactly zero labor income. Using $\log(1 + \text{income})$ retains zeros but imposes an ad hoc curvature near zero and, in our case, does not restore the same qualitative picture.

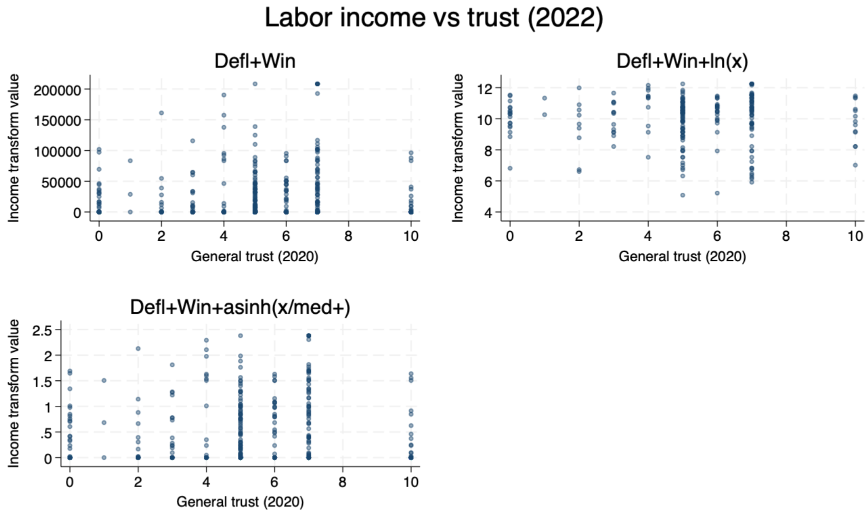

Figure 44: Labor income measures vs. trust (2022)

Motivated by this issue, we follow a large applied econometrics literature that uses the inverse hyperbolic sine (IHS, or asinh) transformation as a "log-like" mapping that is well-defined at zero and can accommodate negative values. The IHS transformation was advocated early on as an alternative to the log for heavy-tailed outcomes with extreme values and potential zeros/negatives (Burbidge, Magee, and Robb, *"Alternative Transformations to Handle Extreme Values of the Dependent Variable"*; MacKinnon and Magee, *"Transforming the Dependent Variable in Regression Models"*). More recently, Bellemare and Wichman (*"Elasticities and the Inverse Hyperbolic Sine Transformation"*) provide practical guidance on interpretation, emphasizing that $\operatorname{asinh}(y)$ behaves similarly to $\log(y)$ for large y (since $\operatorname{asinh}(y) \approx \log(2y)$ when y is large) while remaining defined at $y = 0$.

A related point is that the IHS can be sensitive to the units of measurement, which motivates a *scaled* IHS of the form $\operatorname{asinh}(y/\kappa)$ (see discussions in Aïhounton and Henningsen, *"Units of Measurement and the Inverse Hyperbolic Sine Transformation"*; Norton, *"The Inverse Hyperbolic Sine Transformation"*). In practice, κ is chosen as a meaningful scale (e.g., the median positive income), which makes the transformation more comparable across samples and improves interpretability near zero. Empirically, applying the (scaled) IHS to our deflated and winsorized income restores a scatter with trust that is visually well-behaved while retaining the economically important mass at zero labor income. This can be seen for the measure of toal income as well in the following figure .

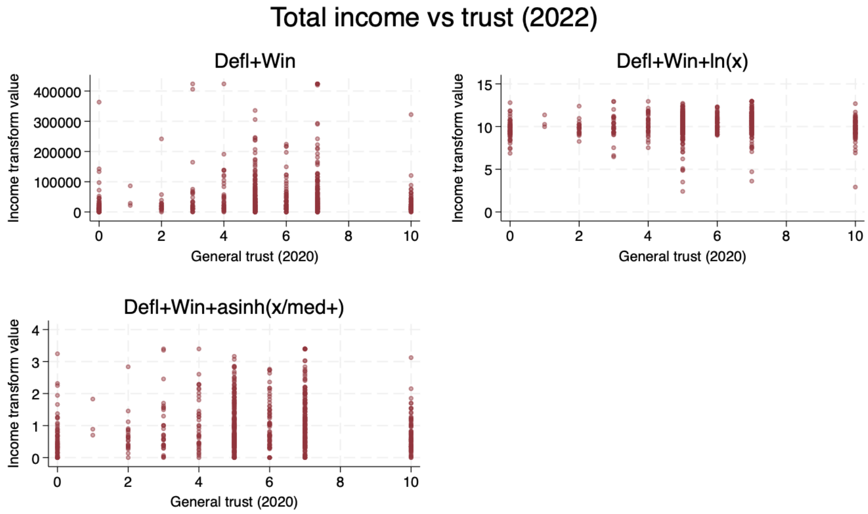

Figure 45: Total income measures vs. trust (2022)

3.6.2 Trust and returns

The scatterplots for trust and the measures of returns suggest stronger evidence for this hump shaped relationship. Especially for the smaller portfolio compositions (core, core and retirement), return values are highest in the middle and lower at the lowest and highest trust values.

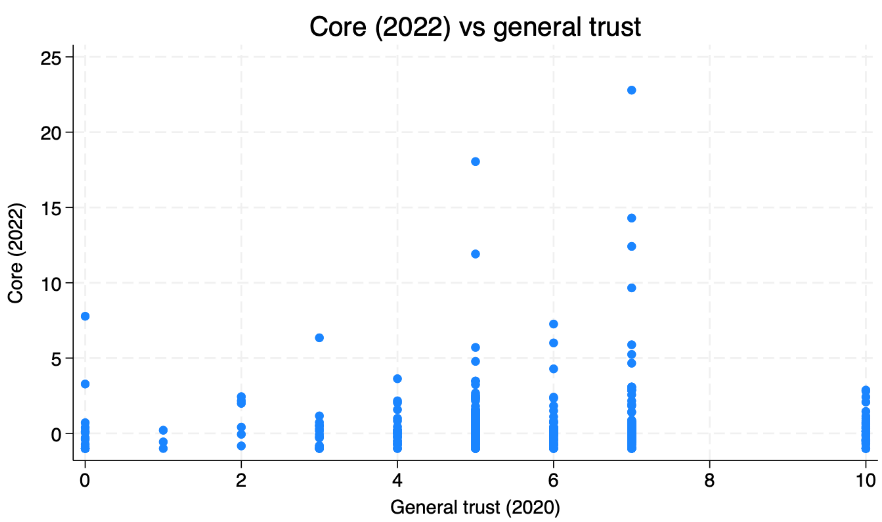

Figure 46: Returns to core assets vs. trust (2022)

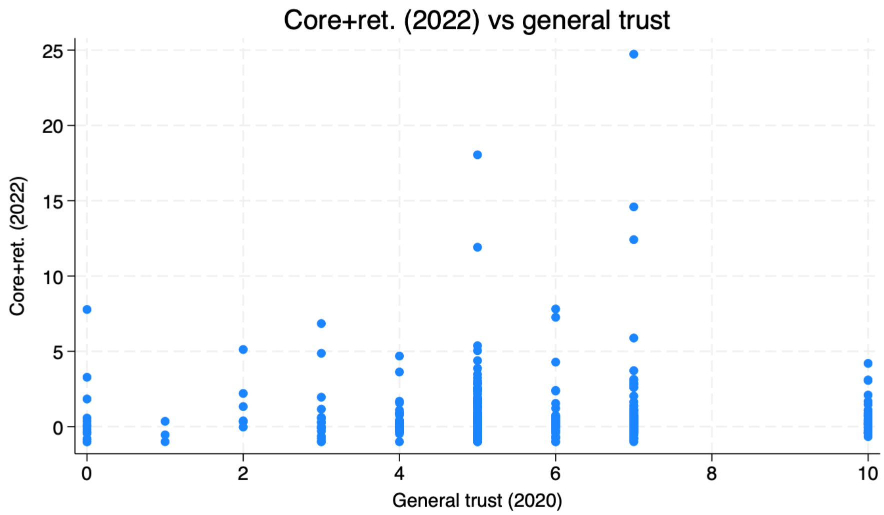

Figure 47: Returns to core and retirement assets vs. trust (2022)

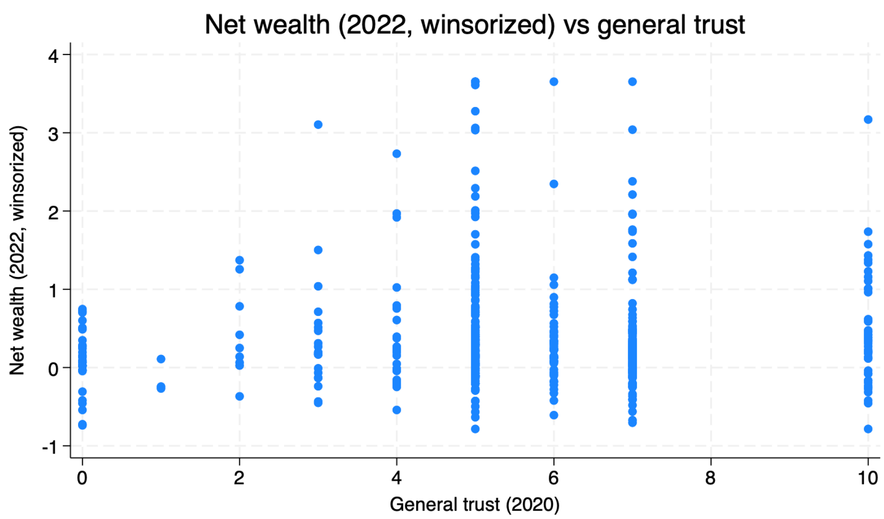

Figure 48: Returns to net wealth vs. trust (2022)

3.7 Demographics

As the HRS oversample older households, I take a quick look at demographic variables that will be important for the statistical analysis later.

Table 7: Demographics: general controls (2020)

Variable	N	Mean	SD
Age	15723	68.089	10.849
Female	15723	0.594	0.491
Years of education	15651	12.961	3.241
Married	15685	0.537	0.499
Immigrant	15718	0.172	0.378
Born in U.S.	15718	0.828	0.378
Race: White (NH)	8865	0.565	0.496
Race: Black (NH)	3381	0.216	0.411
Race: Hispanic	2678	0.171	0.376
Race: Other (NH)	765	0.049	0.215
Working (in labor force)	15479	0.386	0.487

2020. Mean and SD; for dummies/categories mean = proportion (pct). Respondent weights used when available.

Table 8: Demographics: other controls (2020)

Variable	N	Mean	SD	p50
Depression	14998	1.55	2.04	1.00
Health conditions	15723	2.39	1.56	2.00
Medicare	15498	0.60	0.49	1.00
Medicaid	15383	0.14	0.35	0.00
Life insurance	15340	0.53	0.50	1.00
Times divorced	15723	0.57	0.79	0.00
Times widowed	15723	0.22	0.45	0.00

2020. Mean, SD, and median.

Now, I look at the pairwise correlations between general and more specific control variables and the general trust measure in figure. This will be useful, as it will help understand what explains trust in the HRS data.

Table 9: Correlations of General trust with controls

Variable 1	Variable 2	Correlation
General trust	Age	0.2346
General trust	Years of education	0.0971
General trust	Female	-0.0035
General trust	Immigrant	-0.1161
General trust	Born in U.S.	0.1161
General trust	Race/ethnicity	-0.1140
General trust	Married	0.0970
General trust	Depression	-0.1673
General trust	Health conditions	-0.0144
General trust	Medicare	0.1438
General trust	Medicaid	-0.1791
General trust	Life insurance	0.0616
General trust	Times divorced	-0.0473
General trust	Times widowed	0.0266

General trust (var1) with each control.

The literature on trust already documents a signficant statistical relationship between trust and mental health. For that reason, I use the HRS RAND measure for a mental health index and show a clearly negative, linear relationship with trust.

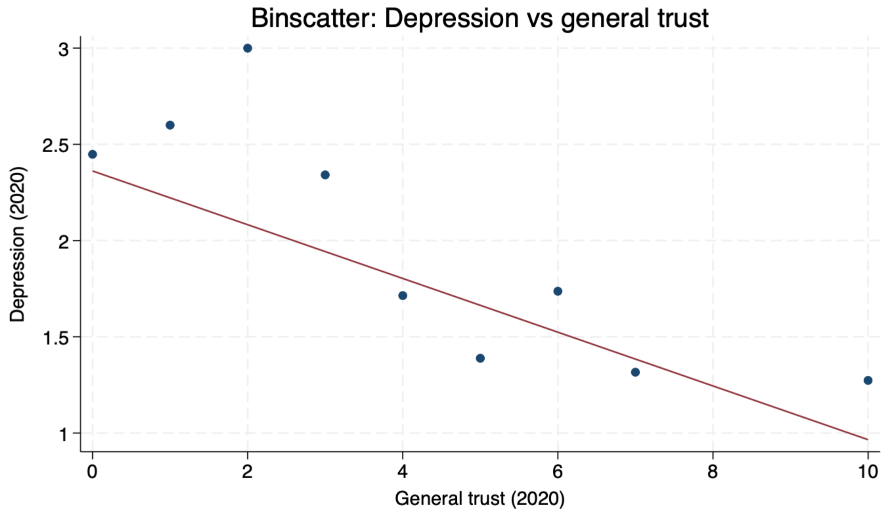

Figure 49: Depression vs. trust

4 Results

4.1 Determinants of trust

First, I go beyond correlations between the variables by trying to consider which variables explain the variation in the trust measures.

Table 10: General trust (2020) on controls

	Demographics	Full controls
Female	0.19	0.27
	(0.17)	(0.18)
Years of education	0.05*	0.04
	(0.03)	(0.03)
Married	0.50***	0.17
	(0.18)	(0.19)
NH Black	−0.99***	−1.07***
	(0.22)	(0.23)
Hispanic	−0.38	−0.34
	(0.27)	(0.27)
NH Other	−0.19	−0.19
	(0.32)	(0.33)
Depression		−0.14***
		(0.05)
Health conditions		−0.05
		(0.07)
Covered by Medicare		0.15
		(0.30)
Covered by Medicaid		−0.58**
		(0.28)
Has life insurance		0.25
		(0.18)
Number of reported divorces		−0.16
		(0.11)
Number of reported times being widowed		0.00
		(0.25)
Constant	2.04	2.90
	(1.49)	(1.84)
Observations	894.00	875.00
Adj. R-squared	0.09	0.12

Standard errors in parentheses

Robust standard errors in parentheses. Trust and controls from 2020. Age bins (5-yr) included; coefficients omitted.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.2 Income and trust

After understanding the determinants of trust in the HRS data, I wanted to see if the "hump-shape" relationship between trust and income found by Butler, Giuliano, and Guiso 2016 was present in the HRS data. I use deflated winsorized income in IHS form. First, I consider the statistical relationship for labor income (cross-section 2020 and average over waves).

Table 11: Labor income (2020) on General trust (2020), scaled asinh

	1	2	3	4
General trust	0.00	0.07***	0.00	−0.01
	(0.01)	(0.02)	(0.01)	(0.02)
(General)^2		−0.01***		0.00
		(0.00)		(0.00)
Female			−0.08**	−0.08**
			(0.03)	(0.03)
Years of education			0.03***	0.03***
			(0.00)	(0.00)
Married			0.07**	0.08**
			(0.03)	(0.03)
Born in U.S.			0.02	0.02
			(0.05)	(0.05)
In labor force			0.56***	0.57***
			(0.04)	(0.04)
NH Black			−0.01	−0.01
			(0.04)	(0.04)
Hispanic			−0.04	−0.04
			(0.05)	(0.05)
NH Other			−0.03	−0.03
			(0.07)	(0.07)
Constant	0.34***	0.22***	−0.40***	−0.40***
	(0.04)	(0.05)	(0.13)	(0.12)
Observations	900.00	900.00	890.00	890.00
Adj. R-squared	−0.00	0.01	0.41	0.41
Joint test: Trust+Trust^2 p-value		0.00		0.43

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 12: Average labor income (avg defl wins, log) on General trust (2020)

	1	2	3	4
General trust	0.01	0.24***	0.01	0.04
	(0.02)	(0.07)	(0.02)	(0.06)
$(\text{General})^2$		−0.02***		−0.00
		(0.01)		(0.01)
Female			−0.33***	−0.33***
			(0.11)	(0.11)
Years of education			0.11***	0.11***
			(0.02)	(0.02)
Married			0.27**	0.27**
			(0.11)	(0.11)
Born in U.S.			−0.07	−0.07
			(0.16)	(0.16)
In labor force			0.81***	0.81***
			(0.13)	(0.13)
NH Black			−0.12	−0.11
			(0.12)	(0.12)
Hispanic			−0.20	−0.20
			(0.18)	(0.19)
NH Other			−0.31	−0.32
			(0.20)	(0.20)
Constant	9.60***	9.18***	7.35***	7.30***
	(0.14)	(0.19)	(0.40)	(0.42)
Observations	712.00	712.00	704.00	704.00
Adj. R-squared	−0.00	0.02	0.23	0.23
Joint test: Trust+$\textbf{Trust}^{\textbf{2}}$ p-value		0.00		0.79

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The pattern seems to be stronger for total income. The cross-section (2020) and average results are given below.

Table 13: Total income (2020) on General trust (2020), scaled asinh

	1	2	3	4
General trust	0.03***	0.19***	0.00	0.05**
	(0.01)	(0.02)	(0.01)	(0.02)
$(\text{General})^2$		−0.02***		−0.00**
		(0.00)		(0.00)
Female			−0.27***	−0.27***
			(0.04)	(0.04)
Years of education			0.07***	0.07***
			(0.01)	(0.01)
Married			0.14***	0.14***
			(0.04)	(0.04)
Born in U.S.			0.02	0.02
			(0.07)	(0.07)
In labor force			0.50***	0.49***
			(0.05)	(0.05)
NH Black			−0.24***	−0.23***
			(0.05)	(0.05)
Hispanic			−0.24***	−0.23***
			(0.07)	(0.07)
NH Other			−0.27***	−0.27***
			(0.09)	(0.09)
Constant	0.83***	0.53***	−0.48***	−0.51***
	(0.05)	(0.06)	(0.14)	(0.16)
Observations	900.00	900.00	890.00	890.00
Adj. R-squared	0.01	0.05	0.35	0.35
Joint test: Trust+Trust^2 p-value		0.00		0.08

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 14: Average total income (avg defl wins, log) on General trust (2020)

	1	2	3	4
General trust	0.05***	0.32***	0.00	0.08**
	(0.01)	(0.04)	(0.01)	(0.04)
(General)^2		−0.03***		−0.01**
		(0.00)		(0.00)
Female			−0.35***	−0.34***
			(0.06)	(0.06)
Years of education			0.12***	0.12***
			(0.01)	(0.01)
Married			0.23***	0.22***
			(0.06)	(0.06)
Born in U.S.			0.07	0.07
			(0.11)	(0.11)
In labor force			0.54***	0.53***
			(0.08)	(0.08)
NH Black			−0.39***	−0.37***
			(0.07)	(0.07)
Hispanic			−0.42***	−0.41***
			(0.10)	(0.10)
NH Other			−0.43***	−0.43***
			(0.15)	(0.15)
Constant	10.15***	9.67***	7.81***	7.68***
	(0.08)	(0.10)	(0.22)	(0.22)
Observations	895.00	895.00	885.00	885.00
Adj. R-squared	0.01	0.07	0.37	0.38
Joint test: Trust+Trust^2 p-value		0.00		0.08

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.3 Returns and trust

With the hump-shape relationship between earnings and trust present in the HRS, I wanted to see if a similar relationship held for returns. The largest portfolio composition is on net wealth, which includes core assets, retirement assets, residential assets, along with other smaller categories (and debt variables). The regression results for winsorized (5 percent at each tail) annual returns to net wealth for 2022 are given below.

Table 15: 2022 Returns to net wealth (2022) on General trust (2020) (5 percent winsorized)

	1	2	3	4
General trust	0.01	0.06**	0.01	0.03
	(0.01)	(0.02)	(0.01)	(0.03)
$(\text{General})^2$		−0.00*		−0.00
		(0.00)		(0.00)
Female			−0.10**	−0.09**
			(0.04)	(0.04)
Years of education			0.03***	0.02***
			(0.01)	(0.01)
Married			0.08	0.08
			(0.05)	(0.05)
Born in U.S.			0.03	0.03
			(0.05)	(0.05)
NH Black			−0.16**	−0.15**
			(0.06)	(0.07)
Hispanic			−0.13*	−0.13*
			(0.07)	(0.07)
NH Other			−0.05	−0.05
			(0.12)	(0.12)
In labor force			0.13**	0.13**
			(0.05)	(0.05)
_cons	0.24***	0.13**	−0.49**	−0.47**
	(0.06)	(0.07)	(0.20)	(0.20)
Observations	497.00	497.00	406.00	406.00
Adj. R-squared	0.00	0.01	0.23	0.23
Joint test: Trust p-value		0.03		0.54

Standard errors in parentheses

Robust standard errors in parentheses. Age bins (5-yr) and wealth deciles included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Average annual returns (5 percent winsorized) over 2002–2022 on trust for net wealth are given below.

Table 16: Average Returns to net wealth (avg) on General trust (2020) (5 percent winsorized)

	1	2	3	4
General trust	0.01**	0.07***	0.01*	0.05***
	(0.00)	(0.01)	(0.01)	(0.02)
$(\text{General})^2$		−0.01***		−0.00**
		(0.00)		(0.00)
Female			−0.04*	−0.04
			(0.02)	(0.02)
Years of education			0.01	0.01
			(0.00)	(0.00)
Married			−0.01	−0.01
			(0.03)	(0.03)
Born in U.S.			−0.02	−0.02
			(0.04)	(0.04)
NH Black			0.02	0.03
			(0.04)	(0.04)
Hispanic			−0.05	−0.05
			(0.05)	(0.05)
NH Other			0.03	0.03
			(0.07)	(0.07)
In labor force			0.10***	0.10***
			(0.03)	(0.03)
_cons	0.15***	0.04	0.07	0.08
	(0.03)	(0.04)	(0.09)	(0.10)
Observations	750.00	750.00	593.00	593.00
Adj. R-squared	0.01	0.03	0.06	0.07
Joint test: Trust p-value		0.00		0.01

Standard errors in parentheses

Robust standard errors in parentheses. Age bins (5-yr) and wealth deciles included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.4 Returns from 2002-2022

Next, I wanted to compute returns across several years and attempt to describe the persistent component of returns that Fagereng et al. 2020 point to as heterogeneity across individuals. I use three similar specifications. First, a pooled OLS regression with a baseline set of controls. Second, a similar pooled regression aimed at controlling for risk exposure. Third, a panel regression with individual fixed effects and year dummies. The winsorized (5 percent) returns to net wealth are given in the following tables.

4.5 The pooled regression with constant trust

The winsorized returns for returns to net wealth are given in the following table.

Table 17: Panel: returns to net wealth (5 percent winsorized)

	(1)	(2)	(3)
Years of education	-0.00^{***}	-0.01^{***}	-0.01^{***}
	(0.00)	(0.00)	(0.00)
Female	-0.02^{***}	-0.03^{*}	-0.03^{*}
	(0.00)	(0.02)	(0.02)
NH Black	0.06^{***}	0.05^{*}	0.05^{*}
	(0.00)	(0.03)	(0.03)
Hispanic	0.03^{***}	-0.01	-0.01
	(0.01)	(0.03)	(0.03)
NH Other	0.02^{**}	0.01	0.01
	(0.01)	(0.04)	(0.04)
Employed	0.03^{***}	0.03^{*}	0.03^{*}
	(0.00)	(0.02)	(0.02)
Married	-0.06^{***}	-0.06^{***}	-0.06^{***}
	(0.00)	(0.02)	(0.02)
Born in U.S.	0.02^{***}	0.03	0.03
	(0.00)	(0.02)	(0.02)
Trust		0.01^{**}	0.03^{***}
		(0.00)	(0.01)
Trust^2			-0.00^{**}
			(0.00)
_cons	0.15	-0.56^{***}	-0.54^{***}
	(0.12)	(0.06)	(0.06)
Observations	102091.00	2899.00	2899.00
Adj. R-squared	0.03	0.04	0.04
Joint test: Trust+Trust^2 p-value			0.00

Standard errors in parentheses
Cluster-robust SE in parentheses. Age bins (5-yr), wealth deciles, region dummies, and year dummies omitted from table but included in regressions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.5.1 Controlling for risk exposure

To control for risk exposure, I add full interaction terms between shares invested in given asset classes (core, retirement, residential) and year. As we could see from the descriptive statistics, mean returns surely do not seem constant over the time period (ex. Global Financial Crisis). The tables capturing the regression results for the return measures are given below. Notice the effect when we extend the model to allow for linear and quadratic trust.

Table 18: Panel Spec 2: returns to net wealth (5 percent winsorized, share x year)

	(1)	(2)	(3)
Years of education	-0.01^{***}	-0.01^{***}	-0.01^{***}
	(0.00)	(0.00)	(0.00)
Female	-0.02^{***}	-0.02	-0.02
	(0.00)	(0.02)	(0.01)
NH Black	0.07^{***}	0.04	0.04
	(0.00)	(0.03)	(0.03)
Hispanic	0.05^{***}	-0.01	-0.01
	(0.01)	(0.03)	(0.03)
NH Other	0.02^{***}	0.03	0.03
	(0.01)	(0.04)	(0.04)
Employed	0.03^{***}	0.02	0.02
	(0.00)	(0.02)	(0.02)
Married	-0.06^{***}	-0.07^{***}	-0.07^{***}
	(0.00)	(0.02)	(0.02)
Born in U.S.	0.01^{*}	0.02	0.02
	(0.00)	(0.02)	(0.02)
Share core	-0.06^{**}	0.25	0.25
	(0.03)	(0.24)	(0.24)
Share IRA	-0.24^{***}	-0.08	-0.08
	(0.03)	(0.24)	(0.24)
Share residential	-0.13^{***}	-0.00	0.01
	(0.03)	(0.23)	(0.23)
Share long-term debt	-0.02^{***}	-0.15	-0.16
	(0.01)	(0.27)	(0.27)
Share other debt	-0.01	0.13	0.14
	(0.01)	(0.17)	(0.16)
Trust		0.01^{**}	0.03^{***}
		(0.00)	(0.01)
Trust^2			-0.00^{**}
			(0.00)
_cons	0.17	-0.46^{**}	-0.45^{**}
	(0.16)	(0.22)	(0.22)
Observations	100837.00	2866.00	2866.00
Adj. R-squared	0.05	0.06	0.06
Joint test: Trust+Trust^2 p-value			0.01
Joint test: Share core x year p-value	0.00	0.01	0.01
Joint test: Share IRA x year p-value	0.00	0.01	0.01
Joint test: Share res x year p-value	0.00	0.01	0.01
Joint test: Share debt long x year p-value	0.00	0.13	0.13
Joint test: Share debt other x year p-value	0.61	0.00	0.00

Standard errors in parentheses

Cluster-robust SE in parentheses. Spec 2: share x year controls for risk exposure.

Age bins, wealth deciles, region dummies, year dummies,

and share x year omitted from table but included in regressions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.5.2 Fixed effects and the persistent component of returns

The accompanying panel fixed-effects regressions (Spec 3, winsorized) are given in the table below.

Table 19: Panel Spec 3: returns to net wealth (5 percent winsorized, share x year)

	(1)
Employed	0.03^{***}
	(0.00)
Married	-0.05^{***}
	(0.01)
Share core	0.24^{***}
	(0.04)
Share IRA	0.08^{*}
	(0.04)
Share residential	0.14^{***}
	(0.04)
Share long-term debt	-0.01^{*}
	(0.01)
Share other debt	-0.08^{**}
	(0.04)
_cons	-0.47^{***}
	(0.13)
Observations	101543.00
Within R^2	0.19
Rho	0.66
Sigma u	0.46
Sigma e	0.33
Joint test: Share (core,IRA,res) x year p-value	0.00
Joint test: Share (debt long,other) x year p-value	0.00

Standard errors in parentheses
Cluster-robust SE in parentheses. Individual fixed effects.
Age bins, wealth deciles, region dummies, year dummies,
share x year interactions included in estimation but omitted from table.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The distribution of estimated individual fixed effects from the panel regressions with share × year interactions (Spec 3) is shown in the following histogram.

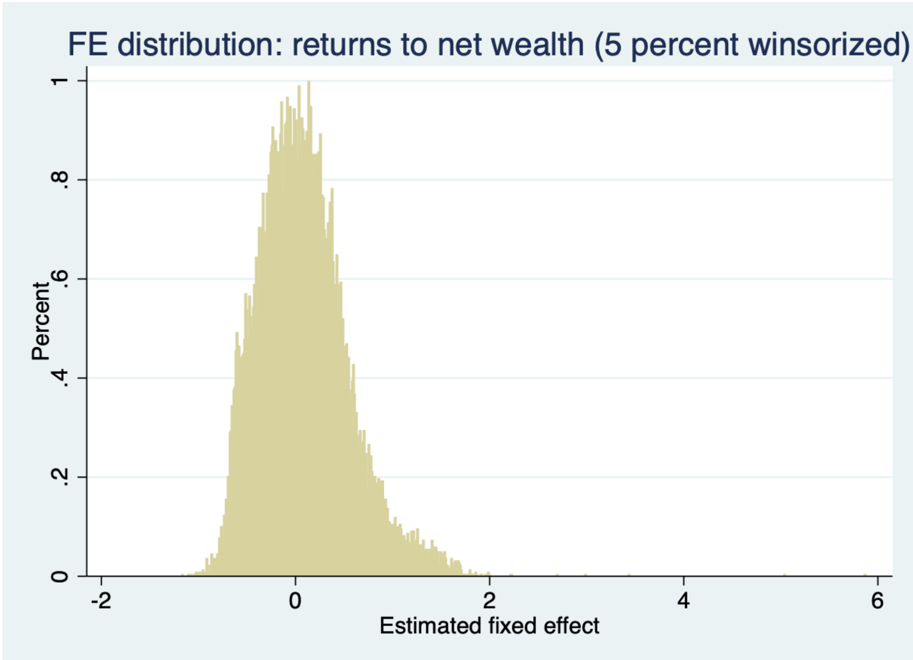

Figure 50: FE distribution: returns to net wealth (5 percent winsorized)

4.6 Estimated fixed effects for returns

I regress the estimated fixed effects on time-invariant covariates (education, gender, race, born in U.S., trust). The second-stage results for winsorized returns to net wealth are given in the following table.

Table 20: Second-stage: FE from returns to net wealth (5 percent winsorized) on time-invariant vars

	(1)	(2)	(3)
Years of education	-0.04^{***}	-0.04^{***}	-0.04^{***}
	(0.00)	(0.01)	(0.01)
Female	0.01^{**}	0.04	0.04
	(0.01)	(0.04)	(0.04)
NH Black	0.30^{***}	0.25^{***}	0.25^{***}
	(0.01)	(0.05)	(0.05)
Hispanic	0.21^{***}	0.22^{***}	0.22^{***}
	(0.01)	(0.05)	(0.05)
NH Other	0.14^{***}	0.07	0.07
	(0.02)	(0.07)	(0.07)
Born in U.S.	0.07^{***}	0.13^{***}	0.13^{***}
	(0.01)	(0.05)	(0.05)
Trust		0.00	0.02
		(0.01)	(0.02)
Trust^{2}			-0.00
			(0.00)
_cons	0.40^{***}	0.40^{***}	0.37^{***}
	(0.02)	(0.10)	(0.10)
Observations	21613.00	560.00	560.00
Adj. R-squared	0.14	0.16	0.16
Joint test: Trust+Trust^{2} p-value			0.68

Standard errors in parentheses

Robust SE. FE from Panel Spec 3 returns to net wealth regression (5 percent winsorized).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The relationship between estimated fixed effects and trust, education, race, and gender is illustrated in the following figures.

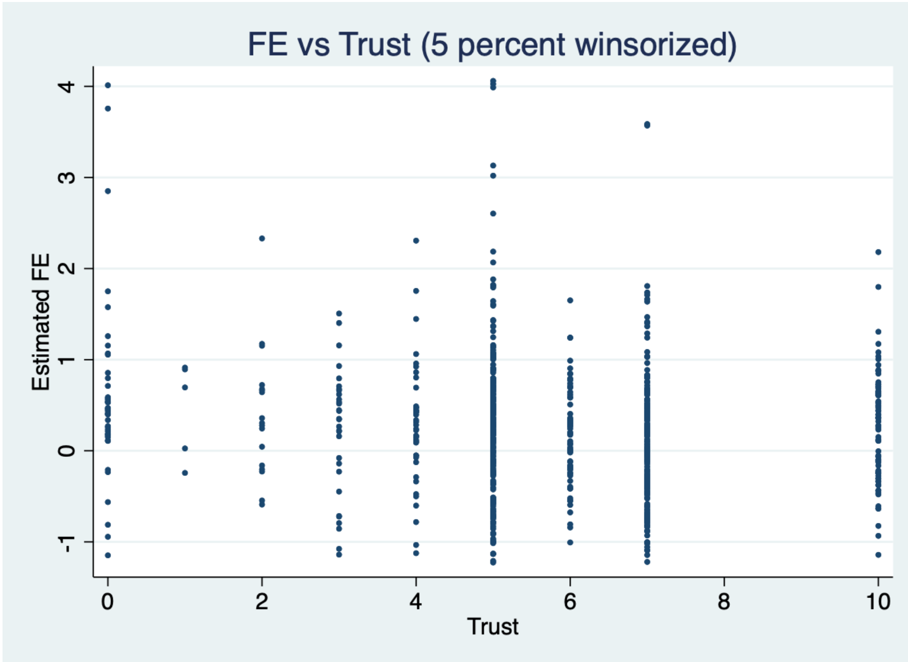

Figure 51: FE vs. trust (5 percent winsorized)

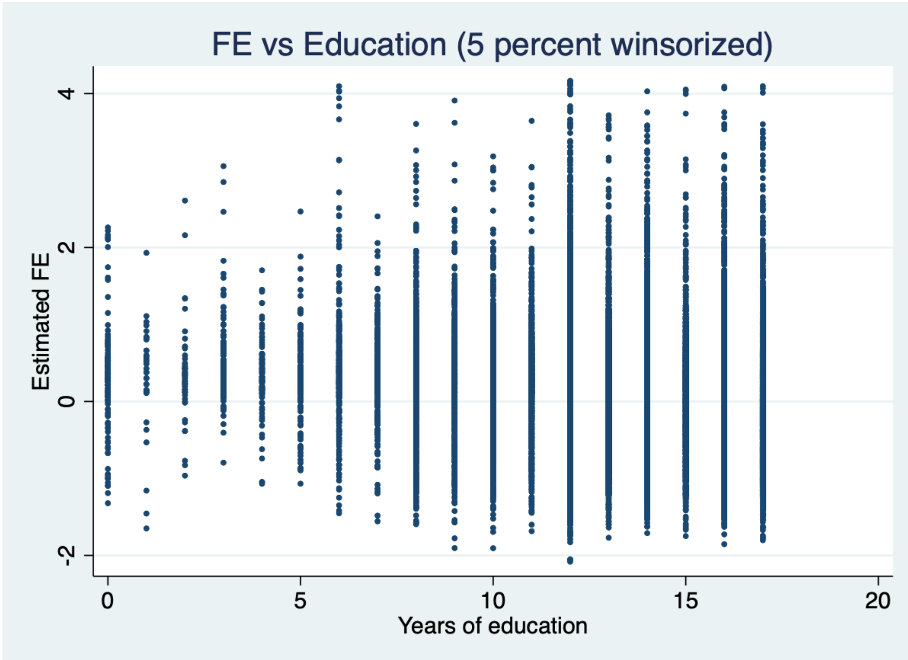

Figure 52: FE vs. education (5 percent winsorized)

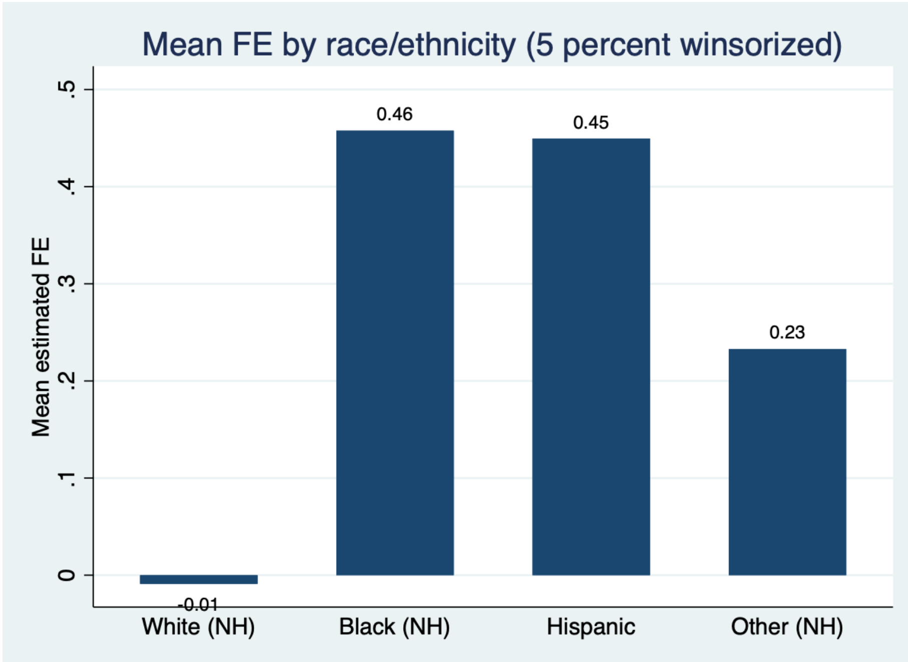

Figure 53: Mean FE by race/ethnicity (5 percent winsorized)

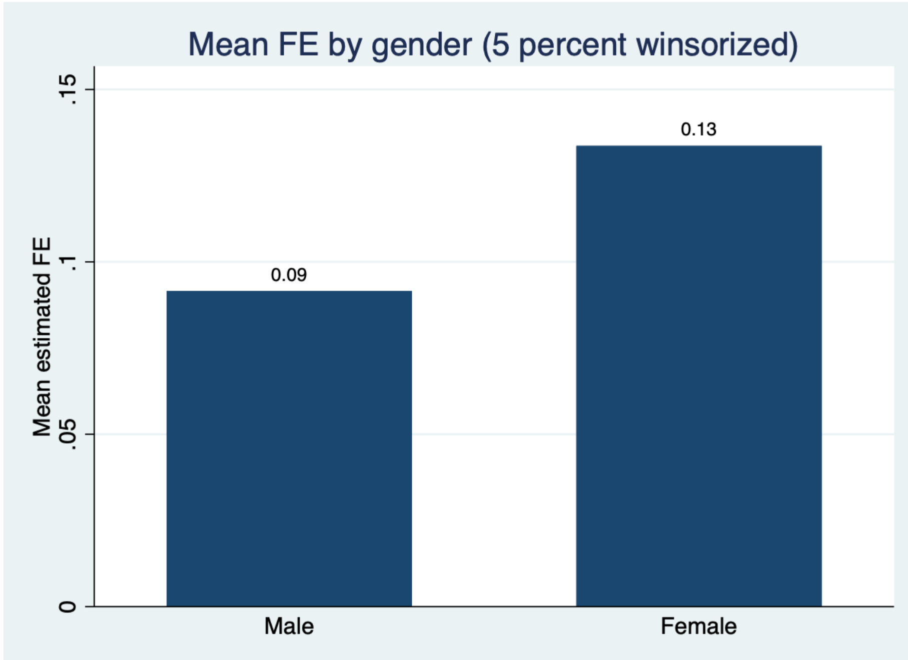

Figure 54: Mean FE by gender (5 percent winsorized)

5 Extensions

In this section, I describe the data and accompanying statistical model used to understand the role of *financial literacy* in the current story of an empirical relationship between trust and returns.

Additionally, the literature on trust and social capital is clear on how heterogenity in income, race and other factors related to one's neighborhood can be important for trust. To this end, we consider two additional variables in the survey: respondent *region* and *hometown population size*.

5.1 Financial literacy

Financial literacy can be an important factor when trying to understand the persistent component of returns. The literature on measuring financial literacy using survey data has agreed up three questions regarding i) interest, ii) inflation, and iii) risk diversification to measure financial literacy for respondents.

Table 21: Financial literacy summary (2020)

Variable	N	Mean	SD	p50
Interest	1302	2.62	0.68	3.00
Inflation	1273	2.66	0.65	3.00
Risk	1072	4.02	1.72	5.00

HRS 2020: rv565 (interest), rv566 (inflation), rv567 (risk diversification).

Figure shows the cross correlations between the financial literacy measures and the general measure of trust. There is little correlation between trust and any of the financial literacy variables. More worrisome is that there is little correlation amongst the financial literacy variable. If they are all measuring the same thing, there should be some correlation.

Table 22: Financial literacy and trust correlations

	Interest	Inflation	Risk diversification	General trust
Interest	1.00	-0.01	0.03	0.01
Inflation	-0.01	1.00	0.07	-0.03
Risk diversification	0.03	0.07	1.00	0.04
General trust	0.01	-0.03	0.04	1.00

Interest, inflation, risk diversification, and general trust (2020).

5.2 Regional trust

There is infomration in the survey about what region the respondent lives in for each wave. This along with the assumption of constant trust allows us create a measure of regional trust that varies over the waves of the survey. How the sample count changes by region can be seen in the table .

Table 23: Observations by region and year

Year	Northeast	Midwest	South	West
2000	3300	4821	8052	3365
2002	2969	4525	7448	3180
2004	3247	4998	8008	3821
2006	2870	4628	7434	3468
2008	2637	4274	7006	3230
2010	3378	4920	9109	4557
2012	3111	4564	8528	4275
2014	2829	4100	7834	3897
2016	2992	4271	9105	4463
2018	2396	3471	7527	3673
2020	2171	3153	6853	3485
2022	1728	2602	5544	2949

Person-year observations by region (region 5 = Other omitted).

The mean trust levels by region can be seen in the table .

Table 24: Mean trust by region (2020)

Region (code)	Region	Mean trust	Obs
1	Northeast	5.1517	145
2	Midwest	5.7296	159
3	South	5.3333	399
4	West	5.4541	196

General trust (2020), nonmissing region.

5.3 "Hometown" population and trust

There was also a question in 2020 asking individuals “how large is the population of the city, village, or town where you currently live”. The trust literature discusses how trust may vary in different communities (small, close-knit towns versus large cities). Counts by population size (6 bins) and by population in 3 bins (small town, small/medium city, large metro) are in the tables .

Table 25: Bin counts by population size (2020)

Population (code)	Population size	Obs
1	Less than 1,000	41
2	1,000 to 10,000	122
3	10,000 to 50,000	202
4	50,000 to 100,000	107
5	100,000 to 1 million	164
6	Greater than 1 million	87

Table 26: Bin counts by population (3 bins, 2020)

Population	Obs
Small town (<10k)	163
Small/med city (10k-100k)	309
Large metro (100k+)	251

Mean trust by population size are given in the table .

Table 27: Mean trust by population (3 bins, 2020)

Pop3 (code)	Population	Mean trust	Obs
1	Small town (<10k)	5.5337	163
2	Small/med city (10k-100k)	5.3981	309
3	Large metro (100k+)	5.3267	251

Small/med/large; general trust (2020).

5.4 Model

References

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Appendix

.1 Trust and race

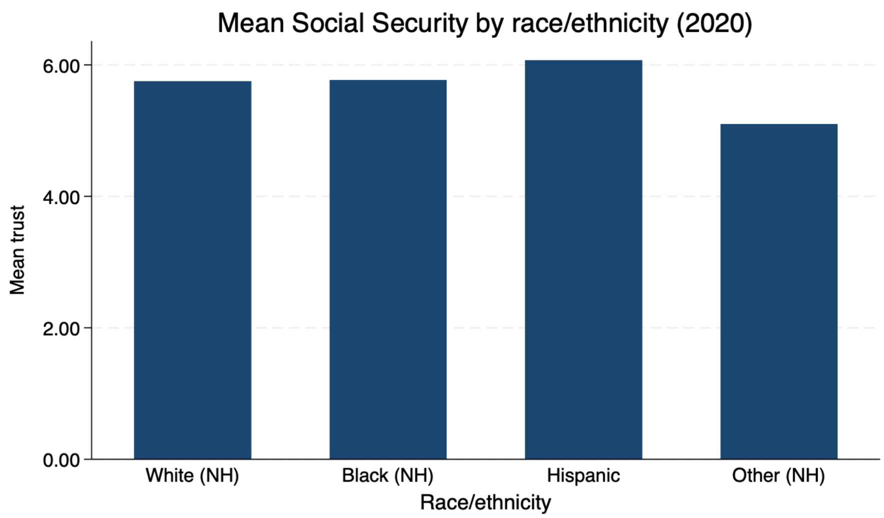

Figure 55: Mean Social Security trust by race/ethnicity (2020)

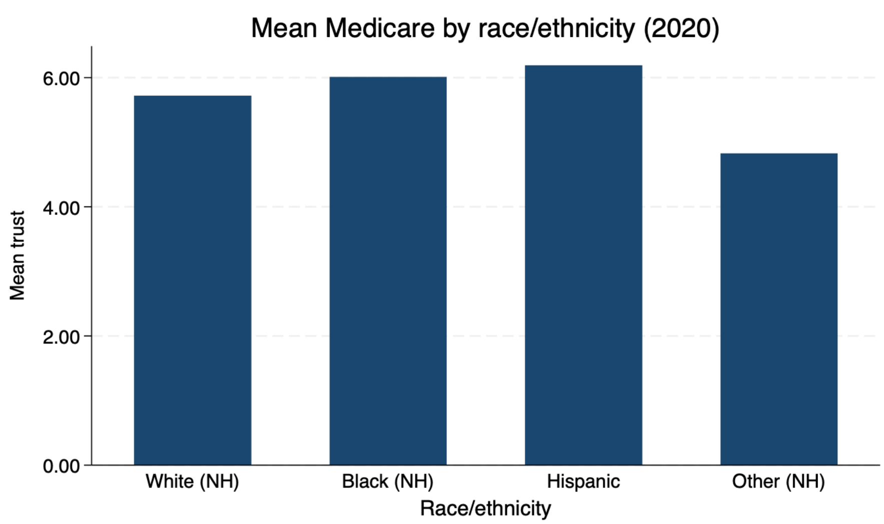

Figure 56: Mean Medicare trust by race/ethnicity (2020)

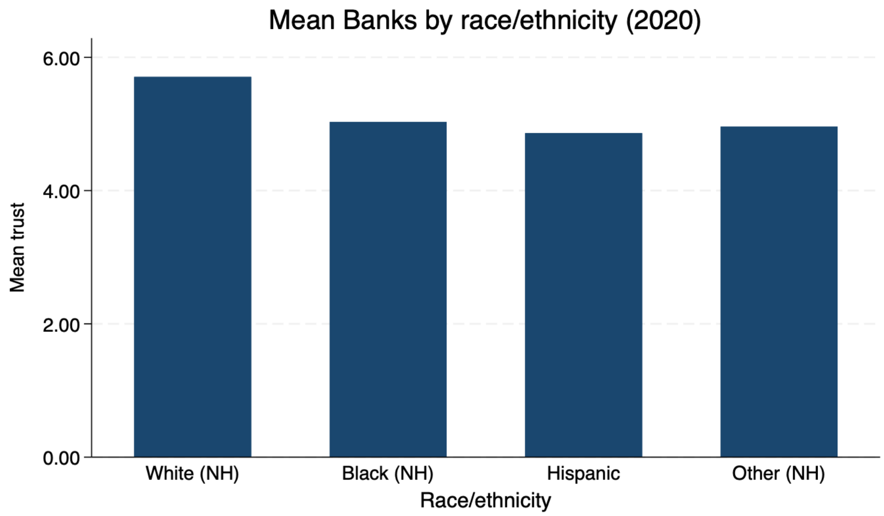

Figure 57: Mean banks trust by race/ethnicity (2020)

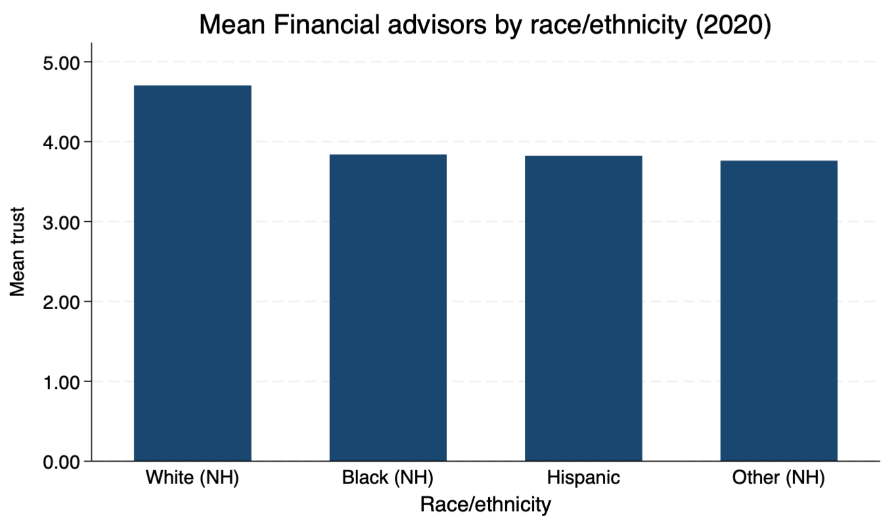

Figure 58: Mean financial advisors trust by race/ethnicity (2020)

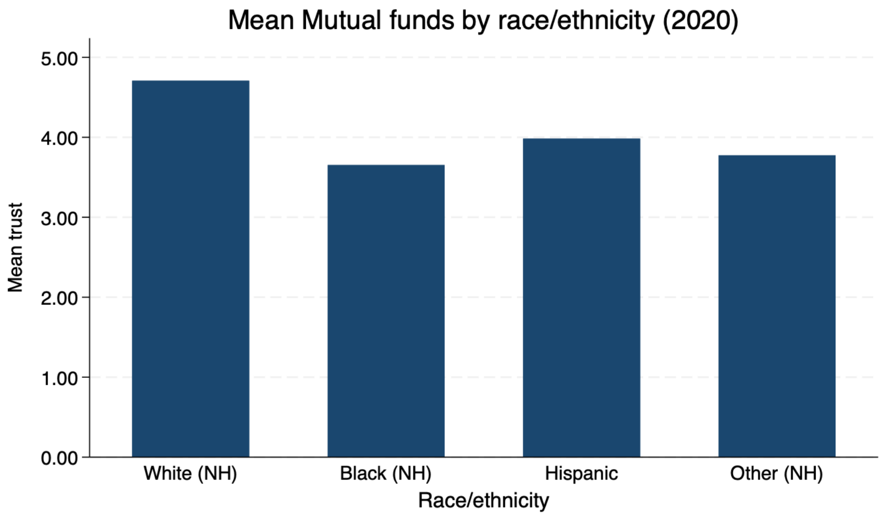

Figure 59: Mean mutual funds trust by race/ethnicity (2020)

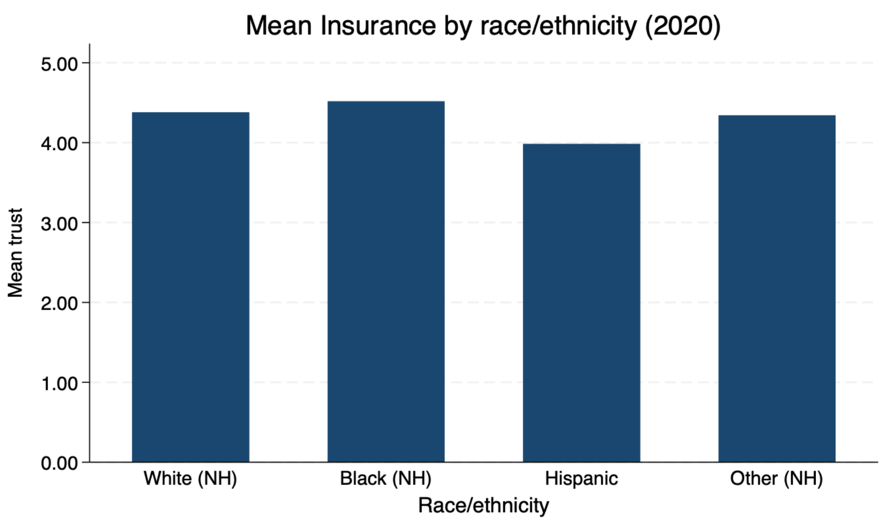

Figure 60: Mean insurance trust by race/ethnicity (2020)

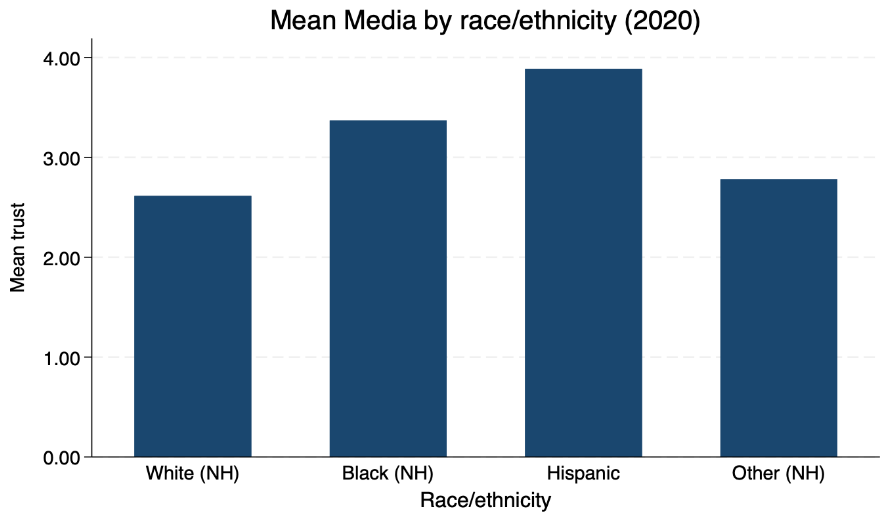

Figure 61: Mean media trust by race/ethnicity (2020)

.2 Other trust measures

.3 Income growth

To further capture the point that mean incomes are relatively flat over the period, I consider income growth as well by considering the log difference in income across waves.

Table 28: Income growth: summary statistics

Variable	Obs	Mean	SD	P50	P95	Min	Max
Log labor income growth (2004)	4,053	-0.1429	0.9658	-0.0490	1.2037	-5.3748	4.8562
Log labor income growth (2006)	5,334	-0.1031	0.9112	-0.0256	1.1879	-5.7080	5.2030
Log labor income growth (2008)	4,468	-0.0873	0.8806	-0.0232	1.1282	-5.1897	5.2897
Log labor income growth (2010)	3,769	-0.1265	0.9786	-0.0130	1.1501	-5.5375	4.9488
Log labor income growth (2012)	6,475	-0.0926	0.9230	-0.0514	1.2295	-5.4439	6.3863
Log labor income growth (2014)	5,439	-0.0719	0.9303	-0.0306	1.2454	-5.5520	5.3963
Log labor income growth (2016)	4,319	-0.0431	0.9628	0.0201	1.2798	-5.1496	5.5314
Log labor income growth (2018)	5,269	-0.0510	0.9891	-0.0228	1.3566	-6.2785	6.3304
Log labor income growth (2020)	4,337	-0.0637	1.0101	-0.0051	1.3046	-5.7117	6.3082
Log labor income growth (2022)	3,337	-0.1798	1.0885	-0.0875	1.3148	-5.9753	5.4186
Log total income growth (2004)	15,707	-0.0342	0.9076	-0.0276	1.3372	-6.1775	6.6288
Log total income growth (2006)	17,275	-0.0296	0.9022	-0.0220	1.3168	-6.4724	6.9622
Log total income growth (2008)	15,997	-0.0225	0.8646	-0.0152	1.2958	-5.6983	5.9585
Log total income growth (2010)	14,507	-0.0821	0.9196	-0.0055	1.2191	-7.0460	6.1571
Log total income growth (2012)	18,706	-0.0480	0.9596	-0.0325	1.4187	-6.7117	6.9345
Log total income growth (2014)	17,128	0.0090	0.9139	-0.0001	1.3945	-6.4459	6.2165
Log total income growth (2016)	15,023	-0.0109	0.9538	0.0037	1.3725	-6.4116	6.9414
Log total income growth (2018)	15,468	-0.0403	1.0045	-0.0362	1.4816	-7.0159	6.7023
Log total income growth (2020)	13,308	-0.0011	0.9655	0.0012	1.4729	-5.9648	7.2582
Log total income growth (2022)	11,444	-0.0932	0.9818	-0.0658	1.3958	-7.2234	5.9135

Two-year log difference by end year; ln(income), zero income dropped (N reflects). Labor = earnings+unemployment; total = all components.

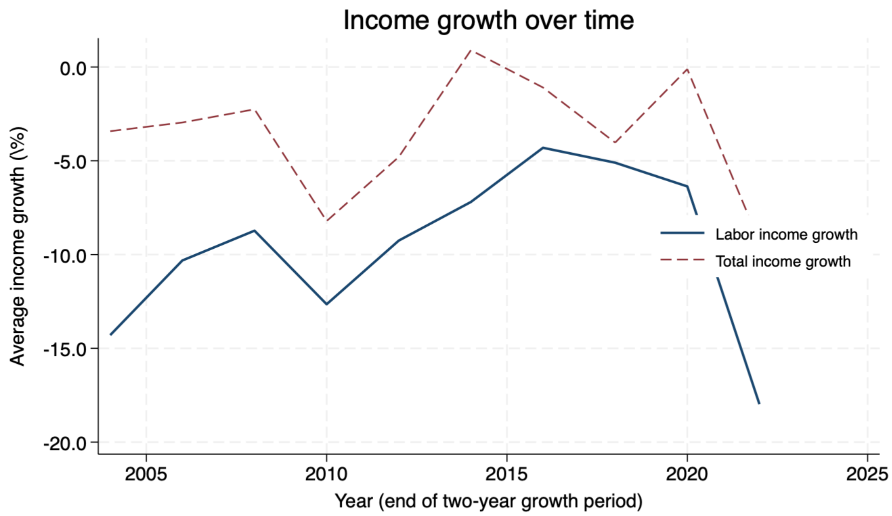

Figure 62: Income growth over time

.4 Labor income regression results

After understanding the determinants of trust in the HRS data, I wanted to see if the "hump-shape" relationship between trust and income found by Butler, Giuliano, and Guiso 2016 was present in the HRS data. I also check the results for deflated winsorized log income. The cross-section (2020) and average over waves (2002–2022) results for labor income are given below.

Table 29: Labor income (2020) on General trust (2020)

	1	2	3	4
General trust	0.02	0.19**	0.01	0.07
	(0.03)	(0.08)	(0.03)	(0.08)
(General)^2		−0.02**		−0.01
		(0.01)		(0.01)
Female			−0.27**	−0.26*
			(0.13)	(0.13)
Years of education			0.11***	0.10***
			(0.02)	(0.02)
Married			0.32**	0.31**
			(0.13)	(0.13)
Born in U.S.			−0.11	−0.11
			(0.18)	(0.18)
In labor force			0.67***	0.65***
			(0.22)	(0.22)
NH Black			−0.10	−0.09
			(0.15)	(0.15)
Hispanic			−0.21	−0.19
			(0.19)	(0.19)
NH Other			−0.30	−0.31
			(0.23)	(0.23)
Constant	10.23***	9.92***	7.75***	7.59***
	(0.17)	(0.22)	(0.49)	(0.53)
Observations	347.00	347.00	343.00	343.00
Adj. R-squared	−0.00	0.01	0.16	0.16
Joint test: Trust+Trust$^{\mathbf{2}}$ p-value		0.06		0.63

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 30: Average labor income (avg defl wins, log) on General trust (2020)

	1	2	3	4
General trust	0.01	0.24***	0.01	0.04
	(0.02)	(0.07)	(0.02)	(0.06)
$(\text{General})^2$		−0.02***		−0.00
		(0.01)		(0.01)
Female			−0.33***	−0.33***
			(0.11)	(0.11)
Years of education			0.11***	0.11***
			(0.02)	(0.02)
Married			0.27**	0.27**
			(0.11)	(0.11)
Born in U.S.			−0.07	−0.07
			(0.16)	(0.16)
In labor force			0.81***	0.81***
			(0.13)	(0.13)
NH Black			−0.12	−0.11
			(0.12)	(0.12)
Hispanic			−0.20	−0.20
			(0.18)	(0.19)
NH Other			−0.31	−0.32
			(0.20)	(0.20)
Constant	9.60***	9.18***	7.35***	7.30***
	(0.14)	(0.19)	(0.40)	(0.42)
Observations	712.00	712.00	704.00	704.00
Adj. R-squared	−0.00	0.02	0.23	0.23
Joint test: Trust+Trust² p-value		0.00		0.79

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

.5 Total income regression results

The pattern seems to be stronger for total income. The cross-section (2020) and average over waves results are given .

Table 31: Total income (2020) on General trust (2020)

	1	2	3	4
General trust	0.03**	0.29***	0.00	0.08**
	(0.01)	(0.04)	(0.01)	(0.04)
(General)^2		−0.03***		−0.01**
		(0.00)		(0.00)
Female			−0.40***	−0.39***
			(0.07)	(0.07)
Years of education			0.10***	0.09***
			(0.01)	(0.01)
Married			0.22***	0.21***
			(0.07)	(0.07)
Born in U.S.			0.08	0.08
			(0.11)	(0.11)
In labor force			0.75***	0.74***
			(0.08)	(0.08)
NH Black			−0.33***	−0.31***
			(0.08)	(0.08)
Hispanic			−0.28***	−0.28***
			(0.10)	(0.11)
NH Other			−0.35**	−0.35**
			(0.14)	(0.14)
Constant	10.12***	9.63***	8.09***	7.95***
	(0.09)	(0.11)	(0.24)	(0.25)
Observations	856.00	856.00	848.00	848.00
Adj. R-squared	0.00	0.05	0.33	0.33
Joint test: Trust+Trust^2 p-value		0.00		0.11

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 32: Average total income (avg defl wins, log) on General trust (2020)

	1	2	3	4
General trust	0.05***	0.32***	0.00	0.08**
	(0.01)	(0.04)	(0.01)	(0.04)
$(\text{General})^2$		−0.03***		−0.01**
		(0.00)		(0.00)
Female			−0.35***	−0.34***
			(0.06)	(0.06)
Years of education			0.12***	0.12***
			(0.01)	(0.01)
Married			0.23***	0.22***
			(0.06)	(0.06)
Born in U.S.			0.07	0.07
			(0.11)	(0.11)
In labor force			0.54***	0.53***
			(0.08)	(0.08)
NH Black			−0.39***	−0.37***
			(0.07)	(0.07)
Hispanic			−0.42***	−0.41***
			(0.10)	(0.10)
NH Other			−0.43***	−0.43***
			(0.15)	(0.15)
Constant	10.15***	9.67***	7.81***	7.68***
	(0.08)	(0.10)	(0.22)	(0.22)
Observations	895.00	895.00	885.00	885.00
Adj. R-squared	0.01	0.07	0.37	0.38
Joint test: Trust+Trust² p-value		0.00		0.08

Standard errors in parentheses

Age bins (5-yr) included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

.6 Core return regression results

The smallest portfolio composition is of core assets only. The regression results for winsorized (5 percent at each tail) annual returns for 2022 are given below.

Table 33: 2022 Returns to core (2022) on General trust (2020) (5 percent winsorized)

	1	2	3	4
General trust	0.02	0.16**	0.02	0.14*
	(0.02)	(0.07)	(0.02)	(0.07)
$(\text{General})^2$		−0.01**		−0.01*
		(0.01)		(0.01)
Female			−0.08	−0.06
			(0.09)	(0.10)
Years of education			0.05**	0.04**
			(0.02)	(0.02)
Married			0.17	0.17
			(0.10)	(0.10)
Born in U.S.			−0.00	0.00
			(0.14)	(0.14)
NH Black			−0.30**	−0.28**
			(0.13)	(0.13)
Hispanic			−0.50***	−0.49***
			(0.19)	(0.19)
NH Other			−0.21	−0.20
			(0.21)	(0.21)
In labor force			0.14	0.14
			(0.11)	(0.11)
_cons	0.15	−0.14	0.97**	0.73
	(0.15)	(0.21)	(0.43)	(0.45)
Observations	442.00	442.00	438.00	438.00
Adj. R-squared	0.00	0.01	0.09	0.10
Joint test: Trust p-value		0.08		0.18

Standard errors in parentheses

Robust standard errors in parentheses. Age bins (5-yr) and wealth deciles included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The pooled regression (Spec 1), risk-exposure specification (Spec 2), and fixed-effects specification (Spec 3) for returns to core assets are given below.

Table 34: Panel: returns to core (5 percent winsorized)

	(1)	(2)	(3)
Years of education	-0.02^{***}	-0.02^{***}	-0.02^{***}
	(0.00)	(0.01)	(0.01)
Female	-0.01	0.01	0.01
	(0.00)	(0.03)	(0.03)
NH Black	0.13^{***}	0.19^{***}	0.19^{***}
	(0.01)	(0.04)	(0.04)
Hispanic	0.09^{***}	0.22^{***}	0.23^{***}
	(0.01)	(0.07)	(0.07)
NH Other	0.03^{*}	0.10	0.10
	(0.02)	(0.08)	(0.08)
Employed	0.11^{***}	0.09^{**}	0.09^{**}
	(0.01)	(0.03)	(0.03)
Married	-0.04^{***}	-0.05	-0.05
	(0.01)	(0.03)	(0.03)
Born in U.S.	-0.01	0.06	0.06
	(0.01)	(0.05)	(0.05)
Trust		-0.00	-0.02
		(0.01)	(0.02)
Trust^2			0.00
			(0.00)
_cons	-1.00^{***}	-0.72^{**}	-0.71^{**}
	(0.03)	(0.36)	(0.34)
Observations	129298.00	3906.00	3906.00
Adj. R-squared	0.18	0.17	0.17
Joint test: Trust+Trust^2 p-value			0.71

Standard errors in parentheses

Cluster-robust SE in parentheses. Age bins (5-yr), wealth deciles, region dummies, and year dummies omitted from table but included in regressions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 35: Panel Spec 2: returns to core (5 percent winsorized, share x year)

	(1)	(2)	(3)
Years of education	-0.01^{***}	-0.01^{*}	-0.01^{*}
	(0.00)	(0.01)	(0.01)
Female	-0.01	0.01	0.01
	(0.00)	(0.03)	(0.03)
NH Black	0.11^{***}	0.16^{***}	0.16^{***}
	(0.01)	(0.04)	(0.04)
Hispanic	0.08^{***}	0.20^{***}	0.20^{***}
	(0.01)	(0.07)	(0.07)
NH Other	0.02	0.10	0.10
	(0.02)	(0.08)	(0.08)
Employed	0.10^{***}	0.08^{**}	0.08^{**}
	(0.01)	(0.03)	(0.03)
Married	0.00	0.00	0.00
	(0.01)	(0.03)	(0.03)
Born in U.S.	-0.00	0.06	0.06
	(0.01)	(0.05)	(0.05)
Share core	0.36^{***}	0.82^{***}	0.82^{***}
	(0.02)	(0.26)	(0.26)
Trust		-0.00	-0.01
		(0.01)	(0.02)
Trust^2			0.00
			(0.00)
_cons	-0.93^{***}	-0.99^{**}	-0.98^{**}
	(0.03)	(0.44)	(0.43)
Observations	127338.00	3854.00	3854.00
Adj. R-squared	0.18	0.18	0.18
Joint test: Trust+Trust^2 p-value			0.82
Joint test: Share core x year p-value	0.00	0.04	0.04

Standard errors in parentheses

Cluster-robust SE in parentheses. Spec 2: share x year controls for risk exposure.

Age bins, wealth deciles, region dummies, year dummies,

and share x year omitted from table but included in regressions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

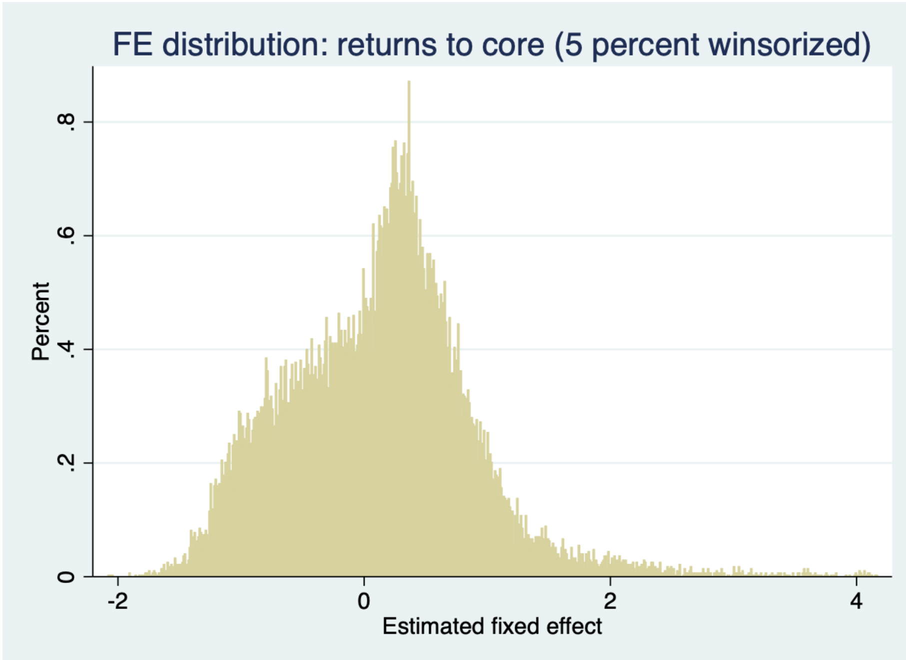

Figure 63: FE distribution: returns to core (5 percent winsorized)

Table 36: Panel Spec 3: returns to core (5 percent winsorized, share x year)

	(1)
Employed	0.06***
	(0.01)
Married	−0.01
	(0.01)
Share core	0.51***
	(0.03)
_cons	−1.03***
	(0.34)
Observations	128219.00
Within R^2	0.31
Rho	0.53
Sigma u	0.75
Sigma e	0.70
Joint test: Share core x year p-value	0.00

Standard errors in parentheses

Cluster-robust SE in parentheses. Individual fixed effects.

Age bins, wealth deciles, region dummies, year dummies,

share x year interactions included in estimation but omitted from table.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Average annual returns (5 percent winsorized) over 2002–2022 on trust for core assets:

Table 37: Average Returns to core (avg) on General trust (2020) (5 percent winsorized)

	1	2	3	4
General trust	0.01	0.08**	−0.00	0.01
	(0.01)	(0.04)	(0.01)	(0.04)
(General)^2		−0.01**		−0.00
		(0.00)		(0.00)
Female			0.00	0.00
			(0.05)	(0.05)
Years of education			0.03***	0.03***
			(0.01)	(0.01)
Married			0.11**	0.11**
			(0.05)	(0.05)
Born in U.S.			0.05	0.05
			(0.08)	(0.08)
NH Black			0.00	0.00
			(0.06)	(0.07)
Hispanic			−0.01	−0.01
			(0.10)	(0.10)
NH Other			0.00	0.00
			(0.10)	(0.10)
In labor force			0.09	0.09
			(0.06)	(0.06)
_cons	0.13*	−0.02	−1.23***	−1.27***
	(0.07)	(0.11)	(0.21)	(0.22)
Observations	728.00	728.00	721.00	721.00
Adj. R-squared	0.00	0.01	0.15	0.15
Joint test: Trust p-value		0.07		0.85

Standard errors in parentheses

Robust standard errors in parentheses. Age bins (5-yr) and wealth deciles included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Second-stage regression of estimated fixed effects on time-invariant covariates:

Table 38: Second-stage: FE from returns to core (5 percent winsorized) on time-invariant vars

	(1)	(2)	(3)
Years of education	-0.03^{***}	-0.04^{***}	-0.04^{***}
	(0.00)	(0.01)	(0.01)
Female	0.03^{***}	0.11^{*}	0.11^{*}
	(0.01)	(0.06)	(0.06)
NH Black	0.45^{***}	0.38^{***}	0.38^{***}
	(0.01)	(0.07)	(0.07)
Hispanic	0.39^{***}	0.48^{***}	0.48^{***}
	(0.02)	(0.11)	(0.11)
NH Other	0.26^{***}	0.37^{***}	0.37^{***}
	(0.02)	(0.13)	(0.13)
Born in U.S.	0.01	0.15^{*}	0.15
	(0.02)	(0.09)	(0.09)
Trust		-0.02	-0.04
		(0.01)	(0.05)
Trust^2			0.00
			(0.00)
_cons	0.35^{***}	0.51^{***}	0.55^{***}
	(0.03)	(0.18)	(0.18)
Observations	26576.00	702.00	702.00
Adj. R-squared	0.08	0.11	0.11
Joint test: Trust+Trust^2 p-value			0.33

Standard errors in parentheses

Robust SE. FE from Panel Spec 3 returns to core regression (5 percent winsorized).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The relationship between estimated fixed effects and trust, education, race, and gender (using r1 FE):

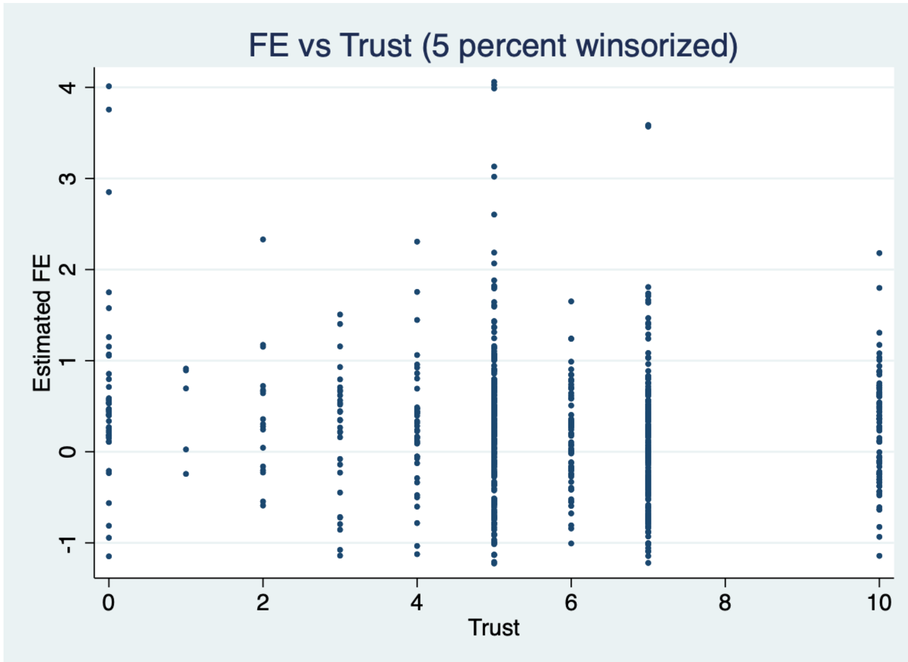

Figure 64: FE vs. trust (5 percent winsorized)

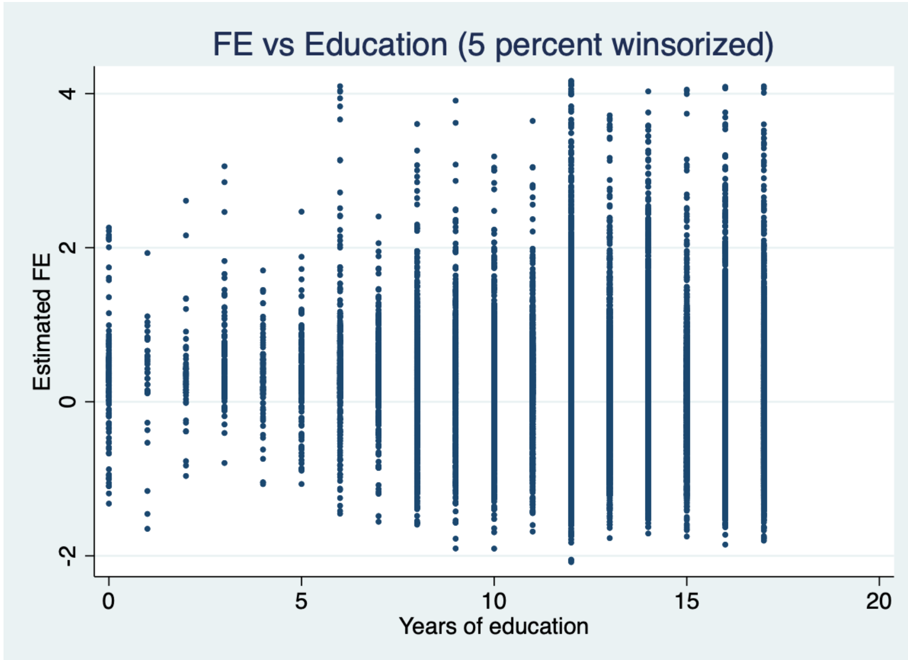

Figure 65: FE vs. education (5 percent winsorized)

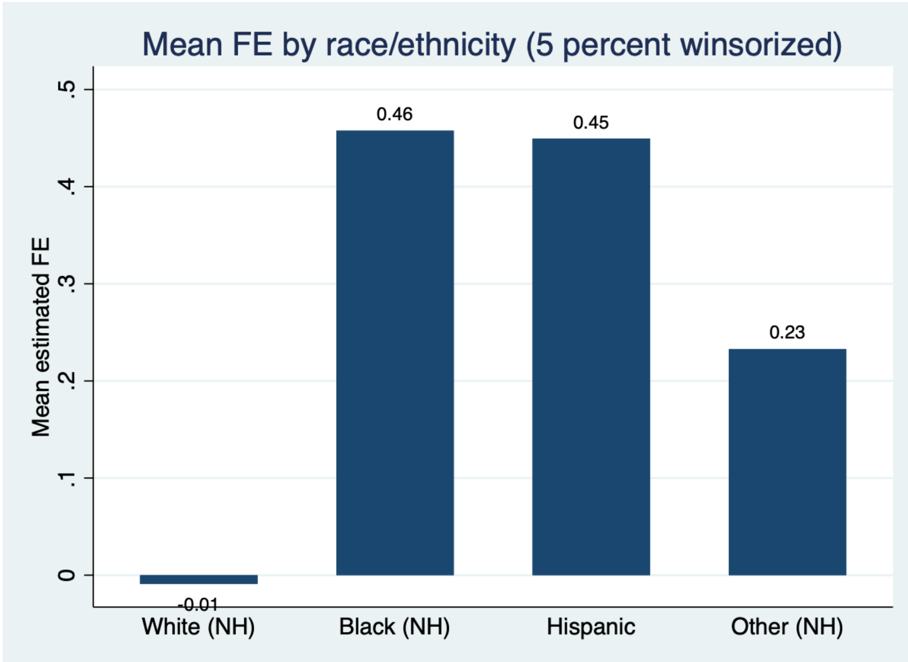

Figure 66: Mean FE by race/ethnicity (5 percent winsorized)

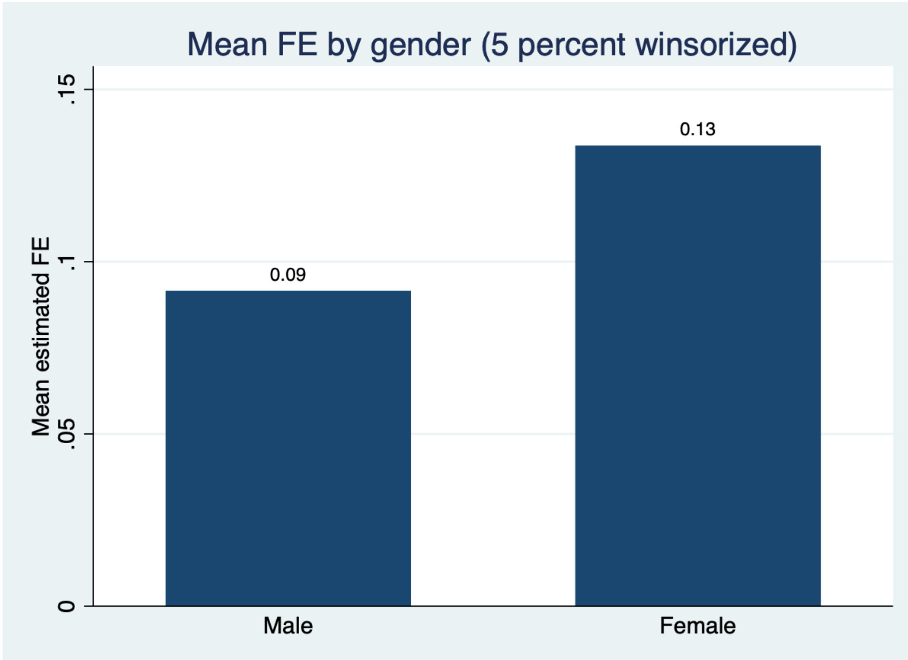

Figure 67: Mean FE by gender (5 percent winsorized)

.7 Core + IRA return regression results

The next portfolio composition includes retirement assets along with those core assets. The regression results for winsorized annual returns for 2022 on these portfolios are given below.

Table 39: 2022 Core+res return (2022) on General trust (2020) (5 percent winsorized)

	1	2	3	4
General trust	0.01	0.02	0.03	0.02
	(0.02)	(0.04)	(0.02)	(0.05)
(General)^2		−0.00		0.00
		(0.00)		(0.00)
Female			−0.10*	−0.10*
			(0.06)	(0.06)
Years of education			0.02	0.02
			(0.01)	(0.01)
Married			0.08	0.08
			(0.06)	(0.06)
Born in U.S.			0.12	0.12
			(0.08)	(0.08)
NH Black			−0.09	−0.09
			(0.08)	(0.08)
Hispanic			−0.33*	−0.33*
			(0.18)	(0.18)
NH Other			0.01	0.01
			(0.11)	(0.11)
In labor force			0.05	0.05
			(0.06)	(0.06)
_cons	0.10	0.08	−0.28	−0.26
	(0.10)	(0.12)	(0.32)	(0.32)
Observations	210.00	210.00	209.00	209.00
Adj. R-squared	−0.00	−0.01	0.09	0.09

Standard errors in parentheses

Robust standard errors in parentheses. Age bins (5-yr) and wealth deciles included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The pooled regression (Spec 1), risk-exposure specification (Spec 2), and fixed-effects specification (Spec 3) for returns to core and IRA:

Table 40: Panel: returns to core and IRA (5 percent winsorized)

	(1)	(2)	(3)
Years of education	-0.01^{***}	-0.01	-0.01
	(0.00)	(0.01)	(0.01)
Female	-0.04^{***}	-0.03	-0.03
	(0.00)	(0.03)	(0.03)
NH Black	0.16^{***}	0.15^{***}	0.15^{***}
	(0.01)	(0.05)	(0.05)
Hispanic	0.08^{***}	0.25^{***}	0.25^{***}
	(0.01)	(0.07)	(0.07)
NH Other	0.03^{**}	0.12	0.12
	(0.01)	(0.08)	(0.08)
Employed	0.03^{***}	-0.02	-0.02
	(0.01)	(0.03)	(0.03)
Married	-0.09^{***}	-0.11^{***}	-0.11^{***}
	(0.01)	(0.04)	(0.04)
Born in U.S.	0.02^{**}	0.07	0.07
	(0.01)	(0.05)	(0.05)
Trust		0.00	-0.02
		(0.01)	(0.02)
Trust^2			0.00
			(0.00)
_cons	-0.34^{***}	-0.62^{***}	-0.59^{***}
	(0.03)	(0.14)	(0.14)
Observations	123030.00	3664.00	3664.00
Adj. R-squared	0.03	0.04	0.04
Joint test: Trust+Trust^2 p-value			0.53

Standard errors in parentheses

Cluster-robust SE in parentheses. Age bins (5-yr), wealth deciles, region dummies, and year dummies omitted from table but included in regressions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 41: Panel Spec 2: returns to core and IRA (5 percent winsorized, share x year)

	(1)	(2)	(3)
Years of education	-0.01^{***}	-0.00	-0.00
	(0.00)	(0.01)	(0.01)
Female	-0.05^{***}	-0.03	-0.03
	(0.00)	(0.03)	(0.03)
NH Black	0.15^{***}	0.13^{***}	0.13^{**}
	(0.01)	(0.05)	(0.05)
Hispanic	0.07^{***}	0.25^{***}	0.25^{***}
	(0.01)	(0.07)	(0.07)
NH Other	0.03^{*}	0.12	0.12
	(0.01)	(0.08)	(0.08)
Employed	0.02^{***}	-0.02	-0.02
	(0.01)	(0.03)	(0.03)
Married	-0.06^{***}	-0.06	-0.06
	(0.01)	(0.04)	(0.04)
Born in U.S.	0.02^{**}	0.07	0.07
	(0.01)	(0.05)	(0.05)
Share core	0.45^{***}	1.10^{***}	1.10^{***}
	(0.02)	(0.24)	(0.24)
Share IRA	0.09^{**}	0.47^{*}	0.48^{**}
	(0.04)	(0.24)	(0.24)
Trust		0.00	-0.03
		(0.01)	(0.02)
Trust^2			0.00
			(0.00)
_cons	-0.35^{***}	-0.98^{***}	-0.94^{***}
	(0.03)	(0.22)	(0.21)
Observations	121939.00	3632.00	3632.00
Adj. R-squared	0.04	0.05	0.05
Joint test: Trust+Trust^2 p-value			0.48
Joint test: Share core x year p-value	0.00	0.01	0.01
Joint test: Share IRA x year p-value	0.00	0.12	0.12

Standard errors in parentheses

Cluster-robust SE in parentheses. Spec 2: share x year controls for risk exposure.

Age bins, wealth deciles, region dummies, year dummies,

and share x year omitted from table but included in regressions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

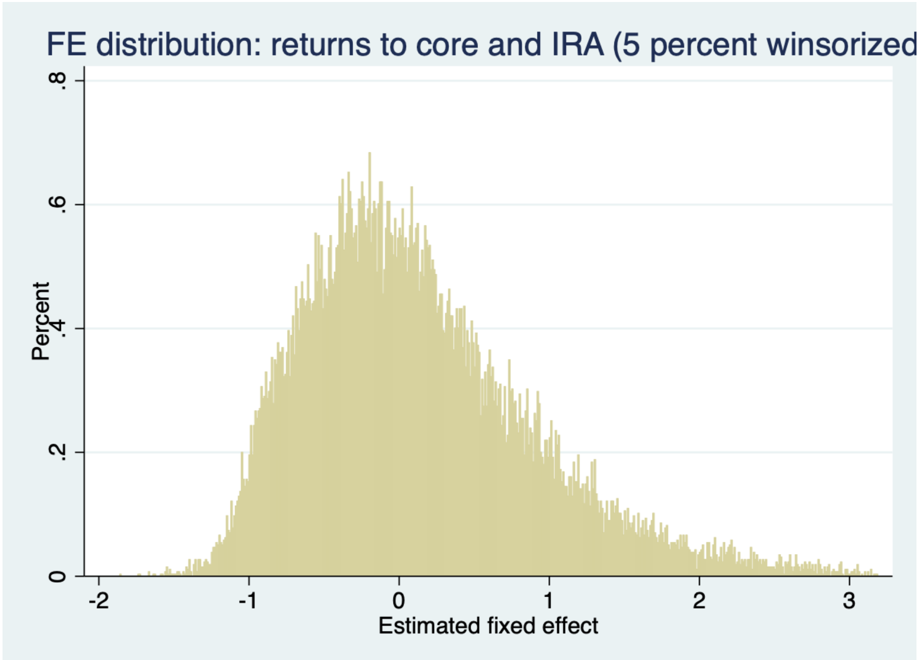

Figure 68: FE distribution: returns to core and IRA (5 percent winsorized)

Table 42: Panel Spec 3: returns to core and IRA (5 percent winsorized, share x year)

	(1)
Employed	0.02**
	(0.01)
Married	−0.08***
	(0.01)
Share core	0.78***
	(0.03)
Share IRA	0.53***
	(0.04)
_cons	−0.72**
	(0.28)
Observations	122790.00
Within R^2	0.17
Rho	0.58
Sigma u	0.77
Sigma e	0.65
Joint test: Share core x year p-value	0.00
Joint test: Share IRA x year p-value	0.00

Standard errors in parentheses

Cluster-robust SE in parentheses. Individual fixed effects.

Age bins, wealth deciles, region dummies, year dummies,

share x year interactions included in estimation but omitted from table.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Average annual returns (5 percent winsorized) over 2002–2022 on trust for core and IRA:

Table 43: Average Returns to core and IRA (avg) on General trust (2020) (5 percent winsorized)

	1	2	3	4
General trust	0.02**	0.05	0.02	0.04
	(0.01)	(0.04)	(0.01)	(0.04)
(General)^2		−0.00		−0.00
		(0.00)		(0.00)
Female			−0.02	−0.02
			(0.05)	(0.05)
Years of education			0.02**	0.02**
			(0.01)	(0.01)
Married			−0.02	−0.02
			(0.05)	(0.05)
Born in U.S.			0.11	0.11
			(0.07)	(0.07)
NH Black			0.03	0.03
			(0.07)	(0.07)
Hispanic			0.17*	0.18*
			(0.10)	(0.10)
NH Other			0.18	0.18
			(0.12)	(0.12)
In labor force			−0.02	−0.02
			(0.06)	(0.06)
_cons	0.22***	0.17	−1.05***	−1.11***
	(0.07)	(0.11)	(0.22)	(0.23)
Observations	676.00	676.00	671.00	671.00
Adj. R-squared	0.01	0.01	0.09	0.09
Joint test: Trust p-value		0.09		0.26

Standard errors in parentheses

Robust standard errors in parentheses. Age bins (5-yr) and wealth deciles included in columns 3–4.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Second-stage regression of estimated fixed effects on time-invariant covariates:

Table 44: Second-stage: FE from returns to core and IRA (5 percent winsorized) on time-invariant vars

	(1)	(2)	(3)
Years of education	-0.05^{***}	-0.05^{***}	-0.05^{***}
	(0.00)	(0.01)	(0.01)
Female	-0.01	0.09^{*}	0.09^{*}
	(0.01)	(0.06)	(0.06)
NH Black	0.44^{***}	0.38^{***}	0.38^{***}
	(0.01)	(0.07)	(0.07)
Hispanic	0.27^{***}	0.56^{***}	0.56^{***}
	(0.02)	(0.11)	(0.11)
NH Other	0.16^{***}	0.40^{***}	0.40^{***}
	(0.02)	(0.14)	(0.14)
Born in U.S.	0.07^{***}	0.22^{**}	0.22^{**}
	(0.02)	(0.09)	(0.09)
Trust		0.02	0.01
		(0.01)	(0.04)
Trust^{2}			0.00
			(0.00)
_cons	0.68^{***}	0.27	0.27
	(0.03)	(0.19)	(0.19)
Observations	25300.00	657.00	657.00
Adj. R-squared	0.09	0.11	0.11
Joint test: Trust+Trust^{2} p-value			0.47

Standard errors in parentheses

Robust SE. FE from Panel Spec 3 returns to core and IRA regression (5 percent winsorized).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$